Creative Mind

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CHAPTER I

THE PROBLEM

¶ 1. REALM OF CREATION. "Creative Mind"! These are big words. Rendered into the Greek language, they become "Nous Poetikos", that great mystery conceived by Aristotle. The passive mind, he writes, is potentially all things; but the creative mind is that which converts the potential things into the actual things, as light turns potential colour into actual colour.

In our mother-tongue, too, is not the very highest of titles we can bestow that of "The Creator"? And He Himself is taken to be a Spirit or Mind; therefore, the Creative Mind. But as so used, the term "creating" has a more general sense than was intended by Aristotle; it means the bringing into existence of that which did not ever exist previously; it signifies much the same as originating, generating, producing, making, and the like. In such a general sense will be taken the creation that concerns us here. But for our part, we shall venture no Icarus-like soaring up to the dizzy heights of the divine. Our topic—though perhaps not without eventual bearings on sublimer regions also—will for the present run its course on the lower plane of humanity. Not to the Supreme Being will we dare to raise our eyes, but only to Man made in the likeness thereof.

Even on this lower plane, what a throng of great deeds and persons come crowding round us at the words! Foremost, the mighty creations of poetry and the other fine arts; of Homer, Dante, Shakespeare and Goethe; of Phidias, Da Vinci, Raphael, and Beethoven. The very word "poet" expresses in Greek what "creator" does in Latin; that is to say, "he who makes".

Still loftier perhaps, though more in the background, loom the achievements of physical science; the theories that interpret the universe as we know it; the mental flights of an Archimedes, a Galileo, a Newton, a Schwann, a Pasteur, an Einstein. And even those good folk for whom such theories remain a closed volume can at any rate appreciate their material realisations; the wonders of transportation by land, air, and sea; the marvels of communication, with or without wires; the colossal structures, as bridges, skyscrapers, and engines of military destruction; the still greater prodigies on a microscopic scale, as revealed in the magical transformations of chemistry and physiology.

But if the physical sciences be deemed creative, why not the mental ones also? Think, for example, of social organisation. Take any modern nation numbering its millions. Consider all its constructions at manifold levels and along multifarious lines; commercial, judicial, religious, disciplinary, industrial, recreative, hygienic, political, artistic, investigational, criminal, and so forth almost without end. Can we withhold the merit of creativity from our law-givers and our statesmen?

More exalted still than either physical or mental science

towers the sphere of philosophy. For here are mentally created, not merely such fragments of the world as material objects and social institutions, but whole new worlds! Let us, then, acclaim as pre-eminent originators Anaxagoras, Plato, Aristotle, Descartes, Spinoza, Berkeley, Kant, Hegel, and their compeers, East as well as West.

But this reference to philosophy suggests that the creativeness of a thought does not depend on its being truthful, or even reasonable. On the contrary, a case might be made out for maintaining that, whilst such mental content as is true *may* be created, such as is false *must* be so. For how else could it ever come into being? But hereby hangs a tale which for the moment we may let hang. Undeniable at any rate is it that falsities—for example, dreams (sleeping or waking)—may be called creative in just as pregnant a sense of the word as are the deliverances of poets.

Yet another type of mental creation is that which plans out conduct. Before anyone can behave—if we exclude from this term the mere unpurposive contracture of his muscles—he must needs construct some idea of what he is going to do. Accordingly, we all attribute creativeness to the strategic schemes of a Hannibal, or of a Napoleon; to the political designs of a Cavour, or of a Lincoln.

With all these instances, of course, the domain of mental creation is not exhaustively catalogued but only here and there illustrated. Many further examples will be found on the following pages, and others to unlimited number will readily be remembered by the reader for himself.

¶ 2. THE TWO POLICIES. In approaching this great realm of mental creativity, one is embarrassed to find that there may be adopted either of two very different policies. The one consists in surrender to the emotional excitement which such an exalted theme is apt to inspire; this course leads to enthusiasm and panegyrics; it is easy to achieve, wins favour from almost everyone, and warms the writer with moral complacency. The contrary attitude is that of cold-blooded investigation. It would take the creative faculties to pieces, in order to find out the trick of them. Such a course as this, besides entailing arduous work, surely brings to the hapless investigator more kicks than ha'pence. As a great artist, Stevenson, once wrote:

"There is nothing more disenchanting to man than to be shown the springs and mechanism of any art. All our arts and occupations lie wholly on the surface; it is on the surface that we perceive their beauty, fitness, and significance; and to pry below is to be appalled by their emptiness and shocked by the coarseness of the strings and pulleys."

Later on, however, the same writer himself salves the poor prying spirit with some words of comfort:

"Those disclosures which seem fatal to the dignity of art seem so perhaps only in the proportion of our ignorance; and those conscious and unconscious artifices which it seems unworthy of the serious artist to employ were yet, if we had the power to trace them to their springs, indications of a delicacy of the sense finer than we conceive, and hints of ancient harmonies in nature."

For my own part, at any rate, I will frankly confess, here and now, that just the "springs and mechanisms" are the

object of the present pursuit. In the end, a better understanding of how great works are created does not abate our sense of their greatness but only enhances it. Look at the artists themselves! Are they not day and night talking and thinking about their "springs and mechanisms" without thereby incurring the least abatement of their artistry!

Why they so concern themselves with the machinery is, of course, because they desire to gain more perfect mastery over it. And this is what all science is really aiming at. If it so persistently analyses things into last elements and reduces events to ultimate laws, all such activity is by no means disinterested and solely for its own sake. The quarry it hunts is not theoretical alone, but in still higher degree practical. If it seeks to understand how things are going on now, it does so in order to foresee what they will be doing presently, thereby bringing their course under direction and control. And just this is our policy here. If ever we should succeed in prying out any secrets as to how the mind achieves its creativeness, it will be in the hope that such a better understanding may aid us to appreciate and to create the more effectively.

CHAPTER II

CURRENT DOCTRINES

¶ 1. ACCEPTANCE AS ULTIMATE FACT. But before adventuring our own inquiry into the creative power, we may perhaps usefully glance at the chief attempts which are current already.[1]

One doctrine that has obtained much vogue is not so much an explanation as rather a refusal to explain. The power to create is simply accepted as an ultimate fact.

On such a view, curiously, it is often limited to "genius". Thus Ravaisson writes: "Genius, by the admission of everyone, consists above all in inventing, in creating". So too Gerard: "Genius is properly the faculty of invention; by means of which a man is qualified for making new discoveries in science or for producing original works of art". Both these authors are quoted with approval by Ward,[2] who speaks of creativity as something "that only transcendent genius displays". He adds the curious declaration that this creative genius is innate, but nevertheless not inherited! He writes that "It pertains to the subject, not to his psychoplasm, as his talents do".

Now, in thus taking creativity to be itself the last word of explanation, there is nothing necessarily wrong. Some word must be the last, any way. But we are scarcely entitled

[1] Should this all too curt reference to current doctrines prove difficult to those who are unfamiliar with them, the chapter may be omitted without hurt to the rest of the book.

[2] *Psychological Principles*, 1918.

to such a renunciation of all better understanding until we have at least made every feasible effort to obtain it. And as for the asserted limitation of creative power to "genius", as also the bizarre statement about heredity, we cannot expect such declarations to be adopted until at any rate they are backed up by definite evidence.

¶ 2. EXPLANATION BY IMAGERY. Passing on to the explanations that have been attempted, the most ancient of them—and perhaps the one which still enjoys the widest favour—is that which resolves creation into "constructive imagination". To this it is that most writers are wont to credit the visions conjured up by the fine frenzy of the poet, the marvels evolved by the great scientist, the Utopias bodied forth by the social reformer, and even the dazzling sallies of the wit.

Upon this "imagination", accordingly, authoritative persons of all kinds—from great ministers of state patronising universities down to literary hacks at loss for a theme in the slack season—have lavished their most eloquent praises. Thus Stewart writes:

"The faculty of imagination is the great spring of human activity, and the principal source of human improvement.... Destroy this faculty, and the condition of man will become as stationary as that of the brutes."[1]

Often it is painted in even more glowing colours:

"That wonderful faculty—the source of poetic genius—the instrument of discovery....It is the creative power of

[1] *Philosophy of the Human Mind.*

the mind which lights up all work, which gives life and meaning to it at every stage, and gave it birth in the beginning."[1]

Goschen, a very notable Chancellor of the Exchequer, finds in such laudation the opportunity for a sly thrust at his political opponents—

"Often you find in men an absolute incapacity to realise an unfamiliar situation, to grasp conditions which are not immediately visible, to recognise facts which to others are a plain and patent element in their lives. That incapacity springs from a dull and uncultivated imagination.... A House of Parliament without imagination is a dangerous House."[2]

Now the word "imagination" originally meant—and by its very structure cannot help implying still—the usage of mental "images," visual, auditory, or otherwise. These in psychology mean the sort of mental pictures examined by Galton.[3] He sent round the following questionnaire: "Think of some definite object; suppose it is your breakfast-table as you sat down to it this morning—and consider carefully the picture that rises before your mind's eye".

In reply, some individuals wrote that their mental imagery was extremely vivid. "Brightness is as in the actual scene." "I can see my breakfast-table or any equally familiar thing with my mind's eye quite as well in all particulars as I can do if the reality is before me."

But other individuals answered very differently. With

[1] M. Macmillan, *Education Through the Imagination.*
[2] Speech to the University of Liverpool.
[3] *Inquiries into Human Faculty.*

many, the vividness of the imagery was only mediocre. They wrote back, for instance: "Fairly clear, but brightness not comparable to that of the actual scene." "Fairly clear as a general image; details rather misty."

And with a not inconsiderable number, at the bottom of the scale, the imagery degenerated to the point of total disappearance. Such reports were made as the following:

"Usually very dim. I cannot speak of its brightness, but only of its faintness." "My powers are zero. . . . I recollect the breakfast-table, but do not see it." "It is only by a figure of speech that I can describe my recollection of a scene as a mental image, which I can 'see' with my 'mind's eye'. . . . I do not see it any more than a man sees the thousand lines of Sophocles which under due pressure he is ready to repeat. The memory possesses it."

But here it might appear that—did they but realise it—the psychologists of whom we are speaking have arrived at a position both wonderful and fearful. For theirs surely must be the task to separate off those persons who possess the images—by which, it is said, creation is effected—from those who do not possess them. Theirs must be the responsibility to select those who have in their hands the wherewithal to improve mankind, light up all work, and pour forth poetry, from those whose rôle is only to endure these things. Upon them must devolve even the picking of those who are fit for seats at St Stephen's, from among those who were better kept out of such harm's way. And all this they will do simply by asking people what rises in their minds when they think of their breakfast table.

For this prospective millennium, however, experimental work has proved discouraging. Comparisons have now been made in many kinds of mental performances between the persons who are endowed with such images and those who are unendowed. In not one single kind of performance, so far, have the imageful persons shown any superiority over the imageless.

Indeed, the persons who possess images of great vividness seem after all not to make much genuine usage of them. An artist replied to Galton that, though he had formerly supposed himself to paint by means of his images, he now found himself not really able to do so. He continued:

"There is perhaps some analogy between these images and those of 'faces in the fire'. One may often fancy an exceedingly well-marked face or other object in the burning coals, but probably everybody will find, as I have done, that it is impossible to draw it, for as soon as its outlines are seriously studied, the fancy flies away."

In the present state of evidence, then, this doctrine of creation by means of images may be dismissed from further serious notice.[1]

¶ 3. EXPLANATION BY COMBINATION. Either allied with the preceding explanation by images, or else divorced from it, there has been from the most ancient times a dominant tendency among psychological authorities to explain creativity by "combination". According to this doctrine, when we

[1] For the experimental work, see particularly that of Aveling, Bühler, Carey, Martin, and T. Moore; also a luminous chapter on "Imagination" by Ballard, *The Changing School*, 1925.

regard a mental product—be it picture, poem, invention or otherwise—none of its constituents are new in themselves; new only is the fact of their now keeping company.

But at bottom, this doctrine appears not so much to explain creations, as rather to miss finding them. Suppose, for example, I see a man, at one time climbing a tree, and at another eating his dinner. And suppose further, as is natural enough, that the second encounter recalls to me the first. I now have in my consciousness both the tree and the dinner; and this, by hypothesis, is a brand new combination (it is so equally, whether it consists of images or of ideas). But there is nothing whatever about it comparable with the achievements cited in our first chapter; nothing which seems to merit the title of "creative" at all: nothing, then, that can render us any service in our present quest.

¶ 4. EXPLANATION BY "FORM" (OR "GESTALT"). Gaining so little satisfaction from the orthodox doctrines which have been handed down by ancient psychological tradition, we may the more expectantly turn to the three modern schools of thought which are at present fighting a droll triangular duel for the title of "The New Psychology".

Most promising of these (for our purposes) might seem to be the school of "Form" or, in German, "Gestalt". For this, at any rate as represented in the earlier "Austrian" way, did try to show what it called mental "production", a word that suggests creation. It maintained, for instance, that when a person appreciates a melody, he first hears the notes and then, by a further act, "produces" in his mind the musical

Gestalt or form. But even this analysis evidently falls far short of what we need. For production in the sense of creation does not lie merely in appreciating melodies, but rather in composing them. And about the latter achievement this school appears to offer no assistance.

¶ 5. REJECTION BY BEHAVIOURISM. The second participant in the triangular rivalry is the school of Behaviourism. But so far is *this* from explaining any mental creativity, that its express slogan—that which alone holds together its otherwise strangely assorted champions—consists in demanding that the very concept of "mental" should be expunged from psychology, reducing this to a bare account of physical stimulation and motor response!

¶ 6. PSYCHO-ANALYSIS. With this third claimant to be The New Psychology, the part played by mental events, far from being eliminated, receives a vast extension; to the territory of consciousness is added on the boundless depth of the "subconscious" mind; and herein is found to revel and riot all that is most fantastic. Prodigious is the crop of similes, metonyms and synedoches, not to mention innuendoes, euphemisms, litotes, and transferred epithets; in fact, all the graces of conscious poetry, now redoubled in the service of subconscious bestiality. But as to how such feats are possible; as to the mental laws by which either poet or beast is able to conjure up his amazing tropes; about all this the psycho-analysts show little interest. Absorbed as they are in hunting down the origin of motives, they lend us but scant help in searching out the creation of ideas.

CHAPTER III

QUALITATIVE PRINCIPLES OF KNOWING

¶ 1. THE REQUIRED PRINCIPLES. The upshot of our search for existing explanations of creativity has been disappointing. And so, not getting forward by the efforts of others, there seems no way out but to put our own shoulders to the wheel and try to explain the matter for ourselves.

But what is "to explain"? Much might be said about this term, which we utter so glibly. In its literal sense, it means to spread out and flatten; metaphorically, it is to make plain or clear. But this achievement possesses, so to speak, value in two dimensions, the perfective and the extensive. By the former is meant that, since a thing is explained by being identified with something else known already, the better this is known the more perfect the explanation. Thus, where a rock is ascertained to consist of dolomite, this explanation is especially effective for the mountaineer who has travelled in the Carinthian Alps, or for the builder who has used the stone for building purposes. The second or extensive value of an explanation depends on its generality; it is the better, that means, as the thing to be explained is identified with things of wider and wider extent. And such an increase of scope derives from submitting the things concerned to finer and finer analysis. Suppose that the dolomite were analysed out into a double carbonate of calcium and magnesium; this fact would bring it under the light of all that chemistry knows on the very extensive subjects of carbon, calcium and

magnesium. Yet a third requisite in explanations—leading naturally out of the second—is that they should collectively make up a complete system. So long as a science knows only a fraction of the influences at work anywhere, it is almost as likely to lead astray as aright.

From all this we may gain a better idea of the kind of explanation that is *required.* The creativity should be traced down, not to processes or laws of any novel and wonderful kind, but on the contrary to those which are most familiar and most self-evident. Again, these processes or laws should be ultimate, so as to have the widest possible extent; the laws should not be deducible from any others more general, nor should the processes be divisible into others more minute. In fact, this is just what the word "principle" (from the Latin *principium*, a beginning) really signifies. Furthermore —and hardest of all to accomplish—the laws or processes should together constitute a complete set. The great exemplar of satisfying these three explanatory needs is supplied by Newton's laws of motion, of which the first runs as follows: "Every body perseveres in its state of rest, or of uniform motion in a straight line, except in so far as it is compelled by forces to change that state".

Here a critic might hastily declare that such a law he could see for himself, without any Newton to tell him. But this is just what Newton wanted; to express events in terms that the critic *could* understand. The ideal of science is indeed wonderfulness of results, but always based on simplicity of means.

¶ 2. PRINCIPLE OF EXPERIENCE. Let us now bring all this to bear on our present problem. The task of explaining mental creativity has become that of finding for it a place among the basal and ultimate powers of knowing; or, as it is technically designated, of "cognition". These powers have recently been enunciated. They are three in number. The first has been called the Principle of Apprehension of Experience. For our present purposes, this may be formulated as follows—"*A person tends to know his own sensations, feelings, and strivings*".[1]

It should be noted that this principle expresses simultaneously both a law and a process. And the same will be found true of the two other qualitative principles; but *not* of the subsequent quantitative ones.

As suggested in the preceding considerations, many who hear this principle may at once think, What a platitude! For my part, I could only desire that it were more so. As a matter of fact, simple as it undeniably is, and exactly true as I believe it to be, it nevertheless stirs up some of the most difficult problems and obstinate controversies that have vexed psychologists and philosophers from the earliest recorded times. These troubles have largely been connected with the concepts of "inner sense" and "consciousness". Such powers have had more vicissitudes of repute and valuation than befall stocks and shares in the finance market.

Nevertheless, though not going so far as to say that all

[1] A more exact formula given by the present author is: "Any lived experience tends to evoke immediately a knowing of its own characters and experiencer". *Nature of Intelligence*, 2nd ed. 1927, p. 48.

this has been much ado about nothing, the suggestion may be ventured that the ado has been over-done. This is perhaps one of the occasions where the greatest authorities have tied themselves up in the tightest knots, ending in a worse plight even than that of plain common sense.

The facts really at issue may be illustrated by such familiar sayings as "I see this", "I remember that", "Such and such a thing displeases me", "It is not my intention". A man will even, upon occasion, avouch such statements with the most solemn oaths. But what he is affirming is nothing more than his own experiences; his perceptions, thoughts, feelings, and volitions. Such experiences, then, by universal admission, do enter into the awareness of the experiencer.

One difficulty that seems to need a word or two here comes from sensory perception, especially visual. Expressed as in ordinary parlance, I at this moment see before me a shilling. Do I really see it? The study of hallucinations proves beyond doubt that I could possibly have an experience exactly like the present one, although there might in truth be no shilling there. An inevitable conclusion is that the experience in itself does not include the real existence of the shilling, but solely the mental act of perceiving it. And so with all other sensory perceptions. However true really, they are as experiences nothing more than mental acts or states.

The question now arises: How do such complex sensory percepts as that of a shilling stand with reference to the more elementary experiences commonly called bare "sensation"? In answer we may say that the latter provides most, though not all, of the original material out of which the

complex percepts are constituted. As to the way in which this constitution is achieved, we shall see more in chapter XI. For the present it must suffice to outline the whole domain of the sensations by recording that they possess four and only four primary characters: quality, intensity, place and time. As to range of the quality, the tactile sense would seem to possess only four kinds, pressure, warmth, cold and pain. Taste also has four, sweet, salt, sour and bitter. The visceral sensations have perhaps a dozen appreciable grades. Smell, on the other hand, has been credited with about 500 grades. Sound is divided into noise and tone, the grades of the former numbering some 600; those of the latter, not less than 10,000. Sight separates into chromatic and achromatic, the former having perhaps 200 grades, but the latter only two, namely, black and white. Thus, the grand total may be taken at roundly 12,000.

Passing on to the second general character, that of *intensity*, there appear to be about 700 distinguishable grades of brightness, but only about 100 of loudness.

As for the two remaining characters, those of *space* and *time*, their range of variation is for the present purposes sufficiently obvious. Such, then, is the entire gamut of the sentient characters.

On the whole, we are now sufficiently prepared to cope with this first law and process in so far as concerns our main task. This is, to decide how far and in what significance their action can be accepted as "creative". When, for example, one feels a pain, knows it, and thereby acquires the idea of it, can this idea rightly claim to be something created?

We may reply that the pain does create the idea in the sense of producing it; but not in the sense of inventing it. Otherwise expressed, the knowledge has no genuine originality, since it does no more than imitate what was already existent. If we entitle it creative at all, we must add that it is so only in the lowest degree.

¶ 3. PRINCIPLE OF RELATIONS. Let us pass on, then, to the second principle, formulating it approximately as follows:

When two or more items (percepts or ideas) are given, a person may perceive them to be in various ways related; thus, one may be near, after, the cause of, or a part of, the other.[1]

The items which are related may conveniently be termed the "fundaments" of the relation. Here again, we have facts that might seem only too obvious; so much so, as not to be worth the saying. And indeed the great majority of psychologists appear to have put some such view into their actual practice. They have brought forth tome after tome about mental happenings and have left out the perceiving of relations because it happens too often! Surely, this is the very archetype of not seeing the wood for trees.

For all its seeming triviality, however, even this principle of relations presents many a problem that is thorny enough. And some sharp pricks from them we shall hardly manage to escape even in our present account.

Passing them over for the present, however, we may get

[1] More accurately, "the presenting of any two or more characters (simple or complex) tends to evoke immediately a knowing of relations between them," see p. 63 of the work quoted here on p. 15.

some notion of the total scope of this principle by briefly enumerating, with examples, the different classes into which the relations have been divided. They fall into two general types, "ideal" and "real", of which we will take first the former. This itself splits into three classes. One is supplied by the ubiquitous relation of *likeness*, including all its kinds and degrees. Without the power to perceive this relation, a person could recognise nothing and conceive nothing; he would be mentally and even physically paralysed. Next comes the relation of *evidence*; it is that whereby we know, for instance, that the premisses of any syllogism warrant its conclusion. Upon this relation depends the whole length and breadth of human reasoning. Last comes the *conjunctive* relation. It is that which is signified by the little word "and". Despite its seeming simplicity, it appears to be responsible for the whole of arithmetic.

Turning to the "real" relations, these include seven classes. One is that of *attribution*; it exists when we can appropriately say that one thing is an attribute of another; as "hard" is of "diamond", "yellow" is of "lemon", and so forth. Every school child has to become familiar with attributes under the name of "adjectives". The second class presents far more difficulty; in fact, it has worried philosophers so greatly, that some have denied its being really a relation at all. It consists in *identity*. It holds between any two things that can be called the "same"; for instance, oneself at one moment and at the next. As the third class we may cite the relation of *time*. When one notices that lightning precedes thunder, one is perceiving a temporal relation

between them. Next comes naturally the class deriving from *space*; if anything is perceived to be higher, lower, larger, or smaller, than another, it is to this class that the perceiving must be assigned. Next may be put the relation of *cause*. It is that which holds, or is supposed to hold, between the blow of the bat and the flight of the ball, or between the hearing of good news and the rejoicing at it. The sixth real relation is peculiarly hard to understand. For want of a better name, it may be called the "*psychic*" relation, since it is the prerogative of mind. It has also been called the relation of "*objectivity*", since it is that which holds between a mental process and its object, between seeing and what is seen, thinking and what is thought about, desiring and what is desired. The seventh and last class of relation has been named that of "*constitution*". It has the distinction of having been rarely if ever detected; although really, it is the commonest of all, for it occurs wherever any of the others do. It is simply that which holds between constituents and what they constitute; that, for instance, which bread and meat hold to a sandwich, or redness and squareness to a red square.

Such, then, is the whole armoury of relations at the disposal of the human mind. It is a subject on which one is tempted to expatiate. Restraining ourselves, we will here only touch on a few points that might otherwise be likely to cause confusion.

One is that relations may be arranged either randomly, or systematically. The former case is exemplified by pebbles on the seashore; the latter by the pearls of a necklace. Or again,

the random relations are shown by bricks dumped on the ground; the systematic ones, by these same bricks when built up into a house. Now, a systematic arrangement of relations is called by such names as a "form", "pattern", "configuration" and the like. It is the main meaning also of that very equivocal and controversial German word "Gestalt". A special case of systematic arrangement is furnished by a continuum; for example, an even wash of paint, or one getting uniformly darker in one direction.

Besides this diversity between random and systematic relations, there is another one that has given rise to much misunderstanding. It consists in this, that the perceiving of a relation may be done either in two steps or in only one. Suppose, for example, that several cards are exposed to view on a table and that five of them happen to be neighbouring values of the same suit. Some spectators, although they look at every single card (including the five), might fail to notice the fact of the sequence till some time afterwards. In this way the whole operation would fall into two easily distinguishable steps: first, the five cards are seen one by one; and then they are mentally combined. But other spectators might behave otherwise; they might apparently see the five cards as a sequence from the very beginning; they would be more likely to do this if they were habitual poker-players, or if the cards chanced to lie side by side. This time only one step would be manifest. A curious scrutiny of these two modes of operation, by one and by two steps respectively, arouses many points of interest, and even of difficulty. For instance, which of

the two modes is "synthetic" and which "analytic"? And in what respect? But for our present purposes it is sufficient to note with great care that under our principle of perceiving relations, we include *both* modes.

Just another detail seems to need remark. When we talk of perceiving relations we incline to mean doing so in the focus of our attention. But really by far the greater part of our perceiving goes on marginally. I not only see some item upon which I am intent but also, more obscurely, a great many further items. The same applies to perception through the other senses, and no less so to thinking.

There remains to consider our main theme. How far may this second principle of perceiving relations be regarded as creative? In answer, we must concede that much of its achievement falls under the same objection as was raised to the first principle; it only copies what was already existing; thus in our example of the cards, the sequence really existed before ever it was detected. But possibly other cases of the principle do not fall under this objection. Some people have even held that none of the "ideal" relations have any real existence at all (indeed, this is the very reason that they are distinguished by the name of "ideal"). If so, we seem forced to admit that they are created by the mind. However, on this point we may be allowed to compromise by allowing the principle of relations to be creative in the *second* degree.

¶ 4. PRINCIPLE OF CORRELATES. We push on, then, to the third principle. Roughly expressed, this runs as follows: