

The Principles of Psychology

William James (1890)

CHAPTER IX.[\[1\]](#) The Stream of Thought.

We now begin our study of the mind from within. Most books start with sensations, as the simplest mental facts, and proceed synthetically, constructing each higher stage from those below it. But this is abandoning the empirical method of investigation. No one ever had a simple sensation by itself. Consciousness, from our natal day, is of a teeming multiplicity of objects and relations, and what we call simple sensations are results of discriminative attention, pushed often to a very high degree. It is astonishing what havoc is wrought in psychology by admitting at the outset apparently innocent suppositions, that nevertheless contain a flaw. The bad consequences develop themselves later on, and are irremediable, being woven through the whole texture of the work. The notion that sensations, being the simplest things, are the first things to take up in psychology is one of these suppositions. The only thing which psychology has a right to postulate at the outset is the fact of thinking itself, and that must first be taken up and analyzed. If sensations then prove to be amongst the elements of the thinking, we shall be no worse off as respects them than if we had taken them for granted at the start.

The first fact for us, then, as psychologists, is that thinking of some sort goes on. I use the word thinking, in accordance with what was said on p. 186, for every form of consciousness indiscriminately. If we could say in English 'it thinks,' as we say

'it rains' or 'it blows,' we should be [p. 225]stating the fact most simply and with the minimum of assumption. As we cannot, we must simply say that *thought goes on*.

FIVE CHARACTERS IN THOUGHT.

How does it go on? We notice immediately five important characters in the process, of which it shall be the duty of the present chapter to treat in a general way:

- 1) Every thought tends to be part of a personal consciousness.
- 2) Within each personal consciousness thought is always changing.
- 3) Within each personal consciousness thought is sensibly continuous.
- 4) It always appears to deal with objects independent of itself.
- 5) It is interested in some parts of these objects to the exclusion of others, and welcomes or rejects - *chooses* from among them, in a word - all the while.

In considering these five points successively, we shall have to plunge *in medias res* as regards our vocabulary, and use psychological terms which can only be adequately defined in later chapters of the book. But every one knows what the terms mean in a rough way; and it is only in a rough way that we are now to take them. This chapter is like a painter's first charcoal sketch upon his canvas, in which no niceties appear.

1) Thought tends to Personal Form.

When I say *every thought is part of a personal consciousness*, 'personal consciousness' is one of the terms in question, Its meaning we know so long as no one asks us to define it, but to give an accurate account of it is the most difficult of philosophic

tasks. This task we must confront in the next chapter; here a preliminary word will suffice.

In this room - this lecture-room, say - there are a multitude of thoughts, yours and mine, some of which cohere mutually, and some not. They are as little each-for-itself and reciprocally independent as they are all-belonging- together. They are neither: no one of them is separate, [p. 226] but each belongs with certain others and with none beside. My thought belongs with my other thoughts, and your thought with your other thoughts. Whether anywhere in the room there be a mere thought, which is nobody's thought, we have no means of ascertaining, for we have no experience of its like. The only states of consciousness that we naturally deal with are found in personal consciousnesses, minds, selves, concrete particular I's and you's.

Each of these minds keeps its own thoughts to itself. There is no giving or bartering between them. No thought even comes into direct *sight* of a thought in another personal consciousness than its own. Absolute insulation, irreducible pluralism, is the law. It seems as if the elementary psychic fact were not *thought* or *this thought* or *that thought*, but *my thought*, every thought being *owned*. Neither contemporaneity, nor proximity in space, nor similarity of quality and content are able to fuse thoughts together which are sundered by this barrier of belonging to different personal minds. The breaches between such thoughts are the most absolute breaches in nature. Everyone will recognize this to be true, so long as the existence of *something* corresponding to the term 'personal mind' is all that is insisted on, without any particular view of its nature being implied. On

these terms the personal self rather than the thought might be treated as the immediate datum in psychology. The universal conscious fact is not 'feelings and thoughts exist,' but 'I think' and 'I feel.'^[2] No psychology, at any rate, can question the *existence* of personal selves. The worst a psychology can do is so to interpret the nature of these selves as to rob them of their worth. A French writer, speaking of our ideas, says somewhere in a fit of anti-spiritualistic excitement that, misled by certain peculiarities which they display, we 'end by personifying' the procession which they make, - such personification being regarded by him as a great philosophic blunder on our part. It could only be a blunder if the notion of personality meant something essentially different [p. 227] from anything to be found in the mental procession. But if that procession be itself the very 'original' of the notion of personality, to personify it cannot possibly be wrong. It is already personified. There are no marks of personality to be gathered *aliunde*, and then found lacking in the train of thought. It has them all already; so that to whatever farther analysis we may subject that form of personal selfhood under which thoughts appear, it is, and must remain, true that the thoughts which psychology studies do continually tend to appear as parts of personal selves.

I say 'tend to appear' rather than 'appear,' on account of those facts of sub-conscious personality, automatic writing, etc., of which we studied a few in the last chapter. The buried feelings and thoughts proved now to exist in hysterical anæsthetics, in recipients of post-hypnotic suggestion, etc., themselves are parts of *secondary personal selves*. These selves are for the most part very stupid and contracted, and are cut off at ordinary times from communication with the regular and normal self of the

individual; but still they form conscious unities, have continuous memories, speak, write, invent distinct names for themselves, or adopt names that are suggested; and, in short, are entirely worthy of that title of secondary personalities which is now commonly given them. According to M. Janet these secondary personalities are always abnormal, and result from the splitting of what ought to be a single complete self into two parts, of which one lurks in the background whilst the other appears on the surface as the only self the man or woman has. For our present purpose it is unimportant whether this account of the origin of secondary selves is applicable to all possible cases of them or not, for it certainly is true of a large number of them. Now although the *size* of a secondary self thus formed will depend on the number of thoughts that are thus split-off from the main consciousness, the *form*, of it tends to personality, and the later thoughts pertaining to it remember the earlier ones and adopt them as their own. M. Janet caught the actual moment of inspissation (so to speak) of one of these secondary personalities in his anæsthetic somnambulist Lucie. He found that when this young woman's attention was absorbed [p. 228] in conversation with a third party, her anæsthetic hand would write simple answers to questions whispered to her by himself. "Do you hear?" he asked. "*No*," was the unconsciously written reply. "But to answer you must hear." "*Yes, quite so.*" "Then how do you manage?" "*I don't know.*" "There must be some one who hears me." "*Yes.*" "Who?" "*Someone other than Lucie.*" "Ah! another person. Shall we give her a name?" "*No.*" "Yes, it will be more convenient." "*Well, Adrienne, then.*" "Once baptized, the subconscious personage," M. Janet continues, "grows more definitely outlined and displays better her psychological characters. In particular she shows us that she is conscious of the

feelings excluded from the consciousness of the primary or normal personage. She it is who tells us that I am pinching the arm or touching the little finger in which Lucie for so long has had no tactile sensations." [3]

In other cases the adoption of the name by the secondary self is more spontaneous. I have seen a number of incipient automatic writers and mediums as yet imperfectly 'developed,' who immediately and of their own accord write and speak in the name of departed spirits. These may be public characters, as Mozart, Faraday, or real persons formerly known to the subject, or altogether imaginary beings. Without prejudicing the question of real 'spirit-control' in the more developed sorts of trance-utterance, I incline to think that these (often deplorably unintelligent) rudimentary utterances are the work of an inferior fraction of the subject's own natural mind, set free from control by the rest, and working after a set pattern fixed by the prejudices of the social environment. In a spiritualistic community we get optimistic messages, whilst in an ignorant Catholic village the secondary personage calls itself by the name of a demon, and proffers blasphemies and obscenities, instead of telling us how happy it is in the summer-land. [4]

[p. 229] Beneath these tracts of thought, which, however rudimentary, are still organized selves with a memory, habits, and sense of their own identity, M. Janet thinks that the facts of catalepsy in hysteric patients drive us to suppose that there are thoughts quite unorganized and impersonal. A patient in cataleptic trance (which can be produced artificially in certain hypnotized subjects) is without memory on waking, and seems insensible and unconscious as long as the cataleptic condition

lasts. If, however, one raises the arm of such a subject it stays in that position, and the whole body can thus be moulded like wax under the hands of the operator, retaining for a considerable time whatever attitude he communicates to it. In hysterics whose arm, for example, is anæsthetic, the same thing may happen. The anæsthetic arm may remain passively in positions which it is made to assume; or if the hand be taken and made to hold a pencil and trace a certain letter, it will continue tracing that letter indefinitely on the paper. These acts, until recently, were supposed to be accompanied by no consciousness at all: they were physiological reflexes. M. Janet considers with much more plausibility that feeling escorts them. The feeling is probably merely that of the position or movement of the limb, and it produces no more than its natural effects when it discharges into the motor centres which keep the position maintained, or the movement incessantly renewed.[5] Such thoughts as these, says M. Janet, "are known by *no one*, for disaggregated sensations reduced to a state of mental dust are not synthetized in any personality." [6] He admits, however, that these very same unutterably stupid thoughts tend to develop memory, - the cataleptic ere long moves her arm at a bare hint; so that they form no important exception to the law that all thought tends to assume the form of personal consciousness.

2) *Thought is in Constant Change.*

I do not mean necessarily that no one state of mind has any duration - even if true, that would be hard to establish.

[p. 230] The change which I have more particularly in view is that which takes place in sensible intervals of time; and the result on which I wish to lay stress is this, that *no state once*

gone can recur and be identical with what it was before. Let us begin with Mr. Shadworth Hodgson's description:

"I go straight to the facts, without saying I go to perception, or sensation, or thought, or any special mode at all. What I find when I look at my consciousness at all is that what I cannot divest myself of, or not have in consciousness, if I have any consciousness at all, is a sequence of different feelings. I may shut my eyes and keep perfectly still, and try not to contribute anything of my own will; but whether I think or do not think, whether I perceive external things or not, I always have a succession of different feelings. Anything else that I may have also, of a more special character, comes in as parts of this succession. Not to have the succession of different feelings is not to be conscious at all... The chain of consciousness is a sequence of differentials."[\[7\]](#)

Such a description as this can awaken no possible protest from any one. We all recognize as different great classes of our conscious states. Now we are seeing, now hearing; now reasoning, now willing; now recollecting, now expecting; now loving, now hating; and in a hundred other ways we know our minds to be alternately engaged. But all these are complex states. The aim of science is always to reduce complexity to simplicity; and in psychological science we have the celebrated 'theory of *ideas*' which, admitting the great difference among each other of what may be called concrete conditions of mind, seeks to show how this is all the resultant effect of variations in the *combination* of certain simple elements of consciousness that always remain the same. These mental atoms or molecules are what Locke called 'simple ideas.' Some of Locke's successors

made out that the only simple ideas were the sensations strictly so called. Which ideas the simple ones may be does not, however, now concern us. It is enough that certain philosophers have thought they could see under the dissolving-view-appearance of the mind elementary facts of *any* sort that remained unchanged amid the flow.

[p. 231] And the view of these philosophers has been called little into question, for our common experience seems at first sight to corroborate it entirely. Are not the sensations we get from the same object, for example, always the same? Does not the same piano-key, struck with the same force, make us hear in the same way? Does not the same grass give us the same feeling of green, the same sky the same feeling of blue, and do we not get the same olfactory sensation no matter how many times we put our nose to the same flask of cologne? It seems a piece of metaphysical sophistry to suggest that we do not; and yet a close attention to the matter shows that *there is no proof that the same bodily sensation is ever got by us twice.*

What is got twice is the same OBJECT. We hear the same *note* over and over again; we see the same *quality* of green, or smell the same objective perfume, or experience the same *species* of pain. The realities, concrete and abstract, physical and ideal, whose permanent existence we believe in, seem to be constantly coming up again before our thought, and lead us, in our carelessness, to suppose that our 'ideas' of them are the same ideas. When we come, some time later, to the chapter on Perception, we shall see how inveterate is our habit of not attending to sensations as subjective facts, but of simply using

them as stepping-stones to pass over to the recognition of the realities whose presence they reveal. The grass out of the window now looks to me of the same green in the sun as in the shade, and yet a painter would have to paint one part of it dark brown, another part bright yellow, to give its real sensational effect. We take no heed, as a rule, of the different way in which the same things look and sound and smell at different distances and under different circumstances. The sameness of the *things* is what we are concerned to ascertain; and any sensations that assure us of that will probably be considered in a rough way to be the same with each other. This is what makes off-hand testimony about the subjective identity of different sensations well-nigh worthless as a proof of the fact. The entire history of Sensation is a commentary on our inability to tell whether two sensations received apart are exactly alike. What appeals to our [p. 232] attention far more than the absolute quality or quantity of a given sensation is its *ratio* to whatever other sensations we may have at the same time. When everything is dark a somewhat less dark sensation makes us see an object white. Helmholtz calculates that the white marble painted in a picture representing an architectural view by moonlight is, when seen by daylight, from ten to twenty thousand times brighter than the real moonlit marble would be.[8]

Such a difference as this could never have been *sensibly* learned; it had to be inferred from a series of indirect considerations. There are facts which make us believe that our sensibility is altering all the time, so that the same object cannot easily give us the same sensation over again. The eye's sensibility to light is at its maximum when the eye is first exposed, and blunts itself with surprising rapidity. A long night's

sleep will make it see things twice as brightly on waking, as simple rest by closure will make it see them later in the day.[9] We feel things differently according as we are sleepy or awake, hungry or full, fresh or tired; differently at night and in the morning, differently in summer and in winter, and above all things differently in childhood, manhood, and old age. Yet we never doubt that our feelings reveal the same world, with the same sensible qualities and the same sensible things occupying it. The difference of the sensibility is shown best by the difference of our emotion about the things from one age to another, or when we are in different organic moods. What was bright and exciting becomes weary, flat, and unprofitable. The bird's song is tedious, the breeze is mournful, the sky is sad.

To these indirect presumptions that our sensations, following the mutations of our capacity for feeling, are always undergoing an essential change, must be added another presumption, based on what must happen in the brain. Every sensation corresponds to some cerebral action. For an identical sensation to recur it would have to occur the second time *in an unmodified brain*. But as this, strictly [p. 233] speaking, is a physiological impossibility, so is an unmodified feeling an impossibility; for to every brain-modification, however small, must correspond a change of equal amount in the feeling which the brain subserves.

All this would be true if even sensations came to us pure and single and not combined into 'things.' Even then we should have to confess that, however we might in ordinary conversation speak of getting the same sensation again, we never in strict theoretic accuracy could do so; and that whatever was true of the river of life, of the river of elementary feeling, it would certainly

be true to say, like Heraclitus, that we never descend twice into the same stream.

But if the assumption of 'simple ideas of sensation' recurring in immutable shape is so easily shown to be baseless, how much more baseless is the assumption of immutability in the larger masses of our thought!

For there it is obvious and palpable that our state of mind is never precisely the same. Every thought we have of a given fact is, strictly speaking, unique, and only bears a resemblance of kind with our other thoughts of the same fact. When the identical fact recurs, we *must* think of it in a fresh manner, see it under a somewhat different angle, apprehend it in different relations from those in which it last appeared. And the thought by which we cognize it is the thought of it-in-those-relations, a thought suffused with the consciousness of all that dim context. Often we are ourselves struck at the strange differences in our successive views of the same thing. We wonder how we ever could have opined as we did last month about a certain matter. We have outgrown the possibility of that state of mind, we know not how. From one year to another we see things in new lights. What was unreal has grown real, and what was exciting is insipid. The friends we used to care the world for are shrunken to shadows; the women, once so divine, the stars, the woods, and the waters, how now so dull and common; the young girls that brought an aura, of infinity, at present hardly distinguishable existences; the pictures so empty; and as for the books, what was there to find so mysteriously significant in Goethe, or in John Mill so full of weight? Instead of all this,

more [p. 234] zestful than ever is the work, the work; and fuller and deeper the import of common duties and of common goods.

But what here strikes us so forcibly on the flagrant scale exists on every scale, down to the imperceptible transition from one hour's outlook to that of the next. Experience is remoulding us every moment, and our mental reaction on every given thing is really a resultant of our experience of the whole world up to that date. The analogies of brain-physiology must again be appealed to to corroborate our view.

Our earlier chapters have taught us to believe that, whilst we think, our brain changes, and that, like the aurora borealis, its whole internal equilibrium shifts with every pulse of change. The precise nature of the shifting at a given moment is a product of many factors. The accidental state of local nutrition or blood-supply may be among them. But just as one of them certainly is the influence of outward objects on the sense-organs during the moment, so is another certainly the very special susceptibility in which the organ has been left at that moment by all it has gone through in the past. Every brain-state is partly determined by the nature of this entire past succession. Alter the latter in any part, and the brain-state must be somewhat different. Each present brain-state is a record in which the eye of Omniscience might read all the foregone history of its owner. It is out of the question, then, that any total brain-state should identically recur. Something like it may recur; but to suppose *it* to recur would be equivalent to the absurd admission that all the states that had intervened between its two appearances had been pure nonentities, and that the organ after their passage was exactly as it was before. And (to consider shorter periods) just as, in the

senses, an impression feels very differently according to what has preceded it; as one color succeeding another is modified by the contrast, silence sounds delicious after noise, and a note, when the scale is sung up, sounds unlike itself when the scale is sung down; as the presence of certain lines in a figure changes the apparent form of the other lines, and as in music the whole æsthetic effect comes from the manner in which one set of [p. 235] sounds alters our feeling of another; so, in thought, we must admit that those portions of the brain that have just been maximally excited retain a kind of soreness which is a condition of our present consciousness, a codeterminant of how and what we now shall feel.[10]

Ever some tracts are waning in tension, some waxing, whilst others actively discharge. The states of tension have as positive an influence as any in determining the total condition, and in deciding what the *psychosis* shall be. All we know of submaximal nerve-irritations, and of the summation of apparently ineffective stimuli, tends to show that no changes in the brain are physiologically ineffective, and that presumably none are bare of psychological result. But as the brain-tension shifts from one relative state of equilibrium to another, like the gyrations of a kaleidoscope, now rapid and now slow, is it likely that its faithful psychic concomitant is heavier-footed than itself, and that it cannot match each one of the organ's irradiations by a shifting inward iridescence of its own? But if it can do this, its inward iridescences must be infinite, for the brain-redistributions are in infinite variety. If so coarse a thing as a telephone-plate can be made to thrill for years and never reduplicate its inward condition, how much more must this be the case with the infinitely delicate brain?

I am sure that this concrete and total manner of regarding the mind's changes is the only true manner, difficult as it may be to carry it out in detail. If anything seems obscure about it, it will grow clearer as we advance. Meanwhile, if it be true, it is certainly also true that no two 'ideas' are ever exactly the same, which is the proposition we started to prove. The proposition is more important theoretically than it at first sight seems. For it makes it [p. 236] already impossible for us to follow obediently in the footprints of either the Lockian or the Herbartian school, schools which have had almost unlimited influence in Germany and among ourselves. No doubt it is often *convenient* to formulate the mental facts in an atomistic sort of way, and to treat the higher states of consciousness as if they were all built out of unchanging simple ideas. It is convenient often to treat curves as if they were composed of small straight lines, and electricity and nerve-force as if they were fluids. But in the one case as in the other we must never forget that we are talking symbolically, and that there is nothing in nature to answer to our words. *A permanently existing 'idea' or 'Vorstellung' which makes its appearance before the footlights of consciousness at periodical intervals, is as mythological an entity as the Jack of Spades.*

What makes it convenient to use the mythological formulas is the whole organization of speech, which, as was remarked a while ago, was not made by psychologists, but by men who were as a rule only interested in the facts their mental states revealed. They only spoke of their states as *ideas of this or of that thing*. What wonder, then, that the thought is most easily conceived under the law of the thing whose name it bears! If the thing is composed of parts, then we suppose that the thought of

the thing must be composed of the thoughts of the parts. If one part of the thing have appeared in the same thing or in other things on former occasions, why then we must be having even now the very same 'idea' of that part which was there on those occasions. If the thing is simple, its thought is simple. If it is multitudinous, it must require a multitude of thoughts to think it. If a succession, only a succession of thoughts can know it. If permanent, its thought is permanent. And so on *ad libitum*. What after all is so natural as to assume that one object, called by one name, should be known by one affection of the mind? But, if language must thus influence us, the agglutinative languages, and even Greek and Latin with their declensions, would be the better guides. Names did not appear in them inalterable, but changed their shape to suit the context in which they lay. It must have been easier then than now to conceive of the same [p. 237] object as being thought of at different times in non-identical conscious states.

This, too, will grow clearer as we proceed. Meanwhile a necessary consequence of the belief in permanent self-identical psychic facts that absent themselves and recur periodically is the Humian doctrine that our thought is composed of separate independent parts and is not a sensibly continuous stream. That this doctrine entirely misrepresents the natural appearances is what I next shall try to show.

3) *Within each personal consciousness, thought is sensibly continuous.*

I can only define 'continuous' as that which is without breach, crack, or division. I have already said that the breach from one mind to another is perhaps the greatest breach in nature. The

only breaches that can well be conceived to occur within the limits of a single mind would either be *interruptions*, *time-gaps* during which the consciousness went out altogether to come into existence again at a later moment; or they would be breaks in the *quality*, or content, of the thought, so abrupt that the segment that followed had no connection whatever with the one that went before. The proposition that within each personal consciousness thought feels continuous, means two things:

1. That even where there is a time-gap the consciousness after it feels as if it belonged together with the consciousness before it, as another part of the same self;
2. That the changes from one moment to another in the quality of the consciousness are never absolutely abrupt.

The case of the time-gaps, as the simplest, shall be taken first. And first of all, a word about time-gaps of which the consciousness may not be itself aware.

On page 200 we saw that such time-gaps existed, and that they might be more numerous than is usually supposed. If the consciousness is not aware of them, it cannot feel them as interruptions. In the unconsciousness produced by nitrous oxide and other anæsthetics, in that of epilepsy and fainting, the broken edges of the sentient life may [p. 238] meet and merge over the gap, much as the feelings of space of the opposite margins of the 'blind spot' meet and merge over that objective interruption to the sensitiveness of the eye. Such consciousness as this, whatever it be for the onlooking psychologist, is for itself unbroken. It *feels* unbroken; a waking day of it is sensibly a unit as long as that day lasts, in the sense in which the hours

themselves are units, as having all their parts next each other, with no intrusive alien substance between. To expect the consciousness to feel the interruptions of its objective continuity as gaps, would be like expecting the eye to feel a gap of silence because it does not hear, or the ear to feel a gap of darkness because it does not see. So much for the gaps that are unfelt.

With the felt gaps the case is different. On waking from sleep, we usually know that we have been unconscious, and we often have an accurate judgment of how long. The judgment here is certainly an inference from sensible signs, and its ease is due to long practice in the particular field.[\[11\]](#) The result of it, however, is that the consciousness is, *for itself*, not what it was in the former case, but interrupted and continuous, in the mere time-sense of the words. But in the other sense of continuity, the sense of the parts being inwardly connected and belonging together because they are parts of a common whole, the consciousness remains sensibly continuous and one. What now is the common whole? The natural name for it is *myself*, *I*, or *me*.

When Paul and Peter wake up in the same bed, and recognize that they have been asleep, each one of them mentally reaches back and makes connection with but *one* of the two streams of thought which were broken by the sleeping hours. As the current of an electrode buried in the ground unerringly finds its way to its own similarly buried mate, across no matter how much intervening earth; so Peter's present instantly finds out Peter's past, and never by mistake knits itself on to that of Paul. Paul's thought in turn is as little liable to go astray. The past thought of Peter is appropriated by the present Peter alone. He may [p. 239]

have a *knowledge*, and a correct one too, of what Paul's last drowsy states of mind were as he sank into sleep, but it is an entirely different sort of knowledge from that which he has of his own last states. He *remembers* his own states, whilst he only *conceives* Paul's. Remembrance is like direct feeling; its object is suffused with a warmth and intimacy to which no object of mere conception ever attains. This quality of warmth and intimacy and immediacy is what Peter's *present* thought also possesses for itself. So sure as this present is me, is mine, it says, so sure is anything else that comes with the same warmth and intimacy and immediacy, me and mine. What the qualities called warmth and intimacy may in themselves be will have to be matter for future consideration. But whatever past feeling appear with those qualities must be admitted to receive the greeting of the present mental state, to be owned by it, and accepted as belonging together with it in a common self. This community of self is what the time-gap cannot break in twain, and is why a present thought, although not ignorant of the time-gap, can still regard itself as continuous with certain chosen portions of the past.

Consciousness, then, does not appear to itself chopped up in bits. Such words as 'chain' or 'train' do not describe it fitly as it presents itself in the first instance. It is nothing jointed; it flows. A 'river' or a 'stream' are the metaphors by which it is most naturally described. *In talking of it hereafter, let us call it the stream of thought, of consciousness, or of subjective life.* But now there appears, even within the limits of the same self, and between thoughts all of which alike have this same sense of belonging together, a kind of jointing and separateness among the parts, of which this statement seems to take no account. I

refer to the breaks that are produced by sudden *contrasts in the quality* of the successive segments of the stream of thought. If the words 'chain' and 'train' had no natural fitness in them, how came such words to be used at all? Does not a loud explosion rend the consciousness upon which it abruptly breaks, in twain? Does not every sudden shock, appearance of a new object, [p. 240] or change in a sensation, create a real interruption, sensibly felt as such, which cuts the conscious stream across at the moment at which it appears? Do not such interruptions smite us every hour of our lives, and have we the right, in their presence, still to call our consciousness a continuous stream?

This objection is based partly on a confusion and partly on a superficial introspective view.

The confusion is between the thoughts themselves, taken as subjective facts, and the things of which they are aware. It is natural to make this confusion, but easy to avoid it when once put on one's guard. The things are discrete and discontinuous; they do pass before us in a train or chain, making often explosive appearances and rending each other in twain. But their comings and goings and contrasts no more break the flow of the thought that thinks them than they break the time and the space in which they lie. A silence may be broken by a thunder-clap, and we may be so stunned and confused for a moment by the shock as to give no instant account to ourselves of what has happened. But that very confusion is a mental state, and a state that passes us straight over from the silence to the sound. The transition between the thought of one object and the thought of another is no more a break in the *thought* than a joint in a

bamboo is a break in the wood. It is a part of the *consciousness* as much as the joint is a part of the *bamboo*.

The superficial introspective view is the overlooking, even when the things are contrasted with each other most violently, of the large amount of affinity that may still remain between the thoughts by whose means they are cognized. Into the awareness of the thunder itself the awareness of the previous silence creeps and continues; for what we hear when the thunder crashes is not thunder *pure*, but thunder-breaking-upon-silence-and-contrasting-with-it.[12] Our feeling of the same objective thunder, coming in this way, is quite different from what it would be [p. 241] were the thunder a continuation of previous thunder. The thunder itself we believe to abolish and exclude the silence; but the *feeling* of the thunder is also a feeling of the silence as just gone; and it would be difficult to find in the actual concrete consciousness of man a feeling so limited to the present as not to have an inkling of anything that went before. Here, again, language works against our perception of the truth. We name our thoughts simply, each after its thing, as if each knew its own thing and nothing else. What each really knows is clearly the thing it is named for, with dimly perhaps a thousand other things. It ought to be named after all of them, but it never is. Some of them are always things known a moment ago more clearly; others are things to be known more clearly a moment hence.[13] Our own bodily position, attitude, condition, is one of the things of which *some* awareness, however inattentive, invariably accompanies the knowledge of whatever else we know, We [p. 242] think; and as we think we feel our bodily selves as the seat of the thinking. If the thinking be *our* thinking, it must be suffused through all its parts with that peculiar

warmth and intimacy that make it come as ours. Whether the warmth and intimacy be anything more than the feeling of the same old body always there, is a matter for the next chapter to decide. *Whatever* the content of the ego may be, it is habitually felt *with* everything else by us humans, and must form a *liaison* between all the things of which we become successively aware.[\[14\]](#)

On this gradualness in the changes of our mental content the principles of nerve-action can throw some more light. When studying, in Chapter III, the summation of nervous activities, we saw that no state of the brain can be supposed instantly to die away. If a new state comes, the inertia of the old state will still be there and modify the result accordingly. Of course we cannot tell, in our ignorance, what in each instance the modifications ought to be. The commonest modifications in sense-perception are known as the phenomena of contrast. In æsthetics they are the feelings of delight or displeasure which certain particular orders in a series of impressions give. In thought, strictly and narrowly so called, they are unquestionably that consciousness of the *whence* and the *whither* that always accompanies its flows. If recently the brain-tract *a* was vividly excited, and then *b*, and now vividly *c*, the total present consciousness is not produced simply by *c*'s excitement, but also by the dying vibrations of *a* and *b* as well. If we want to represent the brain-process we must write it thus: ${}_a b^c$ - three different processes coexisting, and correlated with them a thought which is no one of the three thoughts which they would have produced had each of them occurred alone. But whatever this fourth thought may exactly be, it seems impossible that it should not be something

like each of the three other thoughts whose tracts are concerned in its production, though in a fast-waning phase.

[p. 243] It all goes back to what we said in another connection only a few pages ago (p. 233). As the total neurosis changes, so does the total psychosis change. But as the changes of neurosis are never absolutely discontinuous, so must the successive psychoses shade gradually into each other, although their *rate* of change may be much faster at one moment than at the next.

This difference in the rate of change lies at the basis of a difference of subjective states of which we ought immediately to speak. When the rate is slow we are aware of the object of our thought in a comparatively restful and stable way. When rapid, we are aware of a passage, a relation, a transition *from* it, or *between* it and something else. As we take, in fact, a general view of the wonderful stream of our consciousness, what strikes us first is this different pace of its parts. Like a bird's life, it seems to be made of an alternation of flights and perchings. The rhythm of language expresses this, where every thought is expressed in a sentence, and every sentence closed by a period. The resting-places are usually occupied by sensorial imaginations of some sort, whose peculiarity is that they can be held before the mind for an indefinite time, and contemplated without changing; the places of flight are filled with thoughts of relations, static or dynamic, that for the most part obtain between the matters contemplated in the periods of comparative rest.

Let us call the resting-places the 'substantive parts,' and the places of flight the 'transitive parts,' of the stream of thought. It then appears that the main end of our thinking is at all

times the attainment of some other substantive part than the one from which we have just been dislodged. And we may say that the main use of the transitive parts is to lead us from one substantive conclusion to another.

Now it is very difficult, introspectively, to see the transitive parts for what they really are. If they are but flights to a conclusion, stopping them to look at them before the conclusion is reached is really annihilating them. Whilst if we wait till the conclusion *be* reached, it so exceeds them [p. 244] in vigor and stability that it quite eclipses and swallows them up in its glare. Let anyone try to cut a thought across in the middle and get a look at its section, and he will see how difficult the introspective observation of the transitive tracts is. The rush of the thought is so headlong that it almost always brings us up at the conclusion before we can arrest it. Or if our purpose is nimble enough and we do arrest it, it ceases forthwith to be itself. As a snow-flake crystal caught in the warm hand is no longer a crystal but a drop, so, instead of catching the feeling of relation moving to its term, we find we have caught some substantive thing, usually the last word we were pronouncing, statically taken, and with its function, tendency, and particular meaning in the sentence quite evaporated. The attempt at introspective analysis in these cases is in fact like seizing a spinning top to catch its motion, or trying to turn up the gas quickly enough to see how the darkness looks. And the challenge to *produce* these psychoses, which is sure to be thrown by doubting psychologists at anyone who contends for their existence, is as unfair as Zeno's treatment of the advocates of motion, when, asking them to point out in what place an arrow *is* when it moves, he argues the falsity of their

thesis from their inability to make to so preposterous a question an immediate reply.

The results of this introspective difficulty are baleful. If to hold fast and observe the transitive parts of thought's stream be so hard, then the great blunder to which all schools are liable must be the failure to register them, and the undue emphasizing of the more substantive parts of the stream. Were we not ourselves a moment since in danger of ignoring any feeling transitive between the silence and the thunder, and of treating their boundary as a sort of break in the mind? Now such ignoring as this has historically worked in two ways. One set of thinkers have been led by it to *Sensationalism*. Unable to lay their hands on any coarse feelings corresponding to the innumerable relations and forms of connection between the facts of the world, finding no *named* subjective modifications mirroring such relations, they have for the most part denied that feelings of relation exist, and many of them, like Hume, have gone [p. 245] so far as to deny the reality of most relations *out* of the mind as well as in it. Substantive psychoses, sensations and their copies and derivatives, juxtaposed like dominoes in a game, but really separate, everything else verbal illusion, - such is the upshot of this view.[15] The *Intellectualists*, on the other hand, unable to give up the reality of relations *extra mentem*, but equally unable to point to any distinct substantive feelings in which they were known, have made the same admission that the feelings do not exist. But they have drawn an opposite conclusion. The relations must be known, they say, in something that is no feeling, no mental modification continuous and consubstantial with the subjective tissue out of which sensations and other substantive states are made. They are known, these

relations, by something that lies on an entirely different plane, by an *actus purus* of Thought, Intellect, or Reason, all written with capitals and considered to mean something unutterably superior to any fact of sensibility whatever.

But from our point of view both Intellectualists and Sensationalists are wrong. If there be such things as feelings at all, *then so surely as relations between objects exist in rerum naturâ, so surely, and more surely, do feelings exist to which these relations are known.* There is not a conjunction or a preposition, and hardly an adverbial phrase, syntactic form, or inflection of voice, in human speech, that does not express some shading or other of relation which we at some moment actually feel to exist between the larger objects of our thought. If we speak objectively, it is the real relations that appear revealed; if we speak subjectively, it is the stream of consciousness that matches each of them by an inward coloring of its own. In either case the relations are numberless, and no existing language is capable of doing justice to all their shades.

We ought to say a feeling of *and*, a feeling of *if*, a feeling of *but*, and a feeling of *by*, quite as readily as we say a feel- [p. 246] ing of *blue* or a feeling of *cold*. Yet we do not: so inveterate has our habit become of recognizing the existence of the substantive parts alone, that language almost refuses to lend itself to any other use. The Empiricists have always dwelt on its influence in making us suppose that where we have a separate name, a separate thing must needs be there to correspond with it; and they have rightly denied the existence of the mob of abstract entities, principles, and forces, in whose favor no other evidence than this could be brought up. But they have said nothing of that

obverse error, of which we said a word in Chapter VII, (see p. 195), of supposing that where there is *no* name no entity can exist. All *dumb* or anonymous psychic states have, owing to this error, been coolly suppressed; or, if recognized at all, have been named after the substantive perception they led to, as thoughts 'about' this object or 'about' that, the stolid word *about* engulfing all their delicate idiosyncrasies in its monotonous sound. Thus the greater and greater accentuation and isolation of the substantive parts have continually gone on.

Once more take a look at the brain. We believe the brain to be an organ whose internal equilibrium is always in a state of change, - the change affecting every part. The pulses of change are doubtless more violent in one place than in another, their rhythm more rapid at this time than at that. As in a kaleidoscope revolving at a uniform rate, although the figures are always rearranging themselves, there are instants during which the transformation seems minute and interstitial and almost absent, followed by others when it shoots with magical rapidity, relatively stable forms thus alternating with forms we should not distinguish if seen again; so in the brain the perpetual rearrangement must result in some forms of tension lingering relatively long, whilst others simply come and pass. But if consciousness corresponds to the fact of rearrangement itself, why, if the rearrangement stop not, should the consciousness ever cease? And if a lingering rearrangement brings with it one kind of consciousness, why should not a swift rearrangement bring another kind of consciousness as peculiar as the rearrangement itself? The lingering consciousnesses, [p. 247] if of simple objects, we call 'sensations' or 'images,' according as they are vivid or faint; if of complex objects, we

call them 'percepts' when vivid, 'concepts' or 'thoughts' when faint. For the swift consciousnesses we have only those names of 'transitive states,' or 'feelings of relation,' which we have used.[\[16\]](#) As the brain-changes [p. 248] are continuous, so do all these consciousnesses melt into each other like dissolving views. Properly they are but one protracted consciousness, one unbroken stream.

[p. 249] *Feelings of Tendency.*

So much for the transitive states. But there are other unnamed states or qualities of states that are just as im- [p. 250] portant and just as cognitive as they, and just as much unrecognized by the traditional sensationalist and intellectualist philosophies of mind. The first fails to find them at all, the second finds their *cognitive function*, but denies that anything in the way of *feeling* has a share in bringing it about. Examples will make clear what these inarticulate psychoses, due to waxing and waning excitements of the brain, are like.[\[17\]](#)

Suppose three successive persons say to us: 'Wait!' 'Hark!' 'Look!' Our consciousness is thrown into [p. 251] three quite different attitudes of expectancy, although no definite object is before it in any one of the three cases. Leaving out different actual bodily attitudes, and leaving out the reverberating images of the three words, which are of course diverse, probably no one will deny the existence of a residual conscious affection, a sense of the direction from which an impression is about to come, although no positive impression is yet there. Meanwhile we have no names for the psychoses in question but the names hark, look, and wait.

Suppose we try to recall a forgotten name, The state of our consciousness is peculiar. There is a gap therein; but no mere gap. It is a gap that is intensely active. A sort of wraith of the name is in it, beckoning us in a given direction, making us at moments tingle with the sense of our closeness, and then letting us sink back without the longed-for term. If wrong names are proposed to us, this singularly definite gap acts immediately so as to negate them. They do not fit into its mould. And the gap of one word does not feel like the gap of another, all empty of content as both might seem necessarily to be when described as gaps. When I vainly try to recall the name of Spalding, my consciousness is far removed from what it is when I vainly try to recall the name of Bowles. Here some ingenious persons will say: "How *can* the two consciousnesses be different when the terms which might make them different are not there? All that is there, so long as the effort to recall is vain, is the bare effort itself. How should that differ in the two cases? You are making it seem to differ by prematurely filling it out with the different names, although these, by the hypothesis, have not yet come. Stick to the two efforts as they are, without naming them after facts not yet existent, and you'll be quite unable to designate any point in which they differ," Designate, truly enough. We can only designate the difference by borrowing the names of objects not yet in the mind. Which is to say that our psychological vocabulary is wholly inadequate to name the differences that exist, even such strong differences as these. But namelessness is compatible with existence. There are innumerable consciousnesses of [p. 252] emptiness, no one of which taken in itself has a name, but all different from each other. The ordinary way is to assume that they are all emptinesses of consciousness, and so the same state. But the feeling of an absence is *toto cælo*

other than the absence of a feeling. It is an intense feeling. The rhythm of a lost word may be there without a sound to clothe it; or the evanescent sense of something which is the initial vowel or consonant may mock us fitfully, without growing more distinct. Every one must know the tantalizing effect of the blank rhythm of some forgotten verse, restlessly dancing in one's mind, striving to be filled out with words.

Again, what is the strange difference between an experience tasted for the first time and the same experience recognized as familiar, as having been enjoyed before, though we cannot name it or say where or when? A tune, an odor, a flavor sometimes carry this inarticulate feeling of their familiarity so deep into our consciousness that we are fairly shaken by its mysterious emotional power. But strong and characteristic as this psychosis is - it probably is due to the submaximal excitement of wide-spreading associational brain-tracts - the only name we have for all its shadings is 'sense of familiarity.'

When we read such phrases as 'naught but,' 'either one or the other,' '*a* is *b*, but,' 'although it is, nevertheless,' 'it is an excluded middle, there is no *tertium quid*,' and a host of other verbal skeletons of logical relation, is it true that there is nothing more in our minds than the words themselves as they pass? What then is the meaning of the words which we think we understand as we read? What makes that meaning different in one phrase from what it is in the other? 'Who?' 'When?' 'Where?' Is the difference of felt meaning in these interrogatives nothing more than their difference of sound? And is it not (just like the difference of sound itself) known and understood in an affection of consciousness correlative to it, though so impalpable to direct

examination? Is not the same true of such negatives as 'no,' 'never,' 'not yet'?

The truth is that large tracts of human speech are nothing but *signs of direction* in thought, of which direction we nevertheless have an acutely discriminate sense, though no definite sensorial image plays any part in it whatsoever. Sensorial images are stable psychic facts; we can hold them still and look at them as long as we like. These bare images of logical movement, on the contrary, are psychic transitions, always on the wing, so to speak, and not to be glimpsed except in flight. Their function is to lead from one set of images to another. As they pass, we feel both the waxing and the waning images in a way altogether peculiar and a way quite different from the way of their full presence. If we try to hold fast the feeling of direction, the full presence comes and the feeling of direction is lost. The blank verbal scheme of the logical movement gives us the fleeting sense of the movement as we read it, quite as well as does a rational sentence awakening definite imaginations by its words.

What is that first instantaneous glimpse of some one's meaning which we have, when in vulgar phrase we say we 'twig' it? Surely an altogether specific affection of our mind. And has the reader never asked himself what kind of a mental fact is his *intention of saying a thing* before he has said it? It is an entirely definite intention, distinct from all other intentions, an absolutely distinct state of consciousness, therefore; and yet how much of it consists of definite sensorial images, either of words or of things? Hardly anything! Linger, and the words and things come into the mind; the anticipatory intention, the divination is

there no more. But as the words that replace it arrive, it welcomes them successively and calls them right if they agree with it, it rejects them and calls them wrong if they do not. It has therefore a nature of its own of the most positive sort, and yet what can we say about it without using words that belong to the later mental facts that replace it? The intention *to-say-so-and-so* is the only name it can receive. One may admit that a good third of our psychic life consists in these rapid premonitory perspective views of schemes of thought not yet articulate. How comes it about that a man reading something aloud for the first time is able immediately to emphasize all his words [p. 254] aright, unless from the very first he have a sense of at least the form of the sentence yet to come, which sense is fused with his consciousness of the present word, and modifies its emphasis in his mind so as to make him give it the proper accent as he utters it? Emphasis of this kind is almost altogether a matter of grammatical construction. If we read 'no more' we expect presently to come upon a 'than'; if we read 'however' at the outset of a sentence it is a 'yet,' a 'still,' or a 'nevertheless,' that we expect. A noun in a certain position demands a verb in a certain mood and number, in another position it expects a relative pronoun. Adjectives call for nouns, verbs for adverbs, etc., etc. And this foreboding of the coming grammatical scheme combined with each successive uttered word is so practically accurate that a reader incapable of understanding four ideas of the book he is reading aloud, can nevertheless read it with the most delicately modulated expression of intelligence.

Some will interpret these facts by calling them all cases in which certain images, by laws of association, awaken others so very rapidly that we think afterwards we felt the very *tendencies* of

the nascent images to arise, before they were actually there. For this school the only possible materials of consciousness are images of a perfectly definite nature. Tendencies exist, but they are facts for the outside psychologist rather than for the subject of the observation. The tendency is thus a *psychical* zero; only its *results* are felt.

Now what I contend for, and accumulate examples to show, is that 'tendencies' are not only descriptions from without, but that they are among the *objects* of the stream, which is thus aware of them from within, and must be described as in very large measure constituted of *feelings of tendency*, often so vague that we are unable to name them at all. It is in short, the re-instatement of the vague to its proper place in our mental life which I am so anxious to press on the attention. Mr. Galton and Prof. Huxley have, as we shall see in Chapter XVIII, made one step in advance in exploding the ridiculous theory of Hume and Berkeley that we can have no images but of perfectly definite things. Another is made in the overthrow of the equally ridiculous [p. 255] notion that, whilst simple objective qualities are revealed to our knowledge in subjective feelings, relations are not. But these reforms are not half sweeping and radical enough. What must be admitted is that the definite images of traditional psychology form but the very smallest part of our minds as they actually live. The traditional psychology talks like one who should say a river consists of nothing but pailsful, spoonsful, quartpotsful, barrelsful, and other moulded forms of water. Even were the pails and the pots all actually standing in the stream, still between them the free water would continue to flow. It is just this free water of consciousness that psychologists resolutely overlook. Every definite image in the mind is steeped

and dyed in the free water that flows round it. With it goes the sense of its relations, near and remote, the dying echo of whence it came to us, the dawning sense of whither it is to lead. The significance, the value, of the image is all in this halo or penumbra that surrounds and escorts it, - or rather that is fused into one with it and has become bone of its bone and flesh of its flesh; leaving it, it is true, an image of the same *thing* it was before, but making it an image of that thing newly taken and freshly understood.

What is that shadowy scheme of the 'form' of an opera, play, or book, which remains in our mind and on which we pass judgment when the actual thing is done? What is our notion of a scientific or philosophical system? Great thinkers have vast premonitory glimpses of schemes of relation between terms, which hardly even as verbal images enter the mind, so rapid is the whole process.[\[18\]](#) We all of us have this permanent consciousness of whither our thought is going. It is a feeling like any other, a feeling [p. 256] of what thoughts are next to arise, before they have arisen. This field of view of consciousness varies very much in extent, depending largely on the degree of mental freshness or fatigue. When very fresh, our minds carry an immense horizon with them. The present image shoots its perspective far before it, irradiating in advance the regions in which lie the thoughts as yet unborn. Under ordinary conditions the halo of felt relations is much more circumscribed. And in states of extreme brain-fag the horizon is narrowed almost to the passing word, - the associative machinery, however, providing for the next word turning up in orderly sequence, until at last the tired thinker is led to some kind of a conclusion. At certain moments he may find himself doubting whether his thoughts

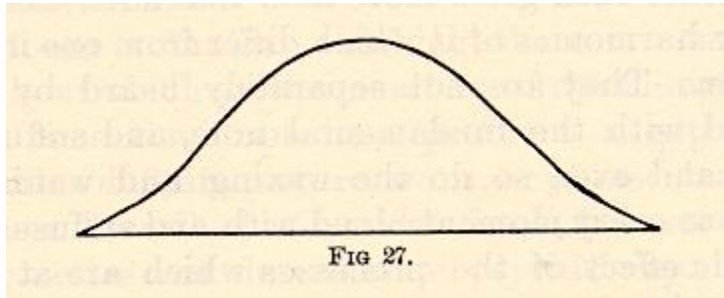
have not come to a full stop; but the vague sense of a *plus ultra* makes him ever struggle on towards a more definite expression of what it may be; whilst the slowness of his utterance shows how difficult, under such conditions, the labor of thinking must be.

The awareness that our *definite* thought has come to a stop is an entirely different thing from the awareness that our thought is definitively completed. The expression of the latter state of mind is the falling inflection which betokens that the sentence is ended, and silence. The expression of the former state is 'hemming and hawing,' or else such phrases as '*et cetera*,' or 'and so forth.' But notice that every part of the sentence to be left incomplete feels differently as it passes, by reason of the premonition we have that we shall be unable to end it. The 'and so forth' casts its shadow back, and is as integral a part of the object of the thought as the distinctest of images would be.

Again, when we use a common noun, such as *man*, in a universal sense, as signifying all possible men, we are fully aware of this intention on our part, and distinguish it carefully from our intention when we mean a certain group of men, or a solitary individual before us. In the chapter on Conception we shall see how important this difference of intention is. It casts its influence over the whole of the sentence, both before and after the spot in which the word *man* is used.

[p. 257] Nothing is easier than to symbolize all these facts in terms of brain-action. Just as the echo of the *whence*, the sense of the starting point of our thought, is probably due to the dying excitement of processes but a moment since vividly aroused; so the sense of the *whither*, the fore-taste of the

terminus, must be due to the waxing excitement of tracts or processes which, a moment hence, will be the cerebral correlatives of some thing which a moment hence will be vividly present to the thought. Represented by a curve, the neurosis underlying consciousness must at any moment be like this:



Each point of the horizontal line stands for some brain-tract or process. The height of the curve above the line

stands for the intensity of the process. All the processes are *present*, in the intensities shown by the curve. But those before the latter's apex *were* more intense a moment ago; those after it *will* be more intense a moment hence. If I recite *a, b, c, d, e, f, g*, at the moment of uttering *d*, neither *a, b, c*, nor *e, f, g*, are out of my consciousness altogether, but both, after their respective fashions, 'mix their dim lights' with the stronger one of the *d*, because their neuroses are both awake in some degree.

There is a common class of mistakes which shows how brain-processes begin to be excited before the thoughts attached to them are *due*-due, that is, in substantive and vivid form. I mean those mistakes of speech or writing by which, in Dr. Carpenter's words, "we mispronounce or misspell a word, by introducing into it a letter or syllable of some other, whose turn is shortly to come; or, it may be, the whole of the anticipated word is substituted for the one [p. 258] which ought to have been expressed." [19] In these cases one of two things must have

happened: either some local accident of nutrition *blocks* the process that is *due*, so that other processes discharge that ought as yet to be but nascently aroused; or some opposite local accident *further*s the *latter processes* and makes them explode before their time. In the chapter on Association of Ideas, numerous instances will come before us of the actual effect on consciousness of neuroses not yet maximally aroused.

It is just like the 'overtones' in music. Different instruments give the 'same note,' but each in a different voice, because each gives more than that note, namely, various upper harmonics of it which differ from one instrument to another. They are not separately heard by the ear; they blend with the fundamental note, and suffuse it, and alter it; and even so do the waxing and waning brain-processes at every moment blend with and suffuse and alter the psychic effect of the processes which are at their culminating point.

Let us use the words *psychic overtone*, *suffusion*, or *fringe*, to designate the influence of a faint brain-process upon our thought, as it makes it aware of relations and objects but dimly perceived.[\[20\]](#)

If we then consider the *cognitive function* of different [p. 259] states of mind, we may feel assured that the difference between those that are mere 'acquaintance,' and those that are 'knowledges-*about*' (see p. 221) is reducible almost entirely to the absence or presence of psychic fringes or overtones.

Knowledge *about* a thing is knowledge of its relations.

Acquaintance with it is limitation to the bare impression which it makes. Of most of its relations we are only aware in the penumbral nascent way of a 'fringe' of unarticulated affinities

about it. And, before passing to the next topic in order, I must say a little of this sense of affinity, as itself one of the most interesting features of the subjective stream.

In all our voluntary thinking there is some topic or subject about which all the members of the thought revolve. Half the time this topic is a problem, a gap we cannot yet fill with a definite picture, word, or phrase, but which, in the manner described some time back, influences us in an intensely active and determinate psychic way. Whatever may be the images and phrases that pass before us, we feel their relation to this aching gap. To fill it up is our thought's destiny. Some bring us nearer to that consummation. Some the gap negates as quite irrelevant. Each swims in a felt fringe of relations of which the aforesaid gap is the term. Or instead of a definite gap we may merely carry a mood of interest about with us. Then, however vague the mood, it will still act in the same way, throwing a mantle of felt affinity over such representations, entering the mind, as suit it, and tingeing with the feeling of tediousness or discord all those with which it has no concern.

Relation, then, to our topic or interest is constantly felt in the fringe, and particularly the relation of harmony and discord, of furtherance or hindrance of the topic. When the sense of furtherance is there, we are 'all right;' with the sense of hindrance we are dissatisfied and perplexed, and cast about us for other thoughts. Now *any* thought the quality of whose fringe lets us feel ourselves 'all right,' is an acceptable member of our thinking, whatever kind of thought it may otherwise be. Provided we only feel it to have a place in the scheme of relations in which the in- [p. 260] teresting topic also lies, that is

quite sufficient to make of it a relevant and appropriate portion of our train of ideas.

For the important thing about a train of thought is its conclusion. That is the *meaning*, or, as we say, the topic of the thought. That is what abides when all its other members have faded from memory. Usually this conclusion is a word or phrase or particular image, or practical attitude or resolve, whether rising to answer a problem or fill a pre-existing gap that worried us, or whether accidentally stumbled on in revery. In either case it stands out from the other segments of the stream by reason of the peculiar interest attaching to it. This interest *arrests* it, makes a sort of crisis of it when it comes, induces attention upon it and makes us treat it in a substantive way.

The parts of the stream that precede these substantive conclusions are but the means of the latter's attainment. And, provided the same conclusion be reached, the means may be as mutable as we like, for the 'meaning' of the stream of thought will be the same. What difference does it make what the means are? "*Qu'importe le flacon, pourvu qu'on ait l'ivresse?*" The relative unimportance of the means appears from the fact that when the conclusion is there, we have always forgotten most of the steps preceding its attainment. When we have uttered a proposition, we are rarely able a moment afterwards to recall our exact words, though we can express it in different words easily enough. The practical upshot of a book we read remains with us, though we may not recall one of its sentences.

The only paradox would seem to lie in supposing that the fringe of felt affinity and discord can be the same in two heterogeneous sets of images. Take a train of words passing through the mind

and leading to a certain conclusion on the one hand, and on the other hand an almost wordless set of tactile, visual and other fancies leading to the same conclusion. Can the halo, fringe, or scheme in which we feel the words to lie be the same as that in which we feel the images to lie? Does not the discrepancy of terms involve a discrepancy of felt relations among them?

If the terms be taken *quâ* mere sensations, it assuredly does. For instance, the words may rhyme with each [p. 261] other, - the visual images can have no such affinity as *that*. But *quâ* thoughts, *quâ* sensations *understood*, the words have contracted by long association fringes of mutual repugnance or affinity with each other and with the conclusion, which run exactly parallel with like fringes in the visual, tactile and other ideas. The most important element of these fringes is, I repeat, the mere feeling of harmony or discord, of a right or wrong direction in the thought. Dr. Campbell has, so far as I know, made the best analysis of this fact, and his words, often quoted, deserve to be quoted again. The chapter is entitled "What is the cause that nonsense so often escapes being detected, both by the writer and by the reader?" The author, in answering this question, makes (*inter alia*) the following remarks:[[21](#)]

"That connection [he says] or relation which comes gradually to subsist among the different words of a language, in the minds of those who speak it, ... is merely consequent on this, that those words are employed as signs of connected or related things. It is an axiom in geometry that things equal to the same thing are equal to one another. It may, in like manner, be admitted as an axiom in psychology that ideas associated by the same idea will associate one another. Hence it will happen that if, from

experiencing the connection of two things, there results, as infallibly there will result, an association between the ideas or notions annexed to them, as each idea will moreover be associated by its sign, there will likewise be an association between the ideas of the signs. Hence the sounds considered as signs will be conceived to have a connection analogous to that which subsisteth among the things signified; I say, the sounds considered as signs; for this way of considering them constantly attends us in speaking, writing, hearing, and reading. When we purposely abstract from it, and regard them merely as sounds, we are instantly sensible that they are quite unconnected, and have no other relation than what ariseth from similitude of tone or accent. But to consider them in this manner commonly results from previous design, and requires a kind of effort which is not exerted in the ordinary use of speech. In ordinary use they are regarded solely as signs, or, rather, they are confounded with the things they signify; the consequence of which is that, in the manner just now explained, we come insensibly to conceive a connection among them of a very different sort from that of which sounds are naturally susceptible.

"Now this conception, habit, or tendency of the mind, call it which you please, is considerably strengthened by the frequent use of language and by the structure of it. Language is the sole channel through which [p. 262] we communicate our knowledge and discoveries to others, and through which the knowledge and discoveries of others are communicated to us. By reiterated recourse to this medium, if necessarily happens that when things are related to each other, the words signifying those things are more commonly brought together in discourse. Hence the words and names by themselves, by customary vicinity, contract in the

fancy a relation additional to that which they derive purely from being the symbols of related things. Farther, this tendency is strengthened by the structure of language. All languages whatever, even the most barbarous, as far as hath yet appeared, are of a regular and analogical make. The consequence is that similar relations in things will be expressed similarly; that is, by similar inflections, derivations, compositions, arrangement of words, or juxtaposition of particles, according to the genius or grammatical form of the particular tongue. Now as, by the habitual use of a language (even though it were quite irregular), the signs would insensibly become connected in the imagination wherever the things signified are connected in nature, so, by the regular structure of a language, this connection among the signs is conceived as analogous to that which subsisteth among their archetypes."

If we know English and French and begin a sentence in French, all the later words that come are French; we hardly ever drop into English. And this affinity of the French words for each other is not something merely operating mechanically as a brain-law, it is something we feel at the time. Our understanding of a French sentence heard never falls to so low an ebb that we are not aware that the words linguistically belong together. Our attention can hardly so wander that if an English word be suddenly introduced we shall not start at the change. Such a vague sense as this of the words belonging together is the very minimum of fringe that can accompany them, if 'thought' at all. Usually the vague perception that all the words we hear belong to the same language and to the same special vocabulary in that language, and that the grammatical sequence is familiar, is practically equivalent to an admission that what we hear is

sense. But if an unusual foreign word be introduced, if the grammar trip, or if a term from an incongruous vocabulary suddenly appear, such as 'rat-trap' or 'plumber's bill' in a philosophical discourse, the sentence detonates, as it were, we receive a shock from the incongruity, and the drowsy assent is gone. The feeling of rationality in these cases seems rather a negative than a [p. 263] positive thing, being the mere absence of shock, or sense of discord, between the terms of thought.

So delicate and incessant is this recognition by the mind of the mere fitness of words to be mentioned together that the slightest misreading, such as 'casualty' for 'causality,' or 'perpetual' for 'perceptual,' will be corrected by a listener whose attention is so relaxed that he gets no idea of the *meaning* of the sentence at all.

Conversely, if words do belong to the same vocabulary, and if the grammatical structure is correct, sentences with absolutely no meaning may be uttered in good faith and pass unchallenged. Discourses at prayer-meetings, re-shuffling the same collection of cant phrases, and the whole genus of penny-a-line-isms and newspaper-reporter's flourishes give illustrations of this. "The birds filled the tree-tops with their morning song, making the air moist, cool, and pleasant," is a sentence I remember reading once in a report of some athletic exercises in Jerome Park. It was probably written unconsciously by the hurried reporter, and read uncritically by many readers. An entire volume of 784 pages lately published in Boston[[22](#)] is composed of stuff like this passage picked out at random:

"The flow of the efferent fluids of all these vessels from their outlets at the terminal loop of each culminate link on the surface of the nuclear organism is continuous as their respective

atmospheric fruitage up to the altitudinal limit of their expansibility, whence, when atmosphered by like but coalescing essences from higher altitudes, - those sensibly expressed as the essential qualities of external forms, - they descend, and become assimilated by the afferents of the nuclear organism." [23]

[p. 264] There are every year works published whose contents show them to be by real lunatics. To the reader, the book quoted from seems pure nonsense from beginning to end. It is impossible to divine, in such a case, just what sort of feeling of rational relation between the words may have appeared to the author's mind. The border line between objective sense and nonsense is hard to draw; that between subjective sense and nonsense, impossible. Subjectively, any collocation of words may make sense - even the wildest words in a dream - if one only does not doubt their belonging together. Take the obscurer passages in Hegel: it is a fair question whether the rationality included in them be anything more than the fact that the words all belong to a common vocabulary, and are strung together on a scheme of predication and relation, - immediacy, self-relation, and what not, - which has habitually recurred. Yet there seems no reason to doubt that the subjective feeling of the rationality of these sentences was strong in the writer as he penned them, or even that some readers by straining may have reproduced it in themselves.

To sum up, certain kinds of verbal associate, certain grammatical expectations fulfilled, stand for a good part of our impression that a sentence has a meaning and is dominated by the Unity of one Thought. Nonsense in grammatical form sounds half rational; sense with grammatical sequence upset

sounds nonsensical; e.g., "Elba the Napoleon English faith had banished broken to he Saint because Helena at." Finally, there is about each word the psychic 'overtone' of feeling that it brings us nearer to a forefelt conclusion. Suffuse all the words of a sentence, as they pass, with these three fringes or haloes of relation, let the conclusion seem worth arriving at, and all will admit the sentence to be an expression of thoroughly continuous, unified, and rational thought.[24]

[p. 265] Each word, in such a sentence, is felt, not only as a word, but as having a *meaning*. The 'meaning' of a word taken thus dynamically in a sentence may be quite different from its meaning when taken statically or without context. The dynamic meaning is usually reduced to the bare fringe we have described, of felt suitability or unfitness to the context and conclusion. The static meaning, when the word is concrete, as 'table,' 'Boston,' consists of sensory images awakened; when it is abstract, as 'criminal legislation,' 'fallacy,' the meaning consists of other words aroused, forming the so-called 'definition.'

Hegel's celebrated dictum that pure being is identical with pure nothing results from his taking the words statically, or without the fringe they wear in a context. Taken in isolation, they agree in the single point of awakening no sensorial images. But taken dynamically, or as significant, - as *thought*, - their fringes of relation, their affinities and repugnances, their function and meaning, are felt and understood to be absolutely opposed.

Such considerations as these remove all appearance of paradox from those cases of extremely deficient visual imagery of whose existence Mr. Galton has made us aware (see below). An exceptionally intelligent friend informs me that he can frame no

image whatever of the appearance of his breakfast-table. When asked how he then remembers it at all, he says he simple '*knows*' that it seated four people, and was covered with a white cloth on which were a butter-dish, a coffee-pot, radishes, and so forth. The mind-stuff of which this 'knowing' is made seems to be verbal images exclusively. But if the words 'coffee,' 'bacon,' 'muffins,' and 'eggs' lead a man to speak to his cook, to pay his bills, and to take measures for the morrow's meal exactly as visual and gustatory memories would, why are they not, [p. 266] for all practical intents and purposes, as good a kind of material in which to think? In fact, we may suspect them to be for most purposes better than terms with a richer imaginative coloring. The scheme of relationship and the conclusion being the essential things in thinking, that kind of mind-stuff which is handiest will be the best for the purpose. Now words, uttered or unexpressed, are the handiest mental elements we have. Not only are they very *rapidly* revivable, but they are revivable as actual sensations more easily than any other items of our experience. Did they not possess some such advantage as this, it would hardly be the case that the older men are and the more effective as thinkers, the more, as a rule, they have lost their visualizing power and depend on words. This was ascertained by Mr. Galton to be the case with members of the Royal Society. The present writer observes it in his own person most distinctly.

On the other hand, a deaf and dumb man can weave his tactile and visual images into a system of thought quite as effective and rational as that of a word-user. *The question whether thought is possible without language* has been a favorite topic of discussion among philosophers. Some interesting reminiscences

of his childhood by Mr. Ballard, a deaf-mute instructor in the National College at Washington, show it to be perfectly possible. A few paragraphs may be quoted here.

"In consequence of the loss of my hearing in infancy, I was debarred from enjoying the advantages which children in the full possession of their senses derive from the exercises of the common primary school, from the every-day talk of their school-fellows and playmates, and from the conversation of their parents and other grown-up persons.

"I could convey my thoughts and feelings to my parents and brothers by natural signs or pantomime, and I could understand what they said to me by the same medium; our intercourse being, however, confined to the daily routine of home affairs and hardly going beyond the circle of my own observation. . . .

"My father adopted a course which he thought would, in some measure, compensate me for the loss of my hearing. It was that of taking me with him when business required him to ride abroad; and he took me more frequently than he did my brothers; giving, as the reason for his apparent partiality, that they could acquire information [p. 267] through the ear, while I depended solely upon my eye for acquaintance with affairs of the outside world. . . .

"I have a vivid recollection of the delight I felt in watching the different scenes we passed through, observing the various phases of nature, both animate and inanimate; though we did not, owing to my infirmity, engage in conversation. It was during those delightful rides, some two or three years before my initiation into the rudiments of written language, that I began to

ask myself the question: *How came the world into being?* When this question occurred to my mind, I set myself to thinking it over a long time. My curiosity was awakened as to what was the origin of human life in its first appearance upon the earth, and of vegetable life as well, and also the cause of the existence of the earth, sun, moon, and stars.

"I remember at one time when my eye fell upon a very large old stump which we happened to pass in one of our rides, I asked myself, 'Is it possible that the first man that ever came into the world rose out of that stump? But that stump is only a remnant of a once noble magnificent tree, and how came that tree? Why, it came only by beginning to grow out of the ground just like those little trees now coming up.' And I dismissed from my mind, as an absurd idea, the connection between the origin of man and a decaying old stump. . . .

"I have no recollection of what it was that first suggested to me the question as to the origin of things. I had before this time gained ideas of the descent from parent to child, of the propagation of animals, and of the production of plants from seeds. The question that occurred to my mind was: whence came the first man, the first animal, and the first plant, at the remotest distance of time, before which there was no man, no animal, no plant; since I knew they all had a beginning and an end.

"It is impossible to state the exact order in which these different questions arose, i.e., about men, animals, plants, the earth, sun, moon, etc. The lower animals did not receive so much thought as was bestowed upon man and the earth; perhaps because I put man and beast in the same class, since I believed that man would be annihilated and there was no resurrection beyond the grave, -

though I am told by my mother that, in answer to my question, in the case of a deceased uncle who looked to me like a person in sleep, she had tried to make me understand that he would awake in the far future. It was my belief that man and beast derived their being from the same source and were to be laid down in the dust in a state of annihilation. Considering the brute animal as of secondary importance, and allied to man on a lower level, man and the earth were the two things on which my mind dwelled most.

"I think I was five years old, when I began to understand the descent from parent to child and the propagation of animals. I was nearly eleven years old, when I entered the Institution where I was educated; and I remember distinctly that it was at least two years before this time that I began to ask myself the question as to the origin of the universe. My age was then about eight, not over nine years.

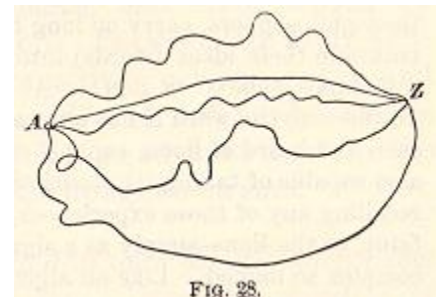
"Of the form of the earth, I had no idea in my childhood, except that, from a look at a map of the hemispheres, I inferred there were two immense disks of matter lying near each other. I also believed the sun and moon to be round, flat plates of illuminating matter; and for those luminaries I entertained a sort of reverence on account of their power of lighting and heating the earth. I thought from their coming up and going down, travelling across the sky in so regular a manner that there must be a certain something having power to govern their course. I believed the sun went into a hole at the west and came out of another at the east, travelling through a great tube in the earth, describing the same curve as it seemed to describe in the sky. The stars seemed to me to be tiny lights studded in the sky.

"The source from which the universe came was the question about which my mind revolved in a vain struggle to grasp it, or rather to fight the way up to attain to a satisfactory answer. When I had occupied myself with this subject a considerable time, I perceived that it was a matter much greater than my mind could comprehend; and I remember well that I became so appalled at its mystery and so bewildered at my inability to grapple with it that I laid the subject aside and out of my mind, glad to escape being, as it were, drawn into a vortex of inextricable confusion. Though I felt relieved at this escape, yet I could not resist the desire to know the truth; and I returned to the subject; but as before, I left it, after thinking it over for some time. In this state of perplexity, I hoped all the time to get at the truth, still believing that the more I gave thought to the subject, the more my mind would penetrate the mystery. Thus I was tossed like a shuttlecock, returning to the subject and recoiling from it, till I came to school.

"I remember that my mother once told me about a being up above, pointing her finger towards the sky and with a solemn look on her countenance. I do not recall the circumstance which led to this communication. When she mentioned the mysterious being up in the sky, I was eager to take hold of the subject, and plied her with questions concerning the form and appearance of this unknown being, asking if it was the sun, moon, or one of the stars. I knew she meant that there was a living one somewhere up in the sky; but when I realized that she could not answer my questions, I gave it up in despair, feeling sorrowful that I could not obtain a definite idea of the mysterious living one up in the sky.

"One day, while we were haying in a field, there was a series of heavy thunder-claps. I asked one of my brothers where they came from. He pointed to the sky and made a zigzag motion with his finger, signifying lightning. I imagined there was a great man somewhere in the blue vault, who made a loud noise with his voice out of it; and each time I [p. 269] heard[25] a thunder-clap I was frightened, and looked up at the sky, fearing he was speaking a threatening word." [26]

Here we may pause. The reader sees by this time that it makes little or no difference in what sort of mind-stuff, in what quality of imagery, his thinking goes on. The only images *intrinsically*



important are the halting-places, the substantive conclusions, provisional or final, of the thought. Throughout all the rest of the stream, the feelings of relation are everything, and the terms related almost naught. These feelings of relation, these psychic overtones, halos, suffusions, or fringes about the terms, may be the same in very different systems of imagery. A diagram may help to accentuate this indifference of the mental means where the end is the same. Let A be some experience from which a number of thinkers start. Let Z be the practical conclusion rationally inferrible from it. One gets to the conclusion by one line, another by another; one follows a course of English, another of German, verbal imagery. With one, visual images predominate; with another, tactile. Some trains are tinged with emotions, others not; some are very abridged, synthetic and rapid, others, hesitating and broken into many steps. But when the penultimate terms of all the trains, however differing *inter se*, finally shoot into the same conclusion, we say and rightly

say, that all the thinkers have had substantially the same thought. It would probably astound each of them beyond [p. 270] measure to be let into his neighbor's mind and to find how different the scenery there was from that in his own.

Thought is in fact a kind of Algebra, as Berkeley long ago said, "in which, though a particular quantity be marked by each letter, yet to proceed right, it is not requisite that in every step each letter suggest to your thoughts that particular quantity it was appointed to stand for." Mr. Lewes has developed this algebra-analogy so well that I must quote his words:

"The leading characteristic of algebra is that of operation on relations. This also is the leading characteristic of Thought. Algebra cannot exist without values, nor Thought without Feelings. The operations are so many blank forms till the values are assigned. Words are vacant sounds, ideas are blank forms, unless they symbolize images and sensations which are their values. Nevertheless it is rigorously true, and of the greatest importance, that analysts carry on very extensive operations with blank forms, never pausing to supply the symbols with values until the calculation is completed; and ordinary men, no less than philosophers, carry on long trains of thought without pausing to translate their ideas (words) into images. . . . Suppose some one from a distance shouts 'a lion!' At once the man starts in alarm. . . . To the man the word is not only an. . . . expression of all that he has seen and heard of lions, capable of recalling various experiences, but is also capable of taking its place in a connected series of thoughts without recalling any of those experiences, without reviving an image, however faint, of the lion - simply as a sign of a certain relation included in the

complex so named. Like an algebraic symbol it may be operated on without conveying other significance than an abstract relation: it is a sign of Danger, related to fear with all its motor sequences. Its logical position suffices. . . . Ideas are *substitutions* which require a secondary process when what is symbolized by them is translated into the images and experiences it replaces; and this secondary process is frequently not performed at all, generally only performed to a very small extent. Let anyone closely examine what has passed in his mind when he has constructed a chain of reasoning, and he will be surprised at the fewness and faintness of the images which have accompanied the ideas. Suppose you inform me that 'the blood rushed violently from the man's heart, quickening his pulse at the sight of his enemy.' Of the many latent images in this phrase, how many were salient in your mind and in mine? Probably two - the man and his enemy - and these images were faint. Images of blood, heart, violent rushing, pulse, quickening, and sight, were either not revived at all, or were passing shadows. Had any such images arisen, they would have hampered thought, retarding the logical process of judgment by irrelevant connections. The symbols had substituted *relations* for these *values*. . . . There are no images of [p. 271] two things and three things, when I say 'two and three equal five;' there are simply familiar symbols having precise relations. . . . The verbal symbol 'horse,' which stands for all our experiences of horses, serves all the purposes of Thought, without recalling one of the images clustered in the perception of horses, just as the sight of a horse's form serves all the purposes of *recognition* without recalling the sound of its neighing or its tramp, its qualities as an animal of draught, and so forth.[\[27\]](#)

It need only be added that as the Algebraist, though the sequence of his terms is fixed by their relations rather than by their several values, must give a real value to the *final* one he reaches; so the thinker in words must let his concluding word or phrase be translated into its full sensible-image-value, under penalty of the thought being left unrealized and pale.

This is all I have to say about the sensible continuity and unity of our thought as contrasted with the apparent discreteness of the words, images, and other means by which it seems to be carried on. Between all their substantive elements there is 'transitive' consciousness, and the words and images are 'fringed,' and not as discrete as to a careless view they seem. Let us advance now to the next head in our description of Thought's stream.

4. *Human thought appears to deal with objects independent of itself; that is, it is cognitive, or possesses the function of knowing.*

For Absolute Idealism, the infinite Thought and its objects are one. The Objects are, through being thought; the eternal Mind is, through thinking them. Were a human thought alone in the world there would be no reason for any other assumption regarding it. Whatever it might have before it would be its vision, would be there, in *its* 'there,' or then, in *its* 'then'; and the question would never arise whether an extra-mental duplicate of it existed or not. The reason why we all believe that the objects of our thoughts have a duplicate existence outside, is that there are *many* human thoughts, each with the *same* objects, as [p. 272] we cannot help supposing. The judgment that *my* thought has the same object as *his* thought is what makes the psychologist call my thought cognitive of an outer reality. The

judgment that my own past thought and my own present thought are of the same object is what makes *me* take the object out of either and project it by a sort of triangulation into an independent position, from which it may *appear* to both. *Sameness* in a multiplicity of objective appearances is thus the basis of our belief in realities outside of thought.[\[28\]](#) In Chapter XII we shall have to take up the judgment of sameness again.

To show that the question of reality being extra-mental or not is not likely to arise in the absence of repeated experiences of the *same*, take the example of an altogether unprecedented experience, such as a new taste in the throat. Is it a subjective quality of feeling, or an objective quality felt? You do not even ask the question at this point. It is simply *that taste*. But if a doctor hears you describe it, and says: "Ha! Now you know what *heartburn* is," then it becomes a quality already existent *extra mentem tuam*; which you in turn have come upon and learned. The first spaces, times, things, qualities, experienced by the child probably appear, like the first heartburn, in this absolute way, as simple *beings*, neither in nor out of thought. But later, by having other thoughts than this present one, and making repeated judgments of sameness among their objects, he corroborates in himself the notion of realities, past and distant as well as present, which realities no one single thought either possesses or engenders, but which all may contemplate and know. This, as was stated in the last chapter, is the *psychological* point of view, the relatively uncritical non-idealistic point of view of all natural science, beyond which this book cannot go. A mind which has become conscious of its own cognitive function, plays what we have called 'the psychologist' upon itself. It not only knows the things that appear before it; it knows that it [p.

273] knows them. This stage of reflective condition is, more or less explicitly, our habitual adult state of mind.

It cannot, however, be regarded as primitive. The consciousness of objects must come first. We seem to lapse into this primordial condition when consciousness is reduced to a minimum by the inhalation of anæsthetics or during a faint. Many persons testify that at a certain stage of the anaesthetic process objects are still cognized whilst the thought of self is lost. Professor Herzen says:[29]

"During the syncope there is absolute psychic annihilation, the absence of all consciousness; then at the beginning of coming to, one has at a certain moment a vague, limitless, infinite feeling - a sense of *existence in general* without the least trace of distinction between the me and the not-me."

Dr. Shoemaker of Philadelphia describes during the deepest conscious stage of ether-intoxication a vision of

"two endless parallel lines in swift longitudinal motion. . . .on a uniform misty background. . . .together with a constant sound or whirr, not loud but distinct. . . . which seemed to be connected with the parallel lines. . . .These phenomena occupied the whole field. There were present no dreams or visions in any way connected with human affairs, no ideas or impressions akin to anything in past experience, no emotions, of course no idea of personality. There was no conception as to what being it was that was regarding the two lines, or that there existed any such thing as such a being; the lines and waves were all." [30]

Similarly a friend of Mr. Herbert Spencer, quoted by him in 'Mind' (vol. III. p. 556), speaks of "an undisturbed empty quiet everywhere except that a stupid presence lay like a heavy intrusion *somewhere* - a blotch on the calm." This sense of objectivity and lapse of subjectivity, even when the object is almost indefinable, is, it seems to me, a somewhat familiar phase in chloroformization, though in my own case it is too deep a phase for any articulate after-memory to remain. I only know that as it vanishes I seem to wake to a sense of my own existence as something additional to what had previously been there.[31]

[p. 274] Many philosophers, however, hold that the reflective consciousness of the self is essential to the cognitive function of thought. They hold that a thought, in order to know a thing at all, must expressly distinguish between the thing and its own self.[32] This is a perfectly wanton assumption, and not the faintest shadow of reason exists for supposing it true. As well might I contend that I cannot dream without dreaming that I dream, swear without swearing that I swear, deny without denying that I deny, as maintain that I cannot know without knowing that I know. I may have either acquaintance-with, or knowledge-about, an object O without think about myself at all. It suffices for this that I think O, and that it exist. If, in addition to thinking O, I also think that I exist and that I know O, well and good; I then know one more thing, a fact about of which I previously was unmindful. That, however, does not prevent me from having already known it a good deal. O *per se*, or O *plus* P, are as good objects of knowledge as O *plus me* is. The philosophers in question simply substitute one particular object for all others, and call it *the* object *par excellence*. It is a case of

the 'psychologist's fallacy' (see p. 197). *They* know the object to be one thing [p. 275] and the thought another; and they forthwith foist their own knowledge into that of the thought of which they pretend to give a true account. To conclude, then, *thought may, but need not, in knowing, discriminate between its object and itself.*

We have been using the word Object. *Something must now be said about the proper use of the term in Psychology.*

In popular parlance the word object is commonly taken without reference to the act of knowledge, and treated as synonymous with individual subject of existence. Thus if anyone ask what is the mind's object when you say 'Columbus discovered America in 1492,' most people will reply 'Columbus,' or 'America,' or, at most, 'the discovery of America.' They will name a substantive kernel or nucleus of the consciousness, and say the thought is 'about' that, - as indeed it is, - and they will call that your thought's 'object.' Really that is usually only the grammatical object, or more likely the grammatical subject, of your sentence. It is at most your 'fractional object;' or you may call it the 'topic' of your thought, or the 'subject of your discourse.' But the *Object* of your thought is really its entire content or deliverance, neither more nor less. It is a vicious use of speech to take out a substantive kernel from its content and call that its object; and it is an equally vicious use of speech to add a substantive kernel not articulately included in its content, and to call that its object. Yet either one of these two sins we commit, whenever we content ourselves with saying that a given thought is simply 'about' a certain topic, or that that topic is its 'object.' The object of my thought in the previous sentence, for example, is strictly

speaking neither Columbus, nor America, nor its discovery. It is nothing short of the entire sentence, 'Columbus-discovered-America-in-1492.' And if we wish to speak of it substantively, we must make a substantive of it by writing it out thus with hyphens between all its words. Nothing but this can possibly name its delicate idiosyncrasy. And if we wish to *feel* that idiosyncrasy we must reproduce the thought as it was uttered, with every word fringed and the [p. 276] whole sentence bathed in that original halo of obscure relations, which, like an horizon, then spread about its meaning.

Our psychological duty is to cling as closely as possible to the actual constitution of the thought we are studying. We may err as much by excess as by defect. If the kernel or 'topic,' Columbus, is in one way less than the thought's object, so in another way it may be more. That is, when named by the psychologist, it may mean much more than actually is present to the thought of which he is reporter. Thus, for example, suppose you should go on to think: 'He was a daring genius!' An ordinary psychologist would not hesitate to say that the object of your thought was still 'Columbus.' True, your thought is *about* Columbus. It 'terminates' in Columbus, leads from and to the direct idea of Columbus. But for the moment it is not fully and immediately Columbus, it is only 'he,' or rather 'he-was-a-daring-genius;' which, though it may be an unimportant difference for conversational purposes, is, for introspective psychology, as great a difference as there can be.

The object of every thought, then, is neither more nor less than all that the thought thinks, exactly as thought thinks it, however complicated the matter, and however symbolic the manner of the

thinking may be. It is needless to say that memory can seldom accurately reproduce such an object, when once it has passed from before the mind. It either makes too little or too much of it. Its best plan is to repeat the verbal sentence, if there was one, in which the object was expressed. But for inarticulate thoughts there is not even this resource, and introspection must confess that the task exceeds her powers. The mass of our thinking vanishes for ever, beyond hope of recovery, and psychology only gathers up a few of the crumbs that fall from the feast. The next point to make clear is that, *however complex the object may be, the thought of it is one undivided state of consciousness.* As Thomas Brown says:[[33](#)]

"I have already spoken too often to require again to caution you against the mistake into which, I confess, that the terms which the [p. 277] poverty of our language obliges us to use might of themselves very naturally lead you; the mistake of supposing that the most complex states of mind are not truly, in their very essence, as much one and indivisible as those which we term simple - the complexity and seeming coexistence which they involve being relative to our feeling[[34](#)] only, not to their own absolute nature. I trust I need not repeat to you that, in itself, every notion, however seemingly complex, is, and must be, truly simple - being one state or affection, of one simple substance, mind. Our conception of a whole army, for example, is as truly this one mind existing in this one state, as our conception of any of the individuals that compose an army. Our notion of the abstract numbers, eight, four, two, is as truly one feeling of the mind as our notion of simple unity."

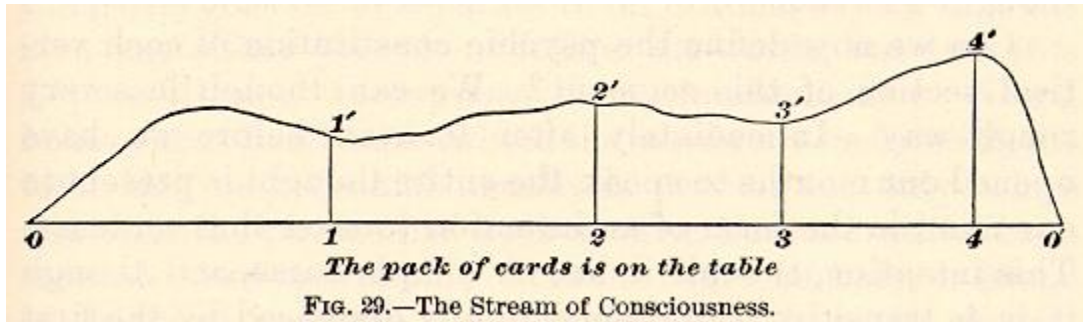
The ordinary associationist-psychology supposes, in contrast with this, that whenever an object of thought contains many elements, the thought itself must be made up of just as many ideas, one idea for each element, and all fused together in appearance, but really separate.[35] The enemies of this psychology find (as we have already seen) little trouble in showing that such a bundle of separate ideas would never form one thought at all, and they contend that an Ego must be added to the bundle to give it unity, and bring the various ideas into relation with each other.[36] We will not discuss the ego just yet, but it is obvious that if things are to be thought in relation, they must be thought together, and in one *something*, be that something ego, psychosis, state of consciousness, or whatever you please. If not thought with each other, things are not thought in relation at all. Now most believers in the ego make the same mistake as the associationists and sensationists whom they oppose. Both agree that the elements of the subjective stream are discrete and separate and constitute what Kant calls a 'manifold.' But while the asso- [p. 278] ciationists think that a 'manifold' can form a single knowledge, the egoists deny this, and say that the knowledge comes only when the manifold is subjected to the synthetizing activity of an ego. Both make an identical initial hypothesis; but the egoist, finding it won't express the facts, adds another hypothesis to correct it. Now I do not wish just yet to 'commit myself' about the existence or non-existence of the ego, but I do contend that we need not invoke it for this particular reason - namely, because the manifold of ideas has to be reduced to unity. *There is no manifold of coexisting ideas*; the notion of such a thing is a chimera. *Whatever things are thought in relation are thought from the outset in a unity, in a single pulse of subjectivity, a single psychosis, feeling, or state of mind.*

The reason why this fact is so strangely garbled in the books seems to be what on an earlier page (see p. 196 ff.) I called the psychologist's fallacy. We have the inveterate habit, whenever we try introspectively to describe one of our thoughts, of dropping the thought as it is in itself and talking of something else. We describe the things that appear to the thought, and we describe other thoughts *about* those things - as if these and the original thought were the same. If, for example, the thought be 'the pack of cards is on the table,' we say, "Well, isn't it a thought of the pack of cards? Isn't it of the cards as included in the pack? Isn't it of the table? And of the legs of the table as well? The table has legs - how can you think the table without virtually thinking its legs? Hasn't our thought then, all these parts - one part for the pack and another for the table? And within the pack-part a part for each card, as within the table-part a part for each leg? And isn't each of these parts an idea? And can our thought, then, be anything but an assemblage or pack of ideas, each answering to some element of what it knows?"

Now not one of these assumptions is true. The thought taken as an example is, in the first place, not of 'a pack of cards.' It is of 'the-pack-of-cards-is-on-the-table,' an entirely different subjective phenomenon, whose Object implies the pack, and every one of the cards in it, but whose conscious constitution bears very little resemblance to that of the [p. 279] thought of the pack *per se*. What a thought *is*, and what it may be developed into, or explained to stand for, and be equivalent to, are two things, not one. [\[37\]](#)

An analysis of what passes through the mind as we utter the phrase *the pack of cards is on the table* will, I hope, make this

clear, and may at the same time condense into a concrete example a good deal of what has gone before.



It takes
time to
utter
the

phrase. Let the horizontal line in Fig. 29 represent time. Every part of it will then stand for a fraction, every point for an instant, of the time. Of course the thought has *time-parts*. The part 2-3 of it, though continuous with 1-2, is yet a different part from 1-2. Now I say of these time-parts that we cannot take any one of them so short that it will not after some fashion or other be a thought of the whole object 'the pack of cards is on the table.' They melt into each other like dissolving views, and no two of them feel the object just alike, but each feels the total object in a unitary undivided way. This is what I mean by denying that in the thought any parts can be found corresponding to the object's parts. Time-parts are not such parts

[p. 280] Now let the vertical dimensions of the figure stand for the objects or contents of the thoughts. A line vertical to any point of the horizontal, as 1-1', will then symbolize the object in the mind at the instant 1; a space above the horizontal, as 1-1'-2'-2, will symbolize all that passes through the mind during the time 1-2 whose line it covers. The entire diagram from 0 to 0' represents a finite length of thought's stream.

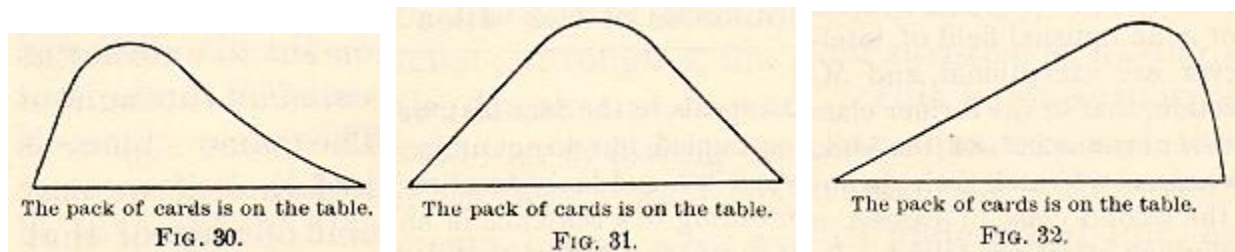
Can we now define the psychic constitution of each vertical section of this segment? We can, though in a very rough way. Immediately after 0, even before we have opened our mouths to speak, the entire thought is present to our mind in the form of an intention to utter that sentence. This intention, though it has no simple name, and though it is a transitive state immediately displaced by the first word, is yet a perfectly determinate phase of thought, unlike anything else (see p. 253). Again, immediately before 0', after the last word of the sentence is spoken, all will admit that we again think its entire content as we inwardly realize its completed deliverance. All vertical sections made through any other parts of the diagram will be respectively filled with other ways of feeling the sentence's meaning. Through 2, for example, the cards will be the part of the object most emphatically present to the mind; through 4, the table. The stream is made higher in the drawing at its end than at its beginning, because the final way of feeling the content is fuller and richer than the initial way. As Joubert says, "we only know just what we meant to say, after we have said it." And as M. V. Egger remarks, "before speaking, one barely knows what one intends to say, but afterwards one is filled with admiration and surprise at having said and thought it so well."

This latter author seems to me to have kept at much closer quarters with the facts than any other analyst of consciousness.[\[38\]](#) But even he does not quite hit the mark, for, as I understand him, he thinks that each word as it occupies the mind *displaces* the rest of the thought's content. He distinguishes the 'idea' (what I have called the total [p. 281] *object* or meaning) from the consciousness of the words, calling the former a very feeble state, and contrasting it

with the liveliness of the words, even when these are only silently rehearsed. "The feeling," he says, "of the words makes ten or twenty times more noise in our consciousness than the sense of the phrase, which for consciousness is a very slight matter." [39] And having distinguished these two things, he goes on to separate them in time, saying that the idea may either precede or follow the words, but that it is a 'pure illusion' to suppose them simultaneous. [40] Now I believe that in all cases where the words are *understood*, the total idea may be and usually is present not only before and after the phrase has been spoken, but also whilst each separate word is uttered. [41] It is the overtone, halo, or fringe of the word *as spoken in that sentence*. It is never absent; no word in an understood sentence comes to consciousness as a mere noise. We feel its meaning as it passes; and although our object differs from one moment to another as to its verbal kernel or nucleus, yet it is *similar* throughout the entire segment of the stream. The same object is known everywhere, now from the point of view, if we may so call it, of this word, now from the point of view of that. And in our feeling of each word there chimes an echo or foretaste of every other. The consciousness of the 'Idea' [p. 282] and that of the words are thus consubstantial. They are made of the same 'mind-stuff,' and form an unbroken stream. Annihilate a mind at any instant, cut its thought through whilst yet uncompleted, and examine the object present to the cross-section thus suddenly made; you will find, not the bald word in process of utterance, but that word suffused with the whole idea. The word may be so loud, as M. Egger would say, that we cannot *tell* just how its suffusion, as such, feels, or how it differs from the suffusion of the next word. But it does differ; and we may be sure that, could we see into the brain, we should find the same processes active

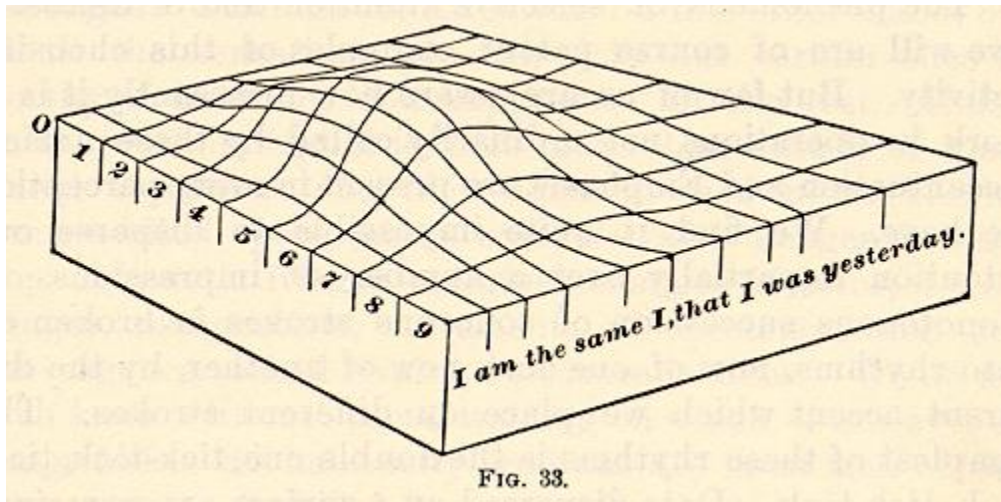
through the entire sentence in different degrees, each one in turn becoming maximally excited and then yielding the momentary verbal 'kernel,' to the thought's content, at other times being only sub-excited, and then combining with the other sub-excited processes to give the overtone or fringe.[42]

We may illustrate this by a farther development of the diagram on p. 279. Let the objective content of any vertical section through the stream be represented no longer by a line, but by a plane figure, highest opposite whatever part of the object is most prominent in consciousness at the moment when the section is made. This part, in verbal thought, will usually be some word. A series of sections 1-1', taken at the moments 1, 2, 3, would then look like this:



The horizontal breadth stands for the entire object in each of the figures; the height of the curve above each part of that object marks the relative prominence of that part in the thought. At the moment symbolized by the first figure *pack* is the prominent part; in the third figure it is *table*, etc.

[p. 283] We can easily add all these plane sections together to make a solid, one of whose solid dimensions will represent time, whilst a cut across this at right angles will give the thought's content at the moment when the cut is made.



Let it be the thought, 'I am the same I that I was yesterday.' If at the

fourth moment of time we annihilate the thinker and examine how the last pulsation of his consciousness was made, we find that it was an awareness of the whole content with *same* most prominent, and the other parts of the thing known relatively less distinct. With each prolongation of the scheme in the time-direction, the summit of the curve of section would come further towards the end of the sentence. If we make a solid wooden frame with the sentence written on its front, and the time-scale on one of its sides, if we spread flatly a sheet of India rubber over its top, on which rectangular co-ordinates are painted, and slide a smooth ball under the rubber in the direction from 0 to 'yesterday,' the bulging of the membrane along this diagonal at successive moments will symbolize the changing of the thought's content in a way plain enough, after what has been said, to call for no more explanation. Or to express it in cerebral terms, it will show the relative intensities, at successive moments, of the several nerve-processes to which the various parts of the thought-object correspond.

The last peculiarity of consciousness to which attention is to be drawn in this first rough description of its stream is that

[p. 284] 5) *It is always interested more in one part of its object than in another, and welcomes and rejects, or chooses, all the while it thinks.*

The phenomena of selective attention and of deliberative will are of course patent examples of this choosing activity. But few of us are aware how incessantly it is at work in operations not ordinarily called by these names. Accentuation and Emphasis are present in every perception we have. We find it quite impossible to disperse our attention impartially over a number of impressions. A monotonous succession of sonorous strokes is broken up into rhythms, now of one sort, now of another, by the different accent which we place on different strokes. The simplest of these rhythms is the double one, tick-tóck, tick-tock, tick-tóck. Dots dispersed on a surface are perceived in rows and groups. Lines separate into diverse figures. The ubiquity of the distinctions, *this* and *that*, *here* and *there*, *now* and *then*, in our minds is the result of our laying the same selective emphasis on parts of place and time.

But we do far more than emphasize things, and unite some, and keep others apart. We actually *ignore* most of the things before us. Let me briefly show how this goes on.

To begin at the bottom, what are our very senses themselves but organs of selection? Out of the infinite chaos of movements, of which physics teaches us that the outer world consists, each sense-organ picks out those which fall within certain limits of velocity. To these it responds, but

ignores the rest as completely as if they did not exist. It thus accentuates particular movements in a manner for which objectively there seems no valid ground; for, as Lange says, there is no reason whatever to think that the gap in Nature between the highest sound-waves and the lowest heat-waves is an abrupt break like that of our sensations; or that the difference between violet and ultra-violet rays has anything like the objective importance subjectively represented by that between light and darkness. Out of what is in itself an undistinguishable, swarming *continuum*, devoid of distinction or emphasis, our senses make for us, by attending to this motion and ignoring that, [p. 285] a world full of contrasts, of sharp accents, of abrupt changes, of picturesque light and shade.

If the sensations we receive from a given organ have their causes thus picked out for us by the conformation of the organ's termination, Attention, on the other hand, out of all the sensations yielded, picks out certain ones as worthy of its notice and suppresses all the rest. Helmholtz's work on Optics is little more than a study of those visual sensations of which common men never become aware - blind spots, *muscæ volitantes*, after images, irradiation, chromatic fringes, marginal changes of color, double images, astigmatism, movements of accommodation and convergence, retinal rivalry, and more besides. We do not even know without special training on which of our eyes an image falls. So habitually ignorant are most men of this that one may be blind for years of a single eye and never know the fact.

Helmholtz says that we notice only those sensations which are signs to us of *things*. But what are things? Nothing, as we shall

abundantly see, but special groups of sensible qualities, which happen practically or aesthetically to interest us, to which we therefore give substantive names, and which we exalt to this exclusive status of independence and dignity. But in itself, apart from my interest, a particular dust-wreath on a windy day is just as much of an individual thing, and just as much or as little deserves an individual name, as my own body does.

And then, among the sensations we get from each separate thing, what happens? The mind selects again. It chooses certain of the sensations to represent the thing most *truly*, and considers the rest as its appearances, modified by the conditions of the moment. Thus my table-top is named *square*, after but one of an infinite number of retinal sensations which it yields, the rest of them being sensations of two acute and two obtuse angles; but I call the latter *perspective* views, and the four right angles the *true* form of the table, and erect the attribute squareness into the table's essence, for aesthetic reasons of my own. In like manner, the real form of the circle is deemed to be the sensation it gives when the line of vision is perpendicular to its centre - all its other sensations are signs of this sensation. The real sound of the cannon is the sensation it makes when the ear is close by. The real color of the brick is the sensation it gives when the eye looks squarely at it from a near point, out of the sunshine and yet not in the gloom; under other circumstances it gives us other color-sensations which are but signs of this - we then see it looks pinker or blacker than it really is. The reader knows no object which he does not represent to himself by preference as in some typical attitude, of some normal size, at some characteristic distance, of some standard tint, etc., etc. But all these essential characteristics, which together form for us the genuine

objectivity of the thing and are contrasted with what we call the subjective sensations it may yield us at a given moment, are mere sensations like the latter. The mind chooses to suit itself, and decides what particular sensation shall be held more real and valid than all the rest.

Thus perception involves a twofold choice. Out of all present sensations, we notice mainly such as are significant of absent ones; and out of all the absent associates which these suggest, we again pick out a very few to stand for the objective reality *par excellence*. We could have no more exquisite example of selective industry.

That industry goes on to deal with the things thus given in perception. A man's empirical thought depends on the things he has experienced, but what these shall be is to a large extent determined by his habits of attention. A thing may be present to him a thousand times, but if he persistently fails to notice it, it cannot be said to enter into his experience. We are all seeing flies, moths, and beetles by the thousand, but to whom, save an entomologist, do they say anything distinct? On the other hand, a thing met only once in a lifetime may leave an indelible experience in the memory. Let four men make a tour in Europe. One will bring home only picturesque impressions - costumes and colors, parks and views and works of architecture, pictures and statues. To another all this will be non-existent; and distances and prices, populations and drainage-arrangements, door-and window-fastenings, and other useful statistics will take [p. 287] their place. A third will give a rich account of the theatres, restaurants, and public balls, and naught beside; whilst the fourth will perhaps have been so wrapped in his own

subjective broodings as to tell little more than a few names of places through which he passed. Each has selected, out of the same mass of presented objects, those which suited his private interest and has made his experience thereby.

If, now, leaving the empirical combination of objects, we ask how the mind proceeds *rationally* to connect them, we find selection again to be omnipotent. In a future chapter we shall see that all Reasoning depends on the ability of the mind to break up the totality of the phenomenon reasoned about, into parts, and to pick out from among these the particular one which, in our given emergency, may lead to the proper conclusion. Another predicament will need another conclusion, and require another element to be picked out. The man of genius is he who will always stick in his bill at the right point, and bring it out with the right element - 'reason' if the emergency be theoretical, 'means' if it be practical - transfixed upon it. I here confine myself to this brief statement, but it may suffice to show that Reasoning is but another form of the selective activity of the mind.

If now we pass to its æsthetic department, our law is still more obvious. The artist notoriously selects his items, rejecting all tones, colors, shapes, which do not harmonize with each other and with the main purpose of his work. That unity, harmony, 'convergence of characters,' as M. Taine calls it, which gives to works of art their superiority over works of nature, is wholly due to *elimination*. Any natural subject will do, if the artist has wit enough to pounce upon some one feature of it as characteristic, and suppress all merely accidental items which do not harmonize with this.

Ascending, still higher, we reach the plane of Ethics, where choice reigns notoriously supreme. An act has no ethical quality whatever unless it be chosen out of several all equally possible. To sustain the arguments for the good course and keep them ever before us, to stifle our [p. 288] longing for more flowery ways, to keep the foot unflinchingly on the arduous path, these are characteristic ethical energies. But more than these; for these but deal with the means of compassing interests already felt by the man to be supreme. The ethical energy *par excellence* has to go farther and choose which *interest* out of several, equally coercive, shall become supreme. The issue here is of the utmost pregnancy, for it decides a man's entire career. When he debates, Shall I commit this crime? choose that profession? accept that office, or marry this fortune? - his choice really lies between one of several equally possible future Characters. What he shall *become* is fixed by the conduct of this moment. Schopenhauer, who enforces his determinism by the argument that with a given fixed character only one reaction is possible under given circumstances, forgets that, in these critical ethical moments, what consciously *seems* to be in question is the complexion of the character itself. The problem with the man is less what act he shall now choose to do, than what being he shall now resolve to become.

Looking back, then, over this review, we see that the mind is at every stage a theatre of simultaneous possibilities.

Consciousness consists in the comparison of these with each other, the selection of some, and the suppression of the rest by the reinforcing and inhibiting agency of attention. The highest and most elaborated mental products are filtered from the data chosen by the faculty next beneath, out of the mass offered by

the faculty below that, which mass in turn was sifted from a still larger amount of yet simpler material, and so on. The mind, in short, works on the data it receives very much as a sculptor works on his block of stone. In a sense the statue stood there from eternity. But there were a thousand different ones beside it, and the sculptor alone is to thank for having extricated this one from the rest. Just so the world of each of us, howsoever different our several views of it may be, all lay embedded in the primordial chaos of sensations, which gave the mere *matter* to the thought of all of us indifferently. We may, if we like, by our reasonings unwind things back to that [p. 289] black and jointless continuity of space and moving clouds of swarming atoms which science calls the only real world. But all the while the world *we* feel and live in will be that which our ancestors and we, by slowly cumulative strokes of choice, have extricated out of this, like sculptors, by simply rejecting certain portions of the given stuff. Other sculptors, other statues from the same stone! Other minds, other worlds from the same monotonous and inexpressive chaos ! My world is but one in a million alike embedded, alike real to those who may abstract them. How different must be the worlds in the consciousness of ant, cuttlefish, or crab!

But in my mind and your mind the rejected portions and the selected portions of the original world-stuff are to a great extent the same. The human race as a whole largely agrees as to what it shall notice and name, and what not. And among the noticed parts we select in much the same way for accentuation and preference or subordination and dislike. There is, however, one entirely extraordinary case in which no two men ever are known to choose alike. One great splitting of the whole universe into

two halves is made by each of us; and for each of us almost all of the interest attaches to one of the halves; but we all draw the line of division between them in a different place. When I say that we all call the two halves by the same names, and that those names are '*me*' and '*not-me*' respectively, it will at once be seen what I mean. The altogether unique kind of interest which each human mind feels in those parts of creation which it can call *me* or *mine* may be a moral riddle, but it is a fundamental psychological fact. No mind can take the same interest in his neighbor's *me* as in his own. The neighbor's *me* falls together with all the rest of things in one foreign mass, against which his own *me* stands out in startling relief. Even the trodden worm, as Lotze somewhere says, contrasts his own suffering self with the whole remaining universe, though he have no clear conception either of himself or of what the universe may be. He is for me a mere part of the world; [p. 290] for him it is I who am the mere part. Each of us dichotomizes the Kosmos in a different place.

Descending now to finer work than this first general sketch, let us in the next chapter try to trace the psychology of this fact of self-consciousness to which we have thus once more been led.

Footnotes

[1] A good deal of this chapter is reprinted from an article 'On some Omissions of Introspective Psychology' which appeared in 'Mind' for January 1884.

[2] B. P. Bowne: Metaphysics, p. 362.

[3] L'Automatisme Psychologique, p. 318.

[4] Cf. A. Constans: Relation sur une Epidémie d'hystero-demonopathie en 1861. 2me ed. Paris, 1863. -Chiap e Franzolini: L'Epidemia d'isterodemonopatie in Verzegnis. Reggio, 1879. - See also J. Kerner's little work: Nachricht von dem Vorkommen des Besessenseins. 1836.

[5] For the Physiology of this compare the chapter on the Will.

[6] *Loc. cit.* p. 316.

[7] The Philosophy of Reflection, I. 248, 290.

[8] Populäre Wissenschaftliche Vorträge, Drittes Heft (1876), p. 72.

[9] Fick, in L. Hermann's Handb. d. Physiol., Bd. III. Th. I. p. 225.

[10] It need of course not follow, because a total brain-state does not recur, that no *point* of the brain can ever be twice in the same condition. That would be as improbable a consequence as that in the sea a wave-crest should never come twice at the same point of space. What can hardly come twice is an identical *combination* of wave-forms all with their crests and hollows reoccupying identical places. For such a total combination as this is the analogue of the brain-state to which our actual consciousness at any moment is due.

[11] The accurate registration of the 'how long' is still a little mysterious.

[12] Cf. Brentano; *Psychologie*, vol. I. pp. 219-20. Altogether this chapter of Brentano's on the Unity of Consciousness is as good as anything with which I am acquainted.

[13] Honor to whom honor is due! The most explicit acknowledgment I have anywhere found of all this is in a buried and forgotten paper by the Rev. Jas. Wills, on 'Accidental Association,' in the *Transactions of the Royal Irish Academy*, vol. XXI. part I (1846). Mr. Wills writes:

"At every instant of conscious thought there is a certain sum of perceptions, or reflections, or both together, present, and together constituting one whole state of apprehension. Of this some definite portion may be far more distinct than all the rest; and the rest be in consequence proportionably vague, even to the limit of obliteration. But still, within this limit, the most dim shade of perception enters into, and in some infinitesimal degree modifies, the whole existing state. This state will thus be in some way modified by any sensation or emotion, or act of distinct attention, that may give prominence to any part of it; so that the actual result is capable of the utmost variation, according to the person or the occasion.

. . . To any portion of the entire scope here described there may be a special direction of the attention, and this special direction is recognized as strictly what is *recognized* as the idea present to the mind. This idea is evidently not commensurate with the entire state of apprehension, and much perplexity has arisen from not observing this fact. However deeply we may suppose the attention to be engaged by any thought, any considerable alteration of the surrounding phenomena would still be perceived; the most abstruse demonstration in this room would

not prevent a listener, however absorbed, from noticing the sudden extinction of the lights. Our mental states have always an *essential unity*, such that each state of apprehension, however variously compounded, is a single whole, of which every component is, therefore, strictly apprehended (so far as it is apprehended) as a part. Such is the elementary basis from which all our intellectual operations commence."

[14] Compare the charming passage in Taine on Intelligence (N.Y. ed.), I. 83-4.

[15] E.g.: "The stream of thought is not a continuous current, but a series of distinct ideas, more or less rapid in their succession; the rapidity being measurable by the number that pass through the mind in a given time." (Bain: E. and W., 29.)

[16] Few writers have admitted that we cognize relations through feeling. The intellectualists have explicitly denied the possibility of such a thing - e.g., Prof. T. H. Green ('Mind,' vol. VII. p. 28): "No feeling, as such or as felt, is [of?] a relation. . . . Even a relation between feelings is not itself a feeling or felt." On the other hand, the sensationalists have either smuggled in the cognition without giving any account of it, or have denied the relations to be cognized, or even to exist, at all. A few honorable exceptions, however, deserve to be named among the sensationalists. Destutt de Tracy, Laromiguière, Cardaillac, Brown, and finally Spencer, have explicitly contended for feelings of relation, consubstantial with our feelings or thoughts of the terms 'between' which they obtain. Thus Destutt de Tracy says (Eléments d'Idéologie, T. Ier, chap. IV): "The faculty of judgment is itself a sort of sensibility, for it is the faculty of feeling the relations among our ideas; and to feel relations is to

feel." Laromiguière writes (*Leçons de Philosophie, II^{me} Partie, 3^{me} Leçon*):

"There is no one whose intelligence does not embrace simultaneously many ideas, more or less distinct, more or less confused. Now, when we have many ideas at once, a peculiar feeling arises in us: we feel, among these ideas, resemblances, differences, relations. Let us call this mode of feeling, common to us all, the feeling of relation, or relation-feeling (*sentiment-rapport*). One sees immediately that these relation-feelings, resulting from the propinquity of ideas, must be infinitely more numerous than the sensation-feelings (*sentiments-sensations*) or the feelings we have of the action of our faculties. The slightest knowledge of the mathematical theory of combinations will prove this. . . . *Ideas* of relation originate in feelings of relation. They are the effect of our comparing them and reasoning about them."

Similarly, de Cardaillac (*Études Élémentaires de Philosophie, Section I. chap. VII*):

"By a natural consequence, we are led to suppose that at the same time that we have several sensations or several ideas in the mind, we feel the relations which exist between these sensations, and the relations which exist between these ideas. . . . If the feeling of relations exists in us, . . . it is necessarily the most varied and the most fertile of all human feelings: 1^o the most varied, because, relations being more numerous than beings, the feelings of relation must be in the same proportion more numerous than the sensations whose presence gives rise to their formulation; 2^o, the most fertile, for the relative ideas of which the feeling-of-relation is the source . . . are more important than

absolute ideas, if such exist. . . . If we interrogate common speech, we find the feeling of relation expressed there in a thousand different ways. If it is easy to seize a relation, we say that it is *sensible*, to distinguish it from one which, because its terms are too remote, cannot be as quickly perceived. A sensible difference, or resemblance. . . . What is taste in the arts, in intellectual productions? What but the feeling of those relations among the parts which constitutes their merit? . . . Did we not feel relations and should never attain to true knowledge, . . . for almost all our knowledge is of relations. . . . We never have an isolated sensation; . . . we are therefore never without the feeling of relation. . . . An *object* strikes our sense; we see in it only a sensation. . . . The relative is so near the absolute, the relation-feeling so near the sensation-feeling, the two are so intimately fused in the composition of the object, that the relation appears to us as part of the sensation itself. It is doubtless to this sort of fusion between sensations and feelings of relation that the silence of metaphysicians as to the latter is due; and it is for the same reason that they have obstinately persisted in asking from sensation alone those ideas of relation which it was powerless to give."

Dr. Thomas Brown writes (Lectures, XLV. *init.*): "There is an extensive order of our feelings which involve this notion of relation, and which consist indeed in the mere perception of a relation of some sort. . . . Whether the relation be of two or of many external objects, or of two or many affections of the mind, the feeling of this relation . . . is what I term a relative suggestion; that phrase being the simplest which it is possible to employ, for expressing, without any theory, the mere fact of the rise of certain feelings of relation, after certain other feelings

which precede them; and therefore, as involving no particular theory, and simply expressive of an undoubted fact. . . . That the feelings of relation are states of the mind essentially different from our simple perceptions, or conceptions of the objects, . . . that they are not what Condillac terms *transformed sensations*, I proved in a former lecture, when I combated the excessive simplification of that ingenious but not very accurate philosopher. There is an original tendency or susceptibility of the mind, by which, on perceiving together different objects, we are instantly, without the intervention of any other mental process, sensible of their relation in certain respects, as truly as there is an original tendency or susceptibility by which, when external objects are present and have produced a certain affection of our sensorial organ, we are instantly affected with the primary elementary feelings of perception; and, I may add, that as our sensations or perceptions are of various species, so are there various species of relations; - the number of relations, indeed, even of external things, being almost infinite, while the number of perceptions is, necessarily, limited by that of the objects which have the power of producing some affection of our organs of sensation. . . . Without that susceptibility of the mind by which it has the feeling of relation, our consciousness would be as truly limited to a single point, as our body would become, were it possible to fetter it to a single atom."

Mr. Spencer is even more explicit. His philosophy is crude in that he seems to suppose that it is only in transitive states that outward relations are known; whereas in truth space-relations, relations of contrast, etc., are felt along with their terms, in substantive states as well as in transitive states, as we shall abundantly see. Nevertheless Mr. Spencer's passage is so clear

that it also deserves to be quoted in full (Principles of Psychology, § 65):

"The proximate components of Mind are of two broadly-contrasted kinds - Feelings and the relations between feelings. Among the members of each group there exist multitudinous unlikenesses, many of which are extremely strong; but such unlikenesses are small compared with those which distinguish members of the one group from members of the other. Let us, in the first place, consider what are the characters which all Relations between feelings have in common.

"Each feeling, as we here define it, is any portion of consciousness which occupies a place sufficiently large to give it a perceivable individuality; which has its individually marked off from adjacent portions of consciousness by qualitative contrasts; and which, when introspectively contemplated, appears to be homogeneous. These are the essentials. Obviously if, under introspection, a state of consciousness is decomposable into unlike parts that exist either simultaneously or successively, it is not one feeling but two or more. Obviously if it is indistinguishable from an adjacent portion of consciousness, it forms one with that portion - is not an individual feeling, but part of one. And obviously if it does not occupy in consciousness an appreciable area, or an appreciable duration, it cannot be known as a feeling.

"A Relation between feelings is, on the contrary, characterized by occupying no appreciable part of consciousness. Take away the terms it unites, and it disappears along with them; having no independent place, no individuality of its own. It is true that, under an ultimate analysis, what we call a relation proves to be

itself a kind of feeling - the momentary feeling accompanying the transition from one conspicuous feeling to an adjacent conspicuous feeling. And it is true that, notwithstanding its extreme brevity, its qualitative character is appreciable; for relations are (as we shall hereafter see) distinguishable from one another only by the unlikenesses of the feelings which accompany the momentary transitions. Each relational feeling may, in fact, be regarded as one of those nervous shocks which we suspect to be the units of composition of feelings; and, though instantaneous, it is known as of greater or less strength, and as taking place with greater or less facility. But the contrast between these relational feelings and what we ordinarily call feelings is so strong that we must class them apart. Their extreme brevity, their small variety, and their dependence on the terms they unite, differentiate them in an unmistakable way.

"Perhaps it will be well to recognize more fully the truth that this distinction cannot be absolute. Besides admitting that, as an element of consciousness, a relation is a momentary feeling, we must also admit that just as a relation can have no existence apart from the feelings which form its terms, so a feeling can exist only by relations to other feelings which limit it in space or time or both. Strictly speaking, neither a feeling nor a relation is an independent element of consciousness: there is throughout a dependence such that the appreciable areas of consciousness occupied by feelings can no more possess individualities apart from the relations which link them, than these relations can possess individualities apart from the feelings they link. The essential distinction between the two, then, appears to be that whereas a relational feeling is a portion of consciousness inseparable into parts, a feeling, ordinarily so called, is a portion

of consciousness that admits imaginary division into like parts which are related to one another in sequence or coexistence. A feeling proper is either made up of like parts that occupy time, or it is made up of like parts that occupy space, or both. In any case, a feeling proper is an aggregate of related like parts, while a relational feeling is undecomposable. And this is exactly the contrast between the two which must result if, as we have inferred, feelings are composed of units of feelings, or shocks."

[17] M. Paulhan (*Revue Philosophique*, XX. 455-6), after speaking of the faint mental images of objects and emotions, says: "We find other vaguer states still, upon which attention seldom rests, except in persons who by nature or profession are addicted to internal observation. It is even difficult to name them precisely, for they are little known and not classed; but we may cite as an example of them that peculiar impression which we feel when, strongly preoccupied by a certain subject, we nevertheless are engaged with, and have our attention almost completely absorbed by, matters quite disconnected therewithal. We do not then exactly think of the object of our preoccupation; we do not represent it in a clear manner; and yet our mind is not as it would be without this preoccupation. Its object, absent from consciousness, is nevertheless represented there by a peculiar unmistakable impression, which often persists long and is a strong feeling, although so obscure for our intelligence." "A mental sign of the kind is the unfavorable disposition left in our mind towards an individual by painful incidents erewhile experienced and now perhaps forgotten. The sign remains, but is not understood; its definite meaning is lost." (P. 458.)

[18] Mozart describes thus his manner of composing: First bits and crumbs of the piece come and gradually join together in his mind; then the soul getting warmed to the work, the thing grows more and more, "and I spread it out broader and clearer, and at last it gets almost finished in my head, even when it is a long piece, so that I can see the whole of it at a single glance in my mind, as if it were a beautiful painting or a handsome human being; in which way I do not hear it in my imagination at all as a succession - the way it must come later - but all at once, as it were. It is a rare feast! All the inventing and making goes on in me as in a beautiful strong dream. But the best of all is the *hearing of it all at once.*"

[19] Mental Physiology, § 236. Dr. Carpenter's explanation differs materially from that given in the text.

[20] Cf. also S. Stricker: Vorlesungen über allg. u. exp. Pathologie (1879), pp. 462-3, 501, 547; Romanes: Origin of Human Faculty, p. 82. It is so hard to make one's self clear that I may advert to a misunderstanding of my views by the late Prof. Thos. Maguire of Dublin (Lectures on Philosophy, 1885). This author considers that by the 'fringe' I mean some sort of psychic material by which sensations in themselves separate are made to cohere together, and wittily says that I ought to "see that uniting sensations by their 'finges' is more vague than to construct the universe out of oysters by plating their beards" (p. 211). But the fringe, as I use the word, means nothing like this; it is part of the *object cognized*, - substantive *qualities* and *things* appearing to the mind in a *fringe of relations*. Some parts - the transitive parts - of our stream of thought cognize the relations rather than the things; but both the transitive and the substantive parts form one

continuous stream, with no discrete 'sensations' in it such as Prof. Maguire supposes, and supposes me suppose, to be there.

[21] George Campbell: *Philosophy of Rhetoric*, book II. chap. VII.

[22] *Substantialism or Philosophy of Knowledge*, by 'Jean Story' (1879).

[23] [*Classics* Editor's Note: the symbol for this footnote does not appear in the main text of the Dover edition; however it does appear in Miller's (1981) edition.]

M. G. Tarde, quoting (in Delboeuf, *Le Sommeil et les Rêves* (1885), p. 226) some nonsense-verses from a dream, says they show how prosodic forms may subsist in a mind from which logical rules are effaced. . . . I was able, in dreaming, to preserve the faculty of finding two words which rhymed, to appreciate the rhyme, to fill up the verse as it first presented itself with other words which, added, gave the right number of syllables, and yet I was ignorant of the sense of the words. . . . Thus we have the extraordinary fact that the words called each other up, without calling up their sense. . . . Even when awake, it is more difficult to ascend to the meaning of a word than to pass from one word to another; or to put it otherwise, *it is harder to be a thinker than to be a rhetorician*, and on the whole nothing is commoner than trains of words not understood."

[24] We think it odd that young children should listen with such rapt attention to the reading of stories expressed in words half of which they do not understand, and of none of which they ask the meaning. But their thinking is in form just what ours is when it is rapid. Both of us make flying leaps over large portions of the

sentences uttered and we give attention only to substantive starting points, turning points, and conclusions here and there. All the rest, 'substantive' and separately intelligible as it may *potentially* be, actually serves only as so much transitive material. It is *internodal* consciousness, giving us the sense of continuity, but having no significance apart from its mere gap-filling function. The children probably feel no gap when through a lot of unintelligible words they are swiftly carried to a familiar and intelligible terminus.

[25] Not literally *heard*, of course. Deaf mutes are quick to perceive shocks and jars that can be felt, even when so slight as to be unnoticed by those who can hear.

[26] Quoted by Samuel Porter: 'Is Thought possible without Language?' in Princeton Review, 57th year, pp. 108-12 (Jan. 1881 ?). Cf. also W. W. Ireland: The Blot upon the Brain (1886), Paper X, part II; G. J. Romanes: Mental Evolution in Man, pp. 81-83, and references therein made. Prof. Max Müller gives a very complete history of this controversy in pp. 30-64 of his 'Science of Thought' (1887). His own view is that Thought and Speech are inseparable; but under speech he includes any conceivable sort of symbolism or even mental imagery, and he makes no allowance for the wordless summary glimpses which we have of systems of relation and direction.

[27] Problems of Life and Mind, 3d Series, Problem IV, chapter 5. Compare also Victor Egger: La Parole Intérieure (Paris, 1881), chap. VI.

[28] If but one person sees an apparition we consider it his private hallucination. If more than one, we begin to think it may be a real external presence.

[29] Revue Philosophique, vol. XXI. p. 671.

[30] Quoted from the Therapeutic Gazette, by the N. Y. Semi-weekly Evening Post for Nov. 2, 1886.

[31] In half-stunned states self-consciousness may lapse. A friend writes me: "We were driving back from ---- in a wagonette. The door flew open and X., alias 'Baldy,' fell out on the road. We pulled up at once, and then he said, 'Did anybody fall out?' or 'Who fell out?' - I don't exactly remember the words. When told that Baldy fell out, he said, 'Did Baldy fall out? Poor Baldy!'"

[32] Kant originated this view. I subjoin a few English statements of it. J. Ferrier, Institutes of Metaphysic, Proposition I: "Along with whatever any intelligence knows it must, as the ground or condition of its knowledge, have some knowledge of itself.: Sir Wm. Hamilton, Discussions, p. 47: "We know, and we know that we know, - these propositions, logically distinct, are really identical; each implies the other. . . . So true is the scholastic brocard: *non sentimus nisi sentiamus nos sentire.*" H. S. Mansel, Metaphysics, p. 58: "Whatever variety of materials may exist within reach of my mind, I can become conscious of them only by recognizing them as mine. . . . Relation to the conscious self is thus the permanent and universal feature which every state of consciousness as such must exhibit." T. H. Green, Introduction to Hume, p. 12: "A consciousness by the man . . . of himself, in negative relation to the thing that is his object, and

this consciousness must be taken to go along with the perceptive act itself. Not less than this indeed can be involved in any act that is to be the beginning of knowledge at all. It is the minimum of possible thought or intelligence."

[33] Lectures on the Philosophy of the Human Mind, Lecture 45.

[34] Instead of saying *to our feeling only*, he should have said, to the *object* only.

[35] "There can be no difficulty in admitting that association does form the ideas of an indefinite number of individuals into one complex idea; because it is an acknowledged fact. Have we not the idea of an army? And is not that precisely the ideas of an indefinite number of men formed into one idea?" (Jas. Mill's Analysis of the Human Mind (J. S. Mill's Edition, vol. I. p. 264)

[36] For their arguments, see above pp. [158-162] [*Classics* Editor's Note: The page numbers do not appear in the Dover edition.]

[37] I know there are readers whom nothing can convince that the thought of a complex object has not as many parts as are discriminated in the object itself. Well, then, let the word parts pass. Only observe that these parts are not the separate 'ideas' of traditional psychology. No one of them can live out of that particular thought, any more than my head can live off of my particular shoulders. In a sense a soap-bubble has parts; it is a sum of juxtaposed spherical triangles. But these triangles are not separate realities; neither are the 'parts' of the thought separate realities. Touch the bubble and the triangles are no more.

Dismiss the thought and out go its parts. You can no more make a new thought out of 'ideas' that have once served than you can make a new bubble out of old triangles. Each bubble, each thought, is a fresh organic unity, *sui generis*.

[38] In his work, *La Parole Intérieure* (Paris, 1881), especially chapters VI and VII.

[39] Page 301.

[40] Page 218. To prove this point, M. Egger appeals to the fact that we often hear some one speak whilst our mind is preoccupied, but do not understand him until some moments afterwards, when we suddenly 'realize' what he meant. Also to our digging out the meaning of a sentence in an unfamiliar tongue, where the words are present to us long before the idea is taken in. In these special cases the word does indeed precede the idea. The idea, on the contrary, precedes the word whenever we try to express ourselves with effort, as in a foreign tongue, or in an unusual field of intellectual invention. Both sets of cases, however, are exceptional, and M. Egger would probably himself admit, on reflection, that in the former class there is some sort of a verbal suffusion, however evanescent, of the idea, when it is grasped - we hear the echo of the words as we catch their meaning. And he would probably admit that in the second class of cases the idea persists after the words that came with so much effort are found. In normal cases the simultaneity, as he admits, is obviously there.

[41] A good way to get the words and the sense separately is to inwardly articulate word for word the discourse of another. One

then finds that the meaning will often come to the mind in pulses, after clauses or sentences are finished.

[42] The nearest approach (with which I am acquainted) to the doctrine set forth here is in O. Liebmann's *Zur Analysis der Wirklichkeit*, pp. 427-438.