

weight or resistance. But a purely negative property of this kind cannot be revealed by our senses; indeed, certain experiments in mixing and combining things might lead us to call it in question if our minds were not already made up on the point. Try to picture one body penetrating another: you will at once assume that there are empty spaces in the one which will be occupied by the particles of the other; these particles in their turn cannot penetrate one another unless one of them divides in order to fill up the interstices of the other; and our thought will prolong this operation indefinitely in preference to picturing two bodies in the same place. Now, if impenetrability were really a quality of matter which was known by the senses, it is not at all clear why we should experience more difficulty in conceiving two bodies merging into one another than a surface devoid of resistance or a weightless fluid. In reality, it is not a physical but a logical necessity which attaches to the proposition: 'Two bodies cannot occupy the same place at the same time.' The contrary assertion involves an absurdity which no conceivable experience could succeed in dispelling. In a word, it implies a contradiction. But does not this amount to recognizing that the very idea of the number 2, or, more generally, of any number whatever, involves the idea of juxtaposition in space? If impenetrability is generally regarded as a quality of matter, the reason is that the idea of number is thought to be independent of the idea of space. We thus believe that we are adding something to the idea of two or more objects by saying that they cannot occupy the same place: as if the idea of the number 2, even the abstract number, were not already, as we have shown, that of two different positions in space! Hence to assert the impenetrability of matter is simply to recognize the inter-connexion between the notions of number and space, it is to state a property of number rather than of matter. — Yet, it will be said, do we not count feelings, sensations, ideas, all of which permeate one another, and each of which, for its part, takes up the whole of the soul? — Yes, undoubtedly; but, just because they permeate one another, we cannot count them unless we represent them by homogeneous units which occupy separate positions in space and consequently no longer permeate one another. Impenetrability thus makes its appearance at the same time as number; and when we attribute this quality to matter in order to distinguish it from everything which is not matter, we simply state under another form the distinction established above between extended objects, to which the conception of number is immediately

applicable, and states of consciousness, which have first of all to be represented symbolically in space.

It is advisable to dwell on the last point. If in order to count states of consciousness, we have to represent them symbolically in space, is it not likely that this symbolical representation will alter the normal conditions of inner perception? Let us recall what we said a short time ago about the intensity of certain psychic states. Representative sensation, looked at in itself, is pure quality; but, seen through the medium of extensity, this quality becomes in a certain sense quantity, and is called intensity. In the same way, our projection of our psychic states into space in order to form a discrete multiplicity is likely to influence these states themselves and to give them in reflective consciousness a new form, which immediate perception did not attribute to them. Now, let us notice that when we speak of *time*, we generally think of a homogeneous medium in which our conscious states are ranged alongside one another as in space, so as to form a discrete multiplicity. Would not time, thus understood, be to the multiplicity of our psychic states what intensity is to certain of them, — a sign, a symbol, absolutely distinct from true duration? Let us ask consciousness to isolate itself from the external world, and, by a vigorous effort of abstraction, to become itself again. We shall then put this question to it: does the multiplicity of our conscious states bear the slightest resemblance to the multiplicity of the units of a number? Has true duration anything to do with space? Certainly, our analysis of the idea of number could not but make us doubt this analogy, to say no more. For if time, as the reflective consciousness represents it, is a medium in which our conscious states form a discrete series so as to admit of being counted, and if on the other hand our conception of number ends in spreading out in space everything which can be directly counted, it is to be presumed that time, understood in the sense of a medium in which we make distinctions and count, is nothing but space. That which goes to confirm this opinion is that we are compelled to borrow from space the images by which we describe what the reflective consciousness feels about time and even about succession; it follows that pure duration must be something different. Such are the questions which we have been led to ask by the very analysis of the notion of discrete multiplicity. But we cannot throw any light upon them except by a direct study of the ideas of space and time in their mutual relations.

We shall not lay too much stress on the question of the absolute reality of space: perhaps we might as well ask whether space is or is not in space. In short, our senses perceive the qualities of bodies and space along with them: the great difficulty seems to have been to discover whether extension is an aspect of these physical qualities – a quality of quality – or whether these qualities are essentially unextended, space coming in as a later addition, but being self-sufficient and existing without them. On the first hypothesis, space would be reduced to an abstraction, or, speaking more correctly, an extract; it would express the common element possessed by certain sensations called representative. In the second case, space would be a reality as solid as the sensations themselves, although of a different order. We owe the exact formulation of this latter conception to Kant: the theory which he works out in the Transcendental Aesthetic consists in endowing space with an existence independent of its content, in laying down as *de jure* separable what each of us separates *de facto*, and in refusing to regard extension as an abstraction like the others. In this respect the Kantian conception of space differs less than is usually imagined from the popular belief. Far from shaking our faith in the reality of space, Kant has shown what it actually means and has even justified it.

Moreover, the solution given by Kant does not seem to have been seriously disputed since his time: indeed, it has forced itself, sometimes without their knowledge, on the majority of those who have approached the problem anew, whether nativists or empiricists. Psychologists agree in assigning a Kantian origin to the nativistic explanation of Johann Müller; but Lotze's hypothesis of local signs, Bain's theory, and the more comprehensive explanation suggested by Wundt, may seem at first sight quite independent of the Transcendental Aesthetic. The authors of these theories seem indeed to have put aside the problem of the nature of space, in order to investigate simply by what process our sensations come to be situated in space and to be set, so to speak, alongside one another: but this very question shows that they regard sensations as inextensive and make a radical distinction, just as Kant did, between the matter of representation and its form. The conclusion to be drawn from the theories of Lotze and Bain, and from Wundt's attempt to reconcile them, is that the sensations by means of which we come to form the notion of space are themselves unextended and simply qualitative: extension is supposed to result from their synthesis, as water from the

combination of two gases. The empirical or genetic explanations have thus taken up the problem of space at the very point where Kant left it: Kant separated space from its contents: the empiricists ask how these contents, which are taken out of space by our thought, manage to get back again. It is true that they have apparently disregarded the activity of the mind, and that they are obviously inclined to regard the extensive form under which we represent things as produced by a kind of alliance of the sensations with one another: space, without being extracted from the sensations, is supposed to result from their co-existence. But how can we explain such an origination without the active intervention of the mind? The extensive differs by hypothesis from the inextensive: and even if we assume that extension is nothing but a relation between inextensive terms, this relation must still be established by a mind capable of thus associating several terms. It is no use quoting the example of chemical combinations, in which the whole seems to assume, of its own accord, a form and qualities which did not belong to any of the elementary atoms. This form and these qualities owe their origin just to the fact that we gather up the multiplicity of atoms in a single perception: get rid of the mind which carries out this synthesis and you will at once do away with the qualities, that is to say, the aspect under which the synthesis of elementary parts is presented to our consciousness. Thus inextensive sensations will remain what they are, viz., inextensive sensations, if nothing be added to them. For their co-existence to give rise to space, there must be an act of the mind which takes them in all at the same time and sets them in juxtaposition: this unique act is very like what Kant calls an *a priori* form of sensibility.

If we now seek to characterize this act, we see that it consists essentially in the intuition, or rather the conception, of an empty homogeneous medium. For it is scarcely possible to give any other definition of space: space is what enables us to distinguish a number of identical and simultaneous sensations from one another; it is thus a principle of differentiation other than that of qualitative differentiation, and consequently it is a reality with no quality. Someone may say, with the believers in the theory of local signs, that simultaneous sensations are never identical, and that, in consequence of the diversity of the organic elements which they affect, there are no two points of a homogeneous surface which make the same impression on the sight or the touch. We are quite ready to grant it, for if these two points affected us in the same

way, there would be no reason for placing one of them on the right rather than on the left. But, just because we afterwards interpret this difference of quality in the sense of a difference of situation, it follows that we must have a clear idea of a homogeneous medium, i.e. of a simultaneity of terms which, although identical in quality, are yet distinct from one another. The more you insist on the difference between the impressions made on our retina by two points of a homogeneous surface, the more do you thereby make room for the activity of the mind, which perceives under the form of extensive homogeneity what is given it as qualitative heterogeneity. No doubt, though the representation of a homogeneous space grows out of an effort of the mind, there must be within the qualities themselves which differentiate two sensations some reason why they occupy this or that definite position in space. We must thus distinguish between the perception of extensity and the conception of space: they are no doubt implied in one another, but, the higher we rise in the scale of intelligent beings, the more clearly do we meet with the independent idea of a homogeneous space. It is therefore doubtful whether animals perceive the external world quite as we do, and especially whether they represent externality in the same way as ourselves. Naturalists have pointed out, as a remarkable fact, the surprising ease with which many vertebrates, and even some insects, manage to find their way through space. Animals have been seen to return almost in a straight line to their old home, pursuing a path which was hitherto unknown to them over a distance which may amount to several hundreds of miles. Attempts have been made to explain this feeling of direction by sight or smell, and, more recently, by the perception of magnetic currents which would enable the animal to take its bearings like a living compass. This amounts to saying that space is not so homogeneous for the animal as for us, and that determinations of space, or directions, do not assume for it a purely geometrical form. Each of these directions might appear to it with its own shade, its peculiar quality. We shall understand how a perception of this kind is possible if we remember that we ourselves distinguish our right from our left by a natural feeling, and that these two parts of our own extensity do then appear to us as if they bore a different quality; in fact, this is the very reason why we cannot give a proper definition of right and left. In truth, qualitative differences exist everywhere in nature, and I do not see why two concrete directions should not be as marked in immediate perception as two colours. But

the conception of an empty homogeneous medium is something far more extraordinary, being a kind of reaction against that heterogeneity which is the very ground of our experience. Therefore, instead of saying that animals have a special sense of direction, we may as well say that men have a special faculty of perceiving or conceiving a space without quality. This faculty is not the faculty of abstraction: indeed, if we notice that abstraction assumes clean-cut distinctions and a kind of externality of the concepts or their symbols with regard to one another, we shall find that the faculty of abstraction already implies the intuition of a homogeneous medium. What we must say is that we have to do with two different kinds of reality, the one heterogeneous, that of sensible qualities, the other homogeneous, namely space. This latter, clearly conceived by the human intellect, enables us to use clean-cut distinctions, to count, to abstract, and perhaps also to speak.

Now, if space is to be defined as the homogeneous, it seems that inversely every homogeneous and unbounded medium will be space. For homogeneity here consisting in the absence of every quality, it is hard to see how two forms of the homogeneous could be distinguished from one another. Nevertheless it is generally agreed to regard time as an unbounded medium, different from space but homogeneous like the latter: the homogeneous is thus supposed to take two forms, according as its contents co-exist or follow one another. It is true that, when we make time a homogeneous medium in which conscious states unfold themselves, we take it to be given all at once, which amounts to saying that we abstract it from duration. This simple consideration ought to warn us that we are thus unwittingly falling back upon space, and really giving up time. Moreover, we can understand that material objects, being exterior to one another and to ourselves, derive both exteriorities from the homogeneity of a medium which inserts intervals between them and sets off their outlines: but states of consciousness, even when successive, permeate one another, and in the simplest of them the whole soul can be reflected. We may therefore surmise that time, conceived under the form of a homogeneous medium, is some spurious concept, due to the trespassing of the idea of space upon the field of pure consciousness. At any rate we cannot finally admit two forms of the homogeneous, time and space, without first seeking whether one of them cannot be reduced to the other. Now, externality is the distinguishing mark of things which occupy space, while states of

consciousness are not essentially external to one another, and become so only by being spread out in time, regarded as a homogeneous medium. If, then, one of these two supposed forms of the homogeneous, namely time and space, is derived from the other, we can surmise *a priori* that the idea of space is the fundamental datum. But, misled by the apparent simplicity of the idea of time, the philosophers who have tried to reduce one of these ideas to the other have thought that they could make extensity out of duration. While showing how they have been misled, we shall see that time, conceived under the form of an unbounded and homogeneous medium, is nothing but the ghost of space haunting the reflective consciousness.

The English school tries, in fact, to reduce relations of extensity to more or less complex relations of succession in time. When, with our eyes shut, we run our hands along a surface, the rubbing of our fingers against the surface, and especially the varied play of our joints, provide a series of sensations, which differ only by their *qualities* and which exhibit a certain order in time. Moreover, experience teaches us that this series can be reversed, that we can, by an effort of a different kind (or, as we shall call it later, *in an opposite direction*), obtain the same sensations over again in an inverse order: relations of position in space might then be defined as reversible relations of succession in time. But such a definition involves a vicious circle, or at least a very superficial idea of time. There are, indeed, as we shall show a little later, two possible conceptions of time, the one free from all alloy, the other surreptitiously bringing in the idea of space. Pure duration is the form which the succession of our conscious states assumes when our ego lets itself *live*, when it refrains from separating its present state from its former states. For this purpose it need not be entirely absorbed in the passing sensation or idea; for then, on the contrary, it would no longer *endure*. Nor need it forget its former states: it is enough that, in recalling these states, it does not set them alongside its actual state as one point alongside another, but forms both the past and the present states into an organic whole, as happens when we recall the notes of a tune, melting, so to speak, into one another. Might it not be said that, even if these notes succeed one another, yet we perceive them in one another, and that their totality may be compared to a living being whose parts, although distinct, permeate one another just because they are so closely connected? The proof is that, if we interrupt the

rhythm by dwelling longer than is right on one note of the tune, it is not its exaggerated length, as length, which will warn us of our mistake, but the qualitative change thereby caused in the whole of the musical phrase. We can thus conceive of succession without distinction, and think of it as a mutual penetration, an interconnexion and organization of elements, each one of which represents the whole, and cannot be distinguished or isolated from it except by abstract thought. Such is the account of duration which would be given by a being who was ever the same and ever changing, and who had no idea of space. But, familiar with the latter idea and indeed beset by it, we introduce it unwittingly into our feeling of pure succession; we set our states of consciousness side by side in such a way as to perceive them simultaneously, no longer in one another, but alongside one another; in a word, we project time into space, we express duration in terms of extensity, and succession thus takes the form of a continuous line or a chain, the parts of which touch without penetrating one another. Note that the mental image thus shaped implies the perception, no longer successive, but simultaneous, of a *before* and *after*, and that it would be a contradiction to suppose a succession which was only a succession, and which nevertheless was contained in one and the same instant. Now, when we speak of an *order* of succession in duration, and of the reversibility of this order, is the succession we are dealing with pure succession, such as we have just defined it, without any admixture of extensity, or is it succession developing in space, in such a way that we can take in at once a number of elements which are both distinct and set side by side? There is no doubt about the answer: we could not introduce *order* among terms without first distinguishing them and then comparing the places which they occupy; hence we must perceive them as multiple, simultaneous and distinct; in a word, we set them side by side, and if we introduce an order in what is successive, the reason is that succession is converted into simultaneity and is projected into space. In short, when the movement of my finger along a surface or a line provides me with a series of sensations of different qualities, one of two things happens: either I picture these sensations to myself as in duration only, and in that case they succeed one another in such a way that I cannot at a given moment perceive a number of them as simultaneous and yet distinct; or else I make out an order of succession, but in that case I display the faculty not only of perceiving a succession of elements, but also

of setting them out in line after having distinguished them: in a word, I already possess the idea of space. Hence the idea of a reversible series in duration, or even simply of a certain order of succession in time, itself implies the representation of space, and cannot be used to define it.

To give this argument a stricter form, let us imagine a straight line of unlimited length, and on this line a material point A, which moves. If this point were conscious of itself, it would feel itself change, since it moves: it would perceive a succession; but would this succession assume for it the form of a line? No doubt it would, if it could rise, so to speak above the line which it traverses, and perceive simultaneously several points of it in juxtaposition: but by doing so it would form the idea of space, and it is in space and not in pure duration that it would see displayed the changes which it undergoes. We here put our finger on the mistake of those who regard pure duration as something similar to space, but of a simpler nature. They are fond of setting psychic states side by side, of forming a chain or a line of them, and do not imagine that they are introducing into this operation the idea of space properly so called, the idea of space in its totality, because space is a medium of three dimensions. But how can they fail to notice that, in order to perceive a line as a line, it is necessary to take up a position outside it, to take account of the void which surrounds it, and consequently to think a space of three dimensions? If our conscious point A does not yet possess the idea of space — and this is the hypothesis which we have agreed to adopt — the succession of states through which it passes cannot assume for it the form of a line; but its sensations will add themselves dynamically to one another and will organize themselves, like the successive notes of a tune by which we allow ourselves to be lulled and soothed. In a word, pure duration might well be nothing but a succession of qualitative changes, which melt into and permeate one another, without precise outlines, without any tendency to externalise themselves in relation to one another, without any affiliation with number: it would be pure heterogeneity. But for the present we shall not insist upon this point; it is enough for us to have shown that, from the moment when you attribute the least homogeneity to duration, you surreptitiously introduce space.

It is true that we count successive moments of duration, and that, because of its relations with number, time at first seems to us to be a measurable magnitude, just like space. But there is here an important

distinction to be made. I say, e.g., that a minute has just elapsed, and I mean by this that a pendulum, beating the seconds, has completed sixty oscillations. If I picture these sixty oscillations to myself all at once by a single mental perception, I exclude by hypothesis the idea of a succession. I do not think of sixty strokes which succeed one another, but of sixty points on a fixed line, each one of which symbolizes, so to speak, an oscillation of the pendulum. If, on the other hand, I wish to picture these sixty oscillations in succession, but without altering the way they are produced in space, I shall be compelled to think of each oscillation to the exclusion of the recollection of the preceding one, for space has preserved no trace of it; but by doing so I shall condemn myself to remain forever in the present; I shall give up the attempt to think a succession or a duration. Now if, finally, I retain the recollection of the preceding oscillation together with the image of the present oscillation, one of two things will happen. Either I shall set the two images side by side, and we then fall back on our first hypothesis, or I shall perceive one in the other, each permeating the other and organizing themselves like the notes of a tune, so as to form what we shall call a continuous or qualitative multiplicity with no resemblance to number. I shall thus get the image of pure duration; but I shall have entirely got rid of the idea of a homogeneous medium or a measurable quantity. By carefully examining our consciousness we shall recognize that it proceeds in this way whenever it refrains from representing duration symbolically. When the regular oscillations of the pendulum make us sleepy, is it the last sound heard, the last movement perceived, which produces this effect? No, undoubtedly not, for why then should not the first have done the same? Is it the recollection of the preceding sounds or movements, later on set in juxtaposition to a single sound or movement, will remain without effect. Hence we must admit that the sounds combined with one another and acted, not by their quantity as quantity, but by the quality which their quantity exhibited, i.e. by the rhythmic organization of the whole. Could the effect of a slight but continuous stimulation be understood in any other way? If the sensation remained always the same, it would continue to be indefinitely slight and indefinitely bearable. But the fact is that each increase of stimulation is taken up into the preceding stimulations, and that the whole produces on us the effect of a musical phrase which is constantly on the point of ending and

constantly altered in its totality by the addition of some new note. If we assert that it is always the same sensation, the reason is that we are thinking, not of the sensation itself, but of its objective cause situated in space. We then set it out in space in its turn, and in place of an organism which develops, in place of changes which permeate one another, we perceive one and the same sensation stretching itself out lengthwise, so to speak, and setting itself in juxtaposition to itself without limit. Pure duration, that which consciousness perceives, must thus be reckoned among the so-called intensive magnitudes, if intensities can be called magnitudes: strictly speaking, however, it is not a quantity, and as soon as we try to measure it, we unwittingly replace it by space.

But we find it extraordinarily difficult to think of duration in its original purity; this is due, no doubt, to the fact that we do not *endure* alone, external objects, it seems, *endure* as we do, and time, regarded from this point of view, has every appearance of a homogeneous medium. Not only do the moments of this duration seem to be external to one another, like bodies in space, but the movement perceived by our senses is, so to speak, the palpable sign of a homogeneous and measurable duration. Nay more, time enters into the formulae of mechanics, into the calculations of the astronomer, and even of the physicist, under the form of a quantity. We measure the velocity of a movement, implying that time itself is a magnitude. Indeed, the analysis which we have just attempted requires to be completed, for if duration properly so-called cannot be measured, what is it that is measured by the oscillations of the pendulum? Granted that inner duration, perceived by consciousness, is nothing else but the melting of states of consciousness into one another, and the gradual growth of the ego, it will be said, notwithstanding, that the time which the astronomer introduces into his formulae, the time which our clocks divide into equal portions, this time, at least, is something different: it must be a measurable and therefore homogeneous magnitude. — It is nothing of the sort, however, and a close examination will dispel this last illusion.

When I follow with my eyes on the dial of a clock the movement of the hand which corresponds to the oscillations of the pendulum, I do not measure duration, as seems to be thought; I merely count simultaneities, which is very different. Outside of me, in space, there is never more than a single position of the hand and the pendulum, for nothing is left of the past positions. Within myself a process of

organization or interpenetration of conscious states is going on, which constitutes true duration. It is because I *endure* in this way that I picture to myself what I call the past oscillations of the pendulum at the same time as I perceive the present oscillation. Now, let us withdraw for a moment the ego which thinks these so-called successive oscillations: there will never be more than a single oscillation, and indeed only a single position, of the pendulum, and hence no duration. Withdraw, on the other hand, the pendulum and its oscillations; there will no longer be anything but the heterogeneous duration of the ego, without moments external to one another, without relation to number. Thus, within our ego, there is succession without mutual externality; outside the ego, in pure space, mutual externality without succession: mutual externality, since the present oscillation is radically distinct from the previous oscillation, which no longer exists; but no succession, since succession exists solely for a conscious spectator who keeps the past in mind and sets the two oscillations or their symbols side by side in an auxiliary space. Now, between this succession without externality and this externality without succession, a kind of exchange takes place, very similar to what physicists call the phenomenon of endosmosis. As the successive phases of our conscious life, although interpenetrating, correspond individually to an oscillation of the pendulum which occurs at the same time, and as, moreover, these oscillations are sharply distinguished from one another, we get into the habit of setting up the same distinction between the successive moments of our conscious life: the oscillations of the pendulum break it up, so to speak, into parts external to one another: hence the mistaken idea of a homogeneous inner duration, similar to space, the moments of which are identical and follow, without penetrating, one another. But, on the other hand, the oscillations of the pendulum, which are distinct only because one has disappeared when the other appears on the scene, profit, as it were, from the influence which they have thus exercised over our conscious life. Owing to the fact that our consciousness has organized them as a whole in memory, they are first preserved and afterwards disposed in a series: in a word, we create for them a fourth dimension of space, which we call homogeneous time, and which enables the movement of the pendulum, although taking place at one spot, to be continually set in juxtaposition to itself. Now, if we try to determine the exact part played by the real and the imaginary in this very complex process, this is what

we find. There is a real space, without duration, in which phenomena appear and disappear simultaneously with our states of consciousness. There is a real duration, the heterogeneous moments of which permeate one another; each moment, however, can be brought into relation with a state of the external world which is contemporaneous with it, and can be separated from the other moments in consequence of this very process. The comparison of these two realities gives rise to a symbolical representation of duration, derived from space. Duration thus assumes the illusory form of a homogeneous medium, and the connecting link between these two terms, space and duration, is simultaneity, which might be defined as the intersection of time and space.

If we analyse in the same way the concept of motion, the living symbol of this seemingly homogeneous duration, we shall be led to make a distinction of the same kind. We generally say that a movement takes place *in* space, and when we assert that motion is homogeneous and divisible, it is of the space traversed that we are thinking, as if it were interchangeable with the motion itself. Now, if we reflect further, we shall see that the successive positions of the moving body really do occupy space, but that the process by which it passes from one position to the other, a process which occupies duration and which has no reality except for a conscious spectator, eludes space. We have to do here not with an *object* but with a *progress*: motion, in so far as it is a passage from one point to another, is a mental synthesis, a psychic and therefore unextended process. Space contains only parts of space, and at whatever point of space we consider the moving body, we shall get only a position. If consciousness is aware of anything more than positions, the reason is that it keeps the successive positions in mind and synthesizes them. But how does it carry out a synthesis of this kind? It cannot be by a fresh setting out of these same positions in a homogeneous medium, for a fresh synthesis would be necessary to connect the positions with one another, and so on indefinitely. We are thus compelled to admit that we have here to do with a synthesis which is, so to speak, qualitative, a gradual organization of our successive sensations, a unity resembling that of a phrase in a melody. This is just the idea of motion which we form when we think of it by itself, when, so to speak, from motion we extract mobility. Think of what you experience on suddenly perceiving a shooting star: in this extremely rapid motion there is a natural and instinctive separation between the

space traversed, which appears to you under the form of a line of fire, and the absolutely indivisible sensation of motion or mobility. A rapid gesture, made with one's eyes shut, will assume for consciousness the form of a purely qualitative sensation as long as there is no thought of the space traversed. In a word, there are two elements to be distinguished in motion, the space traversed and the act by which we traverse it, the successive positions and the synthesis of these positions. The first of these elements is a homogeneous quantity: the second has no reality except in a consciousness: it is a quality or an intensity, whichever you prefer. But here again we meet with a case of endosmosis, an intermingling of the purely intensive sensation of mobility with the extensive representation of the space traversed. On the one hand we attribute to the motion the divisibility of the space which it traverses, forgetting that it is quite possible to divide an *object*, but not an *act*: and on the other hand we accustom ourselves to projecting this act itself into space; to applying it to the whole of the line which the moving body traverses: in a word, to solidifying it: as if this localizing of a *progress* in space did not amount to asserting that, even outside consciousness, the past co-exists along with the present!

It is to this confusion between motion and the space traversed that the paradoxes of the Eleatics are due; for the interval which separates two points is infinitely divisible, and if motion consisted of parts like those of the interval itself, the interval would never be crossed. But the truth is that each of Achilles' steps is a simple indivisible act, and that, after a given number of these acts, Achilles will have passed the tortoise. The mistake of the Eleatics arises from their identification of this series of acts, each of which is of a *definite kind* and *indivisible*, with the homogeneous space which underlies them. As this space can be divided and put together again according to any law whatever, they think they are justified in reconstructing Achilles' whole movement, not with Achilles' kind of step, but with the tortoise's kind: in place of Achilles pursuing the tortoise they really put two tortoises, regulated by each other, two tortoises which agree to make the same kind of steps or simultaneous acts, so as never to catch one another. Why does Achilles outstrip the tortoise? Because each of Achilles' steps and each of the tortoise's steps are indivisible acts in so far as they are movements, and are different magnitudes in so far as they are space: so that addition will soon give a greater length for the space traversed

by Achilles than is obtained by adding together the space traversed by the tortoise and the handicap with which it started. This is what Zeno leaves out of account when he reconstructs the movement of Achilles according to the same law as the movement of the tortoise, forgetting that space alone can be divided and put together again in any way we like, and thus confusing space with motion. Hence we do not think it necessary to admit, even after the acute and profound analysis of a contemporary thinker,⁵ that the meeting of the two moving bodies implies a discrepancy between real and imaginary motion, between space *in itself* and indefinitely divisible space, between concrete time and abstract time. Why resort to a metaphysical hypothesis, however ingenious, about the nature of space, time, and motion, when immediate intuition shows us motion within duration, and duration outside space? There is no need to assume a limit to the divisibility of concrete space; we can admit that it is infinitely divisible, provided that we make a distinction between the simultaneous positions of the two moving bodies, which are in fact in space, and their movements, which cannot occupy space, being duration rather than extent, quality and not quantity. To measure the velocity of a movement, as we shall see, is simply to ascertain a simultaneity; to introduce this velocity into calculations is simply to use a convenient means of anticipating a simultaneity. Thus mathematics confines itself to its own province as long as it is occupied with determining the simultaneous positions of Achilles and the tortoise at a given moment, or when it admits *a priori* that the two moving bodies meet at a point X – a meeting which is itself a simultaneity. But it goes beyond its province when it claims to reconstruct what takes place in the interval between two simultaneities; or rather it is inevitably led, even then, to consider simultaneities once more, fresh simultaneities, the indefinitely increasing number of which ought to be a warning that we cannot make movement out of immobilities, nor time out of space. In short, just as nothing will be found homogeneous in duration except a symbolical medium with no duration at all, namely space, in which simultaneities are set out in line, in the same way no homogeneous element will be found in motion except that which least belongs to it, the traversed space, which is motionless.

Now, just for this reason, science cannot deal with time and motion except on condition of first eliminating the essential and qualitative element – of time, duration, and of motion, mobility. We may easily

convince ourselves of this by examining the part played in astronomy and mechanics by considerations of time, motion, and velocity.

Treatises on mechanics are careful to announce that they do not intend to define duration itself but only the equality of two durations. Two intervals of time are equal when two identical bodies, in identical conditions at the beginning of each of these intervals and subject to the same actions and influences of every kind, have traversed the same space at the end of these intervals.' In other words, we are to note the exact moment at which the motion begins, i.e. the coincidence of an external change with one of our psychic states: we are to note the moment at which the motion ends, that is to say, another simultaneity; finally we are to measure the space traversed, the only thing, in fact, which is really measurable. Hence there is no question here of duration, but only of space and simultaneities. To announce that something will take place at the end of a time t is to declare that consciousness will note between now and then a number t of simultaneities of a certain kind. And we must not be led astray by the words 'between now and then,' for the interval of duration exists only for us and on account of the interpenetration of our conscious states. Outside ourselves we should find only space, and consequently nothing but simultaneities, of which we could not even say that they are objectively successive, since succession can only be thought through *comparing* the present with the past. – That the interval of duration itself cannot be taken into account by science is proved by the fact that, if all the motions of the universe took place twice or thrice as quickly, there would be nothing to alter either in our formulae or in the figures which are to be found in them. Consciousness would have an indefinable and as it were qualitative impression of the change, but the change would not make itself felt outside consciousness, since the same number of simultaneities would go on taking place in space. We shall see, later on, that when the astronomer predicts, e.g., an eclipse, he does something of this kind: he shortens infinitely the intervals of duration, as these do not count for science, and thus perceives in a very short time – a few seconds at the most – a succession of simultaneities which may take up several centuries for the concrete consciousness, compelled to live through the intervals instead of merely counting their extremities.

A direct analysis of the notion of velocity will bring us to the same conclusion. Mechanics gets this notion through a series of ideas, the

connexion of which it is easy enough to trace. It first builds up the idea of uniform motion by picturing, on the one hand, the path AB of a certain moving body, and, on the other, a physical phenomenon which is repeated indefinitely under the same conditions, e.g., a stone always falling from the same height on to the same spot. If we mark on the path AB the points M, N, P . . . reached by the moving body at each of the moments when the stone touches the ground, and if the intervals AM, MN and NP are found to be equal to one another, the motion will be said to be uniform: and any one of these intervals will be called the velocity of the moving body, provided that it is agreed to adopt as unit of duration the physical phenomenon which has been chosen as the term of comparison. Thus, the velocity of a uniform motion is defined by mechanics without appealing to any other notions than those of space and simultaneity. Now let us turn to the case of a variable motion, that is, to the case when the elements AM, MN, NP . . . are found to be unequal. In order to define the velocity of the moving body A at the point M, we shall only have to imagine an unlimited number of moving bodies A_1, A_2, A_3, \dots all moving uniformly with velocities V_1, V_2, V_3, \dots which are arranged, e.g., in an ascending scale and which correspond to all possible magnitudes. Let us then consider on the path of the moving body A two points M' and M'', situated on either side of the point M but very near it. At the same time as this moving body reaches the points M', M, M'', the other moving bodies reach points M', M, M'', M', M, M', . . . on their respective paths; and there must be two moving bodies A_h and A_p such that we have on the one hand $M'M = M_h'M_h$ and on the other hand $MM'' = M_p M_p''$. We shall then agree to say that the velocity of the moving body A at the point M lies between V_h and V_p . But nothing prevents our assuming that the points M' and M'' are still nearer the point M, and it will then be necessary to replace V_h and V_p by two fresh velocities V_r and V_s the one greater than V_h and the other less than V_p . And in proportion as we reduce the two intervals M'M and MM'', we shall lessen the difference between the velocities of the uniform corresponding movements. Now, the two intervals being capable of decreasing right down to zero, there evidently exists between V_r and V_s a certain velocity V_m such that the difference between this velocity and V_h , V_r, \dots on the one hand, and V_p, V_s, \dots on the other, can become smaller than any given quantity. It is this common limit V_m which we shall call the velocity of the moving body A at the point M. — Now, in this analysis

of variable motion, as in that of uniform motion, it is a question only of spaces once traversed and of simultaneous positions once reached. We were thus justified in saying that, while all that mechanics retains of time is simultaneity, all that it retains of motion itself — restricted, as it is, to a measurement of motion — is immobility.

This result might have been foreseen by noticing that mechanics necessarily deals with equations, and that an algebraic equation always expresses something already done. Now, it is of the very essence of duration and motion, as they appear to our consciousness, to be something that is unceasingly being done; thus algebra can represent the results gained at a certain moment of duration and the positions occupied by a certain moving body in space, but not duration and motion themselves. Mathematics may, indeed, increase the number of simultaneities and positions which it takes into consideration by making the intervals very small; it may even, by using the differential instead of the difference, show that it is possible to increase without limit the number of these intervals of duration. Nevertheless, however small the interval is supposed to be, it is the extremity of the interval at which mathematics always places itself. As for the interval itself, as for the duration and the motion, they are necessarily left out of the equation. The reason is that duration and motion are mental syntheses, and not objects; that, although the moving body occupies, one after the other, points on a line, motion itself has nothing to do with a line; and finally that, although the positions occupied by the moving body vary with the different moments of duration, though it even creates distinct moments by the mere fact of occupying different positions, duration properly so called has no moments which are identical or external to one another, being essentially heterogeneous, continuous, and with no analogy to number.

It follows from this analysis that space alone is homogeneous, that objects in space form a discrete multiplicity, and that every discrete multiplicity is got by a process of unfolding in space. It also follows that there is neither duration nor even succession in space, if we give to these words the meaning in which consciousness takes them: each of the so-called successive states of the external world exists alone; their multiplicity is real only for a consciousness that can first retain them and then set them side by side by externalising them in relation to one another. If it retains them, it is because these distinct states of the

external world give rise to states of consciousness which permeate one another, imperceptibly organize themselves into a whole, and bind the past to the present by this very process of connexion. If it externalises them in relation to one another, the reason is that, thinking of their radical distinctness (the one having ceased to be when the other appears on the scene), it perceives them under the form of a discrete multiplicity, which amounts to setting them out in line, in the space in which each of them existed separately. The space employed for this purpose is just that which is called homogeneous time.

But another conclusion results from this analysis, namely, that the multiplicity of conscious states, regarded in its original purity, is not at all like the discrete multiplicity which goes to form a number. In such a case there is, as we said, a qualitative multiplicity. In short, we must admit two kinds of multiplicity, two possible senses of the word 'distinguish,' two conceptions, the one qualitative and the other quantitative, of the difference between *same* and *other*. Sometimes this multiplicity, this distinctness, this heterogeneity contains number only potentially, as Aristotle would have said. Consciousness, then, makes a qualitative discrimination without any further thought of counting the qualities or even of distinguishing them as *several*. In such a case we have multiplicity without quantity. Sometimes, on the other hand, it is a question of a multiplicity of terms which are counted or which are conceived as capable of being counted; but we think then of the possibility of externalising them in relation to one another, we set them out in space. Unfortunately, we are so accustomed to illustrate one of these two meanings of the same word by the other, and even to perceive the one in the other, that we find it extraordinarily difficult to distinguish between them or at least to express this distinction in words. Thus I said that several conscious states are organized into a whole, permeate one another, gradually gain a richer content, and might thus give any one ignorant of space the feeling of pure duration; but the very use of the word 'several' shows that I had already isolated these states, externalised them in relation to one another, and, in a word, set them side by side; thus, by the very language which I was compelled to use, I betrayed the deeply ingrained habit of setting out time in space. From this spatial setting out, already accomplished, we are compelled to borrow the terms which we use to describe the state of a mind which has not yet accomplished it: these terms are thus misleading

from the very beginning, and the idea of a multiplicity without relation to number or space, although clear for pure reflective thought, cannot be translated into the language of common sense. And yet we cannot even form the idea of discrete multiplicity without considering at the same time a qualitative multiplicity. When we explicitly count units by stringing them along a spatial line, is it not the case that, alongside this addition of identical terms standing out from a homogeneous background, an organization of these units is going on in the depths of the soul, a wholly dynamic process, not unlike the purely qualitative way in which an anvil, if it could feel, would realize a series of blows from a hammer? In this sense we might almost say that the numbers in daily use have each their emotional equivalent. Tradesmen are well aware of it, and instead of indicating the price of an object by a round number of shillings, they will mark the next smaller number, leaving themselves to insert afterwards a sufficient number of pence and farthings. In a word, the process by which we count units and make them into a discrete multiplicity has two sides; on the one hand we assume that they are identical, which is conceivable only on condition that these units are ranged alongside each other in a homogeneous medium; but on the other hand the third unit, for example, when added to the other two, alters the nature, the appearance and, as it were, the rhythm of the whole; without this interpenetration and this, so to speak, qualitative progress, no addition would be possible. Hence it is through the quality of quantity that we form the idea of quantity without quality.

It is therefore obvious that if it did not betake itself to a symbolical substitute, our consciousness would never regard time as a homogeneous medium, in which the terms of a succession remain outside one another. But we naturally reach this symbolical representation by the mere fact that, in a series of identical terms, each term assumes a double aspect for our consciousness: one aspect which is the same for all of them, since we are thinking then of the sameness of the external object, and another aspect which is characteristic of each of them, because the supervening of each term brings about a new organization of the whole. Hence the possibility of setting out in space, under the form of numerical multiplicity, what we have called a qualitative multiplicity, and of regarding the one as the equivalent of the other. Now, this twofold process is nowhere accomplished so easily as in the perception of the external phenomenon which takes for us the form of motion. Here

we certainly have series of identical terms, since it is always the same moving body; but, on the other hand, the synthesis carried out by our consciousness between the actual position and what our memory calls the former positions, causes these images to permeate, complete, and, so to speak, continue one another. Hence, it is principally by the help of motion that duration assumes the form of a homogeneous medium, and that time is projected into space. But, even if we leave out motion, any repetition of a well-marked external phenomenon would suggest to consciousness the same mode of representation. Thus, when we hear a series of blows of a hammer, the sounds form an indivisible melody in so far as they are pure sensations, and, here again, give rise to a dynamic progress; but, knowing that the same objective cause is at work, we cut up this progress into phases which we then regard as identical; and this multiplicity of elements no longer being conceivable except by being set out in space, since they have now become identical, we are necessarily led to the idea of a homogeneous time, the symbolical image of real duration. In a word, our ego comes in contact with the external world at its surface; our successive sensations, although dissolving into one another, retain something of the mutual externality which belongs to their objective causes; and thus our superficial psychic life comes to be pictured without any great effort as set out in a homogeneous medium. But the symbolical character of such a picture becomes more striking as we advance further into the depths of consciousness: the deep-seated self which ponders and decides, which heats and blazes up, is a self whose states and changes permeate one another and undergo a deep alteration as soon as we separate them from one another in order to set them out in space. But as this deeper self forms one and the same person with the superficial ego, the two seem to *enclure* in the same way. And as the repeated picture of one identical objective phenomenon, ever recurring, cuts up our superficial psychic life into parts external to one another, the moments which are thus determined determine in their turn distinct segments in the dynamic and undivided progress of our more personal conscious states. Thus the mutual externality which material objects gain from their juxtaposition in homogeneous space reverberates and spreads into the depths of consciousness: little by little our sensations are distinguished from one another like the external causes which gave rise to them, and our feelings or ideas come to be separated like the sensations with which they are contemporaneous.

That our ordinary conception of duration depends on a gradual incursion of space into the domain of pure consciousness is proved by the fact that, in order to deprive the ego of the faculty of perceiving a homogeneous time, it is enough to take away from it this outer circle of psychic states which it uses as a balance-wheel. These conditions are realized when we dream; for sleep, by relaxing the play of the organic functions, alters the communicating surface between the ego and external objects. Here we no longer measure duration, but we feel it; from quantity it returns to the state of quality; we no longer estimate past time mathematically: the mathematical estimate gives place to a confused instinct, capable, like all instincts, of committing gross errors, but also of acting at times with extraordinary skill. Even in the waking state, daily experience ought to teach us to distinguish between duration as quality, that which consciousness reaches immediately and which is probably what animals perceive, and time so to speak materialized, time that has become quantity by being set out in space. Whilst I am writing these lines, the hour strikes on a neighbouring clock, but my inattentive ear does not perceive it until several strokes have made themselves heard. Hence I have not counted them; and yet I only have to turn my attention backwards to count up the four strokes which have already sounded and add them to those which I hear: if, then, I question myself carefully on what has just taken place, I perceive that the first four sounds had struck my ear and even affected my consciousness, but that the sensations produced by each one of them, instead of being set side by side, had melted into one another in such a way as to give the whole a peculiar quality, to make a kind of musical phrase out of it. In order, then, to estimate retrospectively the number of strokes sounded, I tried to reconstruct this phrase in thought: my imagination made one stroke, then two, then three, and as long as it did not reach the exact number four, my feeling, when consulted, answered that the total effect was qualitatively different. It had thus ascertained in its own way the succession of four strokes, but quite otherwise than by a process of addition, and without bringing in the image of a juxtaposition of distinct terms. In a word, the number of strokes was perceived as a quality and not as a quantity: it is thus that duration is presented to immediate consciousness, and it retains this form so long as it does not give place to a symbolical representation derived from extensity.

We should therefore distinguish two forms of multiplicity, two very different ways of regarding duration, two aspects of conscious life. Below homogeneous duration, which is the extensive symbol of true duration, a close psychological analysis distinguishes a duration whose heterogeneous moments permeate one another; below the numerical multiplicity of conscious states, a qualitative multiplicity; below the self with well-defined states, a self in which *succeeding each other means melting into one another* and forming an organic whole. But we are generally content with the first, i.e. with the shadow of the self projected into homogeneous space. Consciousness, goaded by an insatiable desire to separate, substitutes the symbol for the reality, or perceives the reality only through the symbol. As the self thus refracted, and thereby broken to pieces, is much better adapted to the requirements of social life in general and language in particular, consciousness prefers it, and gradually loses sight of the fundamental self.

In order to recover this fundamental self, as the unsophisticated consciousness would perceive it, a vigorous effort of analysis is necessary, which will isolate the fluid inner states from their image, first refracted, then solidified in homogeneous space. In other words, our perceptions, sensations, emotions and ideas occur under two aspects: the one clear and precise, but impersonal; the other confused, ever changing, and inexpressible, because language cannot get hold of it without arresting its mobility or fit it into its common-place forms without making it into public property. If we have been led to distinguish two forms of multiplicity, two forms of duration, we must expect each conscious state, taken by itself, to assume a different aspect according as we consider it within a discrete multiplicity or a confused multiplicity, in the time as quality, in which it is produced, or in the time as quantity into which it is projected.

When e.g. I take my first walk in a town in which I am going to live, my environment produces on me two impressions at the same time, one of which is destined to last while the other will constantly change. Every day I perceive the same houses, and as I know that they are the same objects, I always call them by the same name and I also fancy that they always look the same to me. But if I recur, at the end of a sufficiently long period, to the impression which I experienced during the first few years, I am surprised at the remarkable, inexplicable, and indeed inexpressible change which has taken place. It seems that

these objects, continually perceived by me and constantly impressing themselves on my mind, have ended by borrowing from me something of my own conscious existence; like myself they have lived, and like myself they have grown old. This is not a mere illusion; for if today's impression were absolutely identical with that of yesterday, what difference would there be between perceiving and recognizing, between learning and remembering? Yet this difference escapes the attention of most of us; we shall hardly perceive it, unless we are warned of it and then carefully look into ourselves. The reason is that our outer and, so to speak, social life is more practically important to us than our inner and individual existence. We instinctively tend to solidify our impressions in order to express them in language. Hence we confuse the feeling itself, which is in a perpetual state of becoming, with its permanent external object, and especially with the word which expresses this object. In the same way as the fleeting duration of our ego is fixed by its projection in homogeneous space, our constantly changing impressions, wrapping themselves round the external object which is their cause, take on its definite outlines and its immobility.

Our simple sensations, taken in their natural state, are still more fleeting. Such and such a flavour, such and such a scent, pleased me when I was a child though I dislike them today. Yet I still give the same name to the sensation experienced, and I speak as if only my taste had changed, whilst the scent and the flavour have remained the same. Thus I again solidify the sensation; and when its changeableness becomes so obvious that I cannot help recognizing it, I abstract this changeableness to give it a name of its own and solidify it in the shape of a taste. But in reality there are neither identical sensations nor multiple tastes: for sensations and tastes seem to me to be *objects* as soon as I isolate and name them, and in the human soul there are only *processes*. What I ought to say is that every sensation is altered by repetition, and that it does not seem to me to change from day to day, it is because I perceive it through the object which is its cause, through the word which translates it. This influence of language on sensation is deeper than is usually thought. Not only does language make us believe in the unchangeableness of our sensations, but it will sometimes deceive us as to the nature of the sensation felt. Thus, when I partake of a dish that is supposed to be exquisite, the name which it bears, suggestive of the approval given to it, comes between my sensation and my

consciousness; I may believe that the flavour pleases me when a slight effort of attention would prove the contrary. In short, the word with well-defined outlines, the rough and ready word, which stores up the stable, common, and consequently impersonal element in the impressions of mankind, overwhelms or at least covers over the delicate and fugitive impressions of our individual consciousness. To maintain the struggle on equal terms, the latter ought to express themselves in precise words; but these words, as soon as they were formed, would turn against the sensation which gave birth to them, and, invented to show that the sensation is unstable, they would impose on it their own stability.

This overwhelming of the immediate consciousness is nowhere so striking as in the case of our feelings. A violent love or a deep melancholy takes possession of our soul: here we feel a thousand different elements which dissolve into and permeate one another without any precise outlines, without the least tendency to externalise themselves in relation to one another; hence their originality. We distort them as soon as we distinguish a numerical multiplicity in their confused mass: what will it be, then, when we set them out, isolated from one another, in this homogeneous medium which may be called either time or space, whichever you prefer? A moment ago each of them was borrowing an indefinable colour from its surroundings: now we have it colourless, and ready to accept a name. The feeling itself is a being which lives and develops and is therefore constantly changing; otherwise how could it gradually lead us to form a resolution? Our resolution would be immediately taken. But it lives because the duration in which it develops is a duration whose moments permeate one another. By separating these moments from each other, by spreading out time in space, we have caused this feeling to lose its life and its colour. Hence, we are now standing before our own shadow: we believe that we have analysed our feeling, while we have really replaced it by a juxtaposition of lifeless states which can be translated into words, and each of which constitutes the common element, the impersonal residue, of the impressions felt in a given case by the whole of society. And this is why we reason about these states and apply our simple logic to them: having set them up as genera by the mere fact of having isolated them from one another, we have prepared them for use in some future deduction. Now, if some bold novelist, tearing aside the cleverly woven curtain of our conventional ego, shows us under this appearance of

logic a fundamental absurdity, under this juxtaposition of simple states an infinite permeation of a thousand different impressions which have already ceased to exist the instant they are named, we commend him for having known us better than we knew ourselves. This is not the case, however, and the very fact that he spreads out our feeling in a homogeneous time, and expresses its elements by words, shows that he in his turn is only offering us its shadow: but he has arranged this shadow in such a way as to make us suspect the extraordinary and illogical nature of the object which projects it; he has made us reflect by giving outward expression to something of that contradiction, that interpenetration, which is the very essence of the elements expressed. Encouraged by him, we have put aside for an instant the veil which we interposed between our consciousness and ourselves. He has brought us back into our own presence.

We should experience the same sort of surprise if we strove to seize our ideas themselves in their natural state, as our consciousness would perceive them if it were no longer beset by space. This breaking up of the constituent elements of an idea, which issues in abstraction, is too convenient for us to do without it in ordinary life and even in philosophical discussion. But when we fancy that the parts thus artificially separated are the genuine threads with which the concrete idea was woven, when, substituting for the interpenetration of the real terms the juxtaposition of their symbols, we claim to make duration out of space, we unavoidably fall into the mistakes of associationism. We shall not insist on the latter point, which will be the subject of a thorough examination in the next chapter. Let it be enough to say that the impulsive zeal with which we take sides on certain questions shows how our intellect has its instincts – and what can an instinct of this kind be if not an impetus common to all our ideas, i.e. their very interpenetration? The beliefs to which we most strongly adhere are those of which we should find it most difficult to give an account, and the reasons by which we justify them are seldom those which have led us to adopt them. In a certain sense we have adopted them without any reason, for what makes them valuable in our eyes is that they match the colour of all our other ideas, and that from the very first we have seen in them something of ourselves. Hence they do not take in our minds that common-looking form which they will assume as soon as we try to give expression to them in words; and, although they bear the same name in other minds, they are by no means the

same thing. The fact is that each of them has the same kind of life as a cell in an organism: everything which affects the general state of the self affects it also. But while the cell occupies a definite point in the organism, an idea which is truly ours fills the whole of our self. Not all our ideas, however, are thus incorporated in the fluid mass of our conscious states. Many float on the surface, like dead leaves on the water of a pond: the mind, when it thinks them over and over again, finds them ever the same, as if they were external to it. Among these are the ideas which we receive ready made, and which remain in us without ever being properly assimilated, or again the ideas which we have omitted to cherish and which have withered in neglect. If, in proportion as we get away from the deeper strata of the self, our conscious states tend more and more to assume the form of a numerical multiplicity, and to spread out in a homogeneous space, it is just because these conscious states tend to become more and more lifeless, more and more impersonal. Hence we need not be surprised if only those ideas which least belong to us can be adequately expressed in words: only to these, as we shall see, does the associationist theory apply. External to one another, they keep up relations among themselves in which the inmost nature of each of them counts for nothing, relations which can therefore be classified. It may thus be said that they are associated by contiguity or for some logical reason. But if, digging below the surface of contact between the self and external objects, we penetrate into the depths of the organized and living intelligence, we shall witness the joining together or rather the blending of many ideas which, when once dissociated, seem to exclude one another as logically contradictory terms. The strangest dreams, in which two images overlie one another and show us at the same time two different persons, who yet make only one, will hardly give us an idea of the interweaving of concepts which goes on when we are awake. The imagination of the dreamer, cut off from the external world, imitates with mere images, and parodies in its own way, the process which constantly goes on with regard to ideas in the deeper regions of the intellectual life.

Thus may be verified, thus, too, will be illustrated by a further study of deep-seated psychic phenomena, the principle from which we started: conscious life displays two aspects according as we perceive it directly or by refraction through space. Considered in themselves the deep-seated conscious states have no relation to quantity, they

are pure quality; they intermingle in such a way that we cannot tell whether they are one or several, nor even examine them from this point of view without at once altering their nature. The duration which they thus create is a duration whose moments do not constitute a numerical multiplicity; to characterize these moments by saying that they encroach on one another would still be to distinguish them. If each of us lived a purely individual life, if there were neither society nor language, would our consciousness grasp the series of inner states in this unbroken form? Undoubtedly it would not quite succeed, because we should still retain the idea of a homogeneous space in which objects are sharply distinguished from one another, and because it is too convenient to set out in such a medium the somewhat cloudy states which first attract the attention of consciousness, in order to resolve them into simpler terms. But mark that the intuition of a homogeneous space is already a step towards social life. Probably animals do not picture to themselves, beside their sensations, as we do, an external world quite distinct from themselves, which is the common property of all conscious beings. Our tendency to form a clear picture of this externality of things and the homogeneity of their medium is the same as the impulse which leads us to live in common and to speak. But, in proportion as the conditions of social life are more completely realized, the current which carries our conscious states from within outwards is strengthened; little by little these states are made into objects or things; they break off not only from one another, but from ourselves. Henceforth we no longer perceive them except in the homogeneous medium in which we have set their image, and through the word which lends them its commonplace colour. Thus a second self is formed which obscures the first, a self whose existence is made up of distinct moments, whose states are separated from one another and easily expressed in words. I do not mean, here, to split up the personality, nor to bring back in another form the numerical multiplicity which I shut out at the beginning. It is the same self which perceives distinct states at first, and which, by afterwards concentrating its attention, will see these states melt into one another like the crystals of a snow-flake when touched for some time with the finger. And, in truth, for the sake of language, the self has everything to gain by not bringing back confusion where order reigns, and in not upsetting this ingenious arrangement of almost impersonal states by which it has ceased to form 'a kingdom within a kingdom.' An inner life

with well-distinguished moments and with clearly characterized states will answer better the requirements of social life. Indeed, a superficial psychology may be content with describing it without thereby falling into error, on condition, however, that it restricts itself to the study of what has taken place and leaves out what is going on. But if, passing from statics to dynamics, this psychology claims to reason about things in the making as it reasoned about things made, if it offers us the concrete and living self as an association of terms which are distinct from one another and are set side by side in a homogeneous medium, it will see difficulty after difficulty rising in its path. And these difficulties will multiply the greater the efforts it makes to overcome them, for all its efforts will only bring into clearer light the absurdity of the fundamental hypothesis by which it spreads out time in space and puts succession at the very centre of simultaneity. We shall see that the contradictions implied in the problems of causality, freedom, personality, spring from no other source, and that, if we wish to get rid of them, we have only to go back to the real and concrete self and give up its symbolical substitute.

Matter and Memory