***Time and Free Will* by Henri Bergson**

Chapter I – The Intensity of Psychic States

It is a common sense observation that “states of consciousness, sensations, feelings, passions, efforts, are capable of growth and diminution” (p.1). However, we don’t usually think about what this entails. In actual fact, it means that we imagine there are “differences of quantity between purely internal states.” (p.1) This apparently unproblematic assertion will turn out to be the source of many confusions.

When we talk about a number or a body being greater than another, we are thinking in terms of space, “and we call that space the greater which contains the other.” (p.2) This means we are essentially dealing with a relation of container to contained. But if we have such a relation, the quantity in question is “on this very account divisible, and thereby extended…” (p.3). Now, when we are talking about the intensity of psychic states, which do not have this container/contained relation (there is no sense, for example, in which we can say a more intense pain contains a lesser pain, as if we should have to move through the lesser to get to the greater), how can we then continue to talk of quantity and magnitude? And yet, we do. This leads Bergson to conclude that “we translate the intensive into the extensive, and that we compare two intensities, or at least express the comparison, by the confused intuition of a relation between two extensities.” (p.4)

Bergson considers two possibilities for how we do this. First, maybe the intensity of the sensation is merely a function of “the number and magnitude of the objective, and therefore measurable, causes which have given rise to it.” (p.4) The problem with this is that we seldom know the causes or the magnitudes of the causes of our psychic states, so we could never have deduced their intensity from them. Second, he suggests that maybe physical theories which reduce properties to “well defined movements of their ultimate parts” (p.6) might account for it. It is quite possible after all, that “the intensity of a sensation bears witness to a more or less considerable work accomplished in our organism” (pp.6-7), as, for instance, when disturbances in the molecules of the surrounding environment produce corresponding disturbances in the molecules of the brain. But, here we find the same problem; namely, “it is the sensation which is given to us in consciousness, and not this mechanical work… intensity then remains, at least apparently, a property of sensation.” (p.7)

Perhaps we can gain more traction on this problem by distinguishing different types of intensities, such as those belonging to feelings, sensations, and effort. To this end, Bergson looks in some detail at intensity as it applies to a range of conscious states. Starting with “pure” intensities, which contain no reference to an external cause or muscular contraction, he will find that intensity “is reducible here to a certain quality or shade which spreads over a more or less considerable mass of psychic states…” (p.8):

* Desire: Initially a feeble desire is felt to be isolated from the rest of your life. As it grows in intensity, however, to become a passion, “it permeates a larger number of psychic elements, tingeing them, so to speak, with its own colour: and lo! your outlook on the whole of your surroundings seems now to have changed radically.” (p.8) Although we often tend to think of a desire (and psychic phenomena in general) as extended, as though it takes up space within us, it would be more correct to say that “its image has altered the shade of a thousand perceptions or memories, and that in this sense it pervades them, although it does not itself come into view.” (p.9) Such a change is one of quality rather than magnitude. Instead of this dynamic and ambiguous notion, reflective consciousness prefers “clean cut distinctions, which are easily expressed in words, and in things with well-defined outlines, like those which are perceived in space. It will assume then that, everything else remaining identical, such and such a desire has gone up a scale of magnitudes, as though it were permissible still to speak of magnitude where there is neither multiplicity nor space!” (p.9)
* Hope: The intensity of hope lies in the way that the future “appears to us at the same time under a multitude of forms, equally attractive and equally possible.” (pp.9-10) It invests the future with “an infinity of possibilities” (p.10) meaning that when one possible future becomes realised, many others will have to be forfeited. Hence, “we find more charm in hope than in possession, in dreams than in reality.” (p10)
* Joy/Sadness: “Neither inner joy nor passion is an isolated inner state which at first occupies a corner of the soul and gradually spreads.” (p.10) Instead, it is at first something like a mental turning towards the future. Then, we notice a feeling of lightness in which “our movements no longer cost us the same effort.” (p.10) Finally, “in cases of extreme joy, our perceptions and memories become tinged with an indefinable quality, as with a kind of heat or light… Thus there are several characteristic forms of purely inward joy, all of which are successive stages corresponding to qualitative alterations in the whole of our psychic states.” (p.10) Something similar happens in sadness, which first involves a turn towards the past, and then “an impoverishment of our sensations and ideas…” (p.11) and the future appears stopped up. Finally, we have “an impression of crushing failure, the effect of which is that we aspire to nothingness…” (p.11)

Bergson next looks at aesthetic feelings:

* Gracefulness: At first, we perceive grace in the ease of movement. Something appears more graceful, the easier one movement prepares the way for following movements, such that we are able to foresee the latter. This is why jerky movements are lacking in grace; “each of them is self-sufficient and does not announce those which are to follow.” (p.12) Curves, on the other hand, are graceful because, “while a curved line changes its direction at every moment, every new direction is indicated in the preceding one.” (p.12) When music and rhythm are added to movements, they acquire more predictability, and therefore appear more graceful. This element of sympathy reaches its maximum when it finally suggests to us the idea of moral sympathy. These increasing intensities of aesthetic feeling reveal a qualitative progress that we nevertheless interpret as a change of magnitude “because we like simple thoughts and because our language is ill-suited to render the subtleties of psychological analysis.” (p.13)
* Beauty: Bergson first notes that “the object of art is to put to sleep the active or rather resistant powers of our personality, and thus to bring us into a state of perfect responsiveness, in which we realize the idea that is suggested to us and sympathize with the feeling that is expressed.” (p.14) In this it can be likened to hypnosis. This is how music works on us, “causing our attention to swing to and fro between fixed points…” (pp.14-5) Poetry also uses rhythm as it turns feelings into images, and those images into words, “but we should never realize these images so strongly without the regular movements of the rhythm by which our soul is lulled into self-forgetfulness…” (p.15) The plastic arts achieve the same effect by arresting life in a moment, making the movement appear as if fixed for ever, “absorbing our thought and our will in their own eternity.” (p.15) We see in architecture as well effects similar to rhythm. “The symmetry of form, the indefinite repetition of the same architectural motive, causes our faculty of perception to oscillate between the same and the same again, and gets rid of those customary incessant changes which in ordinary life bring us back without ceasing to the consciousness of our personality…” (pp.15-6)

So, art aims then at “impressing feelings on us rather than expressing them; it suggests them to us…” (p.16) and the important idea concerning the beautiful is that “the beautiful is no specific feeling, but that every feeling experienced by us will assume an aesthetic character, provided that it has been *suggested*, and not *caused*.” (p.17) It is not difficult to see the different phases the intensity of aesthetic beauty might take, and, as before, they “correspond less to variations of degree than to differences of state or of nature.” (p.17) However, in addition to intensity, beauty also possesses a depth. This is an emotional richness that conveys the experiences of the artist him or herself, and goes beyond the understanding. This is accomplished by choosing “among the outward signs of his emotions, those which our body is likely to imitate mechanically, though slightly, as soon as it perceives them, so as to transport us all at once into the indefinable psychological state which called them forth. Thus will be broken down the barrier interposed by time and space between his consciousness and ours: and the richer in ideas and the more pregnant with sensations and emotions is the feeling within whose limits the artist has brought us, the deeper and the higher shall we find the beauty thus expressed.” (p.18) Needless to say, the degrees of depth are changes in quality as well.

Last among the “pure” psychic states, we come to moral feelings:

* Pity: In this emotion, we imagine ourselves in the place of others and suffer their pain. This arouses repugnance, which can be transformed in the next stage into fear of the suffering. After this, we feel the need to help our fellow human being, hence the transition to sympathy. Finally, Bergson thinks the last stage in pity is the desire for self-abasement, as we desire to take over the suffering of the pitiful.

Turning next to those feelings which seem most completely “presented immediately to consciousness under the form of quantity or at least of magnitude…” (p.20), we look at muscular effort. We imagine effort to be something like a psychic force deep within us awaiting an outlet, which the will controls. This leads us to think of effort in terms of intensive magnitudes. However, Bergson contends that the more effort we feel ourselves to exert, “the greater is the number of muscles which contract in sympathy with it… [therefore] the apparent consciousness of a greater intensity of effort at a given point of the organism is reducible, in reality, to the perception of a larger surface of the body being affected.” (p.24) He gives the example of pressing one’s lips together more and more tightly. What feels like a single sensation in the lips gradually growing in magnitude is actually more and more muscle groups being activated in conjunction with the effort expended. “You felt this gradual encroachment, this increase of the surface affected, which is in truth a change of quantity; but, as your attention was concentrated on your closed lips, you localized the increase there and you made the psychic force there expended into a magnitude, although it possessed no extensity.” (p.25) At some point, the effort directed to the lips will result in fatigue and eventually pain in certain parts of the body. In conclusion then, our consciousness of intensity in muscular effort is brought about by the perception of a “greater number of peripheral sensations, and of a qualitative change occurring in some of them.” (p.26) In other words, there is no intensive magnitude in effort itself, but we are led to believe there is because we conflate psychic effort with the increasing number of muscular contractions taking place, which do appear to consciousness as magnitudes; but extensive, not intensive, ones.

Next, Bergson looks at feelings intermediate between superficial effort and deep-seated feelings:

* Attention: There is of course a purely psychic factor in attention “even if it be nothing more than the exclusion by the will of all ideas foreign to the one with which the subject wishes to occupy himself.” (p.28) However, there is also a physiological dimension to attention which is neither its cause nor its result. Instead, it is a part of it. Bergson talks about the tension and contraction of the scalp involved in trying to remember something. It is this which creates the sense of intensity in attention, and it leads to the same conclusion we saw above with muscular contractions.
* Psychic tension: In this class, Bergson places extreme emotions, such as acute desire, uncontrolled anger, passionate love, violent hatred, and shame. Like attention, these states reduce to muscular tension co-ordinated by an idea, however, unlike attention, in which “it is the more or less reflective idea of knowing; in the case of emotion, [it is] the unreflective idea of acting.” (p.28) Bergson refers to a nice example from Darwin where he describes the physical symptoms of rage. He resists going as far as William James, however, who completely reduces rage to its physiology, maintaining that “there will always be an irreducible physic element in anger… which gives a common direction to so many diverse movements.” (p.29)

As these passionate emotional states lose their violence and gain in depth, “the peripheral sensations will give place to inner states; it will be no longer our outward movements but our ideas, our memories, our states of consciousness of every description, which will turn in larger or smaller numbers in a definite direction.” (p.31) This will bring us back to the intensity of deep-seated emotion we looked at first.

Finally, we come to sensations which are aroused by external conditions. We will look at affective sensations (pleasure and pain) and then representative sensations (concerning the five senses).

* Pleasure/Pain: First, Bergson rejects the idea that the appearance of magnitude in the affective sensations could have been transmitted from the magnitude of the external cause because “…there is nothing in common… between superposable magnitudes such as, for example, vibration-amplitudes, and sensations which do not occupy space.” (pp.32-3) Pleasure and pain are conscious states, whereas the magnitude contained in physical causes is precisely non-conscious.

Bergson then raises a secondary hypothesis concerning sensation. Might pleasure and pain, instead of simply reflecting events that have already happened in the past, indicate what is going to happen in the future? Indeed, he argues we “rise by imperceptible stages from automatic to free movements, and that the latter differ from the former principally in introducing an affective sensation between the external action which occasions them and the volitional reaction which ensues.” (p.33) The point of pleasure and pain, then; rather than telling us what has happened, is to “…invite us to choose between this automatic reaction and other possible movements… The intensity of affective sensations might thus be nothing more than our consciousness of the involuntary movements which are being begun and outlined, so to speak, within these states, and which would have gone on in their own way if nature had made us automata instead of conscious beings.” (p.35) He gives another example from Darwin, in which he describes pain which becomes more acute resulting in more of the physical organism being affected, meaning that, as with muscular effort, “we estimate the intensity of a pain by the larger or smaller part of the organism which takes interest in it.” (p.35) Importantly for Bergson, the pain here (the increasing parts of the organism affected) serves not to tell us what has happened, but to urge us more or less emphatically to different actions in order to escape from it.

The same can be said of pleasure, and here Bergson makes the crucial insight that when we compare different pleasures all we mean by a greater pleasure is the one that is preferred. “And what can our preference be, except a certain disposition of our organs, the effect of which is that, when two pleasures are offered simultaneously to our mind, our body inclines towards one of them?” (p.38) Indeed, it is true that our bodies spontaneously turn toward things we find more pleasurable. Without this physical manifestation of pleasure, we would have no way of understanding it as a magnitude, and comparing the intensity of different pleasures.

* Representative Sensations: It is undoubtedly true that “many representative sensations possess an affective character, and thus call forth a reaction on our part which we take into account in estimating their intensity.” (p.39) Bergson talks about bright light which is not pain, but is similar in being dazzling. The same holds with bitter flavours which are, in truth, differences in quality which we perceive as quantity “because of their affective character and the more or less pronounced movements of reaction, pleasure or repugnance, which they suggest to us.” (p.39) Even sensations more properly representative (and less affective) engage our whole organism. In order to perceive a distant sound, we have to strain our faculties, and this extra effort demanded is what allows us to interpret the sound with a feeble magnitude. Another example Bergson gives is the way we estimate a sensation’s importance “by comparing it with another which it drives away, or by taking account of the persistence with which it returns. Thus the ticking of a watch seems louder at night because it easily monopolizes a consciousness almost empty of sensations and ideas. Foreigners talking to one another in a language which we do not understand seem to us to speak very loudly, because their words no longer call up any ideas in our mind, and thus break in upon a kind of intellectual silence and monopolize our attention…” (pp.40-1) Bergson even goes so far (based on experimental evidence) to claim that “every sensation is accompanied by an increase in muscular force which can be measured by the dynamometer…” (p.41)

However, when dealing with a truly representative sensation (i.e. one that has lost its affective character), “we perceive the external object which is its cause, or if we do not now perceive it, we have perceived it, and we think of it. Now, this cause is extensive and therefore measurable: a constant experience… shows us a definite shade of sensation corresponding to a definite amount of stimulation. We thus associate the idea of a certain quantity of cause with a certain quality of effect; and finally, as happens in the case of every acquired perception, we transfer the idea into the sensation, the quantity of the cause into the quality of the effect. At this very moment the intensity, which was nothing but a certain shade or quality of the sensation, becomes a magnitude.” (p.42)

*Sound*: We thus interpret sound as a quantity because we know from experience how much effort would be required to produce a sound with a similar loudness. The same holds for pitch. Further, we represent pitch by a vertical line, rather than a horizontal one, because “high notes seem to us to produce some sort of resonance in the head and the deep notes in the thorax…” (p.45). This is a good example of the way Bergson brings human experience and perception back to the body. Of course, once the physicist defined pitch by the number of vibrations in a given time, we immediately lost sight of this and “no longer hesitate to declare that our ear perceived differences of quantity directly.” (p.46)

*Heat/Cold*: Heat and cold become affective quite quickly which accounts for their apparent magnitude, but in addition to this, we call one “heat more intense because we have experienced this same change a thousand times when we approached nearer and nearer a source of heat, or when a growing surface of our body was affected by it.” (p.47) In truth, a “more intense heat is really another kind of heat.” (p.47)

*Pressure/Weight*: When pressure on a part of your body feels like it is growing stronger and stronger (growing in intensity), what is really happening is that you are applying a “more and more extended, effort of resistance which you oppose to the external pressure.” (p.48) This principle can be seen most easily regarding weight. When you attempt to lift a basket which is empty but you have been told is heavy, you will over-exert and lose your balance. “It is chiefly by the number and nature of these sympathetic efforts, which take place at different points of the organism, that you measure the sensation of weight at a given point; and this sensation would be nothing more than a quality if you did not thus introduce into it the idea of a magnitude.” (p.49)

*Light*: Is the intensity of light a quantity or quality? There are a number of different factors which Bergson identifies here that go into our determination of the apparent magnitude of a light source. Experience has shown us that when we have difficulty in discerning outlines and details, the light is at a distance or very weak. It has also forged connections for us between the number of light sources and the way objects stand out or the shadows they cast. Experience has also taught us how to interpret affective sensations in relation to the intensity of lighting (e.g. light that is dazzling belongs to a higher intensity cause). Most significant though, are the changes of hue that occur under brighter or dimmer light. “As the luminous source is brought nearer, violet takes a bluish tinge, green tends to become a whitish yellow, and red a brilliant yellow… [however] the majority of men do not perceive [the changes], unless they pay attention to them or are warned of them. Having made up our mind, once for all, to interpret changes of quality as changes of quantity, we begin by asserting that every object has its own peculiar colour, definite and invariable. And when the hue of objects tends to become yellow or blue, instead of saying that we see their colour change under the influence of an increase or diminution of light, we assert that the colour remains the same but that our sensation of luminous intensity increases or diminishes. We thus substitute once more, for the qualitative impression received by our consciousness, the quantitative interpretation given by our understanding.” (p.51) Bergson also gives another example involving white paper which becomes darker (i.e. changes colour) when a light source is dimmed, but instead of noting this qualitative change, we say the paper remains white, and what has changed is the intensity of the light source.

In the final section of this first chapter, Bergson considers *psychophysics*, which attempts to measure, and reduce to an equation, the “amount of sensation” perceived between a sensation S and a new sensation S’. The problem here is that S and S’ are simple states, which means there is, by definition, no perceived interval between them; “…what, then, can the transition from the first state to the second be, if not a mere act of your thought, which, arbitrarily and for the sake of argument, assimilates a succession of two states to a differentiation of two magnitudes?” (p.66) Psychophysics gives the transition a name, ΔS, thereby making it appear to be something real, and then attributes a quantity to it, despite the fact that neither of these things are legitimate.

In fact, what psychophysics tries to do is precisely what we all do in common sense. “As speech dominates over thought, as external objects, which are common to us all, are more important to us than the subjective states through which each of us passes, we have everything to gain by objectifying these states, by introducing into them, to the largest possible extent, the representation of their external cause. And the more our knowledge increases, the more we perceive the extensive behind the intensive, quantity behind quality, the more also we tend to thrust the former into the latter, and to treat our sensations as magnitudes.” (p.70)

Nor will it do to admit that there might be two kinds of quantity, one intensive (admitting of “more or less”), and one extensive (capable of being measured), because “as soon as a thing is acknowledged to be capable of increase and decrease, it seems natural to ask by how much it decreases or by how much it increases… Either, then, sensation is pure quality, or, if it is a magnitude, we ought to try to measure it.” (p.72)

To sum up the preceding, Bergson has identified in the notion of intensity two aspects. If we study states of consciousness which represent an external cause, “the perception of intensity consists in a certain estimate of the magnitude of the cause by means of a certain quality in the effect…” (p.72) This is an *acquired perception*. On the other hand, states of consciousness which are self-sufficient appear to be more or less intense according to “the larger or smaller number of simple psychic phenomena which we conjecture to be involved in the fundamental state…” (p.73) This is a *confused perception*.

Chapter II – The Multiplicity of Conscious States and the Idea of Duration

Starting this chapter with an analysis of number, Bergson notes that number can be defined as “a collection of unity, or, speaking more exactly, as the synthesis of the one and the many.” (p.75) Every number is a unity in the sense that we can represent it to ourselves by a simple intuition, but is also a multiplicity because this unity is necessarily built from a sum of other smaller numbers. But Bergson wants to draw our attention to another crucial point implied in number; space.

The individual units that make up the multiplicity in our unity of number are all absolutely alike, but “they must be somehow distinct from one another, since otherwise they would merge into a single unit.” (p.77) There are only two ways we can differentiate these numbers; in succession (time) or in space. “Either we include them all in the same image, and it follows as a necessary consequence that we place them side by side in an ideal space, or else we repeat fifty times in succession the image of a single one…” (p.77) However, if we place each unit before us in succession, we only ever have before us a single unit. “In order that the number should go on increasing in proportion as we advance, we must retain the successive images and set them alongside each of the new units which we picture to ourselves: now, it is in space that such a juxtaposition takes place and not in pure duration.” (p.77) Of course, we don’t literally need to imagine individual units in space every time we think of a number. This is precisely what an *abstract* number is. “But as soon as we wish to picture *number* to ourselves, and not merely figures or words, we are compelled to have recourse to an extended image… every clear idea of number implies a visual image in space.” (pp.78-9)

So, we have said every number is a collection of units, and is itself a unit; but, in saying this, are we using the word ‘unit’ in the same sense in both cases here? It seems that we aren’t; i.e. that “there are two kinds of units, the one ultimate, out of which a number is formed by a process of addition, and the other provisional, the number so formed, which is multiple in itself, and owes its unity to the simplicity of the act by which the mind perceives it.” (p.80) Bergson will deny this; asserting instead that “all unity is the unity of a simple act of the mind, and that, as this is an act of unification, there must be some multiplicity for it to unify.” (p.80) Take the example of 3, which is the sum of 1+1+1. We can also take each 1 and subdivide this by halves, or quarters, or eighths, and then subdivide these smaller units, *ad infinitum*.

This also demonstrates the *discontinuity* inherent in number. Every number is constituted by “elements which are provisionally indivisible, and it is always by jerks, by sudden jumps, so to speak, that we advance from one to the other.” (p.82) When we form the idea of number, we conceive of these elements as mathematical points separated by an interval of space, hence their discontinuity. However, “these mathematical points have a tendency to develop into lines in proportion as our attention is diverted from them, as if they were trying to reunite with one another. And when we look at number in its finished state, this union is an accomplished fact: the points have become lines, the divisions have been blotted out, the whole displays all the characteristics of continuity.” (p.83)

So, while we earlier denied that there were two kinds of unity, one ultimate and one provisional, it turns out that we must still nevertheless “distinguish between the unity which we think of and the unity which we set up as an object after having thought of it… [as we just saw] between number in process of formation and number once formed. The unit is irreducible while we are thinking it and number is discontinuous while we are building it up: but, as soon as we consider number in its finished state, we objectify it, and it then appears to be divisible to an unlimited extent.” (p.83)

This brings us to the difference between *subjective* and *objective*. Subjective is “what seems to be completely and adequately known” (p.83); i.e. what appears as irreducible, while objective is “what is known in such a way that a constantly increasing number of new impressions could be substituted for the idea which we actually have of it.” (pp.83-4) In the idea of number then, what “properly belongs to the mind is the indivisible process by which it concentrates attention successively on the different parts of a given space; but the parts which have thus been isolated remain in order to join with the others, and, once the addition is made, they may be broken up in any way whatever. They are therefore parts of space, and space is, accordingly, the material with which the mind builds up number, the medium in which the mind places it.” (p.84)

Summary: Number must be conceived as a juxtaposition in space based “on the fact that all addition implies a multiplicity of parts simultaneously perceived.” (p.85)

So, number is conceived of as a juxtaposition in space. However, not everything admits of being counted in the same way; indeed, there are two different kinds of multiplicity. Material objects are easily and clearly localised and counted in space. Psychic states, however, lacking physicality, can only be counted through some process of symbolical representation. Bergson considers the sound of a bell ringing. “The sounds of the bell certainly reach me one after the other; but one of two alternatives must be true. Either I retain each of these successive sensations in order to combine it with the others and form a group which reminds me of an air or rhythm which I know: in that case I do not *count* the sounds, I limit myself to gathering, so to speak, the qualitative impression produced by the whole series. Or else I intend explicitly to count them, and then I shall have to separate them, and this separation must take place within some homogeneous medium in which the sounds, stripped of their qualities, and in a manner emptied, leave traces of their presence which are absolutely alike.” (pp.86-7) This medium cannot be time because “a moment of time… cannot persist in order to be added to others. If the sounds are separated, they must leave empty intervals between them. If we count them, the intervals must remain though the sounds disappear: how could these intervals remain, if they were pure duration and not space? It is in space, therefore, that the operation takes place.” (p.87)

Summary: There are “two kinds of multiplicity: that of material objects, to which the conception of number is immediately applicable; and the multiplicity of states of consciousness, which cannot be regarded as numerical without the help of some symbolical representation, in which a necessary element is *space*.” (p.87)

What, then, is space? Bergson begins by outlining two propositions. First, the idea that extensity is an aspect of physical qualities, or a quality of quality, which would make space an abstraction. Second is the idea that “qualities are essentially unextended, space coming in as a later addition, but being self-sufficient and existing without them.” (p.92) This would make space a reality as solid as sensation, just of a different order. It is this second hypothesis Kant explicated in his Transcendental Aesthetic, and which continued to hold sway for idealists in Bergson’s time. Empiricists, on the other hand, “ask how these contents, which are taken out of space by our thought, manage to get [it] back again.” (p.93) They disregard the mind, and prefer to believe that 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?” (p.94) We thus have two hypotheses here, that space is inextensive (idealism) and that it is extensive (empiricism), and either way, according to Bergson, we require an act of the mind to give rise to it.

What exactly is this act? It “consists essentially in the intuition, or rather the conception, of an empty homogeneous medium… space is what enables us to distinguish a number of identical and simultaneous sensations from one another; it is thus a principle of differentiation, and consequently it is a reality with no quality.” (pp.94-5) Now, this isn’t to discount our original perception of space, which is thoroughly heterogeneous; that is, marked by qualitative differences; “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 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.” (p.97) This ability to conceive of space as a homogeneous medium is not an abstract one though. Indeed, since “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.” (p.97)

This all prompts Bergson to draw a contrast between the perception of extensity and the conception of space. And it is only in the more highly intelligent animals that we find this latter. As evidence of this, Bergson points to 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.” (p.96) This indicates that space may not be so homogeneous for animals, and whether the reason for this amounts to sight, smell, or the perception of magnetic fields, different directions may appear for animals with their own peculiar quality, or shade.

Summary: We have identified “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.” (p.97)

If space is the homogeneous, then every homogeneous medium must 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.” (p.98) Despite this, we often consider time to be an unbounded, homogeneous medium different from space. The difference consisting in the fact that the contents of time follow one another, while those of space co-exist. However, “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.” (p.98) Externality is the defining feature of things which occupy space, and since states of consciousness are not essentially external to one another, they can only become so by being spread out in time, regarded as space.

It is here that Bergson defines time as duration. “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 states 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.” (p.100) What we have here, then, in duration, is a “succession without distinction…” and 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.” (p.101)

The whole problem then, as Bergson sees it, is that we take our states of consciousness, which have no share of space or externality, and slot them into a time which has been spatialised; “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.” (p.101) All talk of *order* in succession, can only come about as the result of distinguishing terms and comparing the places 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.” (p.102) In general, whenever the least homogeneity is attributed to duration, space has been surreptitiously introduced.

Despite all of this, it certainly seems as if we count successive moments of duration, and that time is a measurable magnitude, like space. What is happening here? Imagine a pendulum swinging back and forth sixty times. In the first place, I can picture these sixty oscillations all at once by a single mental perception. If I do this, I will exclude any sense of succession, getting something like sixty points on a fixed line my mind can take in at a single gaze. Alternatively, I can picture these sixty oscillations in succession, but restrict myself to the physical (i.e. the way they appear in space), meaning that “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…” (p.105), in which case I again lose any trace of succession, this time because I have locked myself into the present. Finally, I could take the last approach but, instead of isolating myself in the present moment, “retain the recollection of the preceding oscillation together with the image of the present oscillation…” (p.105) In this case, I either “set the two images side by side” (p.105), which would throw me back into the spatiality of the first scenario, 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.” (p.105) Pure duration, then, cannot be measured, and as soon as we try to do so, we end up unwittingly replacing it by space. This means that it falls into the same category as intensity, which, we saw in the first chapter was not a quantity, and therefore incapable of expression as a magnitude.

Yet some will still say that the time of the astronomer and physicist, “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.” (p.107) What of this claim? When we follow the movements of the hand of a clock, we think we are measuring duration, but what we are really doing is counting simultaneities. Why? “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.” (p.108) If we remove the ego, or conscious observer, “there will never be more than a single oscillation, and indeed only a single position, of the pendulum, and hence no duration.” (p.108) Removal of the pendulum will leave us with nothing “but the heterogeneous duration of the ego, without moments external to one another, without relation to number.” (p.108)

What creates the illusion that time is a quantity, then, is a kind of exchange that takes place between the internal and the external. Each of the successive phases of our conscious life (which, in truth, interpenetrate each other) correspond to the different oscillations of the pendulum, and since these oscillations are sharply distinguished from each other (because there is only ever one oscillation present), we unwittingly superimpose this external separation onto our internal conscious states. The result is that “…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.” (p.109) At the same time though, our consciousness organises the series of oscillations of the pendulum into a whole (thanks to memory), creating “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.” (pp.109-10) So, there is a kind of double effect created here in the meeting of consciousness and external reality. Conscious states, which succeed each other in pure duration, are affected by external things so that they appear to pass through a duration which is a homogeneous (i.e. spatial) medium, and external things, which are pure externality, are affected by consciousness so that they appear to move through a time which is a homogeneous (i.e. spatial) medium. The interplay 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.” (p.110)

Bergson now addresses motion, which turns out to be amenable to a similar distinction. There are two aspects to motion; the motion of the moving body itself (a *process*), and the space through which the body progresses (the *positions*). The positions of the moving body really do occupy space, but “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.” (p.111) Consciousness is able to be aware of more than mere momentary positions because it keeps each of them in mind and synthesises them. It doesn’t carry out this synthesis by setting out the “same positions in a homogeneous medium, for a fresh synthesis would be necessary to connect the positions with one another, and so on indefinitely.” (p.111) The reason for this is that a spatial synthesis doesn’t genuinely synthesise the positions into a living, breathing whole; rather, each position is merely laid out side by side externally, separate from each other. The only synthesis that would work here is one that is “qualitative [or, equally, an intensity], a gradual organization of our successive sensations, a unity resembling that of a phrase in a melody.” (p.111)

When we attribute to motion extensity, what we are, in effect, doing is solidifying it into an object, and since it is possible to divide an *object* (but not an *act*), we are then misled into believing it is the motion itself which is divisible, rather than this act we have projected into space. As Bergson notes, localising a progress in space in this way amounts to “asserting that, even outside consciousness, the past co-exists along with the present!” (p.112)

It is precisely in this confusion of motion and space that the paradoxes of the Eleatics arise. Bergson considers Zeno’s paradox concerning Achilles and the tortoise. As he notes, “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.” (pp.112-3) The paradox only arises because Zeno spatialises motion at the beginning, essentially affixing an indivisible *process* onto a divisible *object*. Once this is achieved, the properties of the latter constrain those of the former, and since each interval in space is infinitely divisible, motion (each phase of which has been grafted onto one of those intervals in space) also ends up infinitely divisible, and therefore impossible to complete. In reality however, Achilles will ultimately end up outstripping the tortoise to which he generously gave a head start 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…” (p.113)

Turning to science, we see that it “cannot deal with time and motion except on condition of first eliminating the essential and qualitative element – of time, duration, and of motion, mobility.” (p.115) When a physicist talks of duration, they “…note the exact moment at which the motion begins, i.e. the coincidence of an external change with one of our psychic states… [then] note the moment at which the motion ends, that is to say, another simultaneity; finally… [they] 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.” (pp.115-6) This is hardly surprising because “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.” (p.116)

Bergson has an interesting thought experiment next to ‘prove’ that science is incapable of dealing with duration. If everything in the universe were to suddenly double in speed; while, for consciousness, there would be a noticeable, *qualitative* change (the days and nights would be shorter, clouds would move faster, etc.), our physics formulae would not need altering in the slightest because “the same number of simultaneities would go on taking place in space.” (p.116) The reason for this is that there are no absolute quantities in physics; every symbol (F, M, etc.) is in fact a relation to another symbol or group of symbols. It is this interrelatedness that would make physics formulae impervious to a sudden doubling in speed of all natural bodies.

That duration and motion lie outside science can also be ascertained from the mere fact 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.” (p.119) Mechanics can reduce the size of the intervals (which is where motion and duration happen), making measurements ever closer to each other, but “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…” (p.120)

Summary: Space is homogeneous. Objects in space form a discrete multiplicity. Every discrete multiplicity only arises through a process of unfolding in space. There is neither duration nor succession in space; each so-called successive state in the external world exists alone, and multiplicity is real only for a consciousness that can first retain these states and set them side by side. If it retains them, the states of the external world give rise to states of consciousness which permeate one another, organise themselves into a whole, and bind the past to the present. If, on the other hand, it externalises them, it perceives them as a discrete multiplicity; i.e. setting them out in a line in space. The space used for this is called homogeneous time.

This means that what we actually have here are two kinds of multiplicity; the one qualitative and relating to states of consciousness in their original purity, the other quantitative and derived from the first, involving projecting the states into a spatial medium. We have a multiplicity of the first type when consciousness makes no effort to count the qualities, or even distinguish them as several. This yields multiplicity without quantity. We have the second type when we are dealing with “a multiplicity of terms which are counted or which are conceived as capable of being counted; but we think then of the possibility of externalizing them in relation to one another, we set them out in space.” (p.122)

We have a natural tendency to portray our psychic lives (originally lived in duration) to ourselves as set out in homogeneous time. The reason is the same as we saw regarding our tendency to confuse motion with space. We note the discrete multiplicity belonging to different states in the material world and affix our psychic states to them, making the latter conform to the rules that bind the former. As soon as we do this, we fundamentally change the nature of our psychic states and end up misleading ourselves as to their true nature. As Bergson says, “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 [i.e. the one we project into the homogeneous medium of time], the two seem to *endure* in the same way… 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.” (pp.125-6)

That we reduce duration to a counterfeit spatial phenomenon through a comparison with an external world of objects is demonstrated when we dream, “for sleep… 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 instinct, of committing gross errors, but also of acting at times with extraordinary skill.” (pp.126-7)

But we don’t need to dream to experience this. Even in the waking state, we can “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.” (p.127) Bergson gives an example of this in hearing a clock chiming in the background. Not paying explicit attention to it, he doesn’t count the strokes, although he hears them. After a few have passed, he focuses on them and attempts to recall how many have passed. “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.” (p.127) To reconstruct how many strokes had passed, he simply needs to make one stroke, then another, until a certain ‘quality’ of the whole matches what he had heard the first time. His consciousness “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.” (pp.127-8)

With this analysis, we have thus found “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.” (p.128) Nevertheless, we seldom see this deeper, more original self. “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.” (p.128)

In order to recover this fundamental self then, we must undertake a vigorous effort to “isolate the fluid inner states from their image, first refracted, then solidified in homogeneous space.” (p.129) We have, in fact, uncovered two aspects which our perceptions, sensations, emotions, and ideas occur under: “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.” (p.129)

Our perceptions of our environment are constantly changing, but we freeze them into unchanging objects. Consider the path you take to work every day. It always looks the same to you, but, in truth, every day, the perceptions you have of it are completely different. This difference escapes most of us because “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.” (p.130)

Our sensations are even more fleeting. Consider a flavour which I liked as a child but dislike now. “Yet I still give the same name to the sensation experienced, and I speak as if only my taste had changed, whist the scent and the flavour have remained the same. Thus I again solidify the sensation…” (p.131) We make the flavour into an *object* by isolating and naming it, when in truth, flavour, as a conscious state, is nothing but a *process*. “What I ought to say is that every sensation is altered by repetition, and that if 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.” (p.131)

Concerning any single feeling, a passionate love or deep melancholy; “here we feel a thousand different elements which dissolve into and permeate one another without any precise outlines, without the least tendency to externalize themselves in relation to one another; hence their originality. We distort them as soon as we distinguish a numerical multiplicity in their confused mass… 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… 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… 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…” (pp.132-3)

The same is true even with that seemingly most rarefied and pure of all conscious activity; ideas. Bergson talks about the beliefs to which we most strongly adhere, being the ones to which we 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.” (p.135) In other words, our ideas aren’t discrete objects separate from each other; rather, they each pervade our entire being in its entirety, and to change any one of them is to change the very person we are. “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.” (pp.135-6)

So, we have a conscious life, a self, with no relation to quantity; one whose conscious states are pure quality and “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.” (p.137) We also have an intuition of a homogeneous space external to us, in which objects are sharply distinguished from one another. This marks the first step towards social life, and is probably something most animals lack. As we lose ourselves in this impulse though, “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 whose existence is made up of distinct moments, whose states are separated from one another and easily expressed in words.” (p.138) This is not necessarily bad because such an inner life is better suited to the requirements of social life. Psychology can find utility here as long as 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.” (p.139) It is one of these difficulties; freewill, that Bergson will address in the final chapter.

Chapter III – The Organisation of Conscious States / Free Will

At the outset of this chapter, Bergson identifies two arguments for determinism. First, “it is asserted that our actions are necessitated by our feelings, our ideas, and the whole preceding series of our conscious states…” (p.142). Secondly, “…freedom is denounced as being incompatible with the fundamental properties of matter, and in particular with the principle of the conservation of energy.” (p.142)

His plan of attack is to show that the second argument is reducible to the first “and that all determinism, even physical determinism, involves a psychological hypothesis…” (p.142) He will then show that psychological determinism rests on an “inaccurate conception of the multiplicity of conscious states, or rather of duration.” (p.143) This will result in a self “whose activity cannot be compared to that of any other force.” (p.143)

Turning to physical theories of matter first, Bergson notes that even “if we assumed that the position, the direction and the velocity of each atom of cerebral matter are determined at every moment of time, it would not at all follow that our psychic life is subject to the same necessity. For we should first have to prove that a strictly determined psychic state corresponds to a definite cerebral state, and the proof of this is still to be given.” (p.146) So, while it is undoubtedly true that certain physical stimuli deterministically produce certain psychic states (Bergson’s example is the vibration of the eardrum leading to the hearing of a certain note); first, he notes that “nobody has ever contended that we were free, under given conditions, to hear any note or perceive any colour we liked” (p.146), but second, and more importantly, what *hasn’t* been demonstrated is that molecular movements in the brain *cause* psychic states. Indeed, we see this in the modern day use of the word ‘emergence,’ which does nothing except cover over our ignorance of how, or more pertinently for Bergson, *whether*, physical goings-on in the brain can result in non-physical conscious states. Indeed, it is simply assumed they do, but this is to “settle *a priori* the problem of freedom.” (p.147) As Bergson notes, “we do not prove and we never shall prove by any reasoning that the psychic fact is fatally determined by the molecular movement. For in a movement we may find the reason of another movement, but not the reason of a conscious state: only observation can prove that the later accompanies the former.” (p.148) Bergson dismisses epiphenomenalism by turning this belief against the determinist. If, as it is claimed, “molecular movement can create sensation out of a zero of consciousness, why should not consciousness in its turn create movement either out of a zero of kinetic and potential energy, or by making use of this energy in its own way?” (p.152) Indeed, it is no more outrageous to claim that consciousness influences matter than it is to claim that matter gives rise to consciousness, even of an epiphenomenal type.

Bergson then considers the principle of the conservation of energy. Specifically, he wants to know whether this principle can legitimately be extended to all bodies in nature; i.e. made into a universal law, or whether presuming this also involves some psychological theory. The basic idea here is that Bergson isn’t disputing the principle of the conservation of energy; he’s merely wondering about its limits; specifically, whether it applies to consciousness. To this end, he makes the following point; “the law of the conservation of energy can only be intelligibly applied to a system of which the points, after moving, can return to their former positions. This return is at least conceived of as possible, and it is supposed that under these conditions nothing would be changed in the original state of the system as a whole or of its elements. In short, time cannot bite into it… But this is not the case in the realm of life… a turning backwards is almost meaningless in the sphere of conscious states. A sensation, by the mere fact of being prolonged, is altered to the point of becoming unbearable. The same does not here remain the same, but is reinforced and swollen by the whole of its past. In short, while the material point, as mechanics understands it, remains in an eternal present, the past is a reality perhaps for living bodies, and certainly for conscious beings. While past time is neither a gain nor a loss for a system assumed to be conservative, it may be a gain for the living being, and it is indisputably one for the conscious being.” (pp.152-3)

We ought to break this down. The principle only holds in a system which is reversible. Why would this be the case? Well, in a system in which energy were conserved, it would be impossible that anything could be added to the members of the system which couldn’t be reversed. If energy were conserved, the addition of such a thing could only be something which wasn’t in the system in the first place (if it were already in the system, there would be no reason it *wouldn’t* be reversible); hence, it would be a violation of the principle. It turns out that there is such a thing in conscious beings; namely, experience. As Merleau-Ponty will later say, a person who has seen a Van Gogh painting, even if they can’t recall it, will never be the same as the person they were before seeing the painting. That person’s aesthetic experience, from that point on, will forever be that of a person who has seen Van Gogh’s paintings.

But, you might object that, if the determinist is right, and everything reduces to the position and momentum of atoms, it *would* be possible to reverse experience. Wind the clock back; neurotransmitters flow backwards, newly-formed neural pathways shrink, neurons return to previous states, etc., and lo and behold, experiences disappear. But this isn’t an application of the principle of the conservation of energy; it’s a flight of fancy involving the reversal of time itself. What the principle says, is, if the position of every atom in the brain returned to the position they occupied one hour ago, the consciousness of that brain would be the same as it had been at that time; i.e. it would be as if you had never seen that Van Gogh you saw twenty minutes ago. However, it is precisely this claim that Bergson is arguing is meaningless. To make this claim; i.e. that the conservation of energy is a universal law applying to conscious states in the same way it applies to physical particles, is actually to make a psychological mistake. What mistake? “As we are not accustomed to observe ourselves directly, but perceive ourselves through forms borrowed from the external world, we are led to believe that real duration, the duration lived by consciousness, is the same as the duration which glides over the inert atoms without penetrating and altering them. Hence it is that we do not see any absurdity in putting things back in their place after a lapse of time, in supposing the same motives acting afresh on the same persons, and in concluding that these causes would again produce the same effect.” (p.154) In effect, the determinist hypothesis is secured only by misrepresenting the nature of consciousness in such a way that that concrete duration we discovered in the second chapter is mistaken for abstract time, or, to say the same thing, the determinist hypothesis is *a priori* presupposed from the outset. So, “so-called physical determinism is reducible at bottom to a psychological determinism…” (p.155), and it is to this that Bergson now turns.

Psychological determinism “implies an associationist conception of mind. The existing state of consciousness is first thought of as necessitated by the preceding states, but it is soon realized that this cannot be a geometrical necessity… For between successive conscious states there exists a difference of quality [which we saw in the first chapter] which will always frustrate any attempt to deduce any one of them *a priori* from its predecessors. So experience is appealed to, with the object of showing that the transition from one psychic state to another can always be explained by some simple reason…” (pp.155-6) In other words, the lack of continuity between conscious states means that there is no direct causal connection between them, so experience provides the evidence for the causal link. Bergson has no problem with this latter thesis, acknowledging that “there always is some relation between the existing state of consciousness and any new state to which consciousness passes.” (p.156) The question though, is, is this relation between the two states sufficient to be the necessitating cause of the new one?

Associationist determinism portrays “the self as a collection of psychic states, the strongest of which exerts a prevailing influence and carries the others with it. This doctrine thus sharply distinguishes co-existing psychic phenomena from one another.” (pp.158-9) Indeed, this is how it often seems to us; as if our desire were warring with our fear, for example, and the stronger feeling determines our action. It is also an idea which has resurfaced in modern neuroscientific garb in the form of the hypothesis that consciousness, rather than being singular or unified, is merely the end result of a kind of competition between different *modules* in the brain, i.e. groups of neurons which process information together. Bergson will deny this to be an accurate account of consciousness.

Imagine that you stand up to open the window, but just as you did, you were distracted by another thought, and no sooner have you stood up than you forgot what you had wanted to do. “However, I do not sit down again; I have a confused feeling that something remains to be done. This particular standing still, therefore, is not the same as any other standing still; in the position which I take up the act to be performed is as it were prefigured, so that I have only to keep this position, to study it, or rather to feel it intimately, in order to recover the idea which had vanished for a moment. Hence, this idea must have tinged with a certain particular colouring the mental image of the intended movement and the position taken up, and this colouring, without doubt, would not have been the same if the end to be attained had been different. Nevertheless language would have still expressed the movement and the position in the same way…” (pp.160-1) The important point in this passage is that the act is tinged with a “particular colouring,” and we cannot separate the two without doing violence to the whole thing.

In light of the above then, what we should *not* conclude, is that “the image of a certain position can be connected in consciousness with images of different ends to be attained, but rather that positions geometrically identical outside look different to consciousness from the inside, according to the end contemplated. The mistake of associationism is that it first did away with the qualitative element in the act to be performed and retained only the geometrical and impersonal element: with the idea of this act, thus rendered colourless, it was then necessary to associate some specific difference to distinguish it from many other acts.” (p.161) However, this association is unnaturally forced on my mind, rather than being a part of it itself.

Bergson goes on to give the example of smelling a rose and immediately recalling scenes from one’s childhood. “In truth, these recollections have not been called up by the perfume of the rose: I breathe them in with the very scent; it means all that to me. To others it will smell differently.” (p.161) Of course, this is unintelligible to the associationist, who will assert that the scent of the rose is always the same. It is merely associated with different ideas in different people. This description has “removed the personal element from the different impressions which the rose makes on each one of us; you have retained only the objective aspect, that part of the scent of the rose which is public property and thereby belongs to space. Only thus was it possible to give a name to the rose and its perfume. You then found it necessary, in order to distinguish our personal impressions from one another, to add specific characteristics to the general idea of rose-scent. And you now say that our different impressions, our personal impressions, result from the fact that we associate different recollections with rose-scent. But the association of which you speak hardly exists except for you, and as a method of explanation.” (p.162)

Remember how the act of standing still, trying to recall an act to be performed, was different from simply standing still. The former had been tinged with a particular colouring invisible from the outside, whereas the breaking apart of these two things into a geometrical element and a mental one was an artificial distinction imposed from the outside. The same thing happens with the rose. Its scent is tinged with a particular colouring for the consciousness that smells it. The act of smelling and the scent itself appear geometrically identical from the outside, but are quite different depending on the consciousness experiencing them. Furthermore, Bergson asserts that the association only exists for the associationist because there is literally no association taking place anywhere. No matter how you analyse the smelling of a rose; i.e. according to the actual movements of physical particles, or by what is taking place in the individual’s consciousness – a ‘scent’ is absolutely not found to be associated with ‘childhood memories.’ It is merely created and put forward as an explanation, although it doesn’t exist as the former and fails as the latter.

You might still be tempted to analyse this physically and argue that, while this might be a pleasing, poetic description, what is *really* happening is scent molecules enter the olfactory system, get converted into electrical signals, etc., culminating in the activation of certain neural pathways which cause certain images to be recollected. The memories aren’t *really* in the scent. This is to exhibit precisely the associationist *a priori* bias Bergson is talking about. Imagine I score the winning goal in a football game. I kick the ball and everyone watches it sail through the air, past the keeper’s outstretched hands, and into the back of the net. Would anyone accuse me here of manufacturing a poetic description of what is *really* happening? Would it be *more* true to describe this using terms you might find in a physics textbook; atoms, momentum, acceleration, vectors, and so on? Surely not. They are both ‘true’ within their respective frameworks, or at different levels of description, if you prefer. It would be ridiculous to argue that the ball can’t *actually* be black and white because atoms are colourless. Similarly, it is ridiculous to argue that memories can’t *actually* be contained in the scent of a rose, and it amounts to using a physics (quantitative) yardstick to gauge a conscious (qualitative) process. Bergson isn’t arguing that memories are in scents; rather, he’s saying that for conscious experience, scents aren’t first colourless, objective, public things that trigger secondary (associated) ideas within us. This is only how they appear to us when we put on our associationist glasses and filter our actual experiences through them. According to our lived experience, the scent of the rose (like the world itself) is originally and immediately full of meaning for us; which in this case means infused with the memories we breathe in with it.

As associationism fails to account for our conscious life, we find ourselves “brought back to the distinction which we set up above between the multiplicity of juxtaposition and that of fusion or interpenetration. Such and such a feeling, such and such an idea, contains an indefinite plurality of conscious states: but the plurality will not be observed unless it is, as it were, spread out in this homogenous medium which some call duration, but which is in reality space. We shall then perceive terms external to one another, and these terms will no longer be the states of consciousness themselves, but their symbols, or, speaking more exactly, the words which express them… As soon as we try to give an account of a conscious state, to analyse it, this state, which is above all personal, will be resolved into impersonal elements external to one another, each of which calls up the idea of a genus and is expressed by a word. But because our reason, equipped with the idea of space and the power of creating symbols, draws these multiple elements out of the whole, it does not follow that they were contained in it. For within the whole they did not occupy space and did not care to express themselves by means of symbols; they permeated and melted into one another. Associationism thus makes the mistake of constantly replacing the concrete phenomenon which takes place in the mind by the artificial reconstruction of it given by philosophy, and of thus confusing the explanation of the fact with the fact itself.” (pp.162-3)

As we talked about earlier, the self, in contacting the world “at its surface” (p.164) finds itself imprinted by the objects it touches, and comes to understand itself in extensive terms it has perceived in juxtaposition, and which don’t properly belong to it. It is this ‘surface self’ that the associationist theory describes. “But, just in proportion as we dig below the surface and get down to the real self, do its states of consciousness cease to stand in juxtaposition and begin to permeate and melt into one another, and each to be tinged with the colouring of all the others.” (p.164)

It is permeation of all the states of consciousness with each other that means any emotion or sensation will manifest differently in every person; i.e. because the particular emotion reflects the entire personality of the individual. “Language, however, denotes these states by the same words in every case: so that it has been able to fix only the objective and impersonal aspect of love, hate, and the thousand emotions which stir the soul.” (p.164) Here, Bergson talks about the way we assess the skill of a novelist “by the power with which he lifts out of the common domain, to which language had thus brought them down, feelings and ideas to which he strives to restore, by adding detail to details, their original and living individuality. But just as we can go on inserting points between two positions of a moving body without ever filling up the space traversed, in the same way, by the mere fact that we associate states with states and that these states are set side by side instead of permeating one another, we fail to translate completely what our soul experiences: there is no common measure between mind and language.” (pp.164-5)

Psychology them, inasmuch as it is misled by language, treats the person as if they were determined by emotions which act like external forces impressing themselves upon him or her, when in truth, these emotions, if they go deep enough, “make up the whole soul, since the whole content of the soul is reflected in each of them… The associationist reduces the self to an aggregate of conscious states: sensations, feelings, and ideas. But if he sees in these various states no more than is expressed in their name, if he retains only their impersonal aspect, he may set them side by side for ever without getting anything but a phantom self, the shadow of the ego projecting itself into space. If, on the contrary, he takes these psychic states with the particular colouring which they assume in the case of a definite person, and which comes to each of them by reflection from all the others, then there is no ned to associate a number of conscious states in order to rebuild the person, for the whole personality is in a single one of them, provided that we know how to choose it.” (p.165) And it is here that Bergson makes one of the central claims of his essay:

“And the outward manifestation of this inner state will be just what is called a free act, since the self alone will have been the author of it, and since it will express the whole of the self.” (pp.165-6)

A *free act* then is one that issues from a conscious state in which the whole personality of the individual is reflected. However, this means that Bergson’s freedom is not absolute because “it is by no means the case that all conscious states blend with one another…” (p.166) Actions that follow as the result of hypnotic suggestion or those “roused by some accidental circumstance, [or] an hereditary vice suddenly emerging from the obscure depths of the organism to the surface of consciousness…” (p.166) do not engage the whole personality and cannot be considered free. “Alongside these independent elements there may be found more complex series, the terms of which do permeate one another, but which never succeed in blending perfectly with the whole mass of the self.” (p.166) These include “feelings and ideas which are the result of an education not properly assimilated, an education which appeals to the memory rather than to the judgment.” (p.166) Most people live lives at this level and therefore “die without having known true freedom.” (p.166) Finally, we have actions that follow from ideas assimilated by the entire self; “passion, even sudden passion, would no longer bear the stamp of fatality if the whole history of the person were reflected in it… It is the whole soul, in fact, which gives rise to the free decision: and the act will be so much the freer the more the dynamic series with which it is connected tends to be the fundamental self.” (pp.166-7)

This all means that free acts are exceptional; i.e. most acts are not truly free. This is because we “generally perceive our own self by refraction through space, that our conscious states crystallize into words, and that our living and concrete self thus gets covered with an outer crust of clean-cut psychic states, which are separated from one another and consequently fixed.” (p.167) It is also because sociability is enhanced through such a process. In short, “our daily actions are called forth not so much by our feelings themselves, which are constantly changing, as by the unchanging images with which these feelings are bound up.” (pp.167-8) Rather than experiencing things themselves, we experience fixed, objectified images we have constructed in their place. Rather than an impression “disturbing my whole consciousness like a stone which falls into the water of a pond, [it] merely stirs up an idea which is, so to speak, solidified on the surface, the idea of rising and attending to my usual occupations.” (p.168) So, we act from habit, more like a “conscious automaton” than a free being. “It will be found that the majority of our daily actions are performed in this way and that, owing to the solidification in memory of such and such sensations, feelings, or ideas, impressions from the outside call forth movements on our part which, though conscious and even intelligent, have many points of resemblance with reflex acts. It is to these acts, which are very numerous but for the most part insignificant, that the associationist theory is applicable.” (p.168) It has therefore been a mistake to look for free acts in the “ordinary and even indifferent circumstances of life in order to prove that man is capable of choosing without a motive… It is at the great and solemn crisis, decisive of our reputation with others, and yet more with ourselves, that we choose in defiance of what is conventionally called a motive, and this absence of any tangible reason is the more striking the deeper our freedom goes.” (p.170) I can’t help but be reminded of the Libet experiments here, that purport to disprove freewill through the act of bending one’s wrist at a random moment.

Next comes a crucial passage in Bergson’s account of freedom. The determinist pictures the self hesitating between two contrary feelings before choosing one of them. This “self and the feelings which stir it are thus treated as well defined objects, which remain identical during the whole of the process. But if it is always the same self which deliberates, and if the two opposite feelings by which it is moved do not change, how, in virtue of this very principle of causality which determinism appeals to, will the self ever come to a decision?” (p.171) In other words, if none of the elements change, the very notion of a decision is incoherent in determinism. In truth, “the self, by the mere fact of experiencing the first feeling, has already changed to a slight extent when the second supervenes: all the time that the deliberation is going on, the self is changing and is consequently modifying the two feelings which agitate it. A dynamic series of states is thus formed which permeate and strengthen one another, and which will lead by a natural evolution to a free act.” (p.171) Determinism, by objectifying the ego and its feelings “deprives them in advance of every kind of living activity.” (p.171) Such a sterile, mechanised interpretation of the human being has no option but to endorse a sterile, mechanised account of human action.

Next, Bergson moves on to investigate the claim of the determinist that “there is only one possible act corresponding to given antecedents” and that of the libertarian that “the same series could issue in several different acts, equally possible.” (p.175) Imagine a situation in which two options are before me. I could choose either X or Y. I choose X. Of course, the determinist will say Y was never really an option, whereas the libertarian will note that since I deliberated between the two, Y was also possible. However, there is a common postulate underlying both of these accounts; namely, they both assume that the decision has already been made. (You can, of course, do the same thing projecting forward into the future, but then you simply *imagining* yourself at a point after the decision has been made. Importantly, both cases involve a backwards reflection). The significance of this is that our thinking “does not show me the deed in the doing but the deed already done.” (p.180) In other words, we are back to “representing time by space and a succession by a simultaneity… We have been present at the deliberation of the self in all its phases until the act was performed: then, recapitulating the terms of the series, we perceive succession under the form of simultaneity, we project time into space, and we base our reasoning, consciously or unconsciously, on this geometrical figure. But this figure represents a *thing* and not a *progress*; it corresponds, in its inertness, to a kind of stereotyped memory of the whole process of deliberation and the final decision arrived at: how could it give us the least idea of the concrete movement, the dynamic progress by which the deliberation issued in the act?” (pp.180-1) In effect, what we have done here is “give a mechanical explanation of a fact, and then substitute the explanation for the fact itself.” (p.181) For Bergson, then, neither assertion makes sense. Was Y a real choice? “I should answer that the question is meaningless…” (p.180)

“Certainly, once it has elapsed, we are justified in picturing the successive moments as external to one another and in thus thinking of a line traversing space; but it must then be understood that this line does not symbolize the time which is passing but the time which has passed.” (pp.181-2) If we look beyond the symbolism, past the mechanical explanation we have substituted for the fact, we see that the determinist says nothing more than, ““The act, once performed, is performed,” and that their opponents reply: “The act, before being performed, was not yet performed.”” (p.182) Neither says anything about freedom in the slightest. We will only find freedom “in a certain shade or quality of the action itself and not in the relation of this act to what it is not or to what it might have been. All the difficulty arises from the fact that both parties picture the deliberation under the form of an oscillation in space, while it really consists in a dynamic progress in which the self and its motives, like real living beings, are in a constant state of becoming. The self, infallible when it affirms its immediate experiences, feels itself free and says so; but, as soon as it tries to explain its freedom to itself, it no longer perceives itself except by a kind of refraction through space.” (pp.182-3)

The determinist then recasts the question so that it asks “whether, knowing from now onwards all the future antecedents, some higher intelligence would not be able to predict with absolute certainty the decision which will result.” (p.183) To investigate this, Bergson imagines one person, Peter, called upon to make a free choice. The claim is that another person, Paul, living either at the same time as, or centuries before, Peter, “would have been able, knowing *all* the conditions under which Peter acts, to foretell with certainty the choice which Peter made.” (p.185) What does it mean to know all the conditions under which a person acts though? It must mean that no detail of that person’s life escapes your notice. However, when it comes to psychic states, “I know exactly the intensity of this state and its importance in relation to the others, not by measurement or comparison, but because the intensity of e.g. a deep-seated feeling is nothing else than the feeling itself. On the other hand, if I try to give you an account of this psychic state, I shall be unable to make you realize its intensity except by some definite sign of a mathematical kind: I shall have to measure its importance, compare it with what goes before and what follows, in short determine the part which it plays in the final act.” (pp.185-6)

So, there are “two ways of assimilating the conscious states of other people: the one dynamic, which consists in experiencing them oneself; the other static, which consists in substituting for the consciousness of these states their image or rather their intellectual symbol, their idea.” (p.186) In addition, for the latter, some indication must also be given as to the intensity of these states. “Now, this indication itself will necessarily assume a quantitative character…” (p.186) and, as we have already seen, would require that I know in advance the later history of the person (or how would I know that a certain feeling has more strength than another?)

If Paul then wishes to know all the conditions under which Peter acts, he must take one of these routes; either dynamic or static. The latter, in requiring knowledge of the final act, fails given that “the very point at issue is whether, the antecedents *alone* being given, Paul will be able to foresee the final act.” (p.187) The former also fails because in this case Peter would have to *become* Paul. “The more complete you made the sum of the conditions which, when known, would have enabled you to predict Peter’s future action, the closer became your grasp of his existence and the nearer you came to living his life over again down to its smallest details: you thus reached the very moment when, the action taking place, there was no longer anything to be foreseen, but only something to be done.” (pp.188-9)

There are three illusions at play in this argument. “The first consists in regarding intensity as a mathematical property of psychic states and not, as we said at the beginning of this essay, as a special quality, as a particular shade of these various states. The second consists in substituting for the concrete reality or dynamic progress, which consciousness perceives, the material symbol of this progress when it has already reached its end, that is to say, of the act already accomplished together with the series of its antecedents.” (p.190) The third illusion consists in thinking of time as space.

What about the way in which astronomers predict a lunar eclipse years in advance? Do they not demonstrate the ability to foresee future events from antecedent ones? Yes, they do, but their calculations, as we have already seen, have nothing to do with duration. “He decrees that time shall go ten times, a hundred times, a thousand times as fast, and he has a right to do so, since all that he thus changes is the nature of the conscious intervals, and since these intervals, by hypothesis, do not enter into the calculations.” (p.194) All the astronomer does is establish relations between heavenly bodies, “a series of simultaneities and coincidences, a series of numerical relations: as for duration properly so called, it remains outside the calculation and could only be perceived by a consciousness capable of living through the intervals and, in fact, living the intervals themselves, instead of merely perceiving their extremities.” (p.194)

The problem is that duration is precisely what concerns the psychologist. Consciousness doesn’t measure time “but a feeling which lasted only half the number of days, for example, would no longer be the same feeling for it; it would lack thousands of impressions which gradually thickened its substance and altered its colour.” (p.196) In giving the feeling a name, turning it into a thing, “we believe that we can diminish its duration by half, for example, and also halve the duration of all the rest of our history: it seems that it would still be the same life, only on a reduced scale. But we forget that states of consciousness are processes, and not things… that they are alive and therefore constantly changing; that, in consequence, it is impossible to cut off a moment from them without making them poorer by the loss of some impression, and thus altering their quality. I quite understand that the orbit of a planet might be perceived all at once or in a very short time, because its successive positions or the *results* of its movement are the only things that matter, and not the duration of the equal intervals which separate them. But when we have to do with a feeling, it has no precise result except its having been felt; and, to estimate this result adequately, it would be necessary to have gone through all the phases of the feeling itself and to have taken up the same duration… All foreseeing is in reality seeing…” (pp.196-7) So, “when we ask whether a future action could have been foreseen, we unwittingly identify that time with which we have to do in the exact sciences, and which is reducible to a number, with real duration, whose so-called quantity is really a quality, and which we cannot curtail by an instant without altering the nature of the facts which fill it.” (pp.197-8)

It doesn’t help that we can sometimes deal with real duration as we do with astronomical time; as in, for example, the past; “when we call to mind the past, i.e. a series of deeds done, we always shorten it, without however distorting the nature of the event which interests us. The reason is that we know it already; for the psychic state, when it reaches the end of the *progress* which constitutes its very existence, becomes a *thing* which one can picture to oneself all at once.” (p.198) When we are concerned with a future state though, “we can no longer view the antecedents in a static condition as things; we must view them in a dynamic condition as processes, since we are concerned with their influence alone. Now their duration is this very influence. Therefore it will no longer do to shorten future duration in order to picture its parts beforehand; one is bound to *live* this duration whilst it is unfolding. As far as deep-seated psychic states are concerned, there is no perceptible difference between foreseeing, seeing, and acting.” (p.198)

Finally, Bergson thinks, the determinist will give up trying to foresee future acts or states of consciousness, but will nevertheless maintain that “every act is determined by its psychic antecedents, or, in other words, that the facts of consciousness… being phenomena, they must remain subject to the law of causality.” (p.199) This, however, assumes that “the same cause can appear a second time on the stage of consciousness. Now, if duration is what we say, deep-seated psychic states are radically heterogeneous to each other, and it is impossible that any two of them should be quite alike, since they are two different moments of a life-story… the same feeling, by the mere fact of being repeated, is a new feeling.” (pp.199-200)

Despite this, Bergson cannot see the determinist giving up their assertion that the act is inseparably bound up with its antecedents, so he turns his attention to the principle of causality; specifically, whether the regularity of the principle as it concerns physical phenomena is also to be found in the domain of consciousness.

There are two ways we can understand the word ‘cause.’ The first is as a wholly subjective connection between two ideas, so that the regular succession of two phenomena amounts to glimpsing the second when the first is given. However, if the idea of the second phenomenon is already implied in that of the first, this implies (for common sense) that “the second phenomenon itself must exist objectively, in some way or other, within the first phenomenon… We thus pass imperceptibly from the first meaning to the second, and we picture the causal relation as a kind of prefiguring of the future phenomenon in its present conditions.” (pp.203-4)

Taking the objective notion of causality first, we get a *mathematical* description. Bergson’s example *par excellence* of this is the drawing of the circumference of a circle which “generates all the mathematical properties of this figure: in this sense an unlimited number of theorems can be said to pre-exist within the definition…” (p.204) It is easy to see here, in the realm of pure quantity, how an “original equation, expressing the fundamental property of the figure, is transformed into an unlimited number of new ones, all virtually contained in the first.” (p.204) Physical phenomena, on the other hand, “which succeed one another and are perceived by our senses, are distinguished by quality not less than by quantity,” (p.204) so it is not as easy to trace a later phenomenon out of an earlier. Nevertheless, it appears reasonable to do so precisely because we assume, behind the heterogeneity of our sensations, a homogenous physical universe. On this basis, we “strip matter of the concrete qualities with which our senses clothe it, colour, heat, resistance, even weight, and we shall finally find ourselves confronted with homogeneous extensity, space without body.” (p.205) Having reduced bodies to geometrical figures, position and motion are easily converted into mathematical relations, leaving us with shape. Shape however, “is a mental image, and, however tenuous, however transparent we assume it to be, it still constitutes, in so far as our imagination has, so to speak, the visual perception of it, a concrete and therefore irreducible quality of matter.” (p.205) In order to purge this last vestige of concrete reality, it is replaced by “the abstract formula of the movement which gives rise to the figure. Picture then algebraical relations getting entangled in one another, becoming objective by this very entanglement, and producing, by the mere effect of their complexity, concrete, visible, and tangible reality…” (pp.205-6) This is essentially the idea put forward by Max Tegmark, that reality is, not merely describable by mathematics, it actually *is* mathematics. It also seems to describe the more commonly accepted physics hypothesis of matter arising from excitations in quantum fields. The problem Bergson points out with these conceptions is that the homogeneous extensity of space (whether Tegmark’s mathematical manifold, quantum fields, or Lord Kelvin’s “homogeneous and incompressible fluid in which vortices moves, thus producing the properties of matter” (p.206)), being homogeneous, means that there are no intervals separating its parts, nor any difference by which these parts could be distinguished. Any movement in the case of Lord Kelvin’s vortices is “really equivalent to absolute immobility, since before, during, and after the movement nothing changes and nothing has changed in the whole.” (p.206) The ‘movement,’ then, is nothing more than “a movement which is pictured mentally: it is a relation between relations.” (p.206) This is also exactly how one could describe Tegmark’s mathematical manifold and the excitations of quantum fields; as abstract contrivances that don’t map onto anything concrete; relations between relations.

In trying to prefigure the future in the present through a necessary mathematical relation, this conception of causality is actually an attempt to make itself equivalent to the principle of identity. “The principle of identity is the absolute law of our consciousness: it asserts that what is thought is thought at the moment when we think it: and what gives this principle its absolute necessity is that it does not bind the future to the present, but only the present to the present… But the principle of causality, in so far as it is supposed to bind the future to the present, could never take the form of a necessary principle; for the successive moments of real time are not bound up with one another, and no effort of logic will succeed in proving that what has been will be or will continue to be, that the same antecedents will always give rise to identical consequents.” (pp.207-8)

Descartes and Spinoza, in understanding this, both sought to vouchsafe the regularity of the physical world in related ways. Descartes held that Providence continually recreated each instant anew, essentially reducing the whole of duration to the present moment. Spinoza held that the indefinite series of phenomena, apparently occurring in time, was actually divine unity, again, rendering duration in a single moment, which was eternity.

In attempting to establish relations of logical necessity between cause and effect, what we have done here is “transform relations of succession into relations of inherence, [done] away with active duration, and [substituted] for apparent causality a fundamental identity.” (p.209)

The subjective understanding of causality postulates that while a later psychic state is not contained in an earlier, it was present as a more or less confused idea. This would make the actual realisation of the idea merely possible; i.e. not necessary, and what separates the idea and the action is the feeling called effort. However, the progress in between each of these points is so continuous that we cannot say where the idea and effort end, and the act begins. “Hence we see that in a certain sense we may still say here that the future was prefigured in the present…” (p.211); it was simply prefigured imperfectly.

What this method ends up doing is supposing “that the objective connexion of the two phenomena resembles the subjective association which suggested the idea of it to us. The qualities are thus set up as actual *states*, somewhat analogous to those of our own self; the material universe is credited with a vague personality which is diffused through space and which, although not exactly endowed with a conscious will, is led on from one state to another by an inner impulse, a kind of effort.” (pp.212-3) This is ancient hylozoism, which holds the contradictory claim that matter retains its extensity while also possessing conscious (i.e. inner) states. Leibniz embraced this route, but resolved the contradiction by claiming that “if the succession of external qualities or phenomena is understood as the succession of our own ideas, these qualities must be regarded as simple states or perceptions, and the matter which supports them as an unextended monad, analogous to our soul. But, if such be the case, the successive states of matter cannot be perceived from the outside any more than our own psychic states; the hypothesis of pre-established harmony must be introduced in order to explain how these inner states are representative of one another.” (p.213)

So, we have explored two conceptions of causality. In the one, “all phenomena, physical or psychical, are pictured as *enduring* in the same way, and therefore in the way that *we* do: in this case the future will exist in the present only as an idea, and the passing from the present to the future will take the form of an effort which does not always lead to the realization of the idea conceived.” (p.215) Here, everything, even natural phenomena, is free. In the second definition of causality, “duration is regarded as the characteristic form of conscious states; in this case, things are no longer supposed to *endure* as we do, and a mathematical pre-existence of their future in their present is admitted.” (p.215) Here, there is no reason not to suppose that the self, being different from natural things, is a free force.

The error, then, comes from “taking the principle of causality in both senses at the same time… Sometimes we think particularly of the regular *succession* of physical phenomena and of the kind of inner effort by which one *becomes* another; sometimes we fix our mind on the absolute *regularity* of these phenomena, and from the idea of regularity we pass by imperceptible steps to that of mathematical necessity, which excludes duration understood in the first way.” (p.216) So, force (as in, the ‘psychical force,’ or ‘inner effort,’ by which we perform an act) is something we know only through consciousness, and “we perceive force, rightly or wrongly, as a free spontaneity.” (p.217) But, the idea of force also gets carried over into, and applied in, the realm of nature, where it becomes inextricably bound up with necessity. When we next talk of force, then (in consciousness), it seems to have an air of necessity that it doesn’t, in fact, have. “Here again the mistake made by consciousness arises from the fact that it looks at the self, not directly, but by a kind of refraction through the forms which it has lent to external perception, and which the latter does not give back without having left its mark on them.” (p.217)

At this point, Bergson unveils his conception of freedom. “Freedom is the relation of the concrete self to the act which it performs. This relation is indefinable, just because we *are* free. For we can analyse a thing, but not a process; we can break up extensity, but not duration. Or, if we persist in analysing it, we unconsciously transform the process into a thing and duration into extensity. By the very fact of breaking up concrete time we set out its moments in homogeneous space; in place of the doing we put the already done; and, as we have begun by, so to speak, stereotyping the activity of the self, we see spontaneity settle down into inertia and freedom into necessity. Thus, any positive definition of freedom will ensure the victory of determinism.” (pp.219-20)

If we attempt to define the free act by saying that it could have been left undone, we are admitting an equivalence between concrete duration and its spatial symbol (because we are imagining the act completed and reflecting on the steps that led to it). If we define it as an act which could not be foreseen, even with all of the antecedent conditions known, we have the problem that to know all of the antecedent conditions, one has to actually place oneself at the moment of the act. It also amounts to equating psychic duration with its spatial symbol (because it assumes all of the conditions can be known in advance). Finally, if we define the free act by saying that it is not necessarily determined by its cause, either the words lose their meaning, or we “understand by them that the same inner causes will not always call forth the same effects.” (p.220) This then admits that “the psychic antecedents of a free act can be repeated, that freedom is displayed in a duration whose moments resemble one another, and that time is a homogeneous medium, like space.” (p.221)

Bergson sums up the work of this chapter thus:

To sum up; every demand for explanation in regard to freedom comes back, without our suspecting it, to the following question: “Can time be adequately represented by space?” To which we answer: Yes, if you are dealing with time flown; No, if you speak of time flowing. Now, the free act takes place in time which is flowing and not in time which has already flown. Freedom is therefore a fact, and among the facts which we observe there is none clearer. All the difficulties of the problem, and the problem itself, arise from the desire to endow duration with the same attributes as extensity, to interpret a succession by a simultaneity, and to express the idea of freedom in a language into which it is obviously untranslatable. (p.221)

Conclusion

In this section, Bergson summarises the ground we have covered in this essay, and supplies a critique of Kant. Let’s begin with the summary. We typically believe that we grasp the ego directly when we think about it, however, the ego that we get a hold of here is actually one “mostly perceived through the medium of certain forms borrowed from the external world, which thus gives us back what we have lent it… when we try to grasp ourselves after an excursion into the external world, we no longer have our hands free.” (p.223) In order, then, to view the self “in its original purity,” (p.224) we need to clear away what these forms have picked up from the external world. There are three forms this essay has marked as needing to be ‘purified’:

1. Psychic states appearing to be more or less *intense* – Psychic phenomena are pure quality or qualitative multiplicity. Their cause, situated in space, is quantity. The intensity of psychic states we tend to mistakenly attribute to the quantity we perceive behind the quality, and so “arises from a compromise between pure quality, which is the state of consciousness, and pure quantity, which is necessarily space.” (pp.224-5) We effortlessly move beyond this compromise when we study external things, dropping all notions of quality (force), so why do we “keep to this hybrid concept when [we] analyse in its turn the state of consciousness? If magnitude, outside you, is never intensive, intensity, within you, is never magnitude.” (p.225) It is this confusion that has resulted in philosophers erroneously claiming that there are two kinds of quantity, one extensive, the other intensive.
2. The multiplicity of psychic states unfolding in time, constituting *duration* – Regarding multiplicity, we saw that to understand number, we need a homogeneous medium (space) in which to place the terms distinct from one another. But we also need a “process of permeation and organization by which these units are dynamically added together and form what we called a qualitative multiplicity.” (p.226) The dynamic process ensures the units get added, while their appearing in space ensures they remain distinct, yielding another compromise. Once more, we give up the compromise when we turn to external objects, regarding them as impenetrable, divisible, and distinct from each other; i.e. without a trace of permeation or dynamism. In not giving up the compromise when we study our selves, we end up going down the dead end of associationism.

Turning to duration next; this turned out to be a qualitative multiplicity, an “organic evolution”, a pure heterogeneity. “In a word, the moments of inner duration are not external to one another.” (p.226) Outside us, there is no duration, merely simultaneity. Of course, “external things change, but their moments do not *succeed* one another… except for a consciousness which keeps them in mind… Thus in consciousness we find states which succeed, without being distinguished from one another; and in space simultaneities which, without succeeding, are distinguished from one another, in the sense that one has ceased to exist when the other appears.” (p.227) The compromise here? While “our consciousness thus introduces succession into external things, inversely these things themselves externalize the successive moments of our inner duration in relation to one another.” (p.228) This leaves us with the “mixed idea of a measurable time, which is space in so far as it is homogeneity, and duration in so far as it is succession, that is to say, at bottom, the contradictory idea of succession in simultaneity.” (p.228) Science has no problem tearing these two elements, extensity and duration, apart when it studies external things, retaining “nothing of duration but simultaneity, and nothing of motion itself but the position of the moving body, i.e. immobility.” (pp.228-9) Yet, no such distinction is made when we study inner phenomena.

1. In the relations between the psychic states, they appear to *determine* one another – This arises from the error made in (2) above, and results in one party denying freedom while the other defines it, inadvertently denying it as well. Any denial of freedom involves identifying time with space, and any definition of freedom demands that space adequately represent time. “All determinism will thus be refuted by experience, but every attempt to define freedom will open the way to determinism.” (p.230)

So, why does science happily separate duration and extensity in the external world, but fail to do so regarding inner states? Given that science is about measuring and forecasting, and only quantities in space can be measured, it naturally behooves science to treat the external world as not *enduring* the way we do. However, “when we turn to our conscious states, we have everything to gain by keeping up the illusion through which we make them share in the reciprocal externality of outer things, because this distinctness, and at the same time this solidification, enables us to give them fixed names in spite of their instability, and distinct ones in spite of their interpenetration. It enables us to objectify them, to throw them out into the current of social life.” (p.231)

This yields two different selves. One of which is an external, spatial projection of the other. This latter can only be reached by “deep introspection, which leads us to grasp our inner states as living things, constantly *becoming*, as states not amenable to measure, which permeate one another and of which the succession in duration has nothing in common with juxtaposition in homogeneous space. But the moments at which we thus grasp ourselves are rare, and that is just why we are rarely free. The greater part of the time we live outside ourselves, hardly perceiving anything of ourselves but our own ghost, a colourless shadow which pure duration projects into homogeneous space. Hence our life unfolds in space rather than in time; we live for the external world rather than for ourselves; we speak rather than think; we “are acted” rather than act ourselves. To act freely is to recover possession of oneself, and to get back into pure duration.” (pp.231-2)

Concerning Kant, Bergson feels that his “great mistake was to take time as a homogeneous medium.” (p.232) On one side we have the heterogeneous thing-in-itself, while on the other we have the homogeneous forms of time and space, through which the former is refracted. This division leads to (at least) two problems. First, if time were a homogeneous medium (like space), it would admit of treatment by science. However, Bergson has shown that science deals with duration by quantifying it, thereby reducing it to simultaneity. Secondly, if duration is homogeneous, psychic states are external to one another and as surely determined as external phenomena. Freedom would be impossible in such a framework. Hence, it had to be raised to the sphere of the noumena, where it lay outside of space but also outside of duration as well, and consequently outside of the grasp of our knowledge.

Bergson agrees with Kant that there is a homogeneous space, separate from the matter which fills it, and which is a “form of our sensibility” (p.236). By this, Bergson simply means that this “intuition of a homogeneous medium, an intuition peculiar to man, enables us to externalize our concepts in relation to one another, reveals to us the objectivity of things, and thus, in two ways, on the one hand by getting everything ready for language, and on the other by showing us an external world, quite distinct from ourselves… foreshadows and prepares the way for social life.” (p.236)

Bergson differs from Kant when he asserts that time is a heterogeneous, concrete duration, and that it is in this medium that our inner states arise, or, which is to say the same thing, in which we live. My action is free “because the relation of this action to the state from which it issued could not be expressed by a law, this psychic state being unique of its kind and unable ever to occur again.” (p.239)