series, by the reactive force supporting the representation of the desired pleasure. Here the reactive force spreads still wider than before, and not only keeps in abeyance the representations of pain and difficulty, but overcomes the irksomeness or fatigue of muscular movements in presentation or sensation, as it previously overcame the representations of them. The same reactive force is spread over and stimulates the efferent nerves distributed to the muscles.

5. The process now examined contains both transient and immanent actions. Immanent actions are those which are confined to action on the nervous organism, or in one or all of its three groups, and which consequently produce only modifications of perception. Transient actions are those which, being set on foot by immanent actions, are directed upon muscles, and produce consequently muscular movements. All cases of reasoning, and all its included operations, such as comparison, memory, judgment, analysis, synthesis, exclusion and inclusion, and so on, so far as they are voluntary, are cases of attention, a desire or choice insisted on; whatever else is included in them belongs to spontaneous redintegration. In reasoning we fix our attention on a contrast, and the comparison and consequent judgment are performed spontaneously. We are thus properly said to be masters of what we shall look at, but not of what we shall see; masters of the wish to reason, but not masters of the conclusions we shall draw; these depend upon our previous mental furniture. The concluding step in an immanent process of voluntary redintegration, when it consists in an image of ourself performing some bodily movement as a means to, some represented end, is the first step in a trans-
eunt process which governs the action of the muscles in performing the whole series of bodily movements, until that represented end is realised in presentation. Transcendent voluntary movements, therefore, are intermediate between immanent voluntary movements and the movements of those organs of the second group which combine and coordinate into systems the movements of the nerves of muscular sense and motion, as described in § 52. These organs of the second group must send up movements into that part of the organs of the third group upon which transcendent action depends, and must in their turn receive movements from it which depend on the results of immanent action. The seat of transcendent action must be a seat of the combination of the movements from these two sources, namely, the organs of immanent action on the one side, and the organs of coordinated movements of nerves of muscular sense and motion on the other. Since, however, the line of distinction between immanent and transcendent voluntary action is so sharply drawn as we have seen it is, it is natural to suppose that the latter should have an organ clearly distinct, yet in close connection with the organs on either side of it; and accordingly I am inclined to adopt the hypothesis, that the cerebellum is the organ of transcendent voluntary action, the organ by means of which are combined those nerve movements, directed upon muscles, which have not as yet been brought into permanent and organised combination. This organ would then be the one appropriated to all such muscular actions as are performed pro re natu, or rather to those parts of them which are modifications of the systems of already coordinated actions belonging to the organs of the second group,
or which combine these again into new systems, which may or may not be repeated so as to become habitual. Among such actions performed pro re nata, and in obedience to an image belonging to immanent action, may be enumerated the actions subsidiary to reasoning, drawing diagrams, taking observations, instituting experiments, skilled mechanical labour, the manual operations in painting and sculpture, choice of words in writing and in speaking, movements in hunting, shooting, fishing, travelling, rifle practice, military drill, gestures to express feelings,—all bodily movements in short which depend on, or involve as their condition, acquired systematic movements of muscles, and which modify these in turn, in dependence on a previously represented purpose.

6. It remains to examine the immanent actions of voluntary redintegration, depending on the nerve movements of the cerebral hemispheres, which we must now consider as their organ. The first question is, whether any thoroughgoing distinction can be discovered in these actions, which may serve to arrange them under different heads. The difference between the material and formal elements in redintegration, that is, between the feelings, emotions, and passions, contained in frameworks, on the one side, and the frameworks themselves and their connection, the images abstracting from the specific feelings which they contain, on the other, is the basis of the well-known and exhaustive distinction of Practical and Speculative reasoning. All intensely willed feelings and emotions, all judgments of the relative merits of feelings and emotions, their intensity, their pleasure and pain, their value, their validity, their moral good and evil, their moral beauty and deformity, all actual
choice, and all judgment about choosing, belong to the first head, and are instances of practical reasoning. All judgments about the connection of images, about facts, abstracting from the feelings of pleasure or pain with which they are accompanied for the reasoner at the time, although it is clear that feelings of pleasure or pain may be themselves objects of such judgments, are cases of speculative reasoning. Practical reasoning is having trains of feelings, speculative reasoning is having trains of thoughts. And it is volition itself which distinguishes between the two methods, since in the former it abstracts from the images and their connection, that is, disregards them as ends or motives in its procedure, and in the latter from the feelings contained in images as similar motives. Yet even in the purest speculative reasoning there is a pleasure always present as the motive power, the emotional pleasure of the logical instinct, as it was called in § 19, 2, the desire to know the order and truth of things, the pleasure which may be most properly called intellectual, because it arises in and belongs to all redintegration of the formal element in objects, whatever they may be, and consequently to all redintegration of the connection of images which are frameworks of emotion. The exercise of speculative reason therefore contains in itself its own motive power.

7. Speculative and practical reasoning, which as already shown exist separately only by virtue of a volition to abstract from one kind of motive and to be guided by another kind, are, besides this, also often interwoven with each other, following each other successively. Practical reasoning is the whole comparison of feelings, including the judgment about
them as better or worse than one another, as well as the actual choice between them. These two branches of practical reasoning are both imperative of ends, both fix on a feeling or emotion as desirable, or as the object of wish. At this point the process of practical reasoning changes into one of speculative; the represented object fixed on becomes the starting point of a reasoning which redintegrates the images in connection with it as means and obstacles to its attainment, and every one of the means in its turn becomes an end commanded by the practical, discovered by the speculative reason. Again, the greater certainty or attainability of the means to some desired ends than that of the means to other ends, perhaps more desirable in themselves, causes the practical reason itself to reconsider its own verdict, by setting on foot a new process of practical reasoning, the starting point of which is the image resulting from the previous process of speculative reason. These two branches of immanent voluntary redintegration, speculative and practical reasoning, the latter of which falls again into two subordinate branches, actual feeling and judgment of feelings, seem to exhaust the whole remaining field of consciousness, and of the nervous organism on which it depends. For the sake of clearness I append a table of voluntary redintegration:

<table>
<thead>
<tr>
<th>Transcendent Action</th>
<th>Speculative Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immanent Action</td>
<td>Practical Reasoning</td>
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</table>

It remains to analyse the processes of speculative and practical reasoning, and to show how, in all their
branches, they are but exemplifications of the mode of action already described at the beginning of the present §.

§ 55. 1. Putting the subsidiary processes of observation and experiment aside, all speculative reasoning is an exercise of memory; critical generalisation, which consists in harmonising already given conceptions, is an exercise of memory simply, the object-matter being modified only by the logical instinct; while acquisitive generalisation, which consists in the development of principles, either by applying an old analogy to new facts, or by arranging old facts by a new analogy, that is to say, by the methods either of deduction or induction, is an exercise of imaginative memory. (For the distinction of critical and acquisitive generalisation see “Time and Space” § 36.) We must distinguish the memory of spontaneous from that of voluntary redintegration. The former is where we remember without effort things which have once happened to us, or of which we have read, or which have been by a previous effort learned by heart; the latter is where we recall at will things, names, persons, or events, which have at some time or other stood in connection with what is at present in our minds, from which we start. It is this latter kind of memory which is valuable, not only in and for itself, but also as being the foundation of the reasoning powers; for without an ample supply of facts at command no wide exercise of the inductive process is possible, since it is impossible to have the facts supplied us ab extra, by observation or experiment; or even by reading notes, in sufficient abundance and with sufficient opportuneness. It is then the condition of excellence in inductive reasoning;
analytical power on the other hand does not require memory in the same degree. The reactive and retentive powers appear to be equally concerned in supporting this kind of memory, for we not only recall much, but we recall what is to the purpose, that is, we recall with reference to the central interest from which we start. But even in the memory of spontaneous redintegration we may distinguish two kinds, according as the retentive or the reactive movements predominate. In the first case we have what is called a mechanical memory for things in their actual order, or in what has been made their actual order in learning by heart. What is learned by heart is acquired originally by volition, exercised once for all, not springing from the interest of each verse, date, or name, as it is acquired and added to the series of things committed to memory; although of course it is true that, the greater the interest attaching to the things learned, the less will be the effort required to learn them. The whole series is impressed on the memory, thenceforth belongs entirely to the retentive powers, and is brought forth again by a process of spontaneous redintegration when one of the things in the series is recalled, depending solely on the one factor, habit, and not on the other factor, interest. The other kind of memory in spontaneous redintegration is the foundation or source of the power of recalling at will, and, equally with this, rests on the equal strength of the reactive and retentive powers. This kind of memory is when a person recalls past events accurately and copiously, and with their points of interest in relief, as they were felt in fact at the time of their first occurring to him, or of his first reading them, the
points of interest forming the stepping stones to his redintegration of the entire picture. Vividness of perception and rapidity of change by means of pleasure or interest are here involved; such a mind is said to be lively and quick as well as retentive; and a mind which possesses this power in a high degree is sure to be able very easily to learn by heart things that interest him, since so much less effort will be required. How mistaken then, for the purpose at least of strengthening the memory, must be the practice of learning by heart; I do not say it may not be advisable for other purposes, such for instance as affording a supplement for an incurable deadness of interest in subjects which nevertheless it is important for us to keep in memory; but so far from strengthening the memory, it strengthens only that which is already perhaps too preponderant, the retentive power; it is the reactive power which most needs strengthening; and this may best be done by fostering the intellectual interests, and making them the starting points whence the interest may spread to connected subjects. The only memory that is of any intellectual value, the power of recalling at will, and that kind of spontaneous redintegration upon which it rests, may be strengthened by the indulgence of the natural intellectual tastes, and the gradual connection of them with allied subjects. For instance, an interest in plants or animals may be fostered into an interest in knowing the laws of the vegetable and animal kingdoms, and a memory for the entire range of facts which concern them.

2. *Memory of the voluntary kind, Aristotle’s ἐγγεύσις, or hunting for forgotten facts, is the groundwork of all speculative reasoning; the total com-
plement of facts to be redintegrated is the same in both cases. And the mode in which the antagonism between the reactive and retentive powers is kept in play is the same in both, namely, that we know beforehand in a certain sense, in its second intention, what we want to find, and do not know it in another sense, in its first intention, since this knowledge is the very desideratum we are in search of. The pleasureable interest pervading the image of the present gap in our knowledge becoming filled is the thing supported by the reactive movement, which forces us to dwell upon the images which contain or bound the gap, so as to redintegrate them in all directions by their habitual connections, or images habitually connected with them, until we find the image which fills the gap. The pleasure and the habit are concentrated upon one set of images, which is pleasing so far as it consists of the imagined and desired filling up of the gap, painful or requiring effort so far as the gap is not yet filled. The redintegration by habit is entirely spontaneous; our only command over it is by the effort we make to keep the painful unfilled gap in consciousness, so as to make the images containing it redintegrate all their connected images in turn. This mode of operation is common to voluntary memory and reasoning; but the difference is, first, that the pleasure in simply remembering may be a specific pleasure in the object to be remembered, while in reasoning it is always a general mode of pleasure, consisting in the harmonious and complete coordination of images; and secondly, consequent on this, that reasoning adds to memory the function of comparing or judging the images which arise in the redintegra-
tions, testing their likeness and unlikeness, equality and inequality, and all the other minute relations of time and space which they bear to each other, so as to effect a proved and systematic connection between them. Memory aims at filling the gap with an image which has at some particular time filled it before, reasoning with one which bears certain time and space relations to the images before and after. The perception however of these relations, which is comparison or judgment, is not, taken by itself, an act of volition, but of simple or spontaneously representative perception.

3. There are three modes of speculative reasoning; the first is when we have already in consciousness all the facts or phenomena which are the object-matter of the reasoning, and seek a general conception to colligate them, which is done by arranging them in some classification among themselves, or by bringing them under some analogy to other sets of phenomena, e.g. Plato’s colligation of the phenomena and functions of a republic by analogy with the phenomena and functions of an individual person. This I call a case of critical generalisation. Secondly, we may have already in consciousness some of the phenomena of the object-matter, and seek to complete them in number, so as to establish, out of the old and the new facts together, a conception or law of sequence and coexistence which will colligate them all. This is the process of induction, one of the modes of acquisitive generalisation. Thirdly, we may have already in our minds a general conception with the facts on which it rests and of which it is composed, and seek to deduce from it, and thus anticipate, new facts, in short to develop our principle or general conception.
This is the mode of deduction, the second mode of acquisitive generalisation.

4. This division is at any rate exhaustive, for since the object-matter of all reasoning is primarily distinguishable into particular and general phenomena, facts and laws, particular phenomena and general conceptions of them, (which are all different ways of expressing the same primary distinction), it would seem that only three relations are possible between these two sides, namely, they are either equal, or one of them is greater or less than the other. In the first case we have the relation of equality; in the second, we have the phenomena greater than the conception; in the third, the conception greater than the phenomena. But here is not the place to enter upon any of the theories of reasoning, theories as to the general and ultimate conceptions which we make or ought to make our canons of induction or deduction, such for instance as the Uniformity of the Course of Nature; or as to the mode in which more special canons are to be brought under these; or as to the relation which the facts hold to the special or general canons. The facts which concern us here lie beyond these, and relate to the process of redintegration itself, of which all instances of reasoning are cases. It is only necessary to show that I am describing, and describing exhaustively, the processes of reasoning, in describing the processes of voluntary redintegration; and for this purpose I have adopted the above classification of reasoning processes, without meaning to affirm that this is the only or even, possibly, the best classification of them.

5. It remains to notice the completeness of the victory gained by the reactive movements over the
retentive in voluntary redintegration. A process of speculative reasoning is not completed without the entire subordination of the two movements, as they appeared in spontaneous redintegration, to the new movement which is the continuation of one of them, namely, of the reactive movement. There are two sources of pleasure or interest in speculative reasoning; one the pleasure of satisfying curiosity, or the logical instinct, of holding together a number of facts under a single law, the other the pleasure of minimising the effort necessary to do this, which is expressed by the logical law of Parcimony, a law for construction, as shown in "Time and Space" § 35. This double interest or pleasure is the motive, the exponent of the reactive movement, in speculative reasoning, and it is a pleasure attaching to the whole series of images which are offered by spontaneous redintegration. All the images of the series are seats of the retentive, all are seats of the reactive forces; the effort is no longer, as in spontaneous redintegration, to replace the painful images by pleasureable ones, but to hold fast the painful images, those containing the gap or missing link in our knowledge, which on that account are painful, till they have the gap filled and the missing link supplied, the anticipation of which is pleasureable. In proportion to the pleasure which we take in imagining the link found will be the intensity of the effort to retain the images containing the link missing. The very same set of images which is in itself painful, as being unharmonised and unconnected, is thus converted into the focus of the reactive movements, into the seat of the pleasureable interest of imagining the connection completed.
6. Where, now, is the antagonist force which makes it painful, and demands effort, to keep this set of images in consciousness? Not in those images alone which were the exponents of the retentive force in spontaneous redintegration, but in the total of images, belonging to spontaneous redintegration, and now excluded from the series under investigation; that is to say, in spontaneous redintegration as a whole, with both its forces retentive and reactive, expressed by habit and interest, as opposed to the series of images picked out as the object of voluntary redintegration. The moment the effort of attention, consisting in holding fast the unconnected images, is relaxed, that moment spontaneous redintegration, obeying its two laws of habit and interest, is restored, and we return to a state of idle dreaming instead of active reasoning. Spontaneous redintegration as a whole is the background or foundation of voluntary; its pleasurable movement is the antagonist of the reactive force in voluntary redintegration; for, in the volition of reasoning, that which is in itself painful has become pleasurable, and that which is in itself pleasurable, if it is not the pleasure chosen by the volition, is eo ipso painful to it. Spontaneous redintegration keeps bringing back into consciousness its trains of images once or at any time connected with the images fixed on by volition, and all those parts of them which will not combine with the fixed images, so as to fill up the missing link, are steadily rejected, so long as the volition or reactive force prevails, notwithstanding their character of specific pleasure, notwithstanding their habitual ease and familiarity, which they have as members of trains of spontaneous redintegration.
7. The process just described is the fundamental process of speculative reasoning. Each image as it is offered by spontaneous redintegration is tested, or compared with the gap in the set of images which forms the starting or rallying point of the reasoning, and every one is rejected which does not aid in filling the gap. In critical generalisation, the whole phenomena to be colligated,—and the colligation itself is here the missing link or gap to be filled,—are passed in review and made to recall, by spontaneous redintegration, each feature belonging to them, each mode of connection with other images, each function which they can perform; likenesses and unlikenesses are observed, order in time of their features or functions noted, until the whole mass is analysed, thrown as it were into the crucible, and again put together in a more logical order. In inductive processes, those phenomena are picked out of the trains of spontaneous redintegration which bear a perceived analogy or resemblance to the images or parts of them fixed on by volition; the causes, the effects, the accompaniments, of these phenomena are noted by continual repetition of the redintegrations; until the whole series of phenomena which bear a resemblance to the old images of the starting point have been passed in review and combined with them, so as to become the object-matter for a critical generalisation. In deduction, the general law or principle which it is sought to develop is a provisional image with certain outlines only filled in, similar cases to which are sought for in the phenomena offered by spontaneous redintegration; these redintegrations being made to start from the salient features of the provisional image, and the phenomena offered by them being rejected
if they do not show the same salient features as those fixed on as the starting point; while those which do so are subsumed as parallel cases, or corresponding instances of the application of the original principle.

8. Two circumstances in speculative reasoning, and indeed in voluntary redintegration generally, are important to notice; the first is, that volition has no power of calling up images, but only of rejecting and selecting from those offered by spontaneous redintegration. But the rapidity with which this selection is made, owing to the familiarity of the ways in which spontaneous redintegration runs, gives the process of reasoning the appearance of evoking images that are foreseen to be conformable to the purpose. There is no seeing them before they are offered; there is no summoning them before they are seen. The other circumstance is, that every kind of reasoning is nothing, in its simplest form, but attention. In reasoning which precedes transience action, we attend to the last in the series of means, which is the first in practice, and the muscular action follows of itself. In distinguishing means from obstacles, we attend to the means and their connection with the end, and the choice of them follows of itself. In speculative reasoning again, comparison or judgment is nothing but attention to two moments or states of consciousness, in connection with the image which has interest for us, and the rejection of the one, the choice of the other, follows of itself. The likeness or unlikeness, the greater quantity or the less quantity, of two images is perceived by itself, when once the two are put together in the clear light of attention. Volition is the intensity of the interest counterbalancing the tendency
which the images have to vanish or grow faint. Judgment is the perception of likeness or difference between two images attended to. The act is the sense of effort in attention. And the same will be found to hold true in the cases of practical reasoning which yet remain to be examined.

§ 56. 1. We are now at last entering on that part of the analysis in which we may expect, if anywhere, to discover the key to the Problem of Practice, the analysis namely of those processes in which motives determine choice and judgment on choice. In describing what the real problem in Ethic was, in § 2, it was said that the question of "ought" was a question of the nature of states of consciousness, whereas that of fact was a question of their history. We now come to the point where these two questions have their common source, the process of immanent practical volition; and the analysis of this process must disentangle the phenomena of the two questions, by showing what are the elements or moments in the process, the common source of both, from which each of the two streams flows. In § 54 it was shown that immanent voluntary redintegration had two branches, passion and judgment, corresponding to the two modes of spontaneous redintegration, the redintegration of feelings and that of images. Let us then first follow up the branch of judgment, which is properly called practical reasoning.

2. Practical reasoning differs from speculative in the motives which determine its redintegrations. There the reactive movements, the preponderance of which over the retentive constituted the reasoning process, were those which were evidenced by the pleasure of satisfying curiosity, or the logical
instinct, and the pleasure of minimising effort; in other words, these pleasures were the motives of speculative reasoning. But in practical reasoning pleasures and interests of all kinds, both general and specific, and solely in their character of pleasures or interests, take the place of the single more or less specific pleasure of satisfying curiosity, while the general pleasure of minimising effort remains common to both, inasmuch as both are modes of reasoning, expressed by the law of parcimony; but the one is the discovery of the truth of images, the other of the truth of feelings. Accordingly, practical reasoning abstracts from the images, the frameworks of emotions, except so far as they are requisite to embody clearly the emotions and feelings which are its own immediate object. The images are not the interest or the motive in practical reason, but the emotions and feelings, with their pleasures and interests, which pervade the images. Just however as we have found that pleasure of some kind or other is the evidence or exponent of the changing or reactive movements, so also is the case here. The reactive movements in practical reasoning are evidenced or expressed by pleasureable emotions and interests, with their images; the retentive by emotions which are either habitual or vivid but not pleasureable, and by the images which contain them; and the series of states of consciousness which form the reintegration is governed by the predominance, increased and sustained, of the reactive over the retentive movements.

3. The result of this distribution of the reactive and retentive movements, supposing this account of it to be correct, would be a continued comparison of pleasures and interests, as such; that is, it would be
a process of practical reasoning. I do not profess that this analysis is final or capable of demonstration; it is an hypothetical analysis of the mode in which the familiar process known as practical reasoning may have been produced, of the nerve movements on which it may depend. That pleasures are balanced against pleasures in comparison, that they are judged of as better or worse in kind than each other, as well as more or less intense in degree, are well known facts; and in endeavouring to discover how and by what means the comparison is carried on, we must bring the states of consciousness belonging to it into a systematic connection with those of other similar groups, and the movements which underlie these into similar connection with those which underlie the corresponding groups.

4. Now we must not assume that the process of practical reasoning begins with a desire to know which is the greatest or the best of two or more pleasures; this would be to cut the knot we have to untie. We must show how and by what movements, already discovered in spontaneous reintegra-

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tion, that state of consciousness arises which is a desire to know this; in other words, how the voluntary reintegation of practical reasoning is set on foot, as well as how, continuing the same movements, it reaches its conclusion. I suppose, therefore, that the movements supporting the pleasureable emotion, and those supporting the emotions which are habitual or vivid but not pleasureable, are increased in energy, and their conflict evidenced in consciousness by a sense of effort. The increased energy of the movements supporting the emotion which is pleasureable makes this emotion the fixed point in the reinteg-
igration, and the sense of effort becomes the desire to have this emotion intensified, the obstacles to which are the movements supporting the habitual or the vivid and not pleasureable emotions. Now, according to the intensity of the pleasure in the emotion which is the fixed point of the whole redintegration, will be the character of the redintegration itself. If this intensity is very great, no other emotions or habitual images will harmonise with it, but all will be rejected from the redintegration, except those which either as emotions increase its pleasure, or as images are perceived to stand in the relation of means to it. The redintegration is in this case a process of practical reasoning about the attainability of the pleasure which is the starting point of the redintegration. If however the intensity is less in this emotion which is the starting point, then the series of emotions and their images, offered by the retentive movements, sustain a more equal combat, and are perceived one by one in contrast with the one which is fixed, and their pleasures in contrast with its pleasure. Nor are they only perceived one by one, but each one is developed and brought out in all its parts, and connections with others, by redintegration; and the same with the fixed state of consciousness expressing the reactive movement; so that the various kinds and qualities, the various degrees of refinement and value, of emotion and emotional pleasure and pain, which belong to all these states, are brought into comparison with each other. And the energy in the conflicting movements is evidenced by the attention in perceiving the contrasts of the compared emotions. At every step in this process the fixed emotion and its image may become
modified by those which the retentive movements bring into comparison with it, and the pleasure of it thereby altered in character; and, wherever the greatest intensity of pleasure is found, there, in that emotion and that image, is the fixed point for the next continuance of the redintegration. Each step of the process is a judgment, that is, a perception of the comparative qualities of emotions and pleasures and the images which they pervade; and, since we have found in former cases that the intenser pleasure is the index of the stronger movement, we may now conclude that the stronger movement, described by the kind of emotion and pleasure which it supports, whatever that kind may be, has been accompanied in every particular instance by the intenser pleasure. We may conclude that the emotion, pleasure, and image, in which the redintegration ends as the last fixed point of its series, and the starting point for a future series, or which, in other words, is judged the best of all those which have been under consideration, is that which has at the time been the most pleasureable of them all. There is no judgment passed upon, no perception of, the comparative intensity of these pleasures; the intensity, on the contrary, is itself the judgment passed on their comparative worth; for it is assumed to accompany the actual course of redintegration, and to remain with the pleasure, emotion, and image, which the redintegration ends by leaving in consciousness. That which survives at the conclusion, whatever its analysis or nature may be, is inferred to have possessed the most intense pleasure.

5. If the foregoing is a true account of the process of practical reasoning, we have in it the key to
the problem of Ethic mentioned above; for we have
discovered united in one and the same process the
ground both of the de facto and of the de jure supremacy which states of consciousness may possess.
The de jure supremacy consists in the nature, known
by analysis, of the state of consciousness itself which
is judged better than those it has been compared with; its de facto supremacy consists in the circumstance that it has proved the strongest in maintaining
its place in redintegration. The de jure supremacy
is a fact, the de facto supremacy is a sequence of facts.
Now it is not one state of consciousness, but
all, which may become in turn de facto supreme, and
consequently, for that turn, de jure supreme also.
But since the de jure supremacy consists in the analysis or nature of a fact, and not in the circumstance
that this fact occurs, therefore not only can the de
jure supremacy of any state of consciousness be
named and known as the same, when it occurs again,
but it can be brought into connection and comparis-
on with other states of consciousness, which may
have been in their turn de jure and de facto sup-
preme; and can be arranged in a series or in a sys-
tem with those other states, by processes of practical reasoning in which the de jure supremacy of a state
of consciousness is made the starting point of redin-
tegration, and becomes the exponent of the reactive
movements; and in which therefore a de facto su-
preme state of consciousness will be not only de jure
supreme for a single turn, but for all cases of prac-
tical reasoning in which those other states of con-
sciousness occur with which it has been already
compared. For the de jure supremacy consists not
in the changing degrees of the pleasure, but in the
fixed features of the analysis, of a state of consciousness; these constitute its permanent Right, those its temporary accessions to Power. The de jure supremacy therefore attains, in consequence of the exercise of practical reasoning, to a fixed abode in some particular state or states of consciousness, unattainable by partial, brief, or feeble exercises of it, such as may be supposed to occur frequently or easily; and to a validity which is unassailable by the fluctuations of such minor efforts. And since the Moral Law, for it is plain that this and nothing else can be intended by this all-embracing validity, in attaining to be what it is, must have passed through a long history in every man, and have been in many shapes and many reasonings de facto supreme, before becoming so in perfect completeness, it has therefore below it, and more or less at its command, many habits and many subordinate judgments, which not only enable it to maintain and enforce, through and over minor reasonings, its de facto supremacy, but to make advance itself to ever increasing perfection. And therefore, although the de facto supremacy of some brief and feeble effort of practical reasoning is also, while the effect of the reasoning lasts, a de jure supremacy also, yet it has no de jure supremacy at all, the moment it is remembered that a higher supremacy exists, with which the present is not in agreement.

6. Two modes of practical reasoning have now been analysed; one a reasoning about the attainability of pleasures, the other a comparison of the nature and value of pleasures. The latter is what is most properly called Teleology, a comparison of Ends. But the two modes may be interwoven, or follow each
other alternately, in the same process of practical reasoning; and the greater attainability or certainty of any pleasure is by itself a circumstance which gives it value in comparison with others. This is the explanation of the instances brought forward in § 20, and of the well-known fact that disparate considerations combine into a single motive for a single line of conduct. For instance, in choice of strategical operations, a movement which will give the power of inflicting a greater loss on the enemy, after defeating him in a battle, will often be chosen in preference to one which would make his defeat in the battle more certain, but allow him to escape after it with less loss. This is a case where the greater value of one result counterbalances the greater attainability of a result of less value; and it is obvious that different leaders will judge differently in such cases; those that are cautious will lean to the side of attainability, those that are venturesome to the side of value; but the great general will be he who judges most accurately the precise means requisite to secure the less result, so as to apply all the other means at his disposal to attain the greater. These two modes of practical reasoning are very important to notice and to keep clearly distinguished. Since the reasoning on the attainability or certainty of any desired emotion is always a reasoning about means to an end, the result of the reasoning being an image of a means either to procure or to increase a desired emotion, this kind of practical reasoning stands very close to purely speculative reasoning, and forms as it were a link between speculation and teleology. I propose to name this kind of reasoning, the reasoning about the means to procure or increase a given
end, effective reasoning, in contradistinction to that which compares ends with each other, which I propose to call teleological reasoning; practical reasoning being thus exhaustively divisible into two branches. The complete table of reasoning processes will then stand thus:

Speculative. { Critical.
Acquisitive. { Deductive.
    Inductive.
Reasoning. }

Practical. { Judgment. { Teleological.
    Effective.
Passion. }

7. But we come now to another kind of volition, at least to what seems another; but really one which will be shown to be a modification of what has been already analysed. Every one recognises the difference between actually choosing or willing a pleasure and judging the merits or values of pleasures chosen or to be chosen; the difference between doing what is right or wrong and knowing it; between being a good or bad character and knowing what characters are good or bad. It is the knowing or judging this which has been hitherto examined. Yet different as the two things are, the redintegrating process in both is the same, with slight modification. If in immanent voluntary redintegration the reactive and retentive movements are both energetic, their respective emotions both intense; that is, if both are in the state in which the reactive was described to be (in par. 4.), in giving rise to the reasoning on the attainability of a pleasure; an oscillation between these two movements and their respective emotions will arise, in which first one, then the other, will
seem to be the strongest; each will redintegrate its habitually connected states, and, since each is a fixed point of redintegration, two whole trains of redintegrations will seem to be in conflict, reasons urged against reasons, pleasures against pleasures; and the final victory of one series over the other will be the final preponderance of one very energetic movement over another, that is, will appear as one intense effort overcoming another, rather than as a calm comparison of the emotions and images of the two trains of redintegration. In other words, we shall have willed and chosen an emotion rather than have reasoned about the merits of it. The difference in the conditions of the two cases of judging choice and of actually choosing is this, that not only the energy of the movements underlying the emotions, as compared to those underlying their images, is increased in the latter case, but the conflicting movements underlying two or more conflicting emotions are increased together; so that the sense of effort attaches to the two principal emotions in conflict, which remain in presence, and not to emotions or images in the redintegrations which they set on foot. This is the first occasion on which the former circumstance, namely, the increased energy in the movements supporting emotion as compared with those supporting its framework, comes to light. It is a new distinction in the nerve movements which must be assumed to account for, or correspond with, the well-known fact of emotion, when strong beyond a certain point, obliterating the features of the images which it pervades, while up to that point it has the effect of bringing them out into greater relief. A great predominance of the emotional or material element, over
the cognitive or formal, gives the boundary line between practical reasoning and voluntary action, choice, or passion; a great predominance of the cognitive over the emotional element gives that between speculative and practical reasoning; while practical reasoning itself occupies, as it were, the space between, depending on the presence of the two elements in more nearly equal proportion. The distinctions between reactive and retentive movements appear to be applicable to redintegrations where the emotional element predominates, as much as to those where it is equal or subordinate.

3. In the process of actual choosing or willing, as it is called, we seem to have the emotions and passions themselves in presence, we seem to be affected by them; while in that of judging we refer our judgment to cases where we have had, or may have again, the same emotions and passions in greater intensity, or, as we call it, the emotions and passions themselves; the two cases of emotion seem to stand to each other in the relation of representations to presentations, owing to the parallel difference in their vividness. Just however as, in the case of representations and presentations, the only difference in kind was the difference of vividness, while the difference in their order of sequence, the one being a repetition of the other, causes us to name them presentations and representations, so here, where there is no repetition of one by the other, the sole difference which remains is the difference of vividness depending on the difference of energy in the supporting movements.

9. According to the character, nature, or analysis, of the two conflicting emotions, and of that which is
the victor in the conflict, is the character or nature of the process which ends in the victory of one of them. If the emotion on one side is characterised by the sense of moral goodness, and that on the other by some pleasure not so characterised, or, on the contrary, by the sense of moral evil, then the conflict is in its process a temptation, and on its issue either a yielding to, or a victory over, temptation; it is a struggle between duty and inclination. If one side is characterised both by moral goodness, and by difficulties or painful emotions accompanying it, the other by the pleasure of escaping these pains or difficulties, then the conflict is one between duty and the obstacles to performing it. If one side is characterised by pleasure and by difficulties or painful emotions accompanying it, the other by the pleasure of escaping these pains and difficulties, then the conflict is one between a wish and the obstacles to attaining it. Of whatever nature may be the emotions on either side, each will have its own pleasure; the determination of the conflict will be the choice of some pleasure or pleasures in preference to others. The vividness and force of habit on the retentive side of the balance will have as their pleasure the freedom from painful effort, which the resistance of the retentive movement itself fixes upon the pleasures which are supported by the reactive movement. We cannot then take the single case of temptation as a type of all cases of practical choice, nor oppose pleasure as a whole to duty as a whole; the moral law has pleasures of its own, which make it the exponent of the reactive force, and pains attached to it which make it liable to succumb before the representations of case and pleasure of other kinds. Pleasures again
have pains attached to them in the same way, which make them succumb before representations of other pleasures. All choice is a balance and determination between pleasures; and only by its issue or event, and not before or otherwise, can we tell which pleasures have been greatest on the whole at the time in question. The moral law has always, from its analysis given in § 37, the de jure supremacy; but this does not show that its de facto supremacy is not owing to the intensity of the pleasures which are its own, any more than it shows the same of the admission of its de jure supremacy in particular cases of judgment. (parr. 4, 5.)

10. The processes of action and choice just described tend to grow into habits, and habits to coalesce into characters. When therefore we describe the process of action and choice as a conflict of retentive and reactive movements, we must distinguish two states in the whole progress, first, that of struggle or formation of character, secondly, that after its formation; and it is clear that the struggle ends in movements once reactive passing over to the retentive side and becoming habitual. In the first period, that of struggle and growth, the Ego or Self is always imagined on the side of the reactive movement. Only when this side is victorious in any particular choice do we say that we have been victorious; if the retentive side proves strongest we say that we have had to yield to difficulties or to pains. Yet we have chosen what was felt at the time as the least of two evils, or the greatest of two pleasures. The reactive movements thus become the basis of the True Ego, and the true character of a man consists in the kind of emotions which have been the most frequent
exponents of the reactive movements in his redintegrations. When, however, the character has been formed, or rather in those matters in which it has been formed, the ego or self is imagined as on the reten-
tive side, that is, as belonging to the same emotions as before, but which have now become habitual traits of his character.

11. The fundamental sameness of the two pro-
cesses, choosing and judging choice, is shown by the fact that they succeed each other and pass into each other by imperceptible changes. A judgment passed often becomes an effort to realise itself in an actual choice, which is perhaps resisted by an increased vividness in the images of difficulties and pains attached to it. And an almost equal conflict of choice between emotions dies away into the redintegration of the images attendant on one of them, without any decision having been come to. In this fact of fund-
damental sameness lies the power which reflection has in deciding choice. Reflection is the practical reasoning which judges previous cases both of choice and of judgment on choice. Now, since each of the two conflicting emotions in choice sets on foot its own series of images and emotions, it furnishes many handles to reflection, that is, it leads to many images which we have previously judged as good or bad, pleasureable or painful, which judgments now come up with these images into consciousness. They are a new element in the decision of choice which we have not yet noticed. The very reflection that we are engaged in a conflict of choice leads to many other reflections which bear upon the conflict, and all together act as new elements or moments of it. The reflection that the True Ego must be on one
side or on the other is one among these reflections. What kind of judgments these will be, how numerous, how forcible, how ready to combine with the redintegration actually on foot, and on what side their weight will be thrown in any conflict of choice, depends upon the previous character and habitual tendencies of the individual person. The reflection, being an additional and superinduced motive in the decision of the conflict, in the numerous cases where it determines the decision, makes the determination of it appear as sole act and free will of the Self which is always the object of a reflection. What has really happened is, that the series of redintegration, starting from one or other of the emotions in conflict, has set on foot, by some previously established connection, a new representation or train of representations, which combine with and modify those already existing. But this is not possible without the energy or intensity in one or both of the originally conflicting emotions being either simultaneously or previously relaxed.

12. Finally a mode of immanent voluntary action must be noticed, different in degree of intensity both from reasoning and from actual choice, which consists in strong emotion or passion, the resistance to which is only just sufficient to make evident by a sense of effort the irresistible energy of the feeling. The passion is willed, but can hardly be said to be chosen, certainly not to be judged of. It is choice not militant but triumphant, at least for the moment. The movements supporting the emotional element are so energetic that all the imagery is coloured by them and seen only in their light. No emotion, no imagery, no reflections, contrary to the existing pas-
sion are entertained, no suspicion of its justifiability, no fear for its results. This state will be understood sufficiently from those which have already been analysed. Of voluntary processes this is one extreme, opposed to the other extreme, speculative reasoning, or rather speculative reasoning on abstract form, as for instance in mathematical calculation; the one exhibiting the framework of emotion, the other emotion itself, in their purest or most abstract shape possible, so that they be complete or empirical states of consciousness at all.

§ 57. i. It is requisite here, after the analysis of the two kinds of redintegration, to apply this analysis in a more thorough examination of the doctrine stated at the outset of this Chapter, which has been the fundamental hypothesis throughout its course, the doctrine of the entire dependence of consciousness on nerve movements. Let us have no half-lights in Philosophy. That consciousness depends, both as a whole and in all its moments, upon states or movements of nerve, and that the states of consciousness do not in their turn react upon states or movements of nerve, are doctrines which require the most careful investigation, and to be accepted, if they are accepted, only after complete acquaintance with the entire series of conclusions which they involve. Some of these conclusions are so foreign to our usual ways of thought, and to the language which we all use in daily life, that it is difficult not only to bring them clearly before the mind, but to avoid thinking them unintelligible. Pain, for instance, must be held to be no warning to abstain from the thing which has caused pain; pleasure no motive to seek the thing which has caused pleasure; pain no check,
pleasure no spur, to action. The conception that they are such causes of action must be steadily and consistently banished from our interpretation of the phenomena of nerve action and of consciousness; which certainly will be no easy task, since even those who most succeed in banishing them must be always on the watch against the language they must employ, which everywhere supposes their truth. If however we decide to retain these conceptions, then there will be no consistent system possible, short of referring the phenomena of consciousness to a Soul or an Ego, as the cause of consciousness as a whole; whereby, to say nothing of the far greater difficulties of such theories, the attempt to effect a scientific unity of conception in philosophy must be given up.

2. There are two series of phenomena running parallel to each other, the series of nerve movements and that of states of consciousness. We have, or may have, knowledge of all the changes which take place in the latter series, and can discover general facts about their sequence and combination; we have on the other hand very small knowledge indeed of the changes which take place in the series of nerve movements, but, assuming that every change in the series of conscious states depends upon some change in the series of nerve movements, we characterise the latter by the former, and the whole series of states of consciousness becomes a series consisting of evidences of the changes in the series of nerve movements, on which each conscious state depends. The one series contains the causae cognoscendi of the changes in the other; the other series contains the causae existendi, or some of them, of the former. The first question then is, Does the series of states of
consciousness contain in its earlier states cause existendi of its later states, so becoming sharer with the series of nerve movements in the production and formation of later states of consciousness? The second question is, Does the series of states of consciousness contain cause existendi of changes in the series of nerve movements, so as to react upon them, and through them upon subsequent states of consciousness? Or, on the contrary, does the series of states of consciousness remain entirely, from first to last, a series consisting solely of cause cognoscendi of the nerve movements, and of objects generally? In "Time and Space," Chap. v. § 30, I gave an answer which I now think entirely erroneous. It was in effect a negative to the third of these questions, an affirmative to the two first of them; and that view ran through the analysis of spontaneous reintegration given in the same chapter. It is then the more incumbent upon me to justify the answer I am now led to give to these questions.

3. Common language leads us to assume that states of consciousness react upon nerve and brain; we say that pain is exhausting, and in preventing pain, as for instance in taking ether before undergoing a surgical operation, we think we prevent physical exhaustion. But pain itself is only prevented by acting upon the nerves or brain, as by inhaling ether, or by withdrawing attention from the operation, or by the excitement of action, as when wounds are received in battle without the pain being felt; and in all these cases a physical change is wrought in the nerves or brain, which supports the attention or the excitement; and this change in the states of nerve or brain may be the cause of the prevention
of physical exhaustion, and not the removal of pain which it produces. The physical change in nerve or brain may both support the removal of pain and cause the following physical state to be not one of exhaustion. So also in cases where we speak as if the imagination reacted on the physical state, as for instance where cures are wrought by imagination. The imagination is itself produced by producing changes of nerve or brain, which support the imagination; and it may be these changes, and not the imagination which characterises them, that cause the change in the nervous states beneficial to the diseased part of the body. There is no necessity, therefore, in cases similar to the above, to assume a reaction of states of consciousness on states of nerve or brain. But these are not cases of voluntary redintegration, and perhaps the difficulty there may be greater. It is there at any rate that arises the difficulty which I felt most strongly; for do we not see that voluntary actions are modified in proportion to the strength, and in accordance with the kind, of antecedent states of consciousness? To take, if I may be allowed, my own instance and my own argument, "Time and Space" § 30, page 280-3: "When the sun in June shines in at the window, I lift my hand and pull down the green blind. The sensation of heat is painful; representing this I feel an interest in obviating it; this is a purpose, or final cause, which as efficient produces the sensation of effort in lifting my hand and pulling down the blind, and a more agreeable state of sensation is the result. But it is impossible to explain the phenomena of voluntary action, as for instance the case just described, by the mere production of consciousness by the brain;
for, unless a reaction of consciousness on the brain
is introduced, the particular actions performed are
meaningless, and no special cause for each or any
of them can be assigned; for instance, what deter-
mines the brain to guide the muscles to pull down
the blind? Can we conceive that just this pheno-
menon and no other would follow, if every other
circumstance remained the same, except that the feel-
ing of pain from the heat and representation of the
means to avoid it were absent?"

4. To this reasoning I now reply, that the feeling
of pain from the heat and representation of means
to avoid it must, each of them, be regarded as states
of consciousness dependent on some nerve or brain
movements, and that, if these particular movements
were there, and only the dependent states of con-
sciousness absent, the same muscular movements of
pulling down the blind would follow. Every modi-
fication of the succession of states of consciousness
has its own modification of the succession of nerve
movements causing it; and the various nerve move-
ments are equally numerous, and modified as min-
utely, as the various states of consciousness which
are their evidence. They have grown up together
with them, have ramified and interramified, broken
new channels or taken new directions, combined with
or separated from each other, building up a nervous
organism which bears in its organisation traces of
all the various movements which have taken place
within it; so that any state of consciousness, how-
ever complex, or however abstract and simplified by
generalisation, it may be, rests upon a nerve move-
ment which is equally complex or equally compend-
dious, and which also leads up to, and leads away
from, those other nerve movements which support the states of consciousness connected by habit with, or disjoined by habit from, the state of consciousness of which that nerve movement is the support. If it were possible that the nerve movements could take place without their supported states of consciousness, their result, we must suppose, in muscular movement would be the same. But since, in cases of distinct volition, we have no knowledge of the nerve movements except by the states of consciousness which characterise them, we find it difficult to make this separation in thought, and when we abstract from the states of consciousness we abstract also, without noticing the unwarranted assumption, from the nerve movements which accompany them, thus leaving nothing which can be supposed to cause the muscular movement for which we seek to account. Yet there are cases which clearly show the possibility of complicated nerve movements taking place without being attended during their course by states of consciousness; for this is the case not only in reflex movements, but also in actions which, having been originally performed by efforts of volition, have since become habitual, and are now performed unconsciously and, as it is said, mechanically.

5. To apply these considerations to the case in question, the nerve movements which support the sensation of painful heat, and which when carried up into the organs of the third group combine with their movements to support the representations of the means to remove it, do not produce those representations because they support a painful sensation, but because the same nerve movements have previously been thrown into combinations similar to those which
now support the representations in question. The intensity of the sensation of painful heat is the evidence and the measure of the energy of those nerve-movements, and similarly the vividness of the representations and the rapidity with which they are formed are the evidence and measure of the energy and rapidity with which the nerve movements supporting them take place. And again, in descending from the representations to the movements of hand and arm which remove the cause of painful heat, those muscular movements are not performed because they are the movements which have been imaged in the representation, but because the movements of the nerves which act on the muscles have been previously habituated to be stimulated in that manner by the movements of the third group of organs which support the representations. These movements of the third group belong partly to the cerebrum, partly to the cerebellum, as I suppose (see § 54, 5); and the action is tentative, that is, performed by a rapid process of rejection of suggested movements until the right one is selected (see § 55, 8). The character, which the whole action has, of being done pro re nata, of being a new action, is accounted for by the conception of tentative selection in the nerve movements of the third group of organs. It is true that these muscular motions cease when the heat is removed, but this is because the nerve movement which supports the representation is no longer stimulated by the action of heat, and no longer in its turn stimulates the motor nerves. And this interpretation agrees with the fact, that a person who is not sure of the sufficiency of the means employed to remove a painful sensation will go on acting as the move-
ments supporting the representation direct, till the painful sensation has actually ceased, while one who is sure that the right means have been employed discontinues the movement before the sensation ceases; as, for instance, a child continues crying till the thing he cries for has been actually put into his hand, but a person who rings the bell for a servant rings once and waits; the cause of difference being, that in the latter case the movements supporting the representation are modified by those which support the knowledge that the right means have been employed. Nor should the novelty of voluntary actions, their being done on the spur of the moment, pro re nata, induce us to interpret them differently. If the actions are novel, so also may be the nerve movements on which they depend, without ceasing on that account to depend upon old habits of movement combined with a new stimulating movement; they need not be supposed to be exact repetitions of old movements any more than the actions or representations which they produce; and the nerve movements which support a representation of new means to procure or avoid a new object may be conceived as themselves the result of a new combination in nerve movement.

6. A burnt child dreads the fire; why? Because the movements supporting the sensation are continued into the movements supporting the emotion. A burnt child avoids the fire; why? Because the movements supporting the emotion are continued into the movements supporting the muscular action. It is a kind of sequence of physical facts, of which no further account can be given, any more than of the sequences of physical facts which constitute the phenomena of gravitation, or of growth in plants; a
kind of sequence which at present cannot be analysed farther, or into more elementary facts, than those assigned or intended here; a kind of sequence also which cannot be explained, but only characterised, by the states of consciousness which it supports. Why not explained as well as characterised? Because the sequence of these states is equally inexplicable and ultimate. Why is the sensation of burning followed by the emotion of dread; why the emotion of dread by the image of means of avoiding burning; why the image of these means by the perception of muscular motion away from the fire? No answer can be given beyond the fact that it is so. If we said that this sequence was a case of final causation, of a desire of self-preservation, or of avoiding pain and procuring pleasure, of motives determining volition, or of volition simply, we should only have characterised the sequence of states of consciousness, not explained it. These sequences of states of consciousness are instances of final causation, just as the corresponding sequences of physical movements are instances of efficient causation; both terms sum up and characterise their phenomena, but do not explain them. It is impossible to understand how efficient causation produces final; it would be equally impossible to understand how final could produce efficient; and if it is impossible to understand how one physical movement causes another, it would be equally impossible to understand how one state of consciousness could cause another. Sequences are all which in either case, or between the two series themselves, we can arrive at. But while there is evidence to show that nerve movements are causes of states of consciousness, there is none, it is here maintained,
to show that states of consciousness are causes of nerve movements. Our greater familiarity with the sequences of consciousness, our habitual arrangement of them in systems of teleology or final causation, must not blind us to the fact, that of causation itself we know no more when it is final, than we do when it is efficient.

7. If it is said, that it is at least wonderful that physical movements should connect themselves into sequences and systems of sequences in such a way as to give rise to teleologic systems of conscious states, without any aid or guidance from these conscious states in so connecting themselves;—it is very wonderful, it may be replied, but not more so than analogy would lead us to expect, in a case where consciousness has been superinduced on an organised body so complex as that of man and of the higher animals; seeing that a similar teleologic system is observable in all organised matter, and especially in the vegetable kingdom. That pleasure should be connected with what is favourable to the health and growth of the organism, and pain with what is the reverse, are facts which are agreeable to the analogy between living bodies and living bodies which are sentient and conscious. The addition of consciousness to living bodies, and in greater complexity in proportion to the complexity of their organisation, affords no ground for supposing that consciousness has a causality of its own, or reacts upon the organism in which it appears. Had pain been connected with what was favourable to the health and growth of the organism, and pleasure with what was the reverse, sentient beings would have been born to misery, and our teleologic systems would have
run counter to the order of nature, supposing nature to have aimed, as before, at health and growth; but we should have been without means of giving any efficacy to our desires of pleasure, for the more active and powerful we became the more miserable we should be; happiness would be a constantly receding vision, we should be always losing some even of its broken fragments, instead of, as now, hailing with hope its complete advent. Where in that case would have been the theory that states of consciousness contribute as causes to the production either of nerve movements or of each other? (See the admirable Chapter on Pleasures and Pains, and the connection of their phenomena with the general doctrine of Evolution, in Mr. Herbert Spencer's Principles of Psychology, §§ 122-128, edit. 1869.)

8. The analysis of voluntary reintegration leads us to the same conclusion, when we approach the question from the side of the moment of choice or decision itself. Just as the series of motives can be analysed into representations, and shown to depend on nerve movements, and the series of consequences the same, so also can the moment of will, which stands between these series, be referred to modes of action in the nerve movements which support the series of motives. The phenomenon of consciousness called Willing, or the exercise of volition, is the change of effort for a purpose (which is volition) into the purpose felt without effort, and consequently no longer as purposed but as attained. The moment of Willing is the moment of change, of sequence, occupying no duration of time by itself, but only as defined by its two moments, a quo and ad quem. Two or more conflicting representations contain the effort;
and the conflict of representations depends on the conflict of nerve movements. The victory of one of these nerve movements over the others is the decision of the conflict, and the cause of one representation remaining in consciousness without the sense of effort. The will is the decision, expressed in terms of consciousness; and when the representation which we call the True Ego, or which possesses the most permanent interest, is the one which is thus victorious, we say that the will is victorious, identifying our will with our interests; when the opposing representation is victorious, we say, identifying as before, that the will has succumbed. This use of language, which is incorrect because, in volition, it is always the will which is victorious, is the cause of a great part of the intricacies in which ethical questions are entangled. Every decision in voluntary redintegration is an exercise of volition, whether it is a decision which is pleasant, wise, praiseworthy, or the reverse. The criminal who mounts the scaffold exercises volition in his movements; he chooses to mount rather than to permit himself to be dragged by the main force of the executioner; yet we do not say that he goes willingly; he yields to representations which make it more desirable to him to mount of himself. In examining volition, therefore, we must take the word in its widest which is also its correct sense, the decision between conflicting representations abstracting from the nature of them; for this sense clearly includes the narrower sense within it; and all cases of volition for a purpose which is pleasureable, interesting, or praiseworthy, all cases, for instance, of a morally good will, are special cases included under volition in the abstract.
9. The moment of choice or decision between representations is exhaustively described by the analysis which has been offered of the course of nerve movements in conflict. There is no feature in it which does not find a corresponding feature in the conflict of nerve movements to which it may be referred. Of course it is not professed that the movements, as they are here described, are the actual ones, but that, from the very generality of their description, such movements must be considered possible. That choice requires two representations, is accounted for by the supposition of two nerve movements, reactive and retentive. That it includes a sense of effort is accounted for by the conflict between these nerve movements; the vividness of the sense of effort by the intensity of nearly equal energies in the nerve movements; the balance and oscillation in choice by similarly named circumstances in the nerve movements; the final victory of one representation by the final victory of one nerve movement; the ceasing or lessening of the sense of effort by the ceasing or lessening of energy in one of the two nerve movements. There seems to be no point in all the process, when we combine it with the analysis of the content, where a state of consciousness, or an unknown cause not included in nerve movement, either can or need be supposed to take the initiative, or step in to determine a change in the series of representations. Between the two hypotheses, that of nerve movements is the simplest, and they are also at least known to be a vera causa. The state or moment of consciousness called Willing, or exercising volition, is according to this view an effect of
nerve movements, and not a source of causation, either original or derived.

If this view is accepted, it will at least furnish us with an explanation, that is, a further analysis, or an analysis pushed one step farther back, of the phenomena of redintegration. If however we hold to the view that pain and pleasure, or representations generally, are causes of subsequent states of consciousness and of subsequent nerve movements, this, though it were true, would be no explanation, no further step in analysis. We know from the first that man, as a whole unanalysed, is determined by pain and pleasure in voluntary redintegration. This is the general description of the phenomenon to be explained or analysed. Now the theory which makes perception of pain or pleasure a cause of representation, and representation a cause of movement, which are final causes become efficient, merely gives us back again, in separate pieces, the same phenomenon of determination by final causes which is familiar to us in human action before analysis. And the same may be said of the theories which would explain the phenomena by referring them to unknown agents, a Soul or an Ego, acting in and through the phenomena in question. So far as these are really unknown agents they are no explanation; and so far as they are known, they are merely the phenomena to be accounted for over again. Do I then deny the existence of a Soul? By no means; the soul is not indeed the cause of the phenomena of states of consciousness; it is those phenomena themselves.

When therefore language is used which speaks of a state of consciousness as a cause, it must be understood to include the nerve state or nerve move-
ment of which it is the evidence. The two series are exactly parallel and correspondent, the physical series being the causa existendi, or efficient cause, of the conscious series in all its minuteness of division, and the conscious series being the causa cognoscendi, or evidence, of the physical series with equal minuteness. And, of each pair of corresponding states, the efficient cause or nerve state is always previous in time to its evidence, the conscious state; a circumstance in which this correspondence differs from that between the objective and subjective aspects of phenomena, which aspects are simultaneous; every state of consciousness corresponding to its previously existing efficient cause, the supporting nerve state or nerve movement, and to its simultaneously existing objective aspect, the object which it perceives or represents. The subjective aspect of an object when analysed was called in "Time and Space" § 60 the formal cause, or causa essendi, of that object, which analysis is expressed by its Definition. Final causes belong entirely to the conscious series, and consist in correspondences between different states of consciousness. The existence and the gradual elaboration of such correspondences, as those between means and ends, purposes and attainments, expectations and fulfilments, provisions and applications, evidence and inference, merit and reward, guilt and punishment, sin and sorrow, virtue and happiness, these and such as these constitute the world we live in a reasonable world, being the evidence of its physical constitution. It is therefore a misleading half truth to say, that there are nowhere found final causes in nature, without adding that they are found everywhere in the evidences of nature, where alone,
from their definition, it is possible to find them. Nature and consciousness are not two separate things, but one is the evidence of the other; and therefore it is the same thing to say with Aristotle, “As the mind acts with design, so also does nature,” and to say conversely, “As nature acts with design, so also does the mind;” for that which is the cause of mind is one part of nature, and interdependent on all other parts of it.

12. We are now in a position to comprehend clearly the phenomenon known as free will, or more philosophically self-determination, and that phenomenon which is its consequent, moral responsibility. Final causes are images or feelings represented as desirable, and the terms have meaning only as words of consciousness, or as describing objects in their subjective aspect. Their efficiency or motive power consists in the represented pleasure, of whatever kind, which they contain. These images supported by nerve movements are compared in consciousness, and the conflict of the nerve movements supports their comparison in consciousness; and the same organ, which with its nerve movements redintegrates and compares them, also in the same process decides between them. The same organ, the same process, the same series of representations, are in play; in other words, the organ which is conscious determines the course of its own representations, by movements which are themselves a part of the course. This same organ is also the seat of self-consciousness, which is the reflection that conscious states belong to one and the same series, and thus binds them all up into one and the same personal identity. Whether therefore the trains of redintegration are of a direct
or of a reflective character, they are equally instances of self-determination on the part of the whole train of consciousness in which they are contained, supported by the nerve movements of its organ. The perception of self-determination, or of the will determining itself, is nothing else than reflection or self-consciousness accompanying or supervening on a process of direct self-determination in the same organ.

13. The sense of moral responsibility is a particular case of reflective perception of self-determination. The distinguishing feature in this reflection is, that we know, at the moment of choice, that the pleasure which is now preponderant (being as it is the evidence of a preponderating nerve movement) may appear not preponderant to our own future and better judgment; and thus the moment of choice contains also in itself the moment of responsibility, that is, of being liable to correction on review. This review again is performed in the same organ, and with redintegration of the former nerve movements and their states of consciousness; in other words, we review our own acts; and it is accompanied by praise or blame of our former determination. We praise or blame ourselves for having been or not having been impressed with the stronger desire from what we now perceive as the greater or nobler pleasure. We do not blame or praise ourselves because we were free to be and were, but solely because we actually were, determined in such and such a way. The consideration of freedom to will or choose does not come in until we reason about our own once passed judgment of approval or disapproval, when we ask ourselves why we approved or disapproved
a particular act. We then apply a logic which familiar cases offer to us, namely, the logic of blaming or praising external actions of men, our judgments of which are governed by the consideration of their freedom from physical compulsion, or the reverse. But, applying this logic, we then often proceed by a false analogy to argue, that the self-determined immanent act of choice must have been free, or as it may perhaps be expressed, the better to hide from ourselves the defective analogy, essentially free, in order to be liable to a judgment of praise or blame. The freedom which we are justified in inferring from this analogy, the freedom which we truly have in the actions which we praise or blame, is the freedom of the representative redintegration from new presentations, the circumstance that it is only a series of representations, performed by the organs of the third group, which we judge. For it is freedom from external compulsion, in the case argued from, to which is analogous the freedom of redintegration from new presentations, in the case argued to. Nothing in the first case is affirmed as to the inner mechanism of the man’s transcendent actions; and nothing can be inferred from its analogy, in the second case, as to the inner mechanism of self-determination in the immanent actions of redintegration.

14. Moral approval or disapproval and responsibility to conscience are phenomena attaching inseparably to self-determination, and we can no more escape from the one than from the other. We are our own determinants and our own judges, and the condemnation or acquittal which we pronounce is our own. Again, the judgment is a reality as much as the act which it judges, and, as being more en-
lightened by experience, has presumably greater truth. And against such a judgment, whether of praise or blame, it is impossible to set up the plea, that the nerve movements follow and combat each other by natural fixed laws, which we did not make and cannot alter, and that in this way we are under compulsion, for it is these same nerve movements, in the same organ, and under the same laws, which now pronounce the judgment against which we would appeal; that is, which support those very states of consciousness which we call condemnation or acquittal. Necessity can no more be pleaded against the censure or punishments of conscience, than the same necessity against the judgments or punishments of law.

15. Approval or disapproval of past volitions is a judgment of the comparative character of states of consciousness, the series of which is a self-determined redintegration. Moral approval or disapproval of them is judgment of their comparative character in respect to the moral sense. And although it is requisite to both kinds of judgment that the objects of them should be self-determined series of states of consciousness, and although in such cases of self-determined action there may always be a sense of freedom, which consists in the perception of the balance of motives without knowing its issue, yet neither this sense of freedom, nor a supposed fact of freedom behind it, other than the fact of self-determination, is any part of the ground for passing judgments of approval or disapproval. The character of the conscious states themselves, not the character of the mechanism which moves them, is the object of all judgments of praise or blame, and of moral judg-
ments among them. Neither in fact, therefore, nor in logic is there an escape from the tribunal of conscience; when conceived as a mode of voluntary reintegration supported by nerve movements. There are not two orders of phenomena, acting and reacting on each other, or having the phenomena of the one alternating in one series with those of the other; nerve movements causing feelings, and these in turn causing nerve movements; but there is one order only, of nerve movements evidenced by states of consciousness; and these are at one time preferences, at another judgments on those preferences, both supported by the same series of nerve movements. The nerve movements make us choose; they also make us judge our choice; a phenomenon of consciousness equally real, and, it may be added, equally real with the nerve movements themselves.

16. The sense of freedom, as known to us by the reflective perception of self-determination, is the perception of the fact that we are self-determined, without the perception of the issue of the self-determination. Such is the analysis of what we perceive in perceiving that we are free, the analysis of the sense of freedom or of freedom itself. This brings us back to the moment indicated in § 2 as the moment of distinction between accomplished fact and practical action, the moment which is the turning point of ethical problems. It is the moment which is the junction, or the separation, of what is necessary and what is contingent in action. Necessity and contingency are terms which have meaning only subjectively; they refer to our knowledge of facts. Therefore, since in the moment of choice we know only the past and not the future, not the
issue of the choice, no action that lies in choice is necessary. It cannot be known to be determined this way or that by particular causes, because the determining causes act only through the moment of choice, and the choice itself is the determination of the issue. The causes which determine it are nerve movements, the respective force of which is known only by the issue of their conflict. The physical laws of movement themselves thus produce, or evolve out of themselves, in supporting the phenomena of consciousness, the distinction between the necessary and the contingent, and place the limit between them at the point or moment of conscious action, the point or moment which separates the past from the future.

§ 58. 1. There is a class of questions still remaining to complete the present branch of our enquiry, the questions relating to the physiological distribution of functions within the cerebral hemispheres, which have been already distinguished as the organ of immanent processes of redintegration of pure representations and of the emotions pervading them. Two orders of questions were distinguished in § 51, as of special interest to metaphysic, those relating to the nature of nerve movements, and those relating to the assignment of organs to distinct functions in consciousness. Questions of the first of these two orders, in respect of the cerebral hemispheres, have already been included, so far as our knowledge reached, in the analysis of the processes of redintegration spontaneous and voluntary. It remains to see whether any probable hypothesis is afforded by the results of that analysis, in regard to questions of the second order. In other words, Does the analysis of func-
tions and processes in the cerebral hemispheres suggest any hypothesis, and what, as to distinct portions of the organ being the seats of separate functions and processes?

2. It is natural to suppose, in the first place, that a difference in function implies a difference in position of the organ appropriated to it, since the difference of function depends on a difference of nerve movements, and those nerve movements which are most fitted mutual action and reaction would, by frequency of repetition, tend to consolidate or group themselves together, and take gradually exclusive possession of the portion of nerve substance in which they arise; especially if we remember that such movements are only performed on condition of waste and reparation, by a new growth of nerve substance in place of the old. Increasing organisation seems on this ground to involve increasingly minute separation of parts locally in the organism. And this tendency would be probable independently of an original conformation of organs in the same direction; which conformation might, on the contrary, be itself in turn regarded as the result, hereditarily transmitted, of a previous action of such tendencies. At any rate, our hypothesis of location of organs must be based upon differences of function and process, since there is no original conformation which we can assume as a starting point, or known as contributing to determine differences in function and process.

3. The movements of representation of images received from below, and those which we must suppose original to the cerebral hemispheres themselves, on the meeting and stimulation of the latter by the former, combine into total movements which pro-
duce or support the states of consciousness known as emotions and images or frameworks of emotion, emotion and framework being two elements of each of the conscious states. Volition in reasoning and volition in choice, which ends in passion, are cases of the same process, conflict of nerve movements, different from each other only as they are displayed in cases where either the emotional or the representational element predominates over the other. No state of consciousness however is exclusively emotional or exclusively representational; and therefore no state is exclusively one of passion, or exclusively one of reason. The combination of the movements from the two sources, from the cerebrum and from the organs of the first and second groups, is an universal fact, issuing in every instance in states of consciousness which combine both the elements, emotion and imagery.

4. But although there is this fusion between the two kinds of movement and between their products in consciousness, it does not follow that they are always mixed in the same proportion. It has been shown on the contrary, that either element may predominate to all but the exclusion of the other; and this in cases both of spontaneous and voluntary redintegration, and of both strong and feeble volition. So that no sooner is the fusion effected, in the cerebral processes, than a new dispersion and distinction of processes and their conscious states appears to begin.

5. If we look at the specific content of the different states in redintegration, there is a similar variability between their two elements. The question must have occurred to every one, during the analysis
in Chapter ii., since the emotions are declared not capable of analysis into represented sensations, what is the cause determining the combination of such and such an emotion with such and such a framework? Why, for instance, should the emotion of love be attached to the image of a person feeling fondness, or that of hate to the image of a person feeling aversion, towards the Subject of those emotions? Granted that there are emotions of these kinds naturally produced by the play of cerebral movements, why should this particular emotion be attached to this particular image? The psychological hypothesis, argued against in § 14, was, that represented sensations combined of themselves into emotions, by a kind of chemistry of consciousness; but the present Chapter has, I think, shown the conception on which this hypothesis originally rested to be untenable, the conception that states of consciousness as such act and react, and are reciprocally causes and effects of each other. Nevertheless it might still be maintained by psychologists that the movements supporting sensations become, when continued, movements supporting emotions, without requiring the cooperation of new movements, the consciousness in which is emotional originally; and thus their theory would account, supposing their analysis correct, for the connection of such and such sensations with such and such emotions. But if we reject the psychological theory; we are still in want of a theory of this connection; the question still remains, What is the cause of each particular combination between represented sensations and emotions? The complete answer could only be given by following up the processes of spontaneous and voluntary redintegration, not only in a single life but through
the hereditary transmissions of generations, to a point of indetermination in the relations between emotion and imagery, which is, for the present at least, far beyond the reach of profitable speculation. Nevertheless, if a conjecture is admissible, I would suggest that, since it must be owing to some correspondence, or some similarity, between the nerve movements supporting the image and emotion which combine, it will most probably be a correspondence or similarity in that feature of the two movements which supports the specific pleasure or specific pain of each. Apart however from such conjectures, the mode in which the answer to the question is to be sought consists in applying the analysis of redintegration historically; though the starting point, the original constitution, determining the combination of movements, may perhaps never be discovered. If this view is correct, and if it is the fact that the present combinations of emotions and images are the result of redintegrations, we must infer that the specific emotions and specific images are so far free and independent of each other originally, as to be capable of the most variable combinations.

6. We need hardly however have recourse to this consideration in order merely to show the fact of the variable combination of emotion and imagery. No two persons are precisely alike in this respect, and the differences are sometimes enormous, as between persons of different countries, degrees of civilisation, and times of life. The same person differs from himself not only in fluctuating combinations from day to day, but in habitual combinations at different ages. The moral training of character, so far as it consists of immanent processes, that is, in its aims, its results,
and a great part of its means, is nothing but a modification of the relations between imagery and emotion. And all these changes must have been wrought, as we see that they are wrought where they fall under observation, in and through processes of reintegration.

7. The variable character of the combinations of emotion and imagery is therefore indisputable, and the general kinds of combinations into which they fall, and under which they group themselves, in processes of reintegration, are no less evident, although we are unable to trace the historical steps in their development; these groups being on the one hand those groups of emotions distinguished in Chapter ii., and on the other the groups of intellectual conceptions constituting the several physical sciences, which are not within the purpose of this work. The functions or operations, which have led and continue to lead up to the formation of these and similar groups, are those which have been distinguished and analysed in the present Chapter; and these fall under the two most general heads of reintegration—in which emotion, and reintegration in which imagery, predominates, while they include operations in which now one now the other element is all but entirely excluded. Comparing these processes with these results, it is difficult to avoid the conclusion that the reintegration, by which these results have been gradually attained, must have included, as a very important feature, processes of grouping together the movements supporting emotion, eliminating some of those supporting imagery, and vice versa. But the grouping together of movements, if repeated frequently in a modifiable organism, can only be ima-
gined to result in a localisation of the combined movements in appropriated portions of it. And the sole circumstance of movements frequently made in combination, to the exclusion of others, tends to make the parts of the organism in which they take place an organic whole, even though these parts are separated from each other by portions of the organism devoted to other movements.

8. We have then three considerations to guide us to our hypothesis; first, that the separation of emotion and imagery is never complete; second, that the processes which end by becoming localised separately must be those which are distinguished as reasoning and passion; third, that these processes must commence, and consist throughout their course, in a certain partial separation between movements which support respectively emotions and images. Consequently the process of separation does not consist simply in localising images in one place and emotions in another, but in a separation of some of the elements which compose a fused state of consciousness consisting of emotion and image together. It is a separation of more elementary parts than those which are designated as emotion and image; for the images themselves consist of represented sensations, which have pleasure or pain attached to them as sensations; which represented sensations are pervaded, first by the direct emotions, secondly by the reflective; and on the other hand, the reflective emotions, as well as the direct, are always embodied in some image, though it may be vague and indistinct.

9. The only more elementary parts than image and emotion themselves, in a compound state which may be designated either as an image or as an emo-
tion, are those elements of all consciousness which have been distinguished in "Time and Space" as the formal and material elements; namely, time and space the formal, and feeling the material element. Accordingly, these elements it is which determine the processes in question, which must be conceived as processes which abstract more or less, but never entirely, from one or from the other of these elements. Redintegrations which turn on the formal element, or in which the time and space relations of the object in view are the motive interest, are processes of reasoning, or judgment; those which turn on the material element are processes of passion or choice; and between the extremes of these two modes of redintegration there will naturally arise an intermediate mode, in which the two elements combined in equal proportion are the motives of the process. The formal and material elements, which in presentative perception are so inextricably bound up together, thus become in redintegration of pure representations, which is the final and completing process of consciousness, developed and distinguished; the whole consciousness more specialised, and yet more organised, as it becomes more complex; and at the same time its unity of nature, its unity of principle of development, preserved from first to last.

10. Assuming in the next place, that the separate processes supporting separate modes of consciousness tend to a separate localisation, we shall be inclined to localise separately the phenomena or states of consciousness which are the accompaniments and results of the three processes of redintegration now distinguished. As accompaniments of the processes, or as the processes themselves described in terms of
consciousness, these may be called the speculative, the contemplative, the affective, modes of redintegration; of which the contemplative is the intermediate, the combination of form and matter in equal proportions. Described as results, or, in other words, as states and not processes of consciousness, they are, first, systems of images bound together by correspondences of their time and space relations; theories and explanations of cause and effect, suitability, or final causes; calculations, measurements, analyses, synthescs; everything, in short, which constitutes what is called the purely intellectual world; and these are the objects or results of the speculative mode of redintegration. Those of the contemplative mode are those emotions and their objects which contain form and matter in equal proportion or equal strength of interest; which are, according to the analysis in Chapter ii., the moral sense, the aesthetic and poetic emotions, and religion. Those of the affective mode are the emotions and passions themselves, with their objects and frameworks, felt, chosen, and desired; rather than analysed, reasoned, and judged.

II. The three modes of redintegration, and the three groups of objects or states of consciousness belonging to them, may be considered as forming a series, in the several stages of which the proportion of the formal element increases as that of the material diminishes, and diminishes as that increases; and the same is true of the material element. Referring the series to the cerebrum, we shall be most nearly in accordance with the commonly received opinion, which in the main is likely to be true (see Dr. Maudsley’s work before quoted, page 107), if we consider the anterior portions of the cerebrum to be devoted to
the speculative functions and their objects, the posterior to the affective, and the intermediate to the contemplative. Accordingly, we may place the most abstract images and reasonings, such as the mathematical, at the anterior extremity, the most abstract emotions and passions at the posterior; while the contemplative emotions will occupy the middle portion. Farther than this there seems no ground at present to venture, by attempting, for instance, to assign portions of the cerebral surface to particular emotions or particular images; although it may be true that the point at which we now stop is not destined to be the final limit of science in this direction.

NOTE REFERRED TO AT § 53. 6.

There is a singular circumstance in dreams, which may be paralleled with the phenomenon of seeing things upright though the image of them is thrown inverted on the retina. There is an account of a dream given by M. Alfred Maury in his work Le Sommeil et les Rêves, p. 133, which I will quote at length. "Mais un fait plus concluant pour la rapidité du songe, un fait qui établit à mes yeux qu'il suffit d'un instant pour faire un rêve étendu, est le suivant: J'étais un peu indisposé, et me trouvais couché dans ma chambre, ayant ma mère à mon chevet. Je rêve de la Terreur; j'assiste à des scènes de massacre, je comparaïs devant le tribunal révolutionnaire, je vois Robespierre, Marat, Fouquier-Tinville, toutes les plus vilaines figures de cette époque terrible; je discute avec eux; enfin, après bien des événements que je ne me rappelle qu'imparfaitement, je suis jugé, condamné à mort, conduit en charrette, au milieu d'un concours immense, sur la place de la Révolution; je monte sur l'échafaud; l'exécuteur me lie sur la planche fatale, il le fait basculer, le couperet tombe; je sens ma tête se séparer de mon tronc; je m'éveille en proie à la plus vive angoisse, et je me sens sur le coup la flèche de mon lit qui s'était subitement détachée, et était tombée sur mes vertèbres cervicales, à la façon..."
du couteau d'une guillotine. Cela avait eu lieu à l'instant, ainsi que ma mère le confirma, et cependant c'était cette sensation extérieure que j'avais prise, comme dans le cas cité plus haut, pour point du départ d'un rêve où tant de faits s'étaient succédé. Au moment où j'avais été frappé, le souvenir de la redoutable machine, dont la flèche de mon lit représentait si bien l'effet, avait éveillé toutes les images d'une époque dont la guillotine a été le symbole." M. Maury cites this instance chiefly to show the extreme rapidity of dreams. But must we not also conclude from it, that dreams, when suggested by external agency, and referred to past, time, are suggested in inverted order of time, which is corrected and changed into the real order of history by a process harmonising them with the order of events in actual life? Just as we judge of the top and bottom of a visible image by associating it with sensations of touch, and as we arrange the events of ancient history in real historical order, though we reason back to them, retracing that order, from events which have been their effects, so in dreams we see the events in real historical order though they are suggested to us successively in that order precisely reversed. The image of death by the guillotine was the last thing in the apparent order of the dream; the movements supporting that image were the first things in the real order of suggestion. And we can hardly suppose, as M. Maury might seem to do from his concluding words, that the image of the guillotine called up the image of the Revolution generally, and that then this image developed itself into a special story or sequence of events, because, in the first place, the dream did not appear to begin but to end with the guillotine, and, in the second place, because this would give no reason for the person guillotined being the dreamer himself; the general image of the Revolution might just as well end with the execution of any one else, or without an execution at all. It seems that we must either suppose an inverse order of suggestion, or suppose what is at least unlikely, first, that the image of the guillotine should have immediately suggested the image of the Revolution generally or of prominent scenes in it, and secondly, that the story into which this image developed itself should have ended with the execution of the spectator himself.