was to be seen wherever I looked. Only this morning I had a similar dream. Something seemed loose in my bicycle. I then inspected the parts and wherever I looked, defects were observable. * Looking over my notes, I observe a quantity of dreams of this nature. [Verify in your own dream-life.] Expressing this aspect in the most general form, we may say that dread, fear, hope, desire, anticipation, possibility, tend to actualise themselves in dream-land. In the waking state this is prevented, though in low nervous health the beginnings are common with me. While I am awake, rising fears, etc., are usually suppressed, and often the steadiness of sun-braced thought negatives even the semblance of irrelevant considerations. In the relaxed condition of sleep, on the contrary, every class of suggestion, such as anxiety or hopefulness, has a natural tendency to realise itself, and is accentuated by the unit state of the organism. Hence arises much of the originality and confusion of dream-life; the growth of settings; illusions of time and space; and the transformation of objects and scenes. Herein lies another telling difference between waking and dreaming.

Among physiologists generally it is held that the profundity of sleep varies during the night. Michelson (Die Tiefe des Schlafes, 1897) offers an interesting study of this question, continuing experimentally the traditional views. * In accordance with this, psychologists generally hold that dreams only take place in those states which partake both of the waking and the sleeping condition. In deep sleep, thought, except that of the most rudimentary kind, is held to be absent. My own observations, which require experimental testing, coincide with the above opinions. Macnish (Philosophy of Sleep, 1830, p. 59) holds that "draming is a state of partial slumber." Chesley (Does the Mind ever Sleep? 1877, p. 75) says that "normally during slumber the mind is unconscious; ... it neither thinks, feels, nor wills." Robert (Der Traum, 1886) claims that we only dream so far as we have undigested thoughts or sensations. Macfarlane (Dreaming, 1891) argues (p. 9) against Hamilton, and also contends that "it is during the intermediate states of falling asleep and waking that dreams most commonly occur" (p. 12). Goblot (Sur le Souvenir des Rêves, 1897, p. 329) says: "Each time that we remember a dream, that dream takes place not during sleep, but during the period of transition between sleeping and waking." On the other hand a number of writers contend for the opposite view. Hamilton (Metaphysics, 1877, i) leads the van. "We may, therefore, I think," he sums up, "assert, in general, that whether we recollect our dreams or not, we always dream" (pp. 323-4). The chief reason he alleges to be that whenever we are roused from deep sleep, we find ourselves dreaming (p. 323). Two answers have been given to this contention. The supposed general fact has been tested and found fictitious; and, secondly, the act of rousing has been said to explain the dreams sometimes dreamt on such occasions. On Hamilton's side are ranked Macario, Du Sommeil, 1857, p. 22; Strümpell, Die Natur und Entstehung der Träume, 1874, p. 15; Cox, Sleep and Dream, 1878, p. 88; Julia Gulliver, The Psychology of Dreams, 1880, p. 209; and Hildebrandt, Der Traum, 1881, pp. 2-5. In this connection we may refer to Goblot (Le Souvenir des Rêves, 1896) who holds that "the dream which we remember is wrought in the waking state" (p. 288), and that what we dream during sleep is always forgotten (p. 290). These interesting assertions he bases on slender foundations. The matter, however, should be settled experimentally. See also Dugas, Le Souvenir des Rêves, 1897; and Eger, Le Souvenir dans le Rêve, 1898.

* On the question of sleep, see also Richardson, The Phenomena of Sleep, 1875; Preyer, Über die Ursache des Schlafes, 1877; and Rosenbaum, Warum müssen wir schlafen? 1892.
As children we are naturally unable to distinguish between dreams and actuality, for to the child the world is one uniform tissue of fact. As we grow older, with no discipline and no effort to rationalise our dream world, the reckless judgments persist, the contents alone changing on account of the decay of memory (sec. 115). It is mostly our waking pictures that are transferred to our dreams; scarcely any of our training. To a large extent we still act in that state as strangely and as impulsively as children. We learn little as we grow to manhood, if we except a feeble reflection such as is offered by a turbid stream. There is in dream-life no bitter disappointment to make us ponder, no harsh criticism driving us to refashion our lines of thought, and no self-scrutiny suggesting improvements. There, thanks to a judgment unchecked by relevant memories, every problem is readily solved.* For this very reason we stagnate morally because we can close the door to afferent influences. Were our character exposed to the rude gaze of the world as our intellectual life is, and could we as little sceep our moral as our rational defects, the race would ethically be as superior to that of the present day, as is our strenuous thought to that displayed in an average dream. We are dreamers so far as our more intimate life is concerned. The business of the pedagogue is to find a camera which shall reflect on a visible canvas the play of the soul, and which shall in this way admit afferent influences into morality.

231. — Additional Considerations.

Accepting what has been said in the preceding sections, there remain sundry details to be considered. It is sometimes evident that the scenes in a dream appear to last for hours when but a few seconds have passed. What often happens and explains the great rapidity is that the dreams are ragged scraps which, like fallen leaves, are hurried along by gusts of feeling. According to the necessity of the drama and the fancied demands of logic the feelings give us an illusive notion of the time elapsed. Suppose that in the waking state we think of some one as crossing a room; we do not really see him move; we see one blurred picture, with which goes the attached summary feeling. The act which would occupy thirty seconds, we have imagined in a third of a second or less. Thus the sweep of the eye is to the imagination what bodily motion is to the reality. In a dream of twenty seconds a whole tragedy develops. We hence learn that our time illusions play as important a part as our visual or auditory illusions, and that, therefore, the lengths and lengths of country we traverse take but as many half seconds, as is shown by a study of re-developments of travel. It is very doubtful, however, whether normally the dream-process is rapid at all. [Experiment in this direction.]

* I have already in a former note referred on this subject to Fechner (Psychophysik, 1860, ii, pp. 532-3) who had come to similar conclusions forty years ago.
The problem of the rapidity of dreams is one of the vexed questions of dream psychology. Maury raised the point by recounting his celebrated "Revolution" dream, and even attempts have been made to exhaust the subject. Stewart (Elements, 1808) offers a simple solution of such rapidity. For him thought is so rapid that the swiftness of dreams causes no difficulty (p. 345). Hodgson (Theory of Practice, 1870, p. 446) says, having Maury's dream in view, that "dreams, when suggested by external agency, and referred to past time, are suggested in inverted order of time, which is corrected and arranged in the real order of history by a process harmonizing them with the order of events in actual life." Cox (Sleep and Dream, 1878) says that "the dreaming mind sets no distance between waking conceptions of time" (p. 54). Hilgerbrandt (Der Traum, 1871, pp. 245) holds that the swiftness is illusory, that it is produced by the sense of reality, and that the dream proceedings are no swifter than ordinary imaginative thought. He suggests, on the strength of some observations, that the commencement of any act in which is due to sensory stimulation is not easily traced (pp. 39-40). Spitta, in his A Manual of Time, 1882, pp. 287-8) contends that, shortly before waking, two minutes is enough for the evolution of the most complicated dream. Schwartzkopff (Die Elen im Traum, 1887, pp. 68-72) argues that anxious moments seem to last an eternity. That when we are surprised, we tend to seek instantaneously for an explanation but that the situation is yet clear to us, and that dream travels proceed no faster than thought travels. Baldwin (Feelings and Will, 1891, pp. 345) relates a story where the last of a clock entered a dream, and in this way measured its length. This dream from Maury's case in Mumford (Waking, Sleeping, and Dreaming, 1893, p. 26) quotes a striking instance where the noise of the pulled bell wire set the dream going, making it appear as if the dream had started simultaneously with the ringing bell. In the D' la Dure du Temps dans le Reve, 1894) argues that the guillotine incident in Maury's dream was the last stage in that dream, being merely added. Paul huy (De l'état de l'Était dans le Reve, 1894) refers to Maury rather inconclusively. Ecarts (La Du du Apparais de Rêve, 1895, pp. 41-4) argues that Maury's dream was not recorded at the time, and is hence unreliable. Maury argued backward from the actual how which made him dream of the guillotine (p. 43). And, generally speaking, the retrospective explanatory matter in such dreams is afterwards added (p. 55). Lorrain (Le F, 1895, p. 60) claims that Maury probably made up the dream during the time which they refer to the blow at the full state of waking. L...D.... (in A & Phi., 1895) suggests that the inciting event merely forms a later portion of Maury's dream. Clavier (in Rev Phil, 1897) gives a case where a dream could be proved to have lasted twenty two seconds. W. W. W. (The Rapidity of Dreams, 1897) supplies some experimental instances to show the great rapidity of picture thought in the waking state, arguing that the rapidity of dream incipents is not astonishing. "The whole question is one of the experimental."}

The rapidity of dream life lies in the imaginary solution of its difficulties. A hungry man who is awake thinks of banquets, but manages to discover some means of obtaining a crust of bread. In sleep he also feasts, is again hungry and feasts again, but on waking he learns that if the filling of his stomach depended on dreams he would die of starvation. Accordingly, together with an absence of awareness of the condition of things, there is in dream life almost invariably a fictitious solution. Men, therefore, become tired of re-producing, or dwelling on, dream-sensations, until a general tendency is established which prevents them from annoying our waking life. Their pretensions are unbounded; but in their performances we are offered a sunbeam for a marketable bar of gold.

The opinion expressed in the preceding paragraph is the one generally held. Few go so far as to assert with Binz (Ueber den Traum, 1878, p. 35) that dreams are always use-
less and frequently the sign of indisposition. Most writers, rather agree with Hildebrandt that occasionally the hurried impressions of day life, which Robert (Der Traum, 1886, p. 34) speaks of, and which clarify in a dream, are of some value in giving us hints as regards our character or those of others we have met, as regards events imperfectly analysed, and as regards diseases which may be approaching (Der Traum, pp. 56-60). Greenwood (Imagination in Dreams, 1894) bitterly complains that "it has been decided by the scientific that dreams are entirely profitless" (p. 27). His complaint, however, is made regardless of the literature of the subject. Binz stands by himself in his pronounce ment on the uselessness of dreams. On the other hand, my observations have put the value of dreams very near to the zero point. Greenwood's interesting comparison between day and night dreams (pp. 155-7) is misleading, since the former are manifestly superior in value, and largely different in kind. My counsel to average dreamers would certainly be to ignore dreams.

Closely connected with the useful dreams just discussed, is the question of dreams which are supposed to open loopholes through which to catch glimpses of the otherwise hidden past, present and future. Most writers on dreams notice the subject, and give naturalistic explanations as, for instance, Abercrombie, Inquiry, 1858, pp. 276-85; Beneke, Lehrbuch, 1885, p. 293; Clodd, Myths and Dreams, 1885, pp. 236-44; Graf funder, Traum und Traumdeutung, 1894; Radestock, Schlaf und Traum, 1879; Robert, Der Traum, 1886, p. 34; Siebeck, Das Traumleben, 1877, pp. 30-4; Supron, Le Monde des rêves, 1882, pp. 67-97; Spitta, Schlaf und Traumwahrh, 1882, pp. 309 ff; and Sully, Illusions, 1895, p. 147. On the mystic side we have Greenwood, Imagination in Dreams, 1894; Haffner, Schlaf und Traum, 1884, pp. 323 et seq.; Macario, Du Sommeil, 1857, pp. 66-84; Pfaff, Das Traumleben und seine Psychologie, 1868; Schmick, Die naturliche Fortdauer der Persönlichkeit, 1891; Schulert, Du Symbol des Traumes, 1840; and Ware, Wonderful Dreams, 1883.

I have also glanced at a few nondescript dream-books, designed for ordinary believers in the meaning of dreams. The value of these interpretations seems wholly dependent on belief in them. We read, for example, that to see a clock means that we shall be, we will say, successful in a love affair. If we are unbelievers, we are not likely to dream of clocks in any special connection, if at all. However, if dreams impress us, then the day light hint of success in love will appear to us during the night as the form of our visionary clock. So also prophecies will frequently tend to fulfill themselves by urging the believer to action. As a whole, the dream-books appear to me void of any objective truth, being built upon a purely fanciful foundation. Most of the articles or objects mentioned by them, to judge from my dreams, never occur to those who know nothing of popular dream-interpretations. The dream-books create the dreams which they are supposed to explain.

Some accounts of wonderful dreams have little foundation in fact. For instance, Tissié (Les Rêves, 1890, p. 10) writes: "'Burdaue' tells that he and his travelling companions, staying at an inn, all dreamt at the same time that they were on a rough road, bordered by precipices, and in the depth of night. The cause of all this was a storm which had broken over the inn." Here is evidently a case of undoubted transference of thought, for Burdaue, the physiologist, is a witness whose word must be respected. When we turn to Tissié's authority, we find that Burdaue tells quite a different tale. "'During a fierce storm at night nearly all the travellers in an inn dreamt that carriages and guests had arrived!' [quoting H. Nudow, 1791]. While in an inn I dreamt during a storm that I had departed in the depth of night and was in a precipitous road by a deep clasm. My loud complaints [meine lauten Klagen darüber] induced the same dream in my travelling companion." (Burdaue, Physiologie, iii. sec. ed., 1858, § 601).

The vividness of some dreams requires careful consideration. Often, indeed, our dream-environment is dark or undefined; but there are dreams situations which vie with waking life in clearness of outline. Closed-eye vision may sometimes account for this; but it is probable that there is an extra stimulus which brings about an added effect. In this connection
there is at least one possible mistake against which we must guard; that is, we ought not to confound vivid with accurate vision, for the one does not involve the other. Judging by my records, minute detail is suggested rather than present in dream-life. My waking memory of extremely well known or recent events far surpasses in vividness the details of the dream-condition. For example, glancing at passers-by for half a second or so, I seem to re-develop clearly and faithfully the chief characteristics—chin, mouth, nose, eyes, beard, complexion, size, etc. The picture, except for its tendency to disappear, is not distinguishable in vividness or otherwise from the reality. This is even more fully seen in re-developing those I intimately know. Here the attention can be fixed on the image for a considerable period, because of the number of details with which I am acquainted.

There is considerable divergence of opinion as to the vividness of dreams. Schwartzkopf (Das Leben im Traum, 1887, pp. 10-3) contends that he sees scenes in full detail, colour and movement being faithfully represented, and that he also tastes and smells eatables, etc. Hildebrandt (Der Traum, 1884, pp. 40-1) describes the dream-figures as being painted grey or grey, the environment being veiled, sounds softened and clearness lacking. In a similar way, Huxley (Huntz, 1879, p. 96) thinks that dream-pictures resemble the view we obtain from “out of the corner of the eye,” and that our dream-pictures “are, in short, generic ideas of many past impressions.”

My own observations show no one type of vision. Sometimes, in dreams, total darkness reigns; sometimes things are believed in rather than seen; sometimes the light is indifferent; sometimes the illumination is the same kind as that of good daylight; and not infrequently there is a peculiar glare. This last effect is the least realistic, for objects look semi-transparent, like reddish yellow wax in character, and phosphorescent. The colour seems the same as that which I see with eyes closed when the visual field appears bright: as when the sun’s rays are piercing the eyelids.

It is generally admitted that dream-pictures are mainly visual, and it has also been shown that our dream-vision has an afferent origin. Hence, according to the state of the retina or other mechanism, we can let our fancy build up new shapes or transfigure known objects, as we may do with clouds, with burning coals or with grained doors. This explains whatever originality, vividness and details are observable in dreams. It also supplies a reason for the difference between normal memory and dream-pictures, since the dream-pictures are partly suggested by the natural light-dust. As a matter of fact, except for general prostration, it is rather surprising that under the new conditions most persons are yet narrowly bound to their memories. It would, however, be going too far to assert without experimental verification that “the materials of our dreams are seen, when closely examined, to be drawn from our waking experience” (Sully, Illusions, 1895, p. 139). The truth is that there are considerable individual differences. Delboeuf (Le Sommeil et les Rêves, 1880) exaggerates appreciably. He says: “In dream-pictures, there is to be found nothing new, nothing actual” (p. 632); and, again: “The little which dream-life opens to us is sufficient to induce us to affirm that, in the world of thought, nothing is forgotten; everything is entered, classified and labelled” (p. 647).

Vividness is also said to be gained in other ways than those mentioned above. So Stewart (Elements, 1880, p. 344) rightly draws attention to the fact that engrossment produces vividness, and is most favoured when the senses are asleep. Schwartzkopf (Das Leben im Traum, 1887, p. 40 and p. 51) substantially upholds the same view. Sully (Illusions, 1895, p. 138) also says that in dreams the “image will gain a preternatural force through the greatly narrowed range of attention.” Delboeuf (Le Sommeil et les Rêves, 1879-80) holds, among other doubtful views, that “the perception and the conception of one and the same object cannot simultaneously co-exist in consciousness.”
(1879, p. 496), and from this he deduces that dream-imagery must appear real to us. Taking a broad view, I am inclined to support Stewart’s contention that absorption assists us in procuring the sense of reality in dreams. [Experiment along this line.]

We have assumed throughout that in dream-life we are always acting and never thinking; but this is only partially true. Careful observation shows that in dream-life we often re-develop occurrences, and that dreams of events give rise to dream-reflection, dream-reasoning and dream-moralising. The dream-world, for this reason, is only an effeminate copy of the robust world of waking life.

Broadly speaking, we may sum up as follows: we are stimulated into dreaming by afferent, intra-organic, efferent and recent reactions. Effort being essential to strenuous developing and almost absent in sleep, the judgment and reasoning, or need-satisfying development, are considerably awakened, and hence follow hallucinations, the creation of setting, the introduction of irrelevant matter, the working out of faint suggestion, the acquisition of muscular and sensory control and knowledge, and poorness of memory. Finally, the dream-state may be defined as a state due to sensory stimulation in the first place and, in the second, to a lowering of the muscular and sensory tone.

Further References on Sleep and Dreams.—Bertin, Sommert, 1881; Bouin, L’act. cont. dans le Somn. 1881; De Chambre, Somme, 1881; Dugas, le Somm. de l’Ord. Incons. 1897; Galton, Inqui. 1883, pp. 155-77; Gollot, sur le Souvenir du Rêve, 1897; Guarnier, La Personnalité dans le Rêve, 1892; Hugen, Psychologie und Psychiatrie, 1844; Hering, Statistische Untersuchungen über Traume und Schlaf, 1858; Hitzion, Uber das Traumleben des Blinden, 1894; Maillat, Étude sur le Sommeil, 1893; Manacine, Somme. 1897; Prévost, Sur le Sommeil, 1894; Purkinje, Wachen, Schlaf, Traum, etc., 1846; Scholz, Sleep and Dreams, 1893; Sully, The Laws of Dream Fancy, 1877; Sykes, Dreams, 1883; Tannery, Sur l’Activité de l’Esprit dans le Rêve, 1894; Tannery, Sur la Memoire dans le Rêve, 1898; and Volz, Einige Experimente über Geistebilder im Traum, 1896.

232.—Provoked Dreams and Related Facts

In sec. 223 I spoke of phantasial visions and voices which tend to break in on us in the state between wakefulness and sleep. The story of the brush indicated that occasional hallucinations were not infrequent in such a condition. At the same time experiment proves that what is usually exceptional will, if attention be paid to it, become as common as buttercups in May. We found proof of this when considering those historic periods during which mistaken hypotheses took the place of experiment, and we noted that during those periods visions were of frequent occurrence. When the transitional state is in this way exploited, we are justified in speaking of it as provoked. However, there are degrees of stimulation. In instances such as that of the Maid of Orleans, there is at least to begin

* Sully (Article “Dream,” Enc. Brit., 1877) misapprehends the very nature of dream-life in his definition: “Dreams are a variety of a large class of mental phenomena which may be roughly defined as states of mind which, though not the result of the action of external objects, resume the form of objective perceptions” (p. 452).

† The physical condition of the dreamer I leave undetermined.
with apparent spontaneity. In other cases, such as those of the Primitive Church, or the modern séance room, there exists, on the contrary, a deliberate attempt to exhaust the possibilities of the semi-dream state. St. Paul, in I. Corinthians, i4, gives a full account of such organised provocations. He communicates to his brethren the rules which should guide their assemblies. "If therefore the whole church be come together into some place, and all speak with tongues, and there come in those that are unlearned, or unbelievers, will they not say that ye are mad?" "How is it then, brethren? When ye come together, every one of you hath a psalm, hath a doctrine, hath a tongue, hath a revelation, hath an interpretation. Let all things be done unto edifying. If any man speak in an unknown tongue, let it be by two, or at the most by three, and that in turn, and let one interpret." "If anything be revealed to another that sitteth by, let the first hold his peace." St. Paul thus attempts to introduce order into these meetings where, owing to a strange conception of its importance, a peculiar condition is encouraged, a condition in which fancies are regarded as objective truths.

In sec. 220 we saw that persistent inattention necessarily leads to sleep. There are at least three methods of attaining this result: (1) We fix our attention on one thing exclusively: we stare at a brass button, we think of the object of our worship, or any other person or thing, and shut out every other thought; we look at a piece of glass, at our nose, or at any other physical point. Each of these attempts will, of necessity, be followed by a suspension of thought and action, as explained in sec. 220. The second and third methods accomplish their aim by the opposite course. (2) We fix no subject or object: but we head back the current of thought, or (3) we induce a state of rest by eschewing all effort. In these cases, thinking at last ceases. When comes a fresh metamorphosis. When the object is not connected with anything of interest, and also when the experiment has been performed by oneself on oneself with no ulterior object of exploiting the state, we simply fall asleep. But let it be, however, imagined that some one else or something else, by some peculiar power, is producing the condition. As soon as thought has apparently fled, the supposed subject is roused to a semi-dream state, and the experimenter, imaginary or real, takes full control of the other's imagination. The "agent" represents the afferent stimulus, and supplies the "subject" with the dream-thoughts. Helpless as we are in the dream-state, it stands to reason that the "agent" will have almost unlimited power, and this he can employ in at least two ways. He can suggest any and every fanciful object or event: the young girl becomes a sea-captain; the young man an old lady, while actions and localities are arbitrarily selected and dwelt upon. Or the "agent," seriously, or in fun, impresses on the dreamer a series of beliefs. Then the "subject" becomes a devout Catholic, Buddhist, Mahomedan, Spiritualist, Theosophist, or what not. Since the notions have their origin within the imagination, there is no limit to their variety.

Training, as we should expect, plays an important part. The more
frequently a person is thrown into the provoked dream-state, the oftener notions are insisted upon, the more ingenious the "agent" and the more fit the "subject," the more remarkable is the result. Yet the height of success is most conveniently reached when the individual experimented upon believes, whilst fully awake, that it is some outside power which takes possession of him. In such a case not only is his thought readily guided; but he becomes perhaps his own "agent." The notions he has imbibed during the waking state, whatever they be, assume supreme rule so soon as he falls asleep, and here also practice, combined with fitness, yields the highest returns. In this way the dream-state, being now subject to afferent, efferent and central influences, naturally approaches nearer and nearer the coherency of the waking state. It is impossible that it should be otherwise. At the same time we expect no high level of thought. To reach that there must be an elaborate examination of primary and secondary facts, and this can only be accomplished in the normal waking state, since great effort is absent in the dream-state. Accordingly, we find no record of any sustained original thinking being accomplished in the semi-dream condition. Assertion and repetition, wrapped in the cloak of rhetoric, are the twin children of provoked dreams.

Let us go a little more into detail. We attend a "circle" for the purpose of studying the machinery of provocation. A certain qualified investigator, after several attempts, goes successfully to sleep. As soon as this is observed some one approaches him quietly, takes his hand, and says, "Good evening, dear spirit friend, how are you? Won't you speak to us?" On the first few occasions these are perhaps no response. Gradually an impression is made, and the sleepy face lights up; the "medium" keeps on "developing." At first it may be he speaks only in unknown tongues, i.e., utters a string of meaningless syllables which, according to the intelligence of the sitters, is explained as being African, Japanese, etc., or recognised as mere nonsense. However, the efforts are not relaxed. Steady pressure is brought to bear, and formative influences are allowed full sway until the "subject" has attained to the level of sober speech. He is then made to pray, to sing, to bring messages, to preach, to utter warnings or to prophesy. He becomes proficient in these by the prosaic methods of training, though they are not acknowledged as such. The contents of his imaginings are, of course, entirely subjective. In a good laboratory, or "developing circle," we see a number of persons with varying capacities in various stages of development, and the methods applied, when successful, are uniformly those which an efficient drill-sergeant would recommend. In these circles we find waves of excitement which occasion half a dozen or more to speak in "unknown tongues." We hear some one moaning (because his head is in an awkward position), and forthwith one "subject" after another rises and communicates sad tales to those present. It is superfluous to add that close-eyed and open-eyed visions reach their climax in these training establishments. Fancy after fancy is thrown on the eye-lid. screen or on the canvas of reality.
Thus far the mass of spiritist accounts prove easy of explanation. Those, in St. Paul's churches, who talked in unknown tongues, sang psalms, prophesied or preached, offer no difficulties. Given the then existing beliefs, coupled with ignorance of all unusual thought processes, and the intellectual drift is plain. Yet in some instances more is claimed. The "possessed" person undertakes to tell us, among other things, (1) who we are, (2) what the future has in store; (3) what is happening in remote places, and (4) he assumes other personalities.

My observations suggest that the first question is answered, as we answer it in normal life. Your age, your garments, your behaviour, your speech, your expressions, are seized upon as points of departure. The prophecies are alternately bold and vague, and the utterances and manners of the person experimented upon are duly scheduled. If it be wrongly suggested that you are ill, and you reply to that effect, you are informed that you have been unwell. If you still demur, you are told that some one nearly related to you is ill, or has been ill; and, finally, you are warned that the illness lies in the near future, but that you may possibly circumvent it by extreme care. These ridiculous alternatives are the stock-in-trade of the "prophets."* There are, of course, other methods: for instance, the "agent" cautiously feels his way; or he describes near relatives in terms of yourself; † or he contents himself with vague generalities. The ingenuity displayed by the profession, paid or unpaid, is too varied to be exhaustively described. Self-deception fights desperately for the mastery with semi-deliberate and deliberate fraud. Given, therefore, a fair "sitter," a good medium will spell out correctly almost any name thought of. He will gather from the sitter's attention to the letters, and from his almost irresistible excitement which are the letters he is expected to choose. I have neither seen nor heard, so far, of a medium who reads us as we read a book.

I once went to a medium armed with a number of immediately verifiable test questions. I was, however, told that it was one of the peculiarities of mediumship that the revelations came spontaneously and could not be produced by set questions—an excellent method this for tricksters. One interesting point is that mediums give names, dates and details which are incorrect, a result of second sight which demands an explanation. Answers to mental questions were with three mediums—West End mediums—produced in a purely mechanical manner. In every case without exception, to satisfy their many anxious customers, the answer was Yes, in combination occasionally with a few qualifying words. The results of such a method are often amusing. At one séance where the medium answered written questions, I asked "May I hope?" meaning "May I hope to succeed in proving that Spiritualism is a fraud?" The answer was "Yes; and you will not hope in vain." Later on, I put a mental question "Am I right in my interpretation of your answer?" and the inevitable reply came again "Yes." The crying shame is that these meetings usually commence with hymns and prayers, and make a mockery of grief.

* Dr. Hodgson's A Further Record of Certain Phenomena of Trance, 1898, dealing with a "medium" Mrs. Piper, well brings out these questionable points.
† In one case this was done systematically, and with almost every one. At a private séance with that same medium, he described to me both a gentleman and a lady by reading off my features one by one, only adding that the people referred to were white-haired, old, and the like.
The same explanation applies to the second and third claims.

With regard to the change of identity, when the dreamer is only inspired or uplifted, his own voice, thought and behaviour are naturally little affected. When, on the contrary, some other being of a definite type “controls” him, we look for differences of character. A good personator is, however, rare, and the results are, therefore, unedifying. It is the rule to have for one’s “control” a little boy or girl, a black man, an Irishman, a foreigner, or a very distinguished person, because in these cases imitation imposes the least possible strain. Nevertheless, when tested, the personation fails even here at every point with the large mass of those who are supposed to be “controlled.” Usually a trick or two, easily recognisable, embraces the whole difference between the normal and the quasi-abnormal medium. Those who believe themselves changed into wolves, and the whole tribe of the transformed, from the earliest dawn of ignorance to the modern séance room and hypnotic laboratory, are, as we now see, invariably victims of delusions. The semi-dream state permits any conceit, however preposterous, to arise and develop.

Such and of such a type are provoked dreams. I have attended séances in most parts of London, and my observations have been of a uniform character. What happened was in each instance exactly what was to be expected from my investigations of the vagaries of the semi-dream condition (sec. 223). I have heard dozens of mediums, and have spoken with scores of spiritualists; but I have not been able to discover any new facts. Especially have I taken for my guidance the views of “sitters.” When persons have been spiritualists for twenty years and more, have “sat” in many circles in various parts of the country, and they look upon a séance as good, the inquirer need not go far to discover what Spiritism normally means. All those, again, who were converts, had stories to tell which argued for exactly the same principles. And lastly, the whole history of Spiritism among the different nations and races which have flourished, leads us to the same conclusions.

If that be so, how are we to account for members of learned societies seriously maintaining the objectivity of these pretences? The less said on the subject, the better. These scholars’ names lure unwary souls into the net of superstition, as the names of highly-respected lords and dukes help to keep afloat spurious companies. They throw, by means of a just repute gained in other directions, a halo over the carcass of a superstition. The guilt is upon those men’s heads; and not upon the simpleton who quotes their authority. If their scientific standing depended on the quality of their spiritist researches, they would hold no recognised position at all.

There is no science of Spiritism and there are no works on the subject. In the genuine sciences there is steady progress, whilst the most general conclusions are elaborated with the utmost diffidence. In the so-called science of Spiritism, it is different. A few hasty experiments settle the fundamental principles once for all. There is no continuity or system in Spiritist research. The whole mesh of scientific conclusions is cast aside
with less ado than is made in tracing a particular nervous tract in the spinal cord. Then, after the short experimental stage, comes undiluted dogma and reckless speculation. Professors Wallace, Crookes, Lodge, and James illustrate what I am saying. Only the last of these, is a psychologist, and he has never written anything bulky on the subject.

One long series of spiritualistic phenomena are explicable in a simple manner. If, for instance, we attach a piece of metal to a string about eighteen inches long which we hold in our hand, and desire it to move in one direction or another, either slow or fast, our desire is fulfilled. That is to say, when intently thinking of, or being about to undertake, it, we make minimal efforts to compass it. Very close observation of activity in general lends this art. I also notice that with eyes averted, the string experiment fails. Consider this. I have not yet observed anyone who, in thought reading games, simulates indifference successfully. Hence the thought reader's triumph. Similarly, anxiety has been the victim at "table rapping." The medium offers, for instance, to have a name spelled out, and each time the appropriate letter is nearing, our restless nerves betray us. In the same way, we move the table and the planchette semi-consciously. There is a limit to these deceptive effects. James (Psychology, 1890, II, p. 160) clearly reports the result of minimal attention: "The whole surface of the body is always in a state of semi-conscious irritation which needs only the emphasis of attention, or of some clement inward irritation, to become strong at any point."

I read, of course, rampant in the spiritualistic camp. Having frequently read in high quarters of Mrs. X. and Miss X., as supplying "physical manifestations," I went to "sit" with them. The objects of interest in the room were a musical box, a tambourine, a bell, and a horn, all slightly touched with phosphorus so as to be luminous when the light was withdrawn. Then the room was made totally dark. On a sofa opposite, about two feet away from us, lay the instruments. On either side of me sat one of the mediums, each of my hands resting on the hands of one medium. Then, the instruments being placed one at a time on the floor, they moved and rose about a foot high, and there were attempts at music. During about fifty minutes, in unrelieved darkness, the "manifestations" were continued. Carefully reflecting over what had happened, I came to the conclusion that everything done betokened awkwardness and limitations, though I did not understand the method of performance. After a few days I sat again with Mrs. X. and Miss X. I asked Mrs. X. whether she and her daughter would sit in a certain way, so that I might have appreciable control over their movements. This was agreed to. We sat for one hour and three quarters. For perhaps three quarters of an hour, to begin with, nothing happened, and during the remainder of the time about one fifth of what took place on the previous occasion was re-enacted. Besides, every movement of the objects was indicated as to its extent, degree and repetition, by the movements of Miss X.'s skirt which were hampered by the position in which I sat. Accordingly, I could invariably tell by the skirt moving when anything was going to "manifest" itself. Other circumstances, which need not be detailed, pointed clearly to the conclusion that the "manifestations" were fraudulent, and deliberately so. It was interesting to notice that these so called "miracle workers" were even more anxious, for good reasons, to hold my hands than I was to hold theirs.

Mediums in general form a marked type. They are ostentatiously brusque, simple-minded and voluble. Most of those I have met were ignorant, unbeautiful in character and void of idealism. And yet persons of such a confidence trick type are to demonstrate new and important truths.

There are no works on Spiritualism. Wallace (Miracles and Modern Spiritualism, 1890) offers a descriptive sketch by a strong partisan, with no attempt at scientific handling. Crookes (Researches in the Phenomena of Spiritualism, 1874) has a few interesting experiments. Podmore (Studies in Psychical Research, 1897) reviews the subject from a non-experimental standpoint. Besides these studies there are the Proceedings of the Society for Psychical Research, from 1883 to the present, which contain some

233.—**Animal Psychology.**

Human activities are determined by human needs, while the animal's life is circumscribed by animal needs. Hence, since the needs differ in the two cases, the constitutions must differ also. We are consequently unable to learn deductively the precise behaviour of an unknown living being which possesses a central nervous system. Unfortunately I have made no elaborate study of the total psychic life of any animal. My nearest approach to such an undertaking has been to watch a few times for several hours together three orang-utangs—successive tenants—at the Zoological Gardens in London. Had I been able to repeat my visits daily for several weeks together, it is probable that I should be able to make some authoritative statement. As the matter stands, however, a few words must suffice. The apes were generally occupied in action or observation, the facts of attention applying to them in every way. The movements of their eyes closely resembled—even in rate of motion—those of the human family. Now the apes seemed curious, now interested, now fascinated, now agitated. Now their eyes rested on an object; now they took a comprehensive view; now there were expressions indicating hesitation, doubt, familiarity, surprise, and alarm; now the eyes returned again and again to an object. On many occasions, too, their behaviour suggested that they were puzzled and were seeking for a solution. The first of the apes, the most active of the three, especially showed signs of thought. He would quietly gaze round his capacious cage, his eyes furtively resting on various objects; then they would slowly alight on something, and he would move in that direction. Frequently he appeared to look for some special article. Once while swinging on a trapeze, he came in collision with the partition. He then calmly turned round and looked at the particular spot. He never appeared to be in a hurry. He seemed to observe, and quietly solve difficulties. His whole manner was strangely reflective and human; and unlike that of a dog or a cat. If I held out my hand, the second orang-utang would look round, in an even more lazy fashion, for a suitable piece of straw, pick it up, and give it me. When I kept my hand open,
he would try in various ways to place the straw so that I should retain it, this fact arguing decidedly for consistent thought. The third orang-outang would, in taking a basket into a higher branch of his tree, overcome difficulties in a variety of ways: he would hold the basket in one hand, then in one foot, then between his teeth, and then place it on his head. We are, therefore, justified in stating that at least one species beside the human possesses intelligent thought determined by a continuous and equal current of neural energy, as described in ch. 2. [Students would do well to examine minutely and repeatedly an ape's life in the light of the conclusions arrived at in the second chapter, with notebook in hand, of course.]

Examples in illustration or refutation of ch. 3 should be collected by the zealous inquirer.

Since needs stimulate the ape to activity, it follows that his reactions are need-determined. What has been said thus far makes elaboration of the point superfluous.

The ape re-develops as well as pre-develops. He well knows his keeper and the objects of his environment. He returns to a place whence he has been driven by his companion.* The ape's thought possesses momentum, falls under the law of excitement, and obeys the rules of re-development which flow from the nature of the attention process. We have seen that re-development at intervals is imperative if the past is not to be wiped out. We know also that some animals identify their masters and other objects after considerable intervals of time. Either, then, the animal has occasionally visual or other images of things which are absent, or its memory is much more tenacious than ours. The question should be determined both by observation and experiment. It would be strange that neural excitement and momentum, as when a dog is in search of his master, or a parrot Screams when hearing a friend approach, should be actualities, and that the animal nevertheless should neither re-develop nor imagine anything.†

Memory, as we know, has various aspects. In smelling a rose, for instance, we may recognise the scent as being that of a rose, although we cannot deliberately re-develop the scent, or the scent may be re-developed without recognising it for what it is. Again, re-development of the scent may be dependent on seeing the rose, while the re-developed scent may be able to suggest actions and not ideas. That is to say: we must allow for primary and secondary recognition; ability to re-develop at all; and association with and without the presence of a primary or perceptual factor.

Thought, in the strict sense, is merely a form of the process of satisfying a need (sec. 106). A dull person often learns nothing by doing: he inanely acts as he acted before; or if we assume a somewhat more intelligent individual, we shall find that he learns very slowly, or, lastly, a person may see the appropriate course of action at once. Furthermore, discrimination may be so highly developed, that sweeping generalisations are the rule, e.g., the monkey who has learned by trial and error to walk round a certain object which is in the way of something he wants, may, after one success, not only repeat the success—

* A sparrow will thus take to flight, and return when the danger is over. So a dog looked up to a window where he had noticed me a moment before.
† The possibility is that animals may have no images or memories at all, no ideas to associate” (Thorndike, Animal Intelligence, 1898, p. 73).
ful process, but apply what he has learnt to every obstacle whatever. We might thus
imagine a race of beings who have no trains of thought and who never reflect, and who
yet attain to far-reaching conclusions with ease: what men have to discover in a
groping way, they can see at once. With human beings thought, roughly speaking,
consists normally of trains of thought, but thought which consists only of one step is not
infrequent.

The existence of trains of thought in animals would not, therefore, decide anything as
regards their intelligence, since long trains of thought may not be as effectual in the
solution of a difficulty as spontaneous insight. For this reason the distinction between
perceptual, ideational and conceptual process (Stout, Manual, 1898-9), is more important
theoretically than practically, and that because the distinctions do not mark corresponding
degrees of intelligence. Nevertheless the problem still remains to be decided whether
trains of thought of any length or coherency are to be found outside the human species.
The evidence, so far, discourages the belief. Indeed, an intelligent child of twenty
months whom I observed closely, and who scarcely knew any words, showed no signs of
other than perceptual thought.

All that has been stated in ch. 6 as to neural disturbances, neural inclinations,
emotions, and need-determined thoughts, holds good of animals.

The ape is impelled by organic needs. Since these differ from ours, it
is idle to measure his intelligence by the criterion of actions which only
arise out of human needs. For the same reason, the development of his
thought has a complexion different from our own. In experiments, there-
fore, we should sympathetically enter into the ape’s or other animal’s
nature, and set him ever higher tasks which fall within his purview. We
must aim at an ideal ape, and not at a caricature of a man.

The ape’s thoughts are neurally determined. The sensory series with
him is not parallel with the neural series, nor do feelings give birth to
each other or affect the brain.

Most of our thought is communicated to us. If we cut ourselves off from
others, we bid adieu to every vestige of culture, and we become houseless, clothes-
less, languageless, bookless, art-less and science-less animals. The ape is in
this position; and hence we must expect nothing deep or far-reaching from him. A cultured man is fed by the many rivers which hurry down
the mountains of time, while an ape has to rely on his mother-wit solely.
Probably “culture” is not among his needs, and hence he holds it in con-
tempt. In experiments we must allow for the fact that our wit is borrowed,
that our training has occupied many years, and that consequently it is
unreasonable to expect that an under-developed ape should react as intelligently
as a matured man.

The ape’s thought is sometimes more deliberate than at other times.
His reactions are also frequently attention-determined.

A general survey of the preceding remarks can leave us in no doubt that
the agreements between human and animal thought immeasurably out-
number the differences. These latter are entirely accounted for by the
distinctive needs and the consequent absence of historically gathered know-
ledge. Man does not shine by his ability, but by his native capacity of
development and his social impressibility. Rob him of these attributes and
the one point of difference between man and animal is abolished. Psycho-
logically; therefore, we decide that the various capabilities of the higher animals, including man, differ only in trifling details. [Observe, and experiment with domesticated animals, carefully avoiding any unkindness.]

Nearly all the observations hitherto made on animals are usually interpreted in the light of the current speculative psychology. Prof. Calderwood (Mind and Brain, 1893) and others tell us that animals achieve successes, not by using reason, but by instinct and by their highly developed senses. Yet, strange to say, writers like Sully assure us that one of the conditions of genius is special congenital susceptibility in a certain direction, thus bringing canine intelligence and human genius into dangerous proximity. The fact is that instinct and inherited aptitude play a serious part in human development; and that without these we should not be human beings at all. "The ceaseless limb, eye and voice movements of the infant, and the consequent development along the lines of play and curiosity, of love and of adventure, are as much hereditary tendencies as the sniffing of a dog or the piping of a chicken. The dog has certainly a somewhat different line of development; but that has nothing to do with fundamentals. The great fact which we have to admit is that apart from inherited aptitudes which may be capable of more or less expansion, human activity is as little intelligible as ape activity."

However, we are referred to the proverbial incapacity of an animal to infer and reason. To drive that point home, we are assured that the wonderful feats of animals of which we hear so much, are merely acquired tricks, void of the higher qualities. Thus, for instance, Thorndike (Animal Intelligence, 1898), with the aid of a long series of ingenious experiments, endeavours to show that cats only come to open doors by chance, and not by an effort of intellect, as men are supposed to do. For my part I believe that the facts have been misinterpreted. Let me give some instances. A kitten which I know, knows me well. The moment she hears my footsteps, she runs to meet me. When she sees me, she almost shrieks with apparent pleasure. If I stop still, she lies down and rolls over my feet in scores of different ways, eagerly looking up for encouragement. When, again, food is thrown down as she rests on a chair, and she is not very hungry, she will look down and look away, then look again, and so on. Then she bends down and again straightens herself. Then she lets herself almost down; but once more looks indifferent. Yet when removed from the chair, she will readily find and eat the food. Take another case. I am in a room with the door closed, and on the sofa lies a cat which is a stranger to me, though not to the house. Suddenly footsteps are heard; apparently also something is scented, and the cat runs to the door. Mark what happens. She does not inanely scratch. She tries deliberately the lower corner of the door where it opens, but without success. She then walks along the door and looks at its edges. Then she looks up and at the lock. Then she touches something that is hanging from a nail on the door, which object moves without the desired result. Then she touches the object again, but quite gently, as who would say "It's no use." At last, she turns round, walks up to me, though a stranger, looks at me, and miaws pitifully. Here surely is a picture utterly different from that drawn by Thorndike.†

To multiply examples would be tedious. Such cases bear witness to deliberate and

*I must touch here on a singular psychological tradition. One prominent writer after another has said that a chicken will, immediately on emerging from the shell, successfully run and peck. Poultry keepers smiled when I questioned them as to the truth of the tradition, and repeated observation showed no trace of successful running and pecking with chickens just hatched. I am, therefore, glad to quote an authority on this point. "On leaving the shell they [the chickens] are wet and helpless; they struggle with their legs, wings, and necks, but are unable to stand or hold up their heads. Soon, however, they may be distinctly seen and felt pressing against and endeavouring to keep in contact with any warm object. They advance very rapidly. I have seen them hold up their heads well, peck at objects, and attempt to dress their wings when only but four or five hours old" (Spalding, Instinct, 1873, p. 283).

† The oldest of his cats was 19 months old (ibid, p. 13), and he expects these to act like university graduates.
complicated activity. To say that these cats do not doubt, hesitate, discriminate, judge, infer, learn, compare, re-develop, is surely to play with words. It is to deny the substance, because the shadow—the speech—is absent. Nevertheless men insist, and rightly, that when animals are taught anything, they learn it by mere chance repetition. What else can we expect? A human being can only proceed from the known to the unknown, and how then is the cat to jump to a conclusion? Thorndike mentions that when slight differences were made, the cats readily appreciated these. He says in effect: "Previous experience makes a difference in the quickness with which the cat forms associations... Its tendency to pay attention to what it is doing gets strengthened" (ibid, p. 28). Would it not be right, then, to say that only by graduated training, as with a human being, should an animal be tested?

It will, however, be replied that human beings reason out a case, and that they are not dependent on learning every step. In this lies the fundamental fallacy, the assumption that man proceeds differently from the cat, and in this Thorndike's human psychology is hopelessly mythical, for, throughout his essay, thought means for him employing a great number of words, while he implies that the humble kitten should, without training, be a latter-day philosopher. According to the teachings of this work, the child's intelligence grows very gradually: more and more complications or associations are acquired; cumbersome associations are slowly formed; methods by which to answer nearly every general question are assimilated,—until, after twenty years spent in studiously absorbing the facts and the methods of his fellows, the man begins to philosophise. Yet this philosophising is merely a further elaboration similar to the simplest kind of membering. It suggests no new process; for if it did, then man would be ever changing into some different class of being. All that we have in a long train of verbal reasoning as distinguished from a simple act is greater complexity; otherwise system after system follows as promptly, and for the same reason, as in the chicken or the dog. Hence when Thorndike says of the actions of animals that "they represent the wearing smooth of a path in the brain, not the decisions of a rational consciousness" (ibid, p. 45), he draws a distinction without a difference. This has been so abundantly shown, especially in ch. 4, that no more need be added. (See also Hobhouse, Mind in Evolution, 1901.)

The real differences between animals lie deeper. The dog has not, and man has, an inherited aptitude to learn and to continue learning; and the dog has little, and man much, use for complicated combinations to satisfy his needs. Hence all that should be attempted in training animals, is to make them patterns of their own species.

234.—A BIRD'S EYE VIEW.

Considered from a theoretical point of view the satisfaction of a need might never meet with obstacles; or when obstacles did occur, there might be no attempt to overcome them. In practice, however, we find that obstacles do occur, and that strenuous attempts to surmount them are not infrequent. Yet, under differing conditions, the magnitude of those attempts varies: in the full waking state, the trained thinker, when he is in earnest, is scarcely daunted by any obstacle; under ordinary circumstances he only deliberates, and hence there is a drop in the value of his reflection; when he is roaming in thought, obstacles are not overcome, but avoided; and in dream-life, through changed conditions where the muscular and sensory tone are lowered, primary and secondary systems, the imagination and the judgment develop most imperfectly. The quality of our reactions is, therefore, determined by the strenuousness of our endeavours; and since such strenuousness can only be passingly exerted, there is a tendency for the quality of our thought to be of a low degree, and this especially in
idle moments, in a poor state of health, when the attention has not been trained, and in dream-life whether provoked or not. Lastly, we discussed the nature of the animal mind.
CHAPTER XI

SYSTEMS AS ATTENTION-DETERMINED

'Tis attention-needs explain
Humour, play, and beauty's reign.

235.—GENERAL.

The stream of attention is normally a constant in the waking state (sec 22). Hence arise a multiplicity of problems, all bearing on the question of how to preserve a normal flow. With many of these aspects I have already dealt at length; but in this chapter I wish to treat of one more. We have seen how reluctantly the attention is concentrated, and how prostrate we become under sustained effort. Evidently, then, the highest satisfaction will be obtained when there is something which genially occupies the attention without demanding special muscular exertion or fatiguing reflections.

At the same time the organic view of thought which we have adopted in this work implies that even in what is called self-determined activity there is a satisfaction of need, only the needs are prosecuted no farther than they satisfy the attention mechanism. Accordingly every class of aesthetic activity is but the playful pursuit of what otherwise is a serious concern. We may say that aesthetic gratification exists when needs are satisfied only in so far as they are agreeable to the attention mechanism.

236.—THE BEAUTIFUL IN VISUAL FORMS.

Taking, therefore, the case of visual forms, we assert that that is beautiful the contemplation * of which, of itself, occupies the attention. [Test this definition in every possible way.] In examining the various parts of this definition we shall ascertain the facts which it embodies.

* "Perhaps the first and most striking peculiarity of aesthetic enjoyment is to be found in its contemplative character" (Sully, Human Mind, 1852, ii, p. 135). By contemplation is presumably meant the spontaneous and non-interested satisfaction of curiosity. There seems reason to think that all aesthetic activities are rudiments of some useful function, and that thus the beautiful represents rudimentary curiosity as humour represents rudimentary malice and as imagination and play represent rudimentary thought and action. Hence aesthetics are not unconnected with normal life and development. (Sec. 248.)
The first point that strikes us is that playful or self-determined reactions essentially depend on the bee-like nature of the attention process, and that apart from this aspect, it is conceivable that the nature of nervous functioning should be in exact correspondence with existing needs. On this hypothesis, whenever these needs asserted themselves, the locomotive of thought would begin its journey, continuing until the needs were satisfied, or till interest flagged. In such an event, self-determined combinations would be out of the question. They would serve no purpose, and have no place in the human economy; there would be nothing to set them going, to control them, or to stop them. It is, however, a different matter when we have to deal with the nervous organism, as we know it. The functional tendencies are present, and their actualisation has important consequences. Physical and neural strain, successful as they are, to a certain degree, in strengthening and developing functions, are nevertheless not normal to our nature. We require a stimulus to encourage us in tiring labour. We recoil from oakum picking or the treadmill, nothing urging us to that kind of occupation. On the other hand, when we seek relief from strenuous endeavour, we are not fully satisfied with wandering thought. The contents, in the latter case, are often unattractive. We are restless because we have to think continually of fresh topics, and because the effort of random thought lacks the desirable degree of strenuousness. What is demanded, under such conditions, is a means of easily passing our time, with just the dash of effort * to keep the organism sweet. The contemplation of certain forms satisfies this want to perfection, and hence the conception of the beautiful is to us, human beings, in one sense apart from an organic structure such as our body presents us with. [Try to disprove this.] "No body, no beauty," or, at all events, we do not know how to connect the notion of the beautiful with anything but the attention mechanism.

From the definition we have rigidly excluded objects which occupy the attention, but which have a derived interest. [Note this distinction.] When I am dining it is not the contemplation of the nourishment, for its own sake, which attracts me. Behind it lurks the demon hunger. The infant eagerly seeks his food when famished; but when he is satisfied he takes no more notice of it. Thus a person who is struck with horror, is not moved by the white patch before him, but by the fear of certain consequences, and once assured that the ghost is only a white sheet, due allowance being made for the subsidence of his excitement, he looks at it calmly and ceases to concern himself with it. So also a huge poster, a monster hoarding or the soaring pyramids of Egypt do not attract us in themselves. They do so because of their contrast with those posters, hoardings and pyramids which are piggies by comparison. Their fasci-

* The necessity for employing measurable effort in the contemplation of the beautiful is recognised by Dumont, who says: "The beautiful is that which presents a great complication in the unity of one conception, in such wise that the realisation of the conception in the imagination, demands a considerable outlay of force" (La Sensibilité, 1875, p. 174).
nation has its origin, therefore, in their "relative" size. [Test this.] Only when contemplation has no before or after, do we speak of it as having regard to the beautiful. In accordance with this, we miss the beautiful when we are engaged in learning the outlines and colours of an object. A person occupied in this way displays no appreciation, as commonly understood. Again, one who contemplates objects because of an extraneous reward, or because of the fear of punishment, is to that extent a stranger to art.

"It has been the custom, from the time of Plato, to sharply mark off the beautiful from the useful" (Sully, Human Mind, 1892, ii, p. 134). So Kant, Kritik der Urtheilskraft, 1790: "Every one must admit that an aesthetic judgment in which interest play, even at a small part is partial and illegitimate. To be a judge in matters of taste, the existence of the thing to be judged must be indifferent to us." So Spencer, Psychology, 1890, ii, p. 635: "In the conception of a thing, as fine, as admirable, as beautiful, as great, consciousness is not occupied, distinctly or vaguely, with ultimate advantage, but is occupied with the thing itself as a direct source of pleasure."

As to the place of pleasure in aesthetics, Sully speaks of "art in its relation to what Englishmen at least in the main are agreed to regard as its end, pleasurable emotion" (in Mind, 1892; p. 117). So Fechner, Vorschule der Esthetik, 1876, i: "Everything which has the property of pleasing directly, independently of reflection and teleology..." considerations, is, in the widest sense, called beautiful, especially if the property be pronounced and pure" (p. 15), and "Aesthetics, according to our view, relate to pleasure and pain, in so far as pleasure and pain directly depend on ideas and sensations awakened from without" (p. 37). I, of course, reject the pleasure-pain theory in aesthetics.

The following are the marks of the sublime according to Burke, The Sublime and the Beautiful, Works, i, 1792: terror, obscurity, power, privation, vastness, infinity, succession and uniformity, and magnificence. The beautiful, according to the same author, is the exact opposite of the sublime, implying smallness, smoothness, gradual variation, delicacy, and like qualities. Hence his strange question, "Will any one call the elephant, the wolf and the lion beautiful animals?" (p 171).

We are well acquainted with the nature of the attention process. We have observed its waves, and its ripples (ch. 2). We know that it impatiently presses onward like a torrent, and that it violently resents interference. The nature of the beautiful, therefore, is defined by the nature of the attention process. It cannot consist in a single act, for that would only lead to a senseless stare. The only way in which an object can occupy the attention is by displaying, in turn, a variety of features. Accordingly we learn that an ideally simple object, one that is which possesses the minimum of characteristics, can appeal only minimally to our sense of the beautiful. [Contemplate a white sheet of paper.] Variety, therefore, is one of the fundamentals in artistic contemplation, while lack of variety, other things being equal, tires the attention and leaves us unsatisfied. Yet a certain degree of stressfulness is equally necessary: there must be gentle effort if the attention is not to be restless. A heterogeneous assemblage does not appeal to us. The items must appear in a more or less close relation to one another; they must be welded into some sort

* For a view identifying products of art as useful, see Hirn, The Origins of Art, 1900, and Collin, Literature and Life, 1900.
of a system, not too easy to embrace at once. The object must be full of obstacles which are readily, though not too readily, overcome. There must be gentle exercise, with just a flush of effort; and such exercise must be provoked by no considerations except those of occupying the attention satisfactorily. The ideally beautiful, therefore, will be that which most succeeds in holding the attention for the longest possible time; and the ugliest will be that which the attention most shuns because variety is missing or gentle exercise inapplicable. [Apply simple case, negative case, opposite case, objective case, and cases of gradual extension and degree.]

The contemplation of a sunset offers an admirable illustration. [Test experimentally.] We lean against a five-barred gate and feast our eyes on the magnificent spectacle which lies above us. We are lost in rapture and admiration. We gaze and gaze. Then, when the battle of colours is ended, we walk away, still dazed by the splendour we have witnessed. So absorbed have we been that we are scarcely aware now of what has passed. We did not deliberately reason, observe or admire anything. We melted into the scene. Our many senses were reduced to one, the sense of beauty. Our whole complex being shrunk, until this sense alone remained. Yet the sunset was by no means the first one we had witnessed. That five-barred gate, opening into a meadow full of sweet-scented cowslips, is quite familiar to us. Evening after evening we cross the little strip of oak wood which hides the west, and breathlessly we go out to the dioramic vision. The young rabbit sits close by us, his ears aglow, and the young mole joyously runs to and fro, oblivious of our presence. Cloaked in contemplation, we form part of the peaceful scene.

Why should we become ecstatic on account of a sunset? Why not choose a plain white sheet of paper for admiration? Is it anything but custom which decides that we shall rave about the one and pay no attention to the other? Our principles give an unmistakable reply to these queries. The sunset sky is an admirable object which sustains the attention [is it?], and for this reason. To occupy ourselves we require a quantity of details, and the sky is full of them. Range after range of clouds are scattered above us, all lavishly illuminated. The forms are of the most varied outlines. So manifold are the attractions that time scarcely permits us to dwell on minor shapes. The colours themselves show an abundance of minute variations. On the one hand they point to what would otherwise remain unnoticed, while on the other, their differences and their shading one into another, add largely to the material of our contemplation. It is chiefly for this reason that the grey clouds of day are so little appreciated until they approach the night. The grey is difficult to see; delicate outlines are overlooked; and in the distance the detail is blended into an undistinguishable mass. The day clouds, therefore, are much inferior from the point of view of beauty, growing uninteresting as they become duller, or as their detail becomes blurred:

"The highest beauty of visible objects is obtained by lustre. The metals and precious gems are recommended by it. The finer woods yield it by polish and varnish.
painter's colours are naturally dead, and he superadds the transparent film. This property redeems the privation of colour, as in the lustrous black. The green leaf is often adorned by it, through the addition of moisture. Possibly, much of the refreshing influence of greenness in vegetation is due to lustrous greenness. Animal tissues present the effect in a high degree. 'Ivory, mother of pearl, bone, silk, and wool are of the class of brilliant or glittering substances. The human skin is a combination of thickness of colouring with lustre. The hair is beautiful in a great measure from its brilliancy. The eye is perhaps the finest example: the deep black of the choroid, and the colours of the iris, are liquefied by the transparency of the humours' (Bain, Senses and Intellect, 1894, pp. 250-1). May we not say that lustre reveals and combines details, and that its aesthetic virtue lies in that?

The fascination has still another source. As we gaze on the sunset colours, they imperceptibly but continuously change, and with them the cloud shapes. If the changes were very slow, the attention would not be affected by them and would tend to become tired. \[Test experimentally.\] If the changes passed very rapidly, vision after vision would be guessed at without being fully integrated. \[Verify.\] The attention would be exasperated instead of being satisfied, and we should witness a strange and painful spectacle instead of a beautiful one. As if by an artifice, however, the colours, shades and shapes are usually transformed just quickly enough to prevent the attention being starved or overset. The variety is sufficiently large to hold us permanently entralled.

Yet heterogeneity does not satisfy the attention properly. Unrelated outlines require too large a number of small efforts or readjustments, and attention, even in art, must, therefore, be topical, having a subject, and subdivisions within it. This is obviously so, since contemplation of whatever type must obey the primary facts of the attention process. Hence the sky must be more to us than a vast aggregate. And so it is. The sun is the throne about which colours and shapes group themselves. The variations in the degrees and kinds of tints are based on one centrally determined scale, the view as a whole, and all its parts, belonging equally to one system of relations. The whole expanse, from the sinking orb to the opposite side in the east, shows one uniform plan of transformation. So, too, the changes are symbolic of one supreme event, the setting of the sun, while both the space and the time series are organically interwoven. We thus meet boundless multiplicity, never the same from minute to minute and from day to day; but all is ordered from one controlling centre.

In the text of this section I have attempted not merely to expound, but to explain, the well-worn notion of unity in variety. Sully (Human Mind, 1892, ii, p. 139) says that the aesthetic value is due to certain modes of grouping. The sensuous elements "depend on . . . (a) variety, or (in its intenser degrees) contrast, and (b) harmony, or peaceful coordination of diverse elements." Baldwin (Feeling and Will, 1891, p. 233) observes that "the simplest empirical observation of beautiful things suffices to illustrate the necessity of both unity and variety in form, in any object to which we attach this predicate." With this principle in view, Reeham (Vorschule, 1876, i) remarks that "the finest work of art becomes tiresome if we contemplate it too long" (p. 59); and that we weary of twenty short stories, but readily read one long one (pp. 68-9). Bosanquet (A History of Esthetic, 1892, pp. 4-5) alludes to the doctrine as historic,
"The loosest weed that drifts and waves under the heaving of the sea, or hangs heavily on the brown and slippery shore, has a marked strength, structure, elasticity, gradation of substance; its extremities are more finely fibred than its centre, its centre than its root: every fork of its ramifications is measured and proportioned; every wave of its languid lines is lovely. It has its allotted size, and place, and function; it is a specific creature.” (Seven Lamps of Architecture, 1895, p. 202). In this systematised variety within unity lies the beautiful. Ruskin, however, seems to have a different theory. First, he argues, "all most lovely forms and thoughts are directly taken from natural objects" (ibid, p. 190), and hence speaks of a riband as "a vile thing" (ibid, p. 203), limiting in this way the realm of the beautiful; and, secondly, he contends "that, knowing a thing to be frequent, we may assume it to be beautiful; and assume that which is most frequent to be most beautiful: I mean, of course, visibly frequent" (ibid, p. 192). In my opinion neither naturalness nor visible frequency are essential marks of the beautiful. If a natural object is beautiful, it is because it bears those marks which I have referred to in the text. Hence many a natural object may be unattractive, while many an artificial product may charm us. Besides, is it so easy to show that a riband is not a natural object? As to the relation of frequency or familiarity to the beautiful, much might be said. The very fact that the attention does not deal easily with what is unfamiliar, shows that entire unfamiliarity prevents aesthetic developments; and so, too, our knowing little of a thing implies a lack of visible variety and an ignorance of organic unity, these being essential in the observation of the beautiful. Hence we are bound to conclude that frequency may exist without any corresponding beauty, and that the satisfaction connected with what is familiar is not truly aesthetic. The factors in aesthetics probably are: (1) the implied sense material; (2) the fitness of that material to satisfy the attention mechanism; (3) the complications or associations into which the sensations are formed; and (4) the ease which comes through familiarity.

Our analysis is not yet complete. There are two non-aesthetic factors which contribute to our admiration and determine the part played by colours as such. [Find other factors.] The first is the magnificent sweep of the sky. Its largeness constitutes part of its grandeur. The size acts as a constant tonic, and, though not theoretically to be counted as a portion of aesthetic gratification, has, nevertheless, in practice considerable influence. It helps to emphasise the ensemble. From the standpoint of beauty, dimension is only of importance because it allows room for detail. The second factor is the series of surprises connected with the novelty of much that is developed. Our curiosity is attracted by new tints and new shapes. We have not seen this colour before, and that fantastic form challenges attention. In either instance, purposive contemplation combines with, or outst, the purer form. However, these two factors act the rôle of supers, and are by no means the heroes of the celestial fantasia which we are admiring from the green-carpeted pit.

What is said here explains why a painted sunset cannot compete with a real one. At best, the picture will charm us because of subtle reminiscences of real sunsets; for fine as it may be, it lacks the detail which the magnificent and changing skies offer. Attention energy soon exhausts, if only for the time being, what is presented for development. The neural calls on us are too great to allow us to look very long at a picture.

* Note that the "safety bicycle" was once considered to be ugly, and the "ordinary" graceful, and that now the opposite opinion prevails.
Coming back fresh, it may give us joy repeatedly, and perhaps for all time we can linger over it for a moment; still, the machinery of the attention process is such that only comparative freshness challenges us. We see, therefore, that the beautiful has no arbitrary origin. Its roots branch down into the very depths of the soil of life. What regulates it, except for error, is a truth as lasting as our nervous structure itself.

Next to the glow of a sunset there is in nature perhaps nothing so beautiful as Spring, while variety, transmutation and system are attributes of the latter as of the former. The abounding snow-white blossoms of the blackthorn, standing out sharply defined from the dark branches, invite our gaze. The delicate rose-coloured blooms of the almond tree bid us welcome. The leaf-buds are swelling, the cramped leaves burst through, and gradually the bushes spread out their tiny sails. The hardy celandine flanks the moist places. The wood-anemone, graceful in outline and sprayed with soft white and red and blue, flies along the ground. The pale primrose belies its pallor by its numerous progeny and vigour. The wild hyacinth, most tender in colour and in form, sanctifies the ground it dwells on. The demure cowslip with its tiny throat, its precious necklace, its hanging head, and its sweet scent, calls us to the meadows. In this way, almost day by day, surprises are in store. The violet, the daisy, the daffodil, the buttercup and the whole array of elegant creatures, arrive in procession and greet us and give us cheer. Meanwhile our ears are not less pleased. The prolonged notes of the robin, the outbursts of the lark, the thrush’s melodious litany, the blackbird’s call, the cuckoo’s riddle, the nightingale’s sweet challenges, appear like echoes carried from mountain to mountain. The chorus swells, till the music of the spheres has become a reality. And now the earth’s standing armies, the trees, put on their quaintly-cut emerald garments. Each tree looks as fresh as if it were the first of its kind: the pines with their trimmings, the beeches with their cymbals, the oaks with their golden patterns. Spring having arrived, we can no more peep through hedges, and no more pierce the wood with our sight. Green screens fence in the distance everywhere.

Spring time must be felt; it cannot be adequately described. Its burden, though its tempo be slower, is the same as that of the setting sun: an immense surface, boundless variety, constant transformation and organic interconnection. We walk across spacious meadows, along river banks, past flocks of sheep, through woods and lanes, and in this manner we have the best opportunity of watching Spring’s procession. If we travelled too far—into various counties, for instance—we should miss that organic hold which familiarity with a neighbourhood yields. [Is that so?] At home we are stimulated, kept on the alert, without the danger of tiring ourselves with the effort to understand what is largely novel. Many delicate changes are overlooked abroad, and yet these, if observed, would occasion a series of delightful shocks. To roam aimlessly, given our nervous mechanism, largely reduces the pleasures of Spring. Indeed,
townspeople who seldom make excursions into the country, and then each
time to a different place, who know a nightingale by night and a lark
when they see it poised, who are only sure about the cuckoo's call and
tell a violet by its colour: to such Spring hardly conveys a meaning.
For them there is too much to be observed, too little to be comprehended,
to make the landscape what it is to the poet who dwells in the midst of
the panorama of change. That is to say, away from what is homely, the
attention is wearied and stupefied instead of being easily occupied and
gently stimulated. On the other hand, if we observe Spring in a tiny
garden alone, it equally forfeits its right to be one of the wonders of the
world. The one or two bushes, the one or two trees, the few square feet
of turf, and the occasional chaffinch or robin that chances to alight,
beautiful as they are in their way, do not yield massive delights. There
is no breathing space for the attention, no incessant change on a large
scale, no coherent drama, to be observed. What is Spring time in a large
town? It scarcely suggests the infinite enjoyments of the country. The
houses are scarcely affected, the roads only a little muddier, the rosy buds
turn dull, the leaves become dirty, the bark is uniformly coloured by the
...oke, and as for larks and thrushes and nightingales, these, even if they
came, would not be heard above the din of noise and the thick layers of
dulled sound. Whichever way we posit our problem, our conclusions are
still readily verified. The beautiful implies extensive variety and, therefore,
a vast expanse. It identifies itself neither with what requires keen
effort for appreciation nor with that which needs no effort. It unmistakably
demands a gentle and sustained stimulus. It insists upon some
kind of systematic arrangement. In the absence of order the attention
wanders, for it cannot bear the strain involved in persistent readjustment.
Spring, the inspirer of the poet and the select companion of the lover of
nature, does not, then, owe its fame to fashion, custom, fancy or philosophy.
It appeals to the eternal in us. It satisfies the attention mechanism, as
food satisfies the digestive organs. Apart from an organism such as ours
we have no conception of the beautiful.

We have analysed two examples designed to bring out in full the
implications of the beautiful. We shall now descend to common facts.
Look at the dust in the road on a summer's day, or the mud on a dull
November afternoon. **Test this.** Why do we not admire them, as we
do the sunset, the Spring, the sea or the stars? Plainly because they
are powerless to convey much to us. The mud is a monotonous grey-
brown, which prevents the emergence of recognisable outlines. **Is this
so?** There are no considerable variations observable. There is little for
the attention to dwell upon. There is no interdependence between the
different particles, the grasping of which should stimulate the nervous
system. There is no appreciable change going on to relieve the mono-
tony. We can only rivet the attention by repeated efforts. Hence we
do not contemplate the mud, nor look upon it as a beautiful object. Yet
give the moonlight free play on a mud bank left bare by the receding tide,
and, the conditions being altered, we are face to face with a brilliant exhibition. For this reason, all formless and uniform accumulations repel us, because they cannot hold the attention. The various aggregates produced by accident, such as the contents of a waste-paper basket, or the litter on a table, fall under this condemnation. The attention shoots off as it approaches them. In a moment it is satisfied; the next moment, it seeks fresh food. Seeming exceptions there are. Autumn's tinted leaves, as they garland-like border a lake, or snow-like cover the house-steps, are beautiful in spite of the absence of natural or artistic arrangements. The explanation is simple. The organic shadings in the single leaves constitute one attraction; another lies in the great variety produced by the immense assemblage of colour; and a third in the contrast between gay tints and decay. Pure heterogeneity repels, just as does pure homogeneity.

Let us look at definite shapes. [Do so.] Here is a triangle $\Delta$, and here is a square $\square$. May we regard them as possessing exquisite beauty? Shall we contemplate them rapturously? Clearly not. Though an organic connection exists there are few points, and the interdependence is so obvious that we detect it forthwith. Regular forms, such as a triangle, are pleasing; but the pleasure is evanescent, since it takes very little time to observe all that can be readily observed therein. Yet suppose that we look at a row of ten triangles, or even ten rows of a hundred of them, will these impose upon us? We are no doubt struck by the number; but we take no pleasure in the sight. In an instant we recognise the unity and the plan, and have done with it; we wonder, but hardly admire. Nothing lures us to prolonged contemplation. Of course, when angular forms are interconnected, and when they are represented in a design, then, the conditions being more favourable, we contemplate the result with more or less enjoyment. Accordingly, such patterns command themselves to the simple taste. For ordinary purposes the momentary delight they give is all that is demanded.

The higher we aim, the less obvious do patterns become. At first, they are not elaborate; but later on, they are over-elaborated and come to be distasteful, since the attention shrinks from their complexity. At their best, a hidden order is sought by the artist, such as challenges the imagination without completely yielding up the secret. In such instances admiration knows practically no time limit. We take a perpetual delight in dwelling on the form, hunting for that which we feel to be there, but which ever eludes us. Those sets of outlines which seem to disclose, and yet do not disclose, their secret, are favourites of the attention. They are in direct contrast to the mechanical order observable in the paving stones of a street, or in primitive and monotonous wall papers. He who can produce forms which are easily but not completely grasped, has mounted more than one rung of the ladder of art. Curves are of this satisfactory and yet elusive type: they puzzle us and yet gratify us.

The best pictures are a good exemplification of our general contention. The presence of colours, their happy arrangement, the supple forms, the
organic connection of the whole—all these contribute to the creation of
the intended effect. A "wooden" figure is one lacking in systematic de-
tail and boldness. [Test.] A perfect figure is one where much is seen,
and more is suggested [Test], and for this reason the few strokes of the
caricaturist have their secret not in the quantitative or qualitative merit of
the outlines, but in what these hint at. In other words, the presence of
pertinent detail is a test of beauty, and accordingly an apparently simple
good picture embodies much labour: the work is there, but does not
obtrude itself. The life-like effect in inferior paintings, on the other hand,
depends on the line written underneath or on the general arrangement.

[Test.] 'The faces tell nothing; they are dolls' faces. Covering up all
but a face, we are at a loss whether it represents a boy or a girl, a man or
a woman. The face of the lover, and the face of his beloved, equally lack
expression.' Fashion plates are also apt illustrations of this emptiness.
Now, for a picture to tell us nothing, or to violate our notions of things,
what is it but to lack organic detail and to repel the attention. If the un-
cultured classes admire bad pictures, it is on account of an obvious illusion
of judgment. As a matter of fact, it is only for a very short time that
they can study these cheap coloured prints, for, in themselves, they attract
the ignorant man as little as the cultured. It is a good omen when copies
of famous pictures figure in the households of the humble, and when
advertisers prefer a homely face to the presentation of expressionless beauty.

The realm of the aesthetically indifferent, which has so large a place
reserved to it in life's routine, finds, of course, its explanation in our
principles. The grey pavement, the rows of brick houses lacking orna-
ment, the dingy shops, owe their unattractiveness to the same source.
Hence the difference between a room in a state of natural and one in a
state of artistic confusion. Every object, in short, has its fixed aesthetic
value, and, subject to what is said in the succeeding sections, yields the
same gratification to all. De gustibus non disputandum only holds good
when we confuse beauty with a number of things which have nothing to do
with it, for as a strictly scientific assertion it is false. The middle ages
might as well have argued that de scientiis non disputandum, because in
those times science and error were boon-companions.

Kant (Kritik der Urtheilskraft, 1790, §7) goes to the extreme by insisting that there
can be no difference of opinion as to what is beautiful. His arguments are contradicted
by the fact of aesthetic development, and by observation generally. If it is easier to
differ concerning the agreeable than the beautiful, it is because the attention mechanism
is far more uniform in its reactions than is the palate or the fancy.

Cultivated grounds admirably bring out the truth of our position. Let
us assume that when staying in the country, we traverse at short intervals
an area of twenty-four square miles. We pass woods, meadows, streams,
hills, fields and pastures. Our range is so large that it admits of an im-
mense expanse of attractive detail. Further, the changes we witness are
not designed by us, nor are they artificial or abrupt. Look now at a
SPECIAL SYNTHESSES

garden. [Test this.] If there are beds of regular shapes, we condemn them as lacking sustained interest. If the arrangement of the flowers is artificial, it falls behind that of nature. The blossoms also lack ease and grace. The space being limited, gorgeous and rich forms abound. Nature's few petals become many; the delicate colours become pronounced. So cramped are the grounds that there is no freedom, no natural environment for these earth-chained inhabitants. Hence we lack the pleasure of seeing something unexpectedly, or of resting between sight and sight. There is an attempt to make a tenth of a square mile equal in beauty to twenty-four. The result is a miserable failure. No one but an invalid, physically or aesthetically, will seriously compare man's garden to nature's paradise. A garden-bred poet is a monstrosity. [Carefully study gardens and town parks.]

Thinking and observing are not effortless processes, and the greater the obstacles consequently, the more strained and concentrated the attention. There is a condition, speaking of outlines, when the attention is readily satisfied; and the objects in connection with which this happens are called beautiful. An all-powerful mind or brain would be unable to see any beauty, for the necessary degree of attention would be absent. So, on the other hand, children and savages, lacking as they do the power of quiet contemplation, are naturally unable, except within the narrowest compass, to appreciate what is beautiful. [Experiment.]

Ruskin supplies us with a fine example of what is revealed by a close intimacy with nature. I give the passage in full: "A sleep bank of loose earth of any kind, that has been at all exposed to the weather, contains in it, though it may not be three feet high, features capable of giving high gratification to a careful observer. It is almost a fac-simile of a mountain slope of soft and decomposing rock; it possesses nearly as much variety of character, and is governed by laws of organisation, no less rigid. It is suffused in the first place by undulating lines, caused by the descent of the rain; little ravines, which are cut precisely at the same slope as those of the mountain, and leave ridges scarcely less graceful in their contours, and beautifully sharp in their chiselling. Where a harder knot of ground or a stone occurs, the earth is washed from beneath it, and accumulates above it, and there we have a little precipice connected by a sweeping curve at its summit with the great slope, and casting a sharp dark shadow; where the soil has been soft, it will probably be wasted away underneath until it gives way, and leaves a jagged, hanging, irregular line of fracture: and all these circumstances are explained to the eye in sunshine with the most delicious clearness; every touch of shadow being expressive of some particular truth of structure, and bearing witness to the symmetry into which the whole mass has been reduced. Where this operation has gone on long, and vegetation has assisted in softening the outlines, we have our ground brought into graceful and irregular curves, of infinite variety, but yet always so connected with each other, and guiding to each other, that the eye never feels them as separate things, nor feels inclined to count them, nor perceives a likeness in one to the other; they are not repetitions of each other, but are different parts of one system. Each would be imperfect without the next to it" (Modern Painters, 1873, pp. 309-10). This passage, quoted by Bosanquet, is supposed to "illustrate the beauty of characteristic expression" (A History of Aesthetics, 1892, p. 449); and if this be so, the reader has here Dr. Bosanquet's view in a nutshell.

In another passage, speaking of the sublime in architecture, Ruskin says: "It is a noble thing... to make the face of a wall look infinite, and its edge against the sky
like an horizon: or even if less than this be reached, it is still delightful to mark the play of passing light on its broad surface, and to see how many artifices and gradations of tinting and shadow, time and storm will set their wild signature upon it; and how in the rising or declining of the day the unbroken twilight rests long and luridly on its high lineless forehead, and fades away untraceably down its tiers of confused and countless stone" (Seven Lamps of Architecture, 1897, pp. 140-1).

The organic view of the beautiful which is here put forward is illustrated by facts which are in part only identical with those dealt with in Aesthetics. Men often sit before a blazing fire watching the flames, or look out of the window when it rains or snows, or note the dripping of water into a fountain. In such cases we may say that there is aesthetic gratification in so far as the organic conditions mentioned in the text are satisfied. The variety of detail here is generally sufficient to occupy the attention; but discontinuous observation keeps satisfaction at a very low level. Such activity is disinterested, and agrees with our definition of the beautiful; but the absence of close organic connection changes it into something almost entirely different.

237.—Inference.

We have thus far proceeded on the assumption of a sense uninfluenced by the environment; but this supposition, we know, is gratuitous. We will now correct this impression, and explain what would otherwise appear anomalous.

We sometimes insist on one aspect of an object. Being strongly in favour of a truthful rendering of things, we come to believe that a picture should hold the mirror up to nature. Guided by such considerations we are readily fascinated by paintings of this order. We turn to them and admire them passionately. Our eyes feed upon them like a bee nestling in a blossom, extracting the nectar of delight. We are transported in thought to the scenes called up. However, another man, who is primarily attracted by general impressions, loves the canvas which, while only hinting at the facts, suggests the mental attitude of the imaginary spectator. To the impressionist a scene true to nature repels, for he finds no soul therein. He asserts that a beautiful piece of country is transfigured by him who gazes at it. He cries aloud that only that art is great which takes cognisance of the mode in which we react on what is before us, and which re-instates the atmosphere of indefinable feeling which envelops us when lost in admiration. So, too, within the same school one man demands that pictorial art shall serve the ideal, while others ask that it shall present the various phases of life. As with pictures, so is it with the related arts.

The sportsman, again, has a keen sense of the beauty of thoroughbreds, looking them over with evident enjoyment of make and shape, though outside his own particular hobby, he may have few interests. The admirer of the shire horse, on the other hand, may see no special beauty in the thoroughbred. In both instances, predilections determine what shall be praised; and in each case there is an objective basis for the belief. If the two types of horse displayed few details, the attention could not be fixed on them for any length of time. Both individuals have specialised, and therefore disagree. The fact that their pursuits have pro-
bably suggested the respective objects of their admiration does not affect our conclusion. So also a woman who shows taste in her dress and in the arrangement of her furniture, has perhaps in other respects little veneration for the beautiful. She goes into ecstasies over the latest fashions, her drawing room is a model of taste, and yet a sunset leaves her cold. The pressure of the environment has been one sided, and her training forces her to insist upon the beauty of one class of objects alone. Were it not for that, she might perhaps have been indifferent to her idols, but as it is her restricted reasoning and her narrow outlook control her interests, and, in the same way, prepotions, due to many influences, had men to single out some dimly-hit corner where they erect an altar and worship.

This attitude has, as its correlative, a blindness to much that is beautiful. Walking with eyes never raised, the most lovely sunset fails to impress us. The sky is aglow, but not for us. Our attention has never been drawn to it, we have not suspected anything beautiful there, we have had no inducement to let our eyes wander, there has been resting on us the dead hand of a belief that beauty does not lie in that direction. All our hearts have combined to divert our attention. Hence we never look except vacantly, and never know. We have grown into ignoring the beautiful.

When we were little children we played about in the meadows with no patience to contemplate a beautiful sight. We have grown accustom to an object, and because it has not fallen within the circle of our practical life, we have never fixed our attention on it sufficiently to determine its value. So the child bred in the country, while yet too young to discriminate, hears the birds' songs, but not having any actual dealings with the feathered songsters, he comes to ignore them as he does the surrounding atmosphere. So, too, the various changes in the seasons are overlooked, because they do not actively enter into the routine life of the child. For this reason much that is beautiful never appeals to us, and most things would never do so, but for stimulating forces outside us. It requires social development to direct men to an aesthetic or other discovery, for we do not spontaneously respond, and are so guided by habit that we only rove within the narrowest limits. It is because we have not previously looked at a thing that we ignore it now. If we should venture far without guidance, the world is so mighty a labyrinth, and we are so devoid of art, that we are certain to lose ourselves. Only activity, stimulated from without, enables us to see the true relations of an object.

* Why, for instance, does water rise only to a certain height in a pump? How evident is the answer to one who knows it. ‘When we move our arm rapidly, we note something which resists and touches us. That something we call air. That something, since it behaves like elastic fluids, must resemble them, for it occupies space, it can be displaced, and it presses against objects. Hence it is a more refined fluid, and has weight. Accordingly the water rises in the exhausted receiver, until a column of it is balanced by the weight of the atmosphere which presses on the exposed water in the well, and no higher.’ How simple! Yet it took ages
to establish this truth, because at every turn some false doctrine or some fallacious argument led men away from the truth.

It is for such reasons that our aesthetic outlook is capable of expansion, and that we can observe now this, and now that. There was no fate to force primitive man to the discovery that a gentle stimulus best satisfies the mechanism of attention, and that the contemplation of certain objects is a means to such an end. *Extensive and correct reasoning, as all ratiocination, is need-determined in development* (sec. 102). [Test.] An average man, assuming that he is not engrossed in purposive pursuits, will, unless socially stimulated, almost entirely ignore the realm of the beautiful, in the deeper sense of the word. Yet, granted favourable conditions, the same man will show genuine admiration for many objects. He will seek to penetrate the starry depths; he will gaze on a sunset till he seems turned to stone; he will lend a willing ear to the sea, and he will love mountains, hills and dales. There dwells in him a yearning for the beautiful, for an ideal satisfaction of the attention, and this once developed, he will tend to gratify it like other cravings. His desire will not be subjective, in the sense that he can contemplate indifferently whatever object he arbitrarily chooses. His choice

238.—Misleading Beliefs.

Misleading beliefs introduce a disturbing factor in aesthetics as everywhere else. We are told, for instance, that a cold morning bath is invigorating and pleasant; we act on the suggestion; and we think we are much fresher and better for the dip. Our friends, however, arrive at a different conclusion. [Collect such cases.] They notice that while pretending to be full of activity, we really show less elasticity than usual. They note that while we feign cheerfulness, we are more low-spirited than is our wont. Nevertheless we go on for years with such delusions, never aware that we are acting a part. The contrary feelings exist; but, owing to an *idée fixe*, we do not seek to explain them. We are fatigued, and think ourselves refreshed. We are miserable, and believe that we are in high spirits. Be it observed that our fallacious reasoning has not affected the facts; it has only warped our judgment. This frequently happens in matters aesthetic. Deceived by the description of some wretched daub as a fine picture, we buy it and often stand before it, apparently lost in admiration, even asking our friends to join in our worship. We think that outside the great galleries there is not a finer picture in the world. For months we admire its supposed beauties. Yet a close examination of our condition shows that what we could not do, we have not done; that we have fooled ourselves; that we have not really admired the picture. To make the case perfectly simple, let us imagine that a plain blue sheet is the supposed object of our admiration. To gaze at that for long without falling asleep is obviously impossible. [Try.] The attention has nothing before it, and instead of a gentle stimulus, there is none whatever. How, then, is the illusion sustained? By our thoughts
SPECIAL SYNTHESSES

wandering. Blinded by prejudice we do not notice that the pleasure yielded is a mimic pleasure, that the satisfaction is forced, and that the time is not occupied with the blue sheet. We may believe what we like; but we cannot admire what is not of itself admirable. Our judgment may be deluded; but not the aesthetic sense.

The number of treacherous beliefs is very large, probably much larger than we suspect. Sometimes individuals, sometimes whole nations, reason themselves into the most stupid courses, almost derationalising their natures. On the one hand superstition sometimes provides a semblance of happiness, making its sour-faced devotees believe that perfect felicity is vouchsafed to them; on the other hand, people raise self-gratification into a philosophy, arguing that they are husbanding their happiness when they are really employing the best means of making their existence as insipid as a tasteless apple, or perhaps positively undermining the possibilities of a satisfactory life. We need not study in detail the part which erroneous belief plays in aesthetic; but let it be clearly understood that it does play some part, and that pretended admiration has no objective justification. Such error will often make a theory of the beautiful appear monstrous, and must, therefore, be duly reckoned with. Unquestionably, misleading beliefs enter into our thinking to some extent; but that need not trouble us, if only we are aware of the fact.

239.—EDUCATION.

Education influences us greatly, as is natural, for the attention process is sensitive to training. Hence there results another disturbing factor which we cannot pass unnoticed. The attention, when untrained, naturally cannot apprehend or embrace as much as when trained. The child and the savage, therefore, will only be able to appreciate simple designs.* The moment these designs are not simple, or are on a large scale, they turn away from them. The object is too unfamiliar, and its comprehension requires more than a gentle stimulus. Putting aside secondary considerations, unelaborated forms, freely repeated, please primitive people as also do pronounced colours, indifferently arranged. However, with training comes ease, and these designs and colours are outgrown. Men then require something more subtle and more satisfying, and forms must no longer be so easily readable or so readily comprehensible. The primitive designs are consequently abandoned in favour of less primitive ones. Accordingly, for those observing a sunset for the first time, the mass of detail and the novelty of the sight almost repel because they tire. Practice, however, soon overcomes this. By constant readjustment we discover the way to obtain the maximum of enjoyment with the minimum of effort, while we learn that only discipline, unpremeditated or deliberate, brings the highest satisfaction. In this way our life resembles that of the eagle: as we grow older so our sunward excursions become bolder. What was difficult to understand once, is easy.

* "At all events, get rid of equality; leave that to children and their card houses" (Ruskin, Seven Lamps of Architecture, 1897, p. 235).
now; what is easy now, will be of no interest later in life; and what was easy a long while ago, now leaves us unaffected. There is consequently with the learner, as we should expect, a growth of power. To begin with, it was difficult for us to see much in pictures; they made on us a transitory impression, for only what is strange and striking appeals to us at first. Then gradually the unfamiliar becomes familiar, strangeness and novelty are discounted, and we face the beautiful in all its purity. Our attention feels at home when that stage is reached. It is the same throughout the whole development in the appreciation of the beautiful, where the nature and impressibility of the attention mechanism are alone decisive. From the comparatively simple we rise to the relatively complex; and, in every instance, the craving for easy-flowing attention is the controlling factor. When we ignore the education of aesthetic development we may easily believe that likings are not objectively determined, and it is from this that arises much of the present confusion of thought on the subject.

240.—Fashion.

Rapid changes in fashions obey, of course, the same rules. [Examine such changes.] Something is admired which is pretty in itself, enhanced by novelty and recommended by social circumstances. Time passes, and another object takes its place, and then another, and so on. Why the great admiration at the start? Why the cooling of the ardour and the ultimate rejection of what was once admired? The reasons are not far to seek. At first, the fashion being new, our attention is for some time absorbed in it. Then, the detail being restricted, interest wanes. Lastly, when we become thoroughly familiar with it, it ceases to attract us. There are important secondary factors. The admiration of the butterfly of fashion, for instance, is of a restless type. There is a capacity for excitement, but not for calm contemplation, and novelty is eagerly sought for, because of various society reasons. In this excitement it not infrequently happens that fashion's choice falls on something that is not beautiful. In such a case admiration is fictitious. We give praise to that which does not appeal to us.

241.—Secondary Factors.

In the contemplation of the beautiful, secondary factors, in one form or another, enter almost as a constant. If we look at the sea, at the sky at night, at a sunset or at a landscape, the bulk of the object of attention undoubtedly fascinates us, since gigantic proportions are in themselves an attraction. Thus a building like St. Peter's or St. Paul's affects us to some extent by virtue of its dimensions. [Test.] If we were twenty times our present size, or if buildings were commonly many storeys high, there would be a distinct difference in the effect which, for instance, the cliffs of Dover would have as compared with what we now feel at the sight of them.

What we have just said as to relative size is confirmed by Ruskin's definition of the Sublime as "that degree of magnitude which is the lowest at which sublimity begins,
SPECIAL SYNTHESSES

rudely definable as that which will make a living figure look less than life beside it." (Seven Lamps of Architecture, 1897, p. 133). On the subject of the Sublime, see also the third chapter in the above work.

Novelty is another factor. The sky often shows a number of changes which are, in their way, unique, and naturally these interest us, and we study them. In this way we frequently satisfy curiosity, while the time spent in the acquisition of knowledge is also included in our general estimate of the value of the contemplation of the beautiful. If we went into the matter more deeply, we should perhaps discover that a subdued curiosity is almost a constant in admiration. We both enjoy and learn, though a moment afterwards we forget the results of our observation.

Skill also influences our judgment. Men of a theological bent admire what they describe as design in nature; while all, or nearly all, allow their judgment to be influenced by the technique and the labour in pictures or statues.*

Associations play a not unimportant part. No sane individual would agree to admire anything and everything regardless of social conventions. From some pictures he will turn in disgust; they offend his tastes. To others he will eagerly turn, for they appeal to his deeper feelings. In this way associations, good and bad, influence our aesthetic judgment, though we should beware of calling a thing inherently ugly because it offends our moral sense.

The diffused aura of interests has a subtle power of its own. Latent romances, a hardly suspected fairy world, dim visions, and semi-articulate sounds group themselves around an impressive sight. These are almost unanalysable. They are made up of inarticulate feelings and half-formed imaginings. They are to our thought what the confused hum of a town is to the sense of hearing, and in such an atmosphere, enveloped in half-remembrances, we live when lost in admiration. They may be considered an integral part of the beautiful. The attention constantly wanders from the object to bask in the delightful feelings produced. It is this reverberation of the beautiful which impressionist painters attempt to incorporate in their works.

Allowance must also be made for organised reaction. Once we love beautiful sights, we shall mechanically continue to love them, the interest being automatically maintained. One reason for going to the gate to see the sunset is that we have often done the same thing before. Our likings will lead us on irresistibly because they have become organised, though

* "There is not a cluster of weeds growing in any cranny of ruin which has not a beauty in all respects nearly equal and, in some immensely superior, to that of the most elaborate sculpture of its stones; and that all our interest in the carved work, our sense of its richness, though it is tenfold less rich than the knots of grass beside it; of its delicacy, though it is a thousandfold less delicate; of its admirableness, though a millionfold less admirable; results from our consciousness of its being the work of poor, clumsy, toilsome man. Its true delightfulness depends on our discovering in it the record of thoughts, and intent, and trial, and heart-breakings—of recoveries and joyfullnesses of success." (Ruskin, Seven Lamps of Architecture, 1897, pp. 95-6).
routine can make no difference to what is beautiful. [Test the above statements.]

Alison, in his *Essays on the Nature and Principles of Taste*, 1815 (first ed. 1790), applies the association theory in most thorough fashion to the subject of the beautiful. Interesting associations offer to him a considerable explanation of the problem we are considering. He sums up in this way: "Wherever the appearances of the material world are expressive to us of qualities we love or admire; wherever, from our education, our connections, our habits, or our pursuits, its qualities are associated in our minds with affecting or interesting emotion, there the pleasures of beauty or of sublimity are felt, or at least are capable of being felt. Our minds, instead of being governed by the character of external objects, are enabled to bestow upon them a character which does not belong to them; and even with the rudest, or the commonest appearances of nature, to connect feelings of a nobler or a more interesting kind, than any that the mere influences of matter can ever convey" (ii, p. 428). Fechner, in his *Vorschule*, 1876, takes a similar view to Alison's. He claims that men look upon the orange as the most beautiful of fruits, because of the romantic associations with the south which it calls up (i, pp. 87-9), a claim which few men would agree to. Brown held that Alison's associated images did not, as a rule, exist. With this I certainly agree. However, he went farther, arguing that we were influenced by a mean, or cluster, or residue of associations, including the opinions which we have imbibed. "When we behold a beautiful form, all the images suggested by it, live in like manner in it" (*Lectures*, 1824, iii, p. 149). His argument is well maintained throughout; and I see no reason to doubt that predilections enter considerably and vitally into aesthetic judgments. Nevertheless, the power of these suppressed associations lies, if I mistake not, in the fact that they form a desirable whole for the attention to contemplate. The purest beauty can only be said to exist where there is no portion of a contemplated total which is not considered part of an organic whole. Other ingredients, non-contemplative ones, must not be regarded as truly aesthetic in character. Still, Brown goes too far when he says that he has "found sufficient reason to ascribe to this slow and silent growth of circumstances of adventitious delight, almost all the beauty which is worthy of the name" (*Lectures*, iii, p. 150).

It is not so easy to decide whether colour, and the groundwork of form generally, should be admitted as aesthetic factors. Kant (*Kritik der Urtheilskraft*, 1790, §14) argues against such admission, classing sensory effects as agreeable rather than as pleasing. I am, on the whole, inclined to think that ease of apprehension gives to sensation its desirable character.

Burke, in the work already quoted, dismisses the doctrine of right proportion as a cause of beauty (pp. 156-70), that of fitness (pp. 170-5), and that of perfection (pp. 176-9). Burke's criticisms are to me the only readable portions of his book.

242.—The Aesthetic Standard.

What I have said implies, in one sense, that there is no absolute standard of beauty. That which appears beautiful to one man, does not necessarily appear so to another, and we also, as we have seen, outgrow forms of beauty. This argues a standard relative to the state of the attention apparatus at any given moment; but if this is so, there yet remains a definite measure by which to judge objects, and by which to separate the higher from the lower. Still, to avoid the confusion which is introduced by the personal equation we can fall back on an abstract standard. According to this standard, objects would be weighed by the first effect they leave on spectators, or by their aesthetic constitution. A man who is tired of a picture, may thus find a common standpoint with
another who sees it for the first time. While, then, for scientific purposes we recognize the relativity of the beautiful, for practical purposes we would set up an abstract ideal, based on some mean of impressions. We call an object beautiful, because it has the marks which normally go with beauty, though, for assignable reasons, we are not impressed by what we integrate or perceive.

Here are some additional opinions regarding the subject of aesthetics. In the second volume of his Essay, 1891, Spencer discusses various aspects of aesthetics. He points out, among other things, that “the appliances of one era serve as embellishments to the next,” and that “equally in institutions, creeds, customs, and superstitions, we may trace this evolution of beauty out of what was once purely utilitarian” (p. 370).—this essay was first published in 1852. Speaking of personal beauty (essay first published in 1854), he remarks that “the saying that beauty is but skin-deep, is but a skin-deep saying” (p. 394). Here, too, the obscured states must be supposed to form a solid part of one’s conception of personal beauty, and not to exclude the physical features. In The Nature of Gothic, 1892, Ruskin supplies us with the supposed characteristics of the gothic style, characteristics which reflect the great art-critic’s view of the beautiful, and which also give authority to our conception of aesthetics. The first mark is that of Savageness, imperfection being general because of the absence of undesirable mechanical repetition; then we have the principle of Changefulness which yields variety; then comes Naturalism, where the works of art reflect nothing morbid nor soft, but that which is hearty, human and all-embracing, this resulting from the workman’s freedom of choice; and then come Grotesqueness, Rigidity, and Redundance which offers something pleasant to everyone. Morris (Hopes and Fears for Art, 1882) can only be regarded as an enthusiastic disciple of Ruskin. Fechner (Vorschule, 1876) gives the following aesthetic principles: (1) the aesthetic threshold, (2) aesthetic helps (3) combination of multiplicity in unity, (4) truth, (5) clearness, and (6) association. Baldwin (Feeling and Will, 1891) explains the aesthetic nature of curves physiologically. He holds, and perhaps rightly, that “the normal movement of the eye, except in its vertical and horizontal axes, is a curve of gentle and somewhat irregular curvature” (p. 237), and he is probably correct in stating that “the ideal of form is indicated by the most facile and pleasurable adaptation of the eye at once to detail, and, by easy transition, to the plan as a whole” (p. 237). We have seen Burke pointing to the lion as a specimen of something which lacks beauty, and Fechner making the homely looking orange king of beautiful fruits. In the same incredible spirit Baldwin tells us that “the beauty of a landscape is cold and formal until the smoke of a peasant’s hut, or the spire of a country church, is added to give it a touch of human interest” (p. 234). Bosanquet (A History of Aesthetics, 1892) thinks that the beautiful lies in expressiveness. “Among the ancients the fundamental theory of the beautiful was connected with the notions of rhythm, symmetry, harmony of parts; in short, with the general formula of unity in variety. Among the moderns we find that more emphasis is laid on the idea of significance, expressiveness, the utterance of all that life contains; in general, that is to say, on the conception of the characteristic.” (pp. 4-5). The opposition between ancient and modern aesthetics, it appears to me, is artificial; rhythm, etc., are necessary elements in aesthetics now; and significance was not ignored in old times. Without the former, as Fechner (Vorschule, ii, pp. 64-8) has pointed out, the characteristic ceases to be a distinguishing mark of the beautiful; and without the latter, rich natures are left unsatisfied. The expressive closely connects the beautiful with life and contact; and hence serious natures shrink from an art which is out of touch with the deeper realities. Everywhere Bosanquet adheres to his text that the characteristic is the beautiful; never properly explaining, defining or illustrating his position. Marshall (Aesthetic Principles, 1895, p. 114) is very vague, as witness this

* See also Guérout, Du Mouvement dans les Emotions Esthétiques, 1881.
definition. "The beautiful is that . . . which produces effects in us that in retrospect remain permanently pleasant . . . . . . The ugly . . . . . is that which produces effects that remain permanently painful in retrospect." Bradley (Appearance and Reality, 1897, p. 464) defines the beautiful as follows: "That which is aesthetic may generally be defined as the self-existent emotional." Allen (Physiological Aesthetics, 1877, p. 39) argues that "the aesthetically beautiful is that which affords the maximum of stimulation with the minimum of fatigue or waste, in processes not directly connected with vital functions."

None of the books or essays on aesthetics which I have read show an inclination to face directly the psychological aspects. Lovers of the beautiful seem to have shrunken from the task of analysing that notion, and for a similar reason the beautiful in nature, which is not to be found in cloistered studies, has been almost entirely ignored.

243.—Prose and Poetry.

I have defined the beautiful as that, the contemplation of which, of itself, occupies the attention. The beautiful in connection with language falls, therefore, within this definition. Let us consider an example, the introductory lines in Browning's Pippa Passes.

"Day!
Faster and more fast,
O'er night's brim, day boils at last:
Boils, pure gold, o'er the cloud-cup's brim
Where spurting and suppressed it lay,
For not a froth-flake touched the rim
Of yonder gap in the solid gray
Of the eastern cloud, an hour away;
But forth one wavelet, then another, curled,
Till the whole sunrise, not to be suppressed,
Rose, reddened, and its seething breast
Flickered in bounds, grew gold, then overflowed the world."

Everything beautiful in literature appeals to the senses. Milton's Lycidas, L'Allegro, or Il Penseroso, Gray's Elegy, Goldsmith's Deserted Village, Wordsworth's Ode to Immortality, Shelley's Skylark, Tennyson's Locksley Hall and In Memoriam, Bryant's Thanatopsis, and similar masterpieces alike bear out this contention. Indeed, it is impossible to re-develop any fine poem which does not primarily appeal to the eyes. [Test this.] Colourless and yet beautiful poetry implies almost as great a contradiction in terms, as warm ice. [Does it?] A really blind Milton could scarcely appeal to us on the aesthetic side. The Milton we love abounded in imagery. Is there, then, no poetry without colour? Such poetry, we know, exists and may even be of high quality. Still, apart from sonority and happiness of arrangement, poetry of this kind is not beautiful. What appeals to us here is the thought; and that leaves our aesthetic sensibilities unaffected. Pope's brilliant couplets, which express with ease what is difficult, please us because they are didactic and make no great claim on our attention; but they scarcely touch our aesthetic sense. Such poetry serves all kinds of purposes, but never those of aesthetics. Let us, however, note that even in these cases of eyeless poetry the few grains of aesthetic gratification are derived from the
readiness with which the method of presentation is apprehended. Remove the easy flow of word and thought, make the trend uneven like a neglected highroad, and every spark of delight is gone.

The explanation of this fact lies in the principles which are expounded in this chapter. I have spoken of the pleasure which we derive from the vision of natural objects, and we have seen these transferred to canvas. In poetry the impressions which these objects created in the spectator, are brought before the reader. A poet who has a rare appreciation of the beautiful communicates his knowledge, inner mingled with outer, to his fellows. In proportion as the attempt is that of a true seer, to that degree do we return to his descriptions as to a sunset.

The nature of beautiful poetry is determined. Let us make sure of a few points. In mediocre poetry the imagery is often of a threadbare type, and does not, in consequence, fix the attention. Again, the poem sometimes rambles on without pictorial or descriptive passages, and the piece is then aesthetically tame. In other cases we find a large variety of commonplace similes, and these the attention no sooner detects than it rejects them. So also vagueness is a serious defect, the absence of clear notions, or the inability to express them, results in the would-be poet telling us next to nothing. We obtain no definite information, and are, therefore, dissatisfied. He has a charlatan's vocabulary, using a few inexpressive words to stand sponsor to a large variety of shades of thought. [Test.] Good poetry is without these faults. The gigantic lingual resources of the Elizabethans are well known. They are continually varying their turns of speech, their adjectives and verbs alone adding much to the richness of effect. So, too, their imagery is remarkably fresh, plentiful, apposite and imposing. Instead of using a small stock of trite phrases, which have lost the power of appealing to us, they constantly aim at originality. Their own varied life is interwoven with their work; or else they borrow from such remote sources that the effect, on at least the modern reader, is not diminished. The quality of the thought contributes to the result. The Elizabethans speak not only of sweet and tender things, but of great things. They express frequently a profound observation in a form which instantly appeals to us, as when Massinger says of Love:

. . . . thou art feigned blind,
    And yet we borrow our best sight from thee."

Had he written forty lines instead of two, and resorted to no suggestive pictures, we should have been bored, and perhaps we would not have understood him. Yet the abstract thought, attached to an appropriate image, becomes at once clear and beautiful. Still, it is not enough to have beautiful lines or couples, which, like tiny caskets, hold precious notions. The graduate in literature requires a larger horizon, a concept, which though complex shall yet be readily grasped. Accordingly, in a sonnet, the various pictures move round a common centre, and together they express one theme. And, likewise, a century of sonnets are strung
on one thread, and form one thought. It is so with Tennyson's series of commemorative poems on Arthur Hallam, which have a common source. Take, again, an outburst such as that with which Browning's *Pippa Passes* begins. The description of the sunrise, which I have quoted, like so much else in Browning, is a remarkable illustration of the training required to reach the higher peaks of aesthetic creation and enjoyment. [Consult that poem.] An ordinary person would be utterly baffled in trying to scale them. A Pippa would in vain attempt to break out into such language, embodying, as it does, in so involved a form such minute and discriminating observation and such wide knowledge.

The love of poetry is built on a strong foundation. Given our brain as the type of our present state of development, and no other kind of poetry could possibly satisfy us. We cling to earth and to sense, because they alone satisfy the attention process. [Is that so?] We clothe even our most abstract thoughts in material garments in order to make them attractive, and nothing is so holy but we enlist some sensuous metaphor to give it the additional charm of beauty.* On the other hand, we are deeply affected only by that poetry which deals with what is not ephemeral, and it is accordingly our larger interests which are most suited to rhythmic treatment. Still, since there must be no strain involved, profoundly themes are dwelt on suggestively, as they haunt us, rather than minutely and precisely, as in the lecture room. Our love of sunsets, of artistic representations and of imagery is hence natural, and if, therefore, human nature remains the same, we need not fear that a time will come when men will smile at our prostration before the sensuous. Abstract thought is difficult to grasp, and so long as this is so it will be vain to substitute it for sense systems. Let us suppose, however, that it served to occupy the attention agreeably. Then the abstract would delight us; we should go into raptures over the definition of a noun, while on the other hand, the sensuous, except in the most complex forms, would cease to have any fascination for us. Browning's most perplexing poems would then perhaps be selected as nursery rhymes, while poetically conceived metaphysical conceptions would soar as far above Pippa's morning song as that transcends *Twinkle, twinkle, little star*. It is possible that even our most abstract notions would be too simple for poetic treatment. However, it would be tedious to prolong this inquiry. The beautiful changes with the nature of the attention mechanism, and as that varies so vary the objects of our admiration. In the absence of an attention process, the fundamental notion of aesthetics loses its meaning. *Our conclusion must, therefore, be that non-corporeal beings possess capabilities entirely different from those of corporeal humans.*

What has been said of poetry holds good also of prose. There must be something in the style or in the matter which makes assimilation desirable. Here also the attention is held enthralled by a gentle stimulus, though

*So Ward, *Psychology*, 1886, p. 70: “Art eschews the abstract and speculative; however plastic in its hands, the material wrought is always that of sense.”
rhythm is almost entirely dispensed with and there is more freedom of movement. Sensuousness is generally an essential. Bacon, Milton, Emerson, O. W. Holmes, Jean Paul Richter, and others, shine by its light. There are yet other methods. One man describes striking events with a brilliancy which allows of our easily picturing the scenes; another throws a vivid light upon the inner life of others. One succeeds in delineating the passions; another charms us by his mosaic-like methods; another attracts us by his wit; while yet another employs every one of these methods in turn. Except in occasional passages, no attempt is made in prose to carry us away aesthetically, and some derived interest, therefore, is needed to make the reading tolerable; nor do we ever find in prose the intensity of delight which poetry produces. When prose reaches its highest level it becomes, as we should expect, verse-poetry. Then the rules of poetry, except those of metre, have to be obeyed, though even here there is not that complete enchantment which supervenes on reading an exquisitely wrought piece of verse. As a compensation, however, a larger quantity of prose-poetry may be produced, and we can read more at a time without becoming surfeited; still when the writing is highly charged with imagery, it is difficult to read quickly or much at a time. So varied are the methods of appeal that it is not easy to enumerate them. We can only say that in each case the style and matter must be such as will yield sufficient food for the attention, and that the details must be combined in systems which are neither too easy nor too difficult of comprehension. Books, consequently, will interest us aesthetically in precisely the proportion in which they satisfy the objective test. Compositions which are obscure and disconnected appeal to us as little in prose as in poetry. A small vocabulary, an absence of delicacy and discrimination, lack of similes or the use of trite or poor ones, a flitting to and fro from subject to subject, triviality, and similar failings, are signs that aesthetically the work will displease us.

There is no very clear distinction between poetry and prose; at least the historic tendency has been to minimise existing differences. The cruder Elizabethan form of play, for instance, was rhymed throughout; and it was considered a great improvement when the rhyme, as an essential, was dropped. After that we encountered metrical plays where, as a rule, every line constitutes a sentence and every sentence a line, the line being decasyllabic. However, as we approach the Elizabethan drama in its ripest condition, we note a tendency to suppress the single, to add an eleventh syllable, and to avoid sentences which end with the line or are equal in length to a line. In short, all but the rhythm has been swept away. Add to this that a good reader preserves the sense and largely supersedes the metre, and all we have left is smooth reading, not so much musical as not unmusical. Similarly, with a good reader ordinary lyric poetry loses perhaps all its qualities, except that of suggesting a mood. It becomes a pertinent question whether the good reader's interpretation should not be adopted by the poet, rhyme and arrangement in lines being abandoned. We cannot go further. It is not uncommon in lyric poetry to ignore very considerably the sound of line as well as the arrangement of accents. At this point good prose begins. Here, too, what is unmusical is considered bad composition; and a certain swing is always demanded. The only remaining difference, then, is that in poetry metre is in general distinctly traceable, while in prose this is not the
Nevertheless, to balance this, it is commonly agreed not to regard as poetry that which lacks distinction. In the same way we might contend that where art is absent, prose ceases to be present; i.e., there exists doggerel prose as well as doggerel poetry. Brilliance, fancy, imagination, weight, depth, clearness, subtlety, comprehensiveness, music, mark good prose. Some writers of the seventeenth century, like Bacon and Milton, and a host of writers of the eighteenth, like Addison, Hume and Gibbon, supply us with good examples of the nature of studied prose. To-day the art of prose is almost dead. Occasional fine sentences or passages are embedded in tracts of unattractive soul. It is as if the painter presented us with a daub wherein by careful search we are able to detect a few good points. Not so with Milton, Hume, Gibbon, and their fellows, for what these men lay before us is a true art product in which every part aims at perfection. Perhaps we may compare ordinary writing to necessities, prose to comforts and poetry to luxuries, ignoring any subtle partition.

If this psychological interpretation of style be accepted, it will be seen that what has been said concerning visual beauty holds good to the utmost detail of lingual beauty. As, through social endeavour, the intellect and the emotions increase in keenness and depth, so the obviously formal in language is gradually displaced by a style rich, full, brilliant, subtle and varied. Hence the measure of the superior style is solely the social development of the attention at any period, the method employed being otherwise indifferent. Jean Paul conquers by his brilliancy, Victor Hugo by his warmth; Emerson by his depth, Carlyle by his insight, Scott by his historic background; Thackeray by his minute description; Dickens by his kindly humour; George Eliot by her sympathies; and Johnson by his subtle touch. As long as the attention is held by the manner of exposition, so long is the style to be commended.

In connection with style, the student may be referred to Hume’s essays Of Simplicity and Refinement in Writing, and Of the Standard of Taste, to Herbert Spencer’s essay on The Philosophy of Style in the second volume of his Essays; and to Mr. Frederic Harrison’s Lessons, Rudin, Mill, and other Literary Estimates, 1899. See also Guyau, L’Esthétique du Vers Moderne, 1884.

A study of the orator’s art will show the essential need in oratory of systematized variety, precisely as in written prose or poetry, perhaps even more so.

244 — Music, etc.

It need scarcely be insisted upon that music, to be agreeable, must, equally with poetry, have regard to the nature of the attention mechanism. If we attend a concert as reporters, our attention is perhaps sustained, in the absence of habit, by some reward. Still, when no secondary interest compels us to follow the music, the mechanism itself must be gratified, or else our thoughts wander. Music, then, should offer a variety of detail, and should consist of a system the comprehension of which requires gentle exertion. It will not be difficult to show that, broadly speaking, this is the case. The music of savages, in its simplicity and lack of system, approaches very nearly to noise. Then comes the lyrical music, which alone attracts the uneducated: a song, now serious, now fanciful and now light charms their ear, or a few threads are woven into some unpretentious pattern. Lastly, come the sonatas, such as that of Beethoven. Here the variety and complexity are such that the musically untrained endeavour in vain to follow and enjoy the performance.

There is neither space nor is there need to elaborate the matter further. What was said in sec. 236 with reference to outlines, holds good here in every respect. No doubt, there are peculiarities; but they do not affect
the pillars of our theory. Such and such should be the demands of music to conform with our definition, and such they prove to be. Had we found sonatas appreciated by savages and not by civilised mankind, or songs taking the place of sonatas as we become more at home musically, the startling facts would have demanded an explanation. As it is, data and doctrine harmonise.

Gurney, in his monumental work, *The Power of Sound*, 1880, has a passage which goes to establish our position. He says: "The use of 'subjects' in music is a perpetual feature, and becomes most prominent in large and complex pieces, to which it is the great means of imparting organic unity" (p. 98). As I am a stranger to musical theory, I shall not enter into matters musical. I have frequently listened to music with the attention fixed on the separate sounds. I notice that while some instruments sound much more agreeably than others, there appears to me no relation between the agreeableness of a sound and the agreeableness of the system of sounds which forms the melody. The mere tones of the violin appear to me human in expressiveness; but certainly not specially agreeable. The preference shown for this instrument is due to the nice gradations of sound which it is capable of, thus enabling it to satisfy the attention ideally. Still, a single instrument gives us only shades of one tone or colour, while an orchestra supplies us with variety of colour as well as of shade, and hence an instrument would be ideal if it yielded both shades and colours. However, the chief delight of music seems certainly derived from the structure of a piece rather than from the series of single sounds of which it is composed. Ruskin (*Seven Lamps of Architecture*, 1849, p. 271) speaks of Architecture as "not essentially composed of things pleasant in themselves, as music of sweet sounds, or painting of fair colours." As to the elements of music, see Helmholtz, *Tonenempfindungen*, 1877, and Gurney, *Power of Sound*, 1880. [Consider the notable differences in sound quality between piano, violin, organ, flute and the human voice.]

What is here said as to the organic nature of beauty in sounds is apparently contradicted by the music of birds. Not even the nightingale, the thrush or the skylark satisfies much our definition of the beautiful, though organic combination of sounds and variety of detail are most developed with those birds. We must, therefore, class the songs of birds as intermediate between beautiful things and such sights as a flaming fire or a fall of snow; and we must assume that environment and pleasant associations largely account for the attractiveness of the songs of birds. In that case the beauty would reside in a whole of which the special song forms a part.

Lastly. Wherever the word beautiful is legitimately applied, the same foundation facts will be discerned. A beautiful sentiment, a beautiful character, a beautiful bon mot, a beautiful deed, a beautiful life, a beautiful thought, a beautiful moral, a beautiful arrangement, a beautiful movement, imply one and all, that the object thus spoken of is contemplated by us because it has those characteristics, now well known, to the student, which, of themselves, occupy the attention. Further illustration is superfluous, as this definition covers each and every instance without exception. [Test by rules in sec. 136.]

245.—The Comic.

The recognition of the beautiful arises out of an incidence in the attention machinery the primary purpose of which is to satisfy the needs of the organism, while interest in the beautiful is principally needed to fill the interstices between the serious moments of life. The Comic, literally speaking, occupies the same position. It is one other means to prevent
brooding and aimless or difficult reflection. It, like the beautiful, offers an ideal outlet for the attention. It, too, slips into the crevices left open by strenuous work and thought. It, too, has no justification except the office which it fills. [Test.]

In defining our subject, we assert that the Comic implies a humiliating situation where the sense of malice is aroused so far as it satisfies and mechanically occupies the attention. [Examine this definition.]

The various known forms which the Comic assumes well illustrate this. The popular "tall stories" from America are almost of a uniform character. Thus, to indicate the speed of transatlantic trains, we are told that a man was "canning out of the window and bidding good-bye to some one, when he discovered that he was hailing one of the porters at the next station. In America, exaggeration is the prevalent mode of provoking laughter. Irish stories have a different trend. Under the guise of reason an utterly inadequate explanation is proffered. Thus a man insists that the rifle is his; that, in fact, it had been in his possession ever since it was a pistol. Americanisms and Irishisms are pretty nearly always true to the type they represent. In Shakespeare's plays we find two methods prominent. One of the runs through the majority of the plays, and is a mode of repartee, connected with euphemism. There is in it an interminable doggedness on both sides to construe a remark in a sense not intended by the speaker, or else to draw unsuspected conclusions from the words. In Hamlet, in Love's Labour's Lost, in As You Like It, in Much Ado About Nothing, and, indeed, in most of Shakespeare's attempts at humour, from his first to his last play, this is almost the only class of wit resorted to. The other method in Shakespeare's works, one fairly general in literature and life, is to make a man use words which he does not understand, with the constable in Measure for Measure, Dogberry in Much Ado About Nothing, Launce in Two Gentlemen of Verona, the hostess in Henry IV, the mob in Henry VI, or the gravediggers in Hamlet. There is a closely allied subdivision where a man is muddle-headed, as in the case of the characters just mentioned, and rambles in his thought. Repartee allows, of course, of wide expansion, and is not necessarily verbal or trifling. It is often absolutely crushing, and when that is the case, and the argument is continued on the same level, the highest results are obtained. Caricature attains the same end of pleasing us, by bringing out in striking relief certain abnormalities. Farce of every type produces the same effect, and is caricature in action. At the same time we must recognize that sheer stupidity does not lead to fun any more than to malice. Thus, if the Irishman had insisted that the rifle was his because he once was a boy, we should merely suspect his sanity. So a child trying to jest in imitation of his superiors, fails completely in its object. Some traceable relations must always be present in the Comic, and the mixture of the reasonable and the unreasonable, or the dignified and the undignified, is in each instance implied. The situation must be a likely situation, the things said or done being such as normal persons in seriousness occasionally say or do. Thus
American and Irish humour reflect sober national characteristics, while the humour in Shakespeare has equally its basis in reality. The most absurd "bull" must, therefore, be a possible slip by a sober individual. [Take jest after jest in comic papers and analyse each, neglecting your general memory.]

Those who are not morally refined laugh at one who makes a stupid remark. [Observe.] They rejoice over the misfortunes of those who are not their friends; and they are glad to see their enemies discontented, hurt or defeated. When some one is disappointed, it is to them an occasion for mirth, and they are gratified by the plight in which their adversaries find themselves. This attitude belongs to the serious business of life. In humour proper, on the contrary, we have malice without its sting. [Is this universally true?] We still laugh at a stupid remark, at our neighbour's misfortunes, at his disappointment, or his defeat in argument, while we never laugh at their contraries, a wise remark, or a neighbour's good fortune. [Test this.] We do not laugh at a person; we laugh with him; nor do we rejoice over any notable mishap or where our mirth would hurt. [Test this.] Nevertheless, the malice is not gone. [Is this so?] It still forms the basis of humour; but the stress is transferred from malice to amusement. We train ourselves to the utmost in detecting unfavourable points, and delight in our discoveries. We spend some of our time inventing good things and retailing them. True humour is distinguished from jubilant malice, as the shadow is from the substance. With this shadow we play.

In the Comic, as such, there is no contemplation. [Test.] The wit must burst upon us, and from an unexpected quarter.* We must be taken by surprise; for, in proportion as few develops, so does it fall flat. A bon mot should be well told. The attention must be enlisted, the explosion judiciously led up to, and the point unveiled at the psychological moment while its nature is still unsuspected. All humour is explosive, and what is not explosive is not humour. [Test.] Hence the beautiful, which invariably depends on contemplation and is never explosive, is widely separated from the humorous. [Question this.] Contemplation sometimes leads to humour; but never embodies it. Again, the pleasant mood into which we are thrown by the ludicrous, is mechanically sustained by the momentum produced by the act of explosion. It is not the discovery of characteristics, which impels us to continue amused, but the momentum or the vis a tergo alone. Only when the incongruity strikes us like a sledge-hammer—and this may happen repeatedly with the same story—are we amused, and no oftener.

We see clearly that the Comic occupies the attention without requiring a considerable strain, and that it prevents the tedium of aimless rambling as well as the fatigue of effort. Indeed, within limits, it imparts a glow of freshness to the human system on account of its very violence. It is for

*In normal reasoning there are no startling developments, while in the most brilliant reasoning everything is still closely connected. Not so in far-fetched reasoning where the apparent agreement is utterly outweighed by the obvious disagreement, and where the development therefore, naturally takes us by surprise.
these reasons that the attention is readily attracted and retained by the humorous, while its limitations are implied in our organic structure. The attention becomes tired of humour, as of everything else, if too prolonged. Humour is most effective where the process of attention is best gratified, as when we are skillfully prepared and preserved in a humorous mood. It depends for its existence on the peculiar nature of our attention mechanism. The humour of a bodiless being is, therefore, to us who are in the body, an amusing conception. Education, habit, false opinions, fallacious reasoning, insistence on or ignoring of certain aspects, the mingling of other factors, our views of right and wrong, must all be allowed for, as was done in our analysis of the beautiful.

The nature of the Comic has given rise to much discussion. Kant, in his Krítik der Urtheilskraft, 1790, 674, defines laughter as that "which results from the sudden transformation of strained expectation into nothing." Such an explanation misses the whole of the facts; for the surprise is no more a nothing than a beautiful scene which we unexpectedly chance upon, or a stupid reply which has not the merit of causing laughter. In humour, we have to do with a relation of a particular class, and it is the business of science to discover that relation. It has already been shown that a genuinely humorous answer is never haphazard, stupid or meaningless.

Brown examines the nature of the ludicrous in Lecture 58. He holds, without venturing on an illustration, that "we laugh as readily at some brilliant conception of wit, where there are no infinities of others displayed, as where they are displayed in any awkward blunder (Lecture, 1824, iii, p. 186). In conformity with this he defines the sense of the ludicrous as "the pleasure arising from the discovery of unsuspected resemblance in objects formerly conceived to be known to us, or unsuspected difference in objects formerly regarded as highly similar" (ibid, iii, p. 188). It will be seen, therefore, that Brown demurs the ever-presence of malice in humour. I feel, however, that the Comic always depends on levelling down, and never appears in levelling up. Unexpected differences or resemblances, every one must admit, may exist entirely apart from the ludicrous; it is peculiarly the business of the scientist to disclose these. Brown's classification, moreover, of the ludicrous into the burlesque and mock-heroic, the unexpected, the awkward, and bull or blunders (pp. 197-203) shows that loss of dignity is an essential. Spencer (vol. 3 of Essays, "The Physiology of Laughter," first published 1860) has the following Kantian explanation. Our thoughts, he argues, are engaged intently along one line; there follows now an interruption which is not sufficient to occupy the place of that which has engaged us; hence the discharge goes along physical lines. This explanation does not commend itself to me; it seems forced throughout. We need not in humour be engaged intently, and an irrelevant interruption is usually ignored or causes annoyance. Dumont (La Sensibilité, 1875) argues that it is the unexpected and contradictory which occasions laughter. He also draws attention to the fact that "we laugh when other people tickle us; but that we do not laugh when we tickle ourselves" (p. 206); and this he would explain by saying that there is no adjustment possible when others tickle us. Yet laughter is by no means an invariable concomitant to tickling, however unexpected, and tickling may be followed by convulsions without laughter. In his Des Causes du Rire, 1862, he says: "The Comic may be defined as "that which determines our understanding to form simultaneously two contradictory statements" (p. 45). Bain (Emotions and the Will, 1875) argues that "the occasion of the ludicrous is the degradation of some person or interest possessing dignity, in circumstances that exclude no other strong emotion" (p. 257). Here, also, we may readily imagine a case where there is degradation without the presence of any strong emotion or of the sense of the ludicrous, while the definition scarcely distinguishes between humour and malice. Baldwin (Feelings and Will, 1891) claims that "a joke turns on a misplaced
grammatical or logical relation which, if properly placed, would have been aesthetic" (p. 242). Lastly, Sully (Human Mind, 1892, ii) affirms, as I have done, that "it seems certain that the feeling of glory or of superiority, is a common ingredient in comic laughter" (p. 150); that "we have in the feeling of the ludicrous a transferred and refined form of the primitive brutal laughter of triumph" (pp. 150-1); and that "the most characteristic form of modern humour occurs where there is a touch of kindly or humane feeling." (p. 152). Mirth presupposes that what surprises us shall not affect us seriously either in body or in reputation; and hence the very same remarks under different conditions appear now as comic and now as tragic. Thus the ambassador who, being intoxicated, fell down before Majesty instead of kneeling, might have caused laughter if the king had been in good humour, or indignation if he had been in an irritable mood. Probably the onlookers were inwardly convulsed with amusement. *

246.—THE IMAGINATION.

It is possible to imagine the whole of our thought to be intra-conscious or neural, as part of it is. Deliberation and reflection would then be indicated by a time gulf. We should have immediate knowledge of results; but we should be deprived of active thought in every form. There being no necessity for secondary reflections, the play of thought would, of course, be entirely physical, and hence this section would be left to the neurologist. As the matter stands, the secondary world does not ordinarily lack continuity, nor signs that the central nervous system is busy. A need being given, it is possible that its satisfaction shall be compassed instantaneously. The brain occasionally works thus, and it is imaginable that at some future period the man-machine will generally reach that high level. However, as this is not yet an accomplished fact, we must inquire as to the mode of satisfying a need. The process, we learn, has at least three aspects, and follows the method of cross-classification (sec. 102). [Is this so?] We redevelop what is to the point; we think of what the future has in store; or we analyse the instance before us. As to the first, when some difficult problem presents itself, we attempt to overcome it by bringing the past to our assistance. We consider whether similar incidents have occurred in our life or in another's, so far as our knowledge extends. We recall cases, and dismiss them if they are not pertinent. Thus we let the light of the past illuminate the present and the future.

Again, we may be aware of a problem which we shall be compelled to face in the future. What shall we do? We think of what X. will say, what action Y. will take, or how circumstances will shape themselves. We picture to ourselves a variety of situations and consider how we shall modify them by our action. We endeavour to divine all that can possibly happen, so that we may be equal to the occasion. We also consider how we may create conditions favourable to us.

Lastly, we have to deal with the intimate present. We do not now wander far and wide, for the notion to be embodied in a piece of work requires repeated attention. We stop again and again for a few moments to consider a problem which requires immediate solution. Or we wish to

* On the subject of the Comic, see also Fischer, Ueber den Witz, 1889, and Bergson, Le Rire, 1900, which has a bibliography of the Comic.
make ourselves well understood, and proceed deliberately to use more or
less explanatory illustrations. When we thus conjure up the past, or antici-
pat e the future, or move cautiously along in the present, we are said to
employ the imagination. [Observe carefully.]

Given serious work-a-day reflection, and we at once learn that under the
peculiar circumstances of our attention mechanism, a play of thought is
certain to result if the situation be appropriate. What we pursue under
the limitations of effort, we willingly do when restraint is thrown to the
winds. When purposely summoning up the past, we treat ourselves with
monkish severity; the topic in hand brooks no indiscriminate re-develop-
ments; and we think only of what serves our end. A time comes, how-
ever, when no necessities press upon us. We then wander about at will
over the plains of the past. As a child which is bathing in the sea, rushes
now this way and now that, shouts and splashes the water, bound by no law
of reason or decorum, so we revel in our vivid fancies. Now we laugh in
imagination, now we are sad, now we are excited, now we discern a lovely
face, or a fine character, now we travel abroad or revisit the scenes of our
childhood. Our only purpose is to remain in this restful mood, and we
use effort only in turning away from what has ceased to be attractive.
The series of images is not a firmly connected one, as when re-development
serves a serious purpose. We make no desperate effort to re-develop
certain things in preference to others. We do not try to curtail the life of
a scene, or to dismiss it, because it is wasting our time. Effort of an acute
kind is absent. We drift, and delight in drifting. The attention me-
chanism, as in all aesthetic activity, is expolting for its own ends an activity
otherwise seriously employed. It wants to be occupied; but not to be
tired or distressed. [Experimentally test the working of the imagination.]

The future also we are apt to treat dreamily. It is a relief to cut the
conventional moorings—a delight to discard rudder and sail, and leave the
boat of life to take care of itself. If we cannot attain to a royal crown, our
fancy depicts us as the rulers of the world. If the laurel be tardy in coming,
we see in imagination the whole earth bow to our genius. If we are scoffed
at, we dream of the sincere repentance of the scoffers. On the other hand,
we worry ourselves pitilessly. Perhaps we are dullards after all. Perhaps
we deserve contempt. Perhaps we are chasing a phantom. Perhaps we are
but weaklings. Or, again, in imagination, we successively walk, run,
climb, soar, delve and grope. Pleasant or unpleasant the mood may be;
but as long as the thoughts move along readily, and require no marshalling,
so long is the attention satisfied.

Once more, our own imagination is assisted by those of others. Our
thoughts are perhaps not sufficiently prolific to satisfy our demand, so we
sit down and read novels, biography, history and poetry. The treasures
which the community in this way offers are so great that many are tempted
to effeminately dream away a life time in a harem of fiction. The imagina-
tion, the normal object of which is to assist us in meeting emergencies and in
overcoming difficulties, is degraded into a purposeless fancy. Instead of
pleasant rest from arduous labour, we indulge in emasculating lassitude. Leisure should be the complement of work; unconnected with work it ceases to be aesthetically gratifying.

In conversation, in artistic endeavour, and in all kinds of amateur undertakings, there is a play of thought. The well-shaped sentences which are to assist clearness, are often formed for the pleasure of forming them. The ready response which is to cover our retreat or prepare an attack, is cultivated frequently for its own sake. The weighty pronouncement which is to help on the progress of humanity, is sometimes uttered for the sake of complaisance. Metaphor, necessary in primitive life and useful in modern civilisation, is at times employed without ulterior motive. [Observe the process in the creation of metaphors.] As children play at school, so adults play at life and work. The tools of the pioneers of humanity become our playthings.

The practical imagination, owing to the nature of the attention, gives birth to fancy-winged thought. Every power we develop is, in this manner, expanded into a capacity which is of itself desirable, until our light-born fantasies appear to us in a shaded or sober light. At bottom, they are a continuation of the child’s playfulness. Our imagination roams hither and thither, according to the stage of its development. The spaces between the occasions for necessary work must be filled up, and how else can that be done except by continuing in play what we began in earnest? Undoubtedly, too, the very play assists us to a limited extent in keeping the memory fresh and bright and our various capacities in good order; but, if we are prudent, we shall not lay much stress on these secondary advantages. Smooth thought, for such is normal thought play, forms a doubtful preparation for arduous work.

The play of thought in children, which is normally so abundant, finds its explanation in the fact that they are incapable of much effort. With them the play has a valuable side. They live in the present, and absorb the elementary social knowledge of things and their qualities. They learn the nature of the world they will have to face. Hence their indifference to the most perfect doll which, by reason of its perfection, offers so little to the attention, and their preference for a whip or a broom. Hence their contempt of such playthings as crowing cocks, roaring lions, and other perverse mechanisms whose simplicity exasperates them. The attention is a born traveller, and, especially with children, hates to be detained since it has to perform an educational mission in the dark interior.

All that has been said of secondary influences when dealing with visual forms applies here. We define attention-determined thought as need-satisfying development which, of itself, occupies the attention.

Playful effort of thought is cultivated in several ways. In such games as chess, neural rain is courted. Similarly many parlour games have a predominantly intellectual character. In the same way, we readily pursue favourite studies, though the neural effort required may be considerable. In all these, and related instances, however, the efforts
made possess scarcely any value outside the immediate field of application. Ideal intellectual games, which shall rival field sports, are yet to be invented.

Only space and time have prevented the expansion of this important section into a chapter. It would be interesting, for instance, to analyse the visual imagination. When I attempt to think of a golden mountain, I tend to re-integrate some rugged piece of gold or some sun-lit mountain. I can imagine no golden mountain similar to the ordinary mountains I have seen. So also I cannot think of a man whose face is violet in colour. On the other hand, I can imagine printer's types of all sizes and classes. If I wish to think of a church on a hill with its steeple downward, I succeed after a while, probably by picturing a reflection from a pond or river. With me at least memory largely supplies the imagination, while variety in observation is necessary to give the imagination elasticity to transcend the known. Imagination through the medium of language, where varying combinations are the rule, proceeds readily, and organised reaction has made lingual thought almost free. Nevertheless, if we compare the different kinds of stage plays of the same and of various periods, we shall see how the field even of verbal imagination is very much restricted, and is in general determined socially. [Some advanced students should make a close study of the nature of the imagination, applying, of course, all the rules mentioned in sec. 136.] It may be noted in passing that, given all sensations to be fundamentally alike (sec. 189); given a possibility of constructive imagination; given also a single sensation; and imagination could develop the whole world.

247.—Play.

It need hardly be said that motor activity is essential to a normal life. Without the aid of the muscles, action would be paralysed, the environment acting on us without our being able to react. Yet it is rare for the complete wants of the muscular system to be satisfied by our ordinary activities, while the child's work consists principally in play. Muscular exercise of a rational kind stands on a different basis from the exercise of the imagination, for in the latter case the useful results are, at best, very limited, while in the former, they are often ideally satisfactory. Motor play emphatically fits us for motor work.

The play of muscle is not based on the same necessity for continued exercise as the play of thought. In motor action we have the alternative of rest for a prolonged period, an alternative which is wanting in thought proper.* Nevertheless, only appropriate and varied employment preserves the physical tone. If we neglect exercise, the muscles grow flabby and dwindle, and if our work only makes demands on a few muscles, these alone are kept in a state of elasticity. So also over-exercise has the unwholesome effects with which we have become acquainted in our study of thought. Muscle play is distinguished in yet another way from thought play. We have seen how uniformly strain is discouraged in the latter case, while we know that physical effort is a salient feature in the former. This is an additional illustration of the organic basis of our nature. Where effort is genial, we greet it with delight; where it is toilsome, we recoil. Hence what is pleasant in motor culture is generally shunned in neural culture. Two additional differences moreover must be observed. The muscular system is normally more inured to effort than the neural system. Just as

* We have seen, however, that complete muscular inactivity produces almost immediate sleep (sec. 220).
dreams, through the almost entire absence of effort and of the criticisms of others, show least rationality, so the motor system through the presence of effort and the criticisms of others is ready for effective action. Our teachers can insist upon a physical movement; but in the present state of knowledge, they are easily baffled in matters of morals. If we can once bring controllable pressure to bear on men's thinking and moralising, it will become possible to teach strenuous thought and noble aspirations, while considerable effort will then form a part of thought play (ch. 10). Still, we must not forget that unrelieved muscular labour is not pursued for its own sake. The strain must never be very great or prolonged, and there must be variety. Various muscles must be called into action, and the exercises must not be monotonous, for a complex organism has to be satisfied in a complex fashion. If we could benefit a muscle only by prolonged effort, then a set strain alone would gratify us. In motor activity we are never blind to the fact that only what suits the muscle machinery produces the desired result. Personally we may believe that some curious drug which we are taking preserves us in health and strength; but the spectator who notes the absence of firmly developed muscles smiles in derision. No schoolboy can make his master believe that he is strong when he is not. In the ages to come the distinction between what we believe ourselves to have achieved morally and intellectually, and what we have actually accomplished, will be similarly drawn on objective grounds. Perhaps we shall then be able to trace the precise elements which rivet our attention in the contemplation of a sunset, and we shall then know, not only that system and change are necessary, but the precise constitution of the system, and the whole of the particular change.

Our definition of attention did not exclude muscular activities. To attend means to perform work, to expend energy, to keep going certain portions of our organism. Attention, in the wider sense, embraces all activities, though the attribute of constant and systematically changing activity, if we exclude such functions as those of the heart, only applies to the central nervous system. This fact, in itself, assures us that the organism varies in the mode of its activities; but not that it varies arbitrarily, or that anything is ever performed without mechanism or without functioning. Muscle play finds its justification in the nature of the organism in general and of the attention mechanism in particular. When our normal bodily activity satisfies the demand for variety, play becomes unnecessary from the utilitarian point of view, yet even then the attention, longing for easy occupation, induces men to take to sport, sometimes even to live, move, and have their being in sport. With the normal individual, whose bodily occupation leaves much to be desired, physical sport, in the shape of cricket, football, rowing or running, is one of the means of simultaneously relieving the attention and exercising the relaxed muscular system. The play of muscles should be defined as motor activity which, of itself, occupies the attention, subject, of course, to all the secondary considerations referred to at the end of the sections dealing with visual forms (secs. 237-42).
Given discontinuous needs and a continuous attention process and, as we saw, self-determined activity follows. Also, the lines along which that activity develops are as various, we know, as the forms of our thought, while individual differences find their explanation in social development and personal growth. Hence arises our appreciation of forms and sounds, of unity in the life of the intellect and the affections, of humour, and of intellectual and physical play.

However, we can make our outlook more comprehensive. With one bold sweep of thought we may gain a harmonious view—a view unblurred by divisions—of the totality of man's existence. The life of work and the life of play are not then to be looked upon as two unconnected realms which develop independently of each other. Rather must we see in them an organic whole without break and without cross purposes. Both tendencies together, when neither is irrational, blend into one vivid aesthetic picture. The eager pursuit of wealth, the lust for pomp and luxury and domination, the instincts which keep us on the level of the beast and the brute, the selfishness and ignorance which blind and mutilate; all these make life a jarring discord, setting man against man, and self against self. What is more, the evolutionary view which we have adopted, plainly makes for a life with large purposes and a broad horizon, and is opposed to the narrow aesthetic conception which ignores the oneness of work and play.

To daily with what is mean, sensual, engrossing, selfish, and disconnected with a rational ideal is to make impossible the higher aesthetics which embrace purposeful and self-determined activity. From this standpoint one cannot countenance any severance of aesthetics from ethics. The man who craves for intoxicants, for tasty food, for fine raiment and houses; who wears out a life in voluptuous and irresponsible ease, is far from deserving our emulation. What he admires is out of relation to life as a whole, and is, therefore, a discord in life's harmony. A conception of beauty which is true to itself, transfigures our being as such. It does more than justice; for it not only contemplates life, but expands it. Hence the aesthetic ideal will go in harness with the moral ideal. Above all things, it will strip off the ugly vesture in which the body social is clothed, as well as remove the imperfections of the individual. It will cause all the arts to have a serious aspect. It will aim at harmonising and purifying man's inner world. It will shed brightness and joy everywhere. Lastly, it will not develop at the expense of the larger life. In all our aesthetic speculations we must remember, what we have learnt throughout this work, that life is an organic whole, and that the aesthetic ideal, therefore, must be one in harmony with the most comprehensive ideal which the human mind is able to fashion.

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CHAPTER XII

SUMMARY

To the brim this phial's filled,  
Its quintessence love distilled.

249.—The Totality of Existence regarded as Static.

The contents of thought and action, i.e., what is given, are usually classed under such heads as thing, sensation, feeling, desire, volition, action, thought, imagination, dreams and memory, and each of these classes is usually regarded as more or less rigorously separated from every other. A close analysis, however, modifies the prevailing impression; for in searching for the most comprehensive formula, or the simplest view of things, we discover that our element may be taken to be a simplified touch system, and also that every appreciable fact—thing, sensation, feeling, etc.—can be pictured as a more complicated development or aspect of the almost detailless element or atom we set out with. That is to say, the differences between the various classes mentioned are, for the scientist, secondary or partial, and not primary or complete. At the same time we must allow that our simplified notions do not simplify things, do not prove that nothing but elements exist; but they only bear witness that a simplified view of what is given, a model view, is possible.

Coming to detail, we may say that even what is simplest is given in a system, and that such systems may be divided into present and past, or primary and secondary systems. (1) Starting out from what is simplest, we have vague, undefined systems called elementary sensations or feelings, of which the feelings of touch, of hunger, of pain, of doubt, of effort, of astonishment, afford examples, and the names of which feelings are interpreted by those groups of systems which regularly accompany each of them. Some what higher in the scale we meet with what we have called semi-advanced sensations, which embrace the senses of smell and taste. And, highest in order, we have hearing and sight, of which sight is the more complex. These last two sets of systems—sight and hearing—we have called advanced sensations. Any of the above three classes of systems, forming as they do the simplest things given, we call an Integral. (2) Next in order
of complexity, we have a Compound, where several systems are intimately blended, as in the matter of ordinary observation. (3) Then we have a Complication where, as in association, otherwise unconnected systems appear uniformly together. (4) Then a Combination, which consists of a train of thought or action. (5) Then systems regarded as exhausted, such as objects, e.g., a clock, or notions, e.g., loyalty, and systems regarded as unexhausted, such as a clock as immediately seen or loyalty as immediately felt. (6) Then a Connection, which deals with the lines of development possible in any instance, and is ordinarily called awareness, consciousness, knowledge, belief, doubt, certainty, reasoning and judgment.

The world is given in a coherent series, the abrupt tail-end of which is termed the Present, and every other portion of which, fitting in somewhere, is the Past. On this principle we determine, when necessary, the place of a fact in the total series—whether it be imagination, dreaming, illusion, simple memory, etc.—by noting what develops or forms alongside of it.

The secondary series has usually many minor characteristics; a section of it is much poorer in detail, is less defined, lacks a distinct environment, and disappears more easily than the sections of the primary series. To this may be added that the secondary series which, in the first few moments after primary observation, merely rivals the primary series, dwindles gradually until the given system is completely de-developed or forgotten, i.e., can no more be developed, this de-developing process being only preventable by early and repeated re-development. Lastly, in the panorama of action, thought, imagination and dreams, we have an elaboration of primary and secondary integrals.

The totality of existence, considered as stationary or static, is within itself distinguished only by difference in complexity—integral, compound, complicated, combined, connected, and other systems; or sensation, perception, association, train of thought or action, knowledge, all these constituting one series in the final analysis. Hence we do not acknowledge that matter and thought, or body and mind, refer to two mutually exclusive or discontinuous realms, and hence we abandon in psychology such notions as Self and Energy, which presume to account for the known and analysed by systems which are unknown and unanalysed, i.e., by a system within a system. The world as given is neither chaos nor cosmos, neither a disorderly heap of facts nor a symmetrical structure as science presents it, but any of these at different times. The formulations of the understanding are as truly part of the world as is a model of a machine or a reflection in a lake. The very sense apparatus which is to explain what is given, is itself an integral part of what is to be explained, and can, therefore, explain nothing (ch. 8).

250.—The Totality of Existence Regarded as Dynamic.

As regards changes, the following general statements—to be further defined—commend themselves if we take the human body as the con-
VENIENT TYPE OF THINGS. WE ARE BORN WITH CERTAIN GRADUALLY CHANGING WANTS, OR FUNCTIONAL TENDENCIES, AND WITH A MECHANISM APPROXIMATELY ABLE TO RE-ESTABLISH EQUILIBRIUM. THE WANTS MAY BE DIVided INTO PERSONAL (SUCH AS DISTINGUISH EACH INDIVIDUAL), PERENNIAL (SUCH AS HUNGER), PERIODIC (SUCH AS THE CHILD'S LOVE OF PLAY), PECCULAR (SUCH AS DEPEND ON ONE'S PARTICULAR ENVIRONMENT), PASSING (SUCH AS DEPEND ON PASSING CIRCUMSTANCES), AND POLITICAL (SUCH AS ARE DETERMINED BY SOCIETY, CLIMATE, ETC.) (SEC. 156). THESE PRESS FOR SATISFACTION, AND THE PROCESS OF SATISFYING THEM IS, IN ONE ASPECT OR ANOTHER, CONVENTIONALLY CALLED ACTION, THOUGHT, ATTENTION, REASONING, JUDGMENT, DELIBERATION, VOLITION, ABSTRACTION, AND THE LIKE. OWING TO THE LIMITATIONS OF THE MECHANISM, THE PROCESS IS CONFINED WITHIN NARROW AND WELL MARKED BOUNDARIES, I.E., ONLY A CERTAIN QUANTITY OF DETAIL IS GIVEN, NO MORE AND NO LESS; WHILST AWAKE, SYSTEMS ARE DEVELOPING UNCEASINGLY; AND TOPICS, LIKE DETAILS, TEND TO BE DISPLACED BY OTHER TOPICS. FOR THIS REASON, SO SOON AS A TOPIC IS BECOMING DETAILLESS, THERE DEVELOPS SIMULTANEOUSLY A SECOND AND PERHAPS A THIRD CONNECTED OR UNCONNECTED TOPIC; AND IN PROPORTION AS A TOPIC IS COMPREHENSIVE, SO A FRACTION OF IT TENDS TO MONOPOLISE THE WHOLE FIELD OF IMMEDIATE EXISTENCE. HENCE ALSO THE QUANTITY WHICH CAN BE DONE OR THOUGHT OF AT ANY MOMENT, IS STRICTLY LIMITED AND RIGIDLY DEFINED (CH. 2). THE PRINCIPAL CONCLUSION WHICH FLOWS FROM THE STATE OF THINGS PICTURED HERE IS THAT A STRUGGLE ENSUES BETWEEN NEEDS, OR TENDENCIES, AS A RESULT OF WHICH PRIMARY OR SECONDARY SYSTEMS OF EVERY CLASS ARE SIMPLIFIED AND ECONOMISED TO THE UTTERMOST, A PROCESS CULMINATING IN THE ALMOST ENTIRE SUPPRESSION OR ELIMINATION OF EVERY DETAIL WHICH IS POSSIBLY SUPERFLUOUS AND IN THE SIMPLIFIED SCHEME OF THINGS FURNISHED BY SCIENCE (CH. 3). THE NATURE OF THE MECHANISM IS RESPONSIBLE FOR OTHER CONSEQUENCES, E.G., THERE MUST BE FREQUENT AND ARDUOUS REPETITION AT DEFINED INTERVALS IF A SYSTEM IS TO BE READILY RE-DEVELOPED, THOUGHT OUT, OR PRE-DEVELOPED (CH. 5); THE CRUDITY OF THE MECHANISM EXCLUDES INDIVIDUAL GENIUS OR PRECOCITY AND PROVES ALL GREAT ACHIEVEMENTS TO BE SOCIAL PRODUCTS (CH. 9); OWING TO THE DIFFICULTY OF CLOSELY ATTENDING, THE HIGHEST CLASS OF THOUGHT IS RARE, OUR ORDINARY THOUGHT BEING POOR IN QUALITY, WHILE DREAMS PRESENT A CHAOS WHICH IS DUE TO THE LOW TONE OF THE ORGANISM DURING HALFSLEEP (CH. 10); AND, LASTLY, THERE BEING A CERTAIN BEST WAY OF SATISFYING THE CONDITIONS OF THE MECHANISM, WE OBTAIN THE VARIOUS FORMS OF AESTHETIC GRATIFICATION (CH. 11).

IF WE TURN TO THE SYSTEMS AS THEY CHANGE, WE LEARN THE FOLLOWING (CH. 4). NO SEPARATED SENSATIONS OR IMAGES ARE GIVEN IN ANY TRAIN OF THOUGHT OR COMBINATION, THERE BEING TRACEABLE ONLY A PROCESS OF DEVELOPMENT WHICH IS INCESSANTLY CONTROLLED AND GUIDED BY EXISTING NEEDS. THIS PROCESS TERMINATES QUICKLY IN PROPORTION AS SIMILAR PROCESSES HAD PRECEDED IT. THAT IS TO SAY, THE PRESENT PROCESS IS ONLY A SLIGHTLY MODIFIED PAST PROCESS, AND THE SUBSTANCE AND FORM OF THAT PROCESS MUST BE, AS A WHOLE, GIVEN. A MOTION TO AND FROM OF THE EYE, FOR INSTANCE, WILL YIELD WHAT IS REQUIRED; OR ELSE ANY POINT IN A SYSTEM MAY BE DEVELOPED ALONG GIVEN LINES; OR LASTLY, EXCITEMENT RESULTING FROM RECENCY, OR MOODS, INCLINATIONS, WHAT IS WELL
known, or disturbances, may be the factors in change. Hence while the most untrained mortal may yearn as much as the most highly skilled, to solve some subtle problem, the latter only will succeed, because with him alone the roads to success are constructed and in excellent repair. Needless to add that as a consequence of the organic nature of thought, innumerable tendencies or inclinations develop in the course of life, the growth and simplification of which tendencies remain usually unobserved. However, all primary and secondary processes satisfy some need or needs, and hence systems in a combination or train of thought are neither associated nor do they suggest one another; but the need—the striving for satisfaction—determines the development of any process from moment to moment along the given lines, being always aided by a host of subsidiary needs and by the effects of recency and excitement. All combinations are thus equally need-determined, only differing from one another in the manner of arrangement and the degree of complexity.

In speaking of needs and their satisfaction, and of functional tendencies, we have introduced teleological notions, i.e., notions yet complex and unanalysed. To avoid possible misapprehension, the process summarised above may be briefly described and illustrated as follows: A certain feeling, called that of hunger, develops and persists; then a certain number of changes occur, the end of which changes ordinarily is that the feeling, called that of hunger, disappears. Primary and secondary integral systems are thus all connected with a centre, forming to the view combinations or trains having a certain recognisable beginning and a certain recognisable ending. The beginning—looked at in the light of the whole process—we call the need; the changes ensuing we call the process of satisfying the need; and the cessation of the feeling marks for the onlooker the point of satisfaction. Most generally stated we may, therefore, say that in a primary or secondary combination the systems are found to follow a system which persists until certain changes supervene, and that such systems do not follow each other directly. This means, in other words, that the processes dealt with by psychologists resemble those observable in physiology and not those known in physics.

251.—Disturbances.

When something specially favourable or unfavourable happens, we have, as a consequence, a disturbance of normal process. Under such circumstances attempts are made to ease the strain, as through laughing or crying, or through removing the disturbance. In these cases we speak of pleasure (semi-opposed disturbance) when the disturbance is ultimately beneficial and is fed, and we speak of pain (opposed disturbance) when the disturbance is ultimately harmful and is strenuously resisted. The sole measure of the pleasure-pain is the extent of the disturbance. The accompanying feelings are indifferent in themselves, though in the lowest organisms feelings probably always co-exist with disturbances and disturb-
ances with feelings. Naturally, too, such disturbances are comparatively rare, needs, and not disturbances, being the feeders of action, or the initiators of systematic change (ch. 6).

252.—The Business of Psychology.

From the above we conclude that the business of the psychologist is to inquire into the following facts: (a) The nature and the growth of needs; (b) the range, (c) the effectiveness, (d) the liability to deterioration, to (e) improvement or to (f) breakdown, of the mechanism which is to satisfy the needs; (g) the process of satisfying the needs; and (h) the distinguishable parts of such process.