

The brain side of games, sports and pastimes / by H. C. Donovan.

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Publication/Creation

London : Jarrold, [1909]

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THE BRAIN SIDE
OF GAMES SPORTS
AND PASTIMES



H. C. DONOVAN

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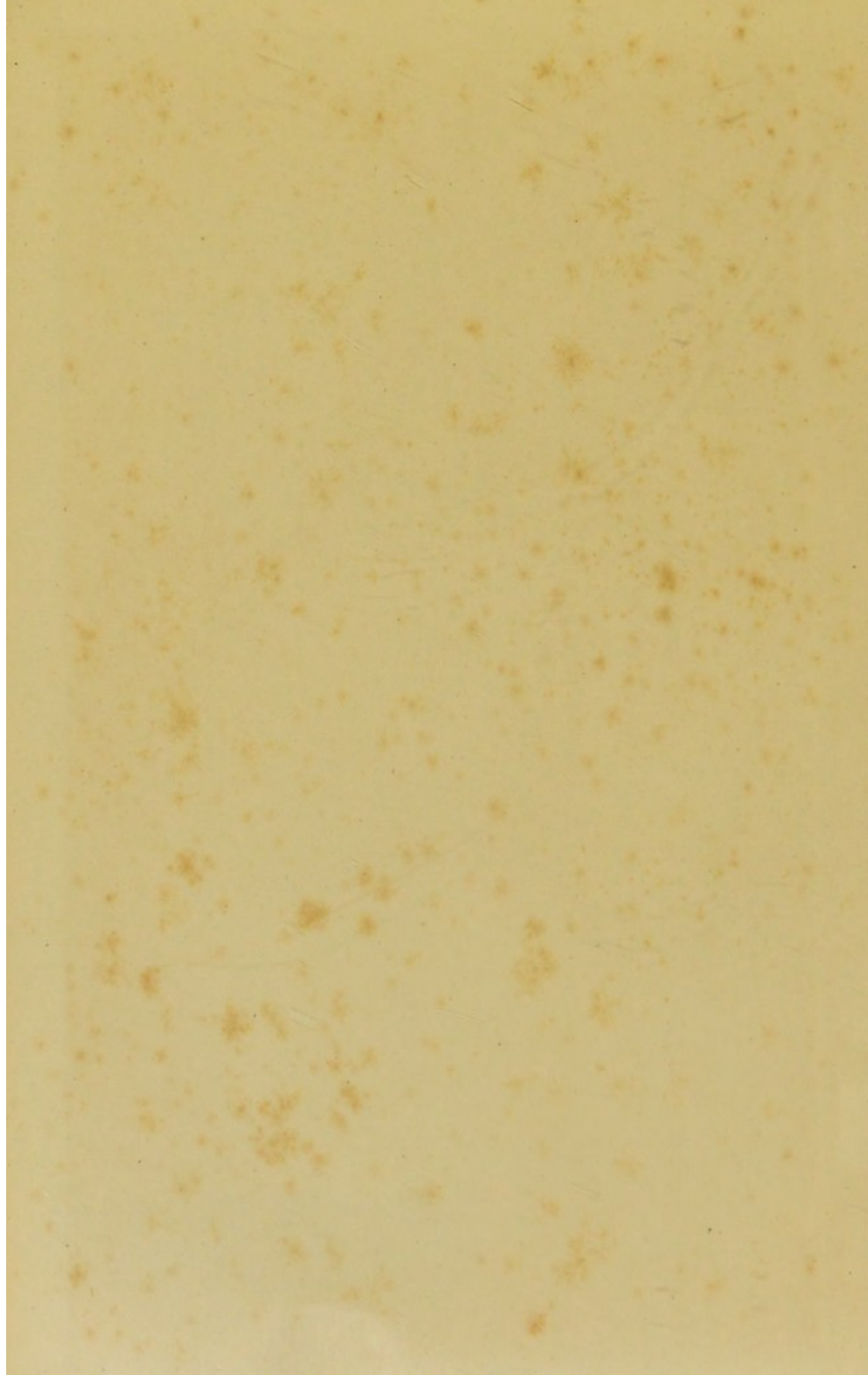
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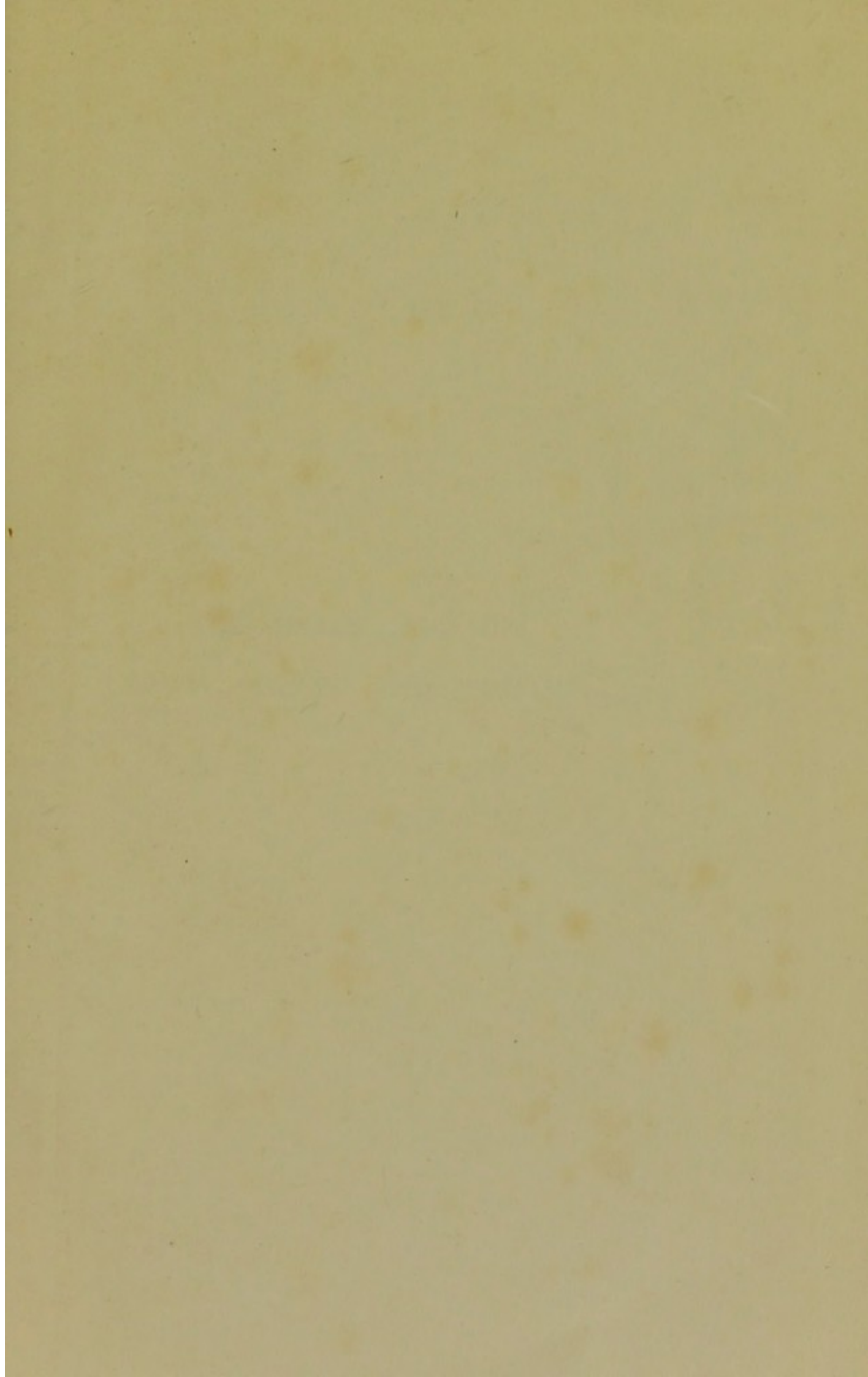


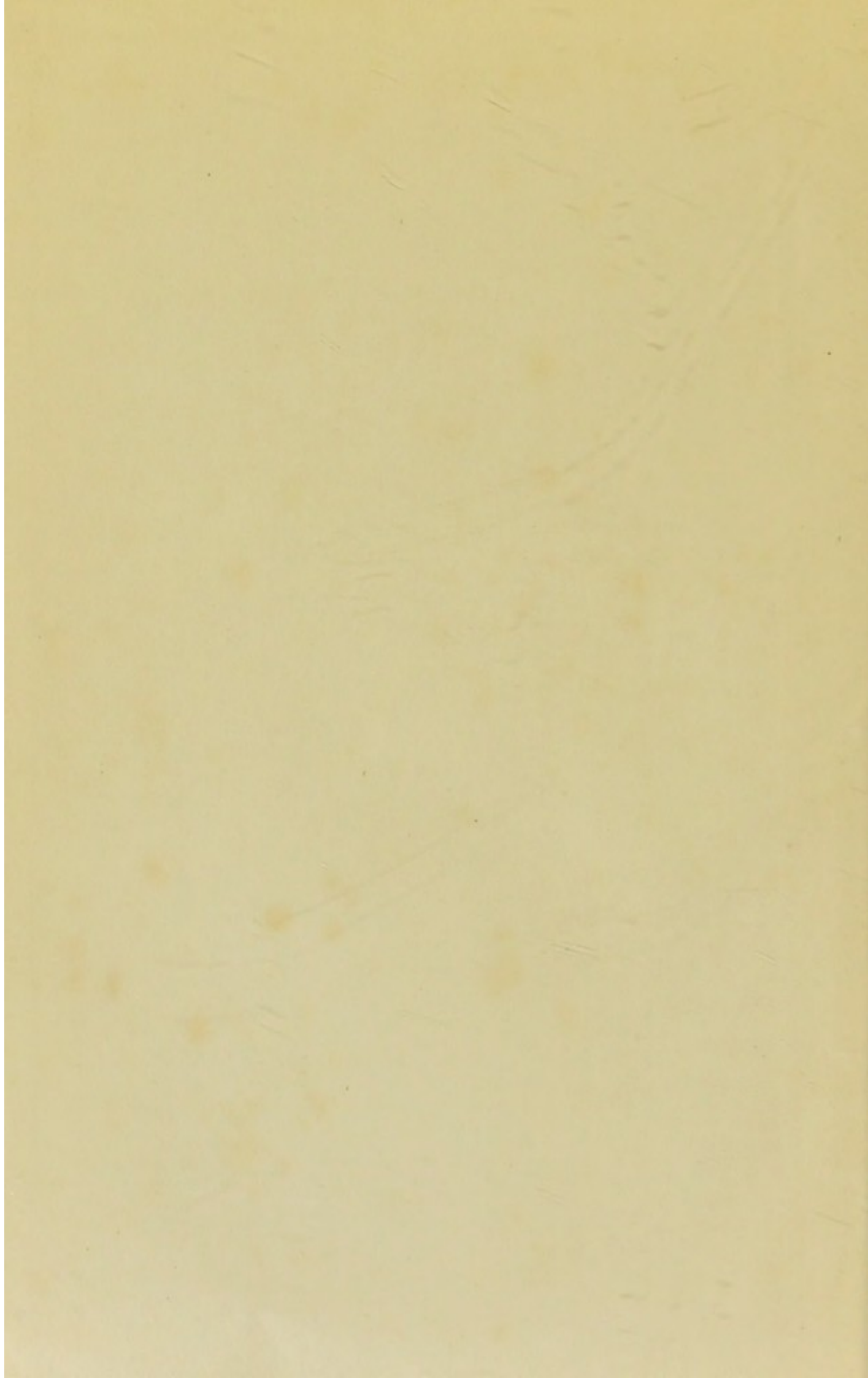
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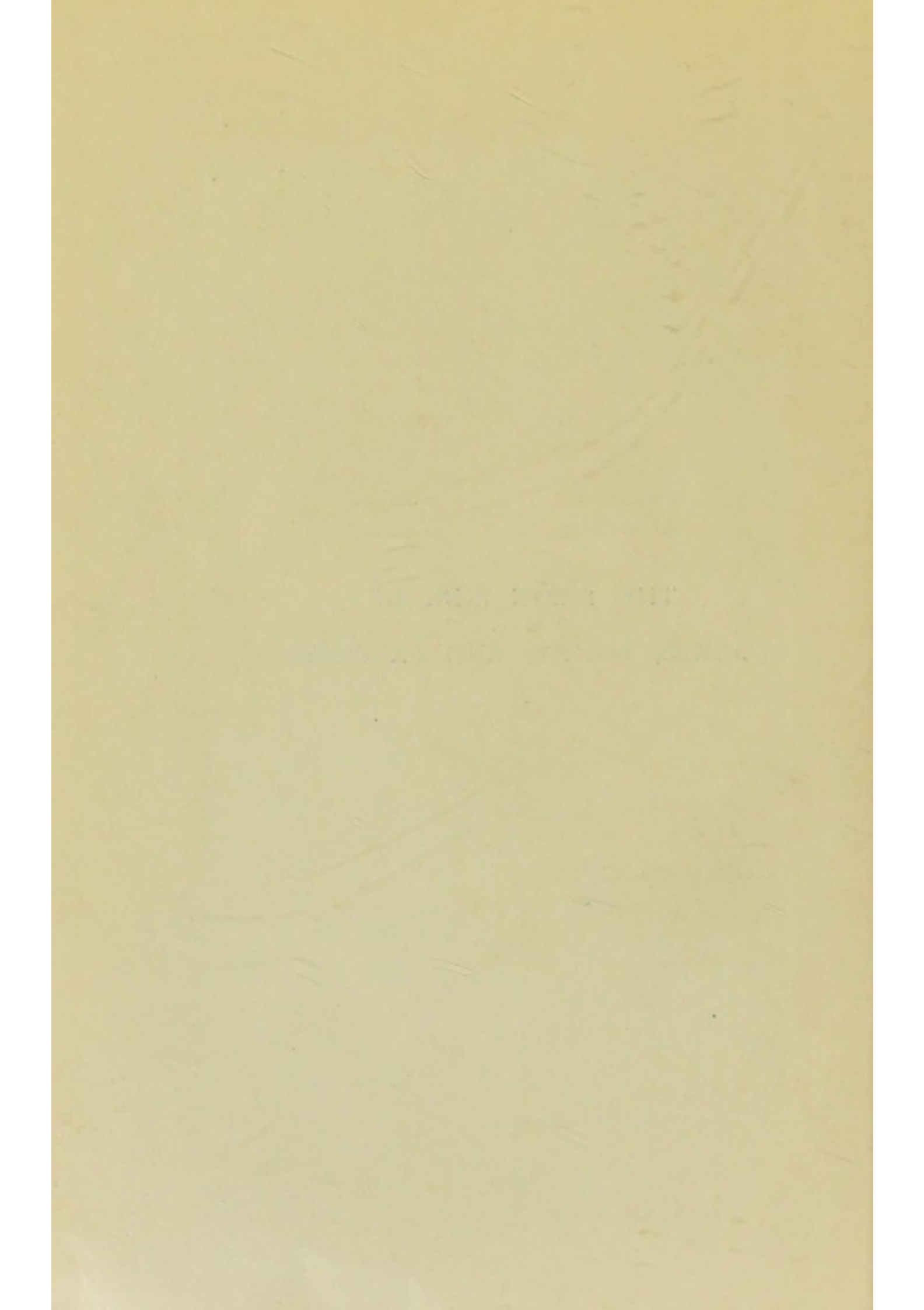
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THE BRAIN SIDE OF
GAMES, SPORTS, AND PASTIMES



THE BRAIN SIDE
OF
GAMES, SPORTS AND
PASTIMES

BY
H. C. DONOVAN

Author of "The Brain Book, and How to Read it."

SANS PEUR ET
SANS REPROCHE



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DEDICATION.

DEAR MR. LITCHFIELD,

In the little work which I am placing before the public, you will, I feel sure, approve of my effort to bring home to my prospective readers the importance of the cultivation of the perceptive powers in all systems of practical education.

I have named this work, which I now have the pleasure of dedicating to you, "The Brain Side of Games, Sports, and Pastimes," and trust that the subject matter will justify this title.

The brain side of many of these indoor games and outdoor sport games ought to be better understood, in order that their value, both as educational and recreational factors may be properly appreciated. If we phrenologists are right in attaching paramount importance to the cultivation of the perceptive faculties, then the playing of these games certainly strengthen them ; whilst many of those much over-rated classroom studies certainly do not, as they mostly educate the reflective powers. Even now, too much valuable time of youth and adolescence is occupied with studies exercising mostly the reflective faculties, which can have but little practical application in business and social life. This is far from the

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case with those pursuits and studies which exercise the perceptive faculties, as their practical application is always with us. If a man is capable of quick and accurate observation, he can, in most cases, take his own time for reflection, or he can make use of other people's reflections, but observations he must make for himself, and make them rapidly too, or lose his opportunity. Hence it is that it is better, in nearly all cases, to have good powers of observation, and moderate reflective faculties, than to have ever so well developed a reflective region of the intellect, with but moderate powers of perception. Strange to say, the general public are apt to attach too much importance to people possessing these very high foreheads, due to large reflective faculties, which as you well know is a great mistake.

Yours sincerely,

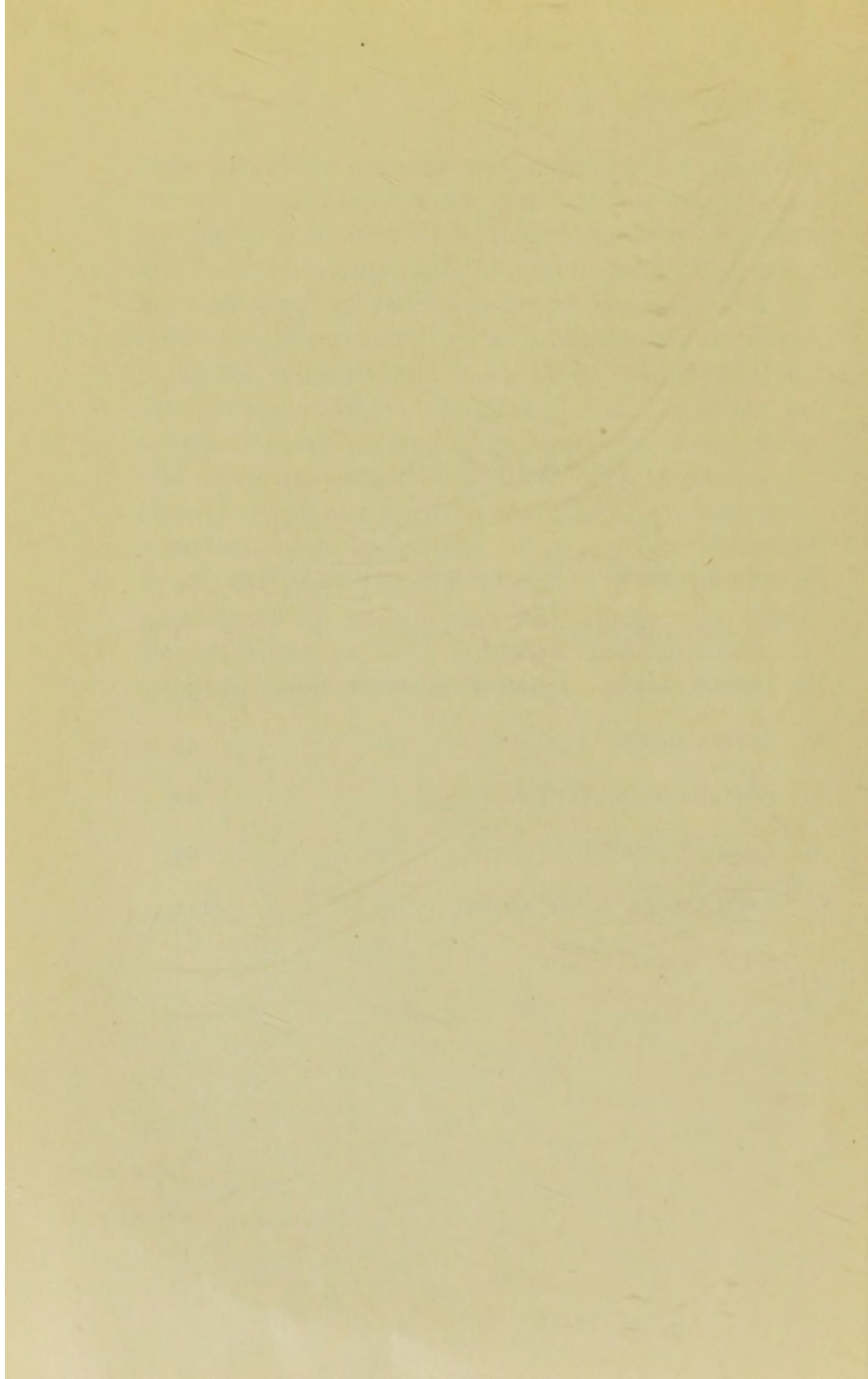
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INTRODUCTION.

IN this work, which the author has ventured to place before the public, he therein professes merely to give a very brief and perhaps incomplete analysis of the brain-work which is entailed in the execution of some only of the many games, sports, and pastimes which are now in vogue ; but those which he has dealt with will be found to be typical of many others which space has compelled him to exclude for the present. The author does not profess to be an expert in any one of these games, sports and pastimes, and therefore his efforts should not be looked upon in the light of instruction.

He has conducted his analysis entirely by the aid of Dr. Francis Joseph Gull's discoveries, upon which a theory of mind has been based, and the practical application of these discoveries is now known as the Science of Phrenology. From a long continued process of reflection based upon observation, he has arrived at the conclusion that a correct analysis of any brain effort which has to depend upon the nervous and muscular system of the body for its manifestation could not be pursued by the aid of any other known science.

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It should ever be kept in view that all definite work must inevitably entail the co-operation of both brain and muscles; therefore the invidious distinction which many attempt to draw between the educational value of one form of work and another is often unscientific; and probably arises from a want of correct knowledge of the constitution of the Human Mind. Some professors are continually speaking of certain studies as being "Brain-work," whilst they look upon the bench work, so necessary in Technical training, and also the various recreations and sport games, as being simply "Muscle-work." The latter being slightly spoken of as having no educational value.

Now many of these School and College studies, especially those relating to the Literature of Greece and Rome, entail the exercise of only a very limited number of the Intellectual Faculties, the first amongst which would be "Language," whose chief functions relate to verbal resource, verbal fluency, and verbal memory. It is the monotonous and uninteresting exercise of a few faculties which lead the unfortunate students, who have not a good brain gift of Language, to imagine that as their School and College efforts entail such a vast amount of brain stress these must consequently be so important to the cultivation of their minds; whilst the handicraft of Technical Institutes, and the much derided Recreations and Game-sports call into pleasurable activity a far greater number of Intellectual Faculties, together

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with many of those Moral and Animal Faculties, the healthy and varied stimulations of which have such a beneficial effect upon both Brain and Body.

The author does not wish to infer that the Classic studies of the dead Languages should be generally avoided; he only wishes to make his readers realise that most of these Game-sports, &c., exercise the Brain as well as the Body, and should, therefore, at least, be raised to the level of other educational subjects.

The two expressions "Brain-work" and "Muscle-work" should be altogether eradicated from educational parlance. The simple word "work" should convey to the mind of the educator all that is necessary.

All work can be made to either elevate or degrade the mind. It should, therefore, be thoroughly understood, both by Educationalists and Politicians, that it is not the nature of the work that either fatigues or degrades the man. It is the monotonous and excessive hours of toil which our past and present economic conditions have cast upon the wealth-producing class, earning for them that class distinctive expression, the "muscle-workers," thus inferring that muscle-work is degrading, as it needs no intellectual effort in its execution.

As preliminary to his task the author has deemed it necessary to give definitions as to the functions of the various Faculties of the mind, *i.e.* the Brain; according, of course, to the Phreno-

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logical rendering of the terms used. Apart from that, definitions are needed as there is much popular misconception with regard to the correct meaning of these Phrenological terms.

Most attention has been paid to the explanation of the Intellectual Faculties, more especially to those of the Perceptive group; together with such Animal Faculties as Aggressive Energy (Destructiveness), Defensive Energy (Combative-ness), Secretiveness, and also Concentrativeness.

The fact that some so-called sports are fashionable must not prevent the student of Phrenology from investigating the amount of brain-work entailed in their execution by the men who profess to be sportsmen. In forming an estimate as to the Intellectual side of any killing sport, the question of cruelty need not be considered, as that would concern the Moral Faculties. There being, of course, three aspects of all sports, viz., the Intellectual, the Moral, and the Animal. For instance, snipe shooting is, intellectually considered, a very fine sport indeed; but shooting snipe is by no means elevating to the Moral Faculties.

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CHAPTER I.

THE PHRENOLOGICAL ASPECT OF GAMES, SPORTS, AND PASTIMES.

BEFORE entering upon our subject, we find it of the utmost importance to first explain, as clearly and as briefly as possible, the word "Faculty" which Phrenologists have found it necessary to take unto themselves as a technical term. A faculty to a Phrenologist may be defined as a Mental Element, the brain seat of an independent, original, mental emotion—a command of nature, having for its object a special impulse, or inclination.

In the English language this word has various synonyms, such as "a talent," "an aptitude," "a mental gift," powers often arising from the happy combination of various well-developed faculties: used in any of these senses, as far as ordinary literature is concerned, the word "Faculty" is correct, but Phrenologists use the term only in one sense, and that as above described.

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Most of the Phrenological Faculties—their localisation in the brain, that is to say, the manner in which their development affect the formation of certain parts of the head, or outer surface of the skull, are well known. These faculties are common to all men: they are inherited, inborn, innate, a birthright of mankind; but like everything else in nature, there is no equality of development. In some races of men one or more of these faculties may be so weak as to be merely rudimentary, whilst in other races and individuals they may be said to form the leading mental characteristics.

The faculties at present fully discovered are over forty in number, divided, for the purpose of classification, into three main groups:

The Intellectual,
The Moral, and
The Animal.

Each of these main groups necessitate subdivision, as for instance, the Intellectual Faculties consist of two groups: the Perceptive and the Reflective; whilst the Moral Faculties may be said to consist of at least four groups: the Sensitive, the Religious (for the want of a better term), the Restraining, and the Personal. Then again, the Animal Faculties are classified into three groups, consisting of the Social, the Protective, and the Provident.

As our task is mostly concerned with the

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Intellectual Faculties, it is to these that we must confine most of our attention.

The first group of the Intellectual Faculties is the Perceptives, as follows :

Individuality,
Form,
Size,
Weight,
Colour,
Order,
Number,
Eventuality,
Locality,
Time,
Tune, and
Language.

The Reflective Faculties at present discovered are :

Comparison,
Causality,
Congruity,
Intuition,
Consequentiality, or
Inference ;

and probably one or two others not yet fully established.

The Moral Faculties consist of

Sympathy,
Imitation,
Ideality,

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Faith,
Hope,
Veneration,
Firmness,
Conscientiousness,
Caution,
Self-Esteem,
Love of Approbation, and
Independence.

The Animal Faculties are :

Amativeness,
Conjugality,
Philoprogenitiveness,
Generosity,
Concentrativeness,
Adhesiveness, personal,
 " collective,
Communicativeness,
Defensive Energy,
Aggressive Energy,
Secretiveness,
Vitality,
Acquisitiveness,
Constructiveness, and
Alimentiveness.

It will be as well to again refer to some of these faculties, and, as far as possible, to still further classify them and explain their functions.

The first group of the Intellectual Faculties is called the "Perceptives." They may be said to be the caterers to the Reflective Faculties, as the former supply the latter with Intellectual food. All profitable reflection must be based upon

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observation, without which reflection of itself is (very often) mere dreaming.

Commencing our task then with the Perceptive Faculties, which in their development affect the shape of the brows, we first come to the consideration of Individuality. It is not our intention in this little work to give instruction as to the localisation, or the method of manipulation necessary to the estimation of the strength of any of these faculties; for those who wish further to pursue the subject, we can only refer them to a previous work.*

The function of Individuality is to take cognisance of an object in its totality, such as a mountain, house, a tree, a brick, a piece of wood, a minute insect, &c. The breaking up, as it were, of any object into its various attributes, is the work of the other Perceptive Faculties, which we will again refer to as we proceed. Individuality then may be said to be the Focussing Faculty, as in its action it singles out one object at a time, sees it in its totality, and of course remembers it. Memory, it must be understood, is but one of the functions of a faculty.

It may be said that Individuality is simply sight. That in a measure is quite true, but there are those who have excellent sight yet see not, and though objects may enter into their brain they are seen at the time; but in consequence of this faculty being weak, the impressions left are slight and soon fade away. Some people then, have little

* "The Brain Book, and How to Read It."

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memory for objects, they see them but soon forget them, and, moreover, they are often not attracted by them; whilst, on the other hand, where Individuality is well developed everything when once seen is remembered, and the impression lasts in the brain in proportion to the strength of this faculty.

The following faculties perceive the different attributes of an object, such as

Form, or Shape,
Size, or Dimension,
Weight, or Specific Gravity,
Colour,
Order,
Number, or Quantity.

“Form” is the faculty that perceives and, of course, remembers shape or outline. Every object has its shape or form. Amongst the generality of artists the term “Form” has quite a different meaning, and would appear to have reference to general perfection—a quality arising from the happy combination of many well-developed Intellectual Faculties, but in Phrenology it refers only to the perception of shape or outline of an object.

“Size” perceives, that is, it notices, and of course remembers, dimension, and in consequence this Perceptive Faculty is impressed by dimension and proportion. Every object capable of being either seen or touched requires this faculty in order to gauge this attribute of perception. It is

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naturally therefore an important element in measuring distance at sight, as it is by the relative sizes of various objects that distance can be more or less accurately gauged, though it is admitted that in estimating distance—that is visible distance—other faculties may come into operation; but the perception and the memory of dimension are, of all things, the leading features in this mental power.

“Weight.” This faculty, which has from the first always been known as Weight, perceives the next attribute of an object, that is its weight, or its gravity. It controls and directs the muscular system as to the amount of force that is to be imparted to an object in order to overcome its *vis inertia*, and not only that, but the amount of force that has to be imparted to any object directly by any part of the body, so that any such object, after it has received the impulse, shall travel the desired distance and thus obtain the wished for result. As an instance of this, it may be necessary for a billiard player to impart such force to a ball that it shall, when struck with a cue point, travel the fraction of an inch, or many inches, and impart part of its force directly to other balls or indirectly from one or more parts of the cushions or sides of the table. Though the force may be made to vary, the position taken up by the player in the act of making the stroke does not necessarily vary with the force required. The steam or power required depends upon other brain energies, but this faculty estimates the

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amount of energy required for a given purpose. Whether it controls the force to be applied to the knife in the hands of a surgeon, the hammer or other implement in the hands of a mechanic, the kick of the footballer, the Club or Iron in the hands of a golfer ; in batting, bowling, or fielding in cricket, the force exerted, on all such occasions, is controlled by the executioner's power of estimating, and not only that, but being able to regulate the desired energy to be used in order to overcome the resistance of whatever nature that resistance may consist. This skill, in all such cases, rests with the Faculty of Weight, the regulator of force, pure and simple ; but not with the direction of that force ; that, it will be seen, rests with another of the Perceptive Faculties ; and not even with the generator of the energy, as such energy rests with some of the Animal Faculties, which we shall have occasion to refer to later on. As a further illustration of this faculty, it may be compared to an engine-driver who controls a certain valve which admits steam into the cylinder of a steam hammer : since the driver has to estimate the amount of steam required to either crack a nut, or make the hammer strike a mass of iron to its full capacity. Where that force is to be applied, it must be remembered, depends on the action of another attendant, who would bear some comparison with other of the Perceptive Faculties ; whilst the fire and the boiler would bear comparison with one of the Animal Faculties, formerly known as

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Destructiveness, but now called by the author, Aggressive Energy.

“Colour” is that Perceptive Faculty which perceives the various gradations of light as it may affect objects. It observes colour, which is an attribute of all objects. It notices colour, and, like all other faculties previously referred to, remembers, and thus directs the artistic manipulator in reproducing colours which he has previously seen. It has its bearing on many Games, Sports, and Pastimes, but it cannot be said to be a leading feature with any one of them; though some sports and pastimes may, however, depend upon correct estimation of colour.

“Order” is one of the attributes of an object. This word used in the ordinary sense, has so many references; but in our acceptation of the term we refer to regularity, uniformity, or consecutiveness. It has only a slight reference to the congruous, as objects may be said to be arranged in order, to be properly classified, and yet would not please the eye of an artist, who desires, in the arrangement of objects, to feel that there is a general blend of many of the Intellectual Faculties and therefore looks for the congruous arrangement of all things. “Order” then is simply regularity and classification: it is not either Harmony or Congruity. In past military training so much attention was paid to order and regularity that the individual initiative was drilled out of a man, and in consequence a number of soldiers thus trained were often

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placed at a disadvantage when they had to meet a foe where each individual member of that force was accustomed to use his Intellectual Faculties as he thought best on certain occasions. In many games and sports, Order, that is classification, regularity, is of the utmost necessity. As an instance, the sense of Order does regulate many games, though to a casual and uninitiated observer there would appear to be an utter disregard of Order. This impression would be due to insufficient observation or knowledge of the game. The uninitiated observer would fail to perceive Order where it really existed, as in playing such games as Cricket, Football, Hockey, &c.

“Number” is the next attribute of all objects whether they be taken separately or collectively. It is the perception of quantity, which can be expressed either by figures, words, or signs, the first being its general means of registration and communication. The application of this faculty is, for our purpose, limited and needs little attention on this occasion. It perceives quantity and, of course, remembers quantity; but the power of calculation depends upon other faculties of the intellect, though the perception and memory of number, that is quantity, must necessarily be its leading feature.

Thus we have dealt with those faculties which can be said to form the first line of the powers of perception, whose position in the brain are such that in their development they give shape to the

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brow; and their strength or weakness can be easily detected by the careful and instructed observer. Let the anatomical objections be what they may: it is none of our concern on this occasion to explain them away.

We now come to consider those Perceptive Faculties which have their external indication in those parts of the forehead, immediately above the region of the Perceptive Faculties, which have been previously referred to. The faculties which now demand our attention are:

Eventuality,
Locality,
Time,
Tune (or Tone), and
Language.

"Eventuality" is the faculty whose function it is to take cognisance of objects when in a state of mobility. Its position in the brain is such that its development affects the formation of that part of the forehead which is above "Individuality" and below "Comparison," and therefore may be said to be in the centre of the forehead. When the faculty in question is well developed, the phrenological observer can notice what may be described as a "fulness" in this part of the forehead; but there is no bump. When, on the contrary, it is actually in a weak state, there can be observed a more or less depressed appearance in this part. In our analyses of the mental aspect of Games and Sports, this faculty

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will be so much referred to that it needs special attention at this stage. Some phrenologists have endowed it with various names and functions: many have described it as general memory, but that is too wide a term, as all faculties have their memories.

Memory is not of itself a separate and independent faculty: it is but a condition or power of the various faculties in general, and of the Intellectual Faculties in particular. When memory, therefore, is spoken of to a phrenologist by an enquirer, the questions that should naturally arise would be "memory of what"? as every faculty of the mind has its memory. Eventuality has also been called the Historical Faculty, because it plays such an important part in the memory of events; but events, after all, are simply a combination of a number of objects and circumstances which were in a state of activity. As its function is to cognise passing objects and events, it therefore enables both the other Perceptive and Reflective Faculties to control the muscular system and thereby set them into action on the spur of the moment. As instances of this function, it is necessary only to cite two cases. The hitting of a ball with a cue point, as in billiards, on the one hand, and the striking of a moving ball with a bat, as in cricket, on the other. In the former case, the object to be hit is at rest. The player has but to impart a pre-determined force and direction to a ball, for a given purpose, at his leisure, and when this

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act has been done, the play ceases until the object or objects affected have returned to a state of rest. Each stroke is an act determined upon after due deliberation, the brain and the muscular system are not called upon for any prompt action; but with the batsman at Cricket it is exactly the reverse. The batsman can do nothing but watch the delivery of the ball, and take action only when the ball has arrived within the hitting range of his bat. It is then that the batsman has to perceive, reflect, and act, as best he can, on the spur of the moment. A fraction of a second either too soon or too late may be fatal. There would appear to be not sufficient time for any process of Perception, Reflection, and the direction of the muscular system. Of course, there is an interval between the anticipated pitch of the ball and the action of the batsman; but to be able to take the necessary action at the right moment there must be a proper appreciation of mobility and a consequent readiness to act on the spur of the moment, that is, at the sublime moment, in the nick of time. Other faculties, of course, are employed, but Eventuality is a leading feature—a *sine qua non* to successful play in all games where one or more players has to deal with an object in a state of mobility. Without a good development of this faculty there would appear to be a retardation, more or less great, between the efforts of Perception and Reflection, and the execution of the act. The comparison which, as

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an illustration, has been drawn between Billiards and Cricket, refers entirely to Eventuality. It is this faculty, then, that makes it necessary to divide games and sports into two distinct classes, because in such games as Billiards and the like, Eventuality is not called into a state of activity; whilst in Cricket, and all such kindred games, a good development of this faculty, it will be seen, is of very great importance. The power which such a brain gift thus imparts to anyone possessing it has often been spoken of as *presence of mind*, or *a quickness of eye*; such qualities are the effect, but not the cause. It is this mental aptitude which enables the happy possessor to take certain action when matters appear to be in a state of confusion, and thus some prompt effort saves the situation, and impending dangers are often averted, or certain tactical advantages are executed.

How important, then, must the cultivation of this faculty be in the education of youth. Beyond such exercise as Mental Arithmetic, there would appear to be little means of exercising Eventuality in either school or college: professors of education are so imbued with the value of book learning that they have ignored the existence of such a primitive power of the mind, and if they have realised that this power is an intellectual gift, the proper exercise of it has been crowded out by the numerous unimportant subjects with which the youthful mind is crammed when at school.

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"Locality" is the next faculty of the upper Perceptive Group. It is so situated in the Frontal Lobes that in its development it gives shape to the forehead on each side of the faculty of Eventuality. Its position frequently leads the inexperienced phrenological observer into a certain amount of error by associating its development with that formation known to Anatomists as the Gabelas, parts of the Frontal Synus, which in male adults is more prominent than will be found in female foreheads. The external indication of Locality, therefore, must be looked for somewhat above these anatomical points. Its function may be said to be the sense of direction, the sense of, and the memory of, the relative positions of objects; also the memory of place, that is to say, the memory of places and of objects when last seen in the relation they bear to other objects. Its function therefore should be easily understood. It is much exercised in many outdoor and indoor games. The proper exercise of this faculty would appear to be almost entirely excluded from school education. No doubt educators labour under the delusion that this mental power can be cultivated through the medium of verbal memory; hence the number of school books on Geography in order that students may commit to memory the names of Continents, Countries, Cities, Lakes, Mountains, Oceans, Rivers, &c., or in copying with lines on paper, the maps set before the pupil. Such methods of teaching Geography, exercise, to a certain extent, only verbal memory; and, of

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course, the faculty of Imitation much more than Locality, as this faculty can be properly exercised only through the medium of objects. All games then, which necessitate the exercise of this faculty, that is, the power of taking into consideration the relative position of objects, and many of them do so to a very high degree, are some of the best means of educating it in the minds of youth. Of course, there are other methods, such, for instance, as getting the pupils to know and understand the relative position of their school in relation to their homes, roads, streets, houses, and outlying objects, &c. This method is adopted in many cases, and so much the better; but this is somewhat apart from our subject. It may be said by professional educators, who may acknowledge the instructive influence of games on the youthful mind, that it is the duty of parents to undertake this work at home. The reply to this is that so many useless tasks are given to children and youth to do at home by their misguided schoolmasters, that after the pupils have had their evening meals, and completed their home lessons, there is no time left for educational games; so, if parents are to undertake the education at home of such an important faculty as this, which is usually neglected in school hours, they must rebel against these school home lessons, for the simple reason that the education of the powers of Observation, or in other words, the Perceptive Faculties, is of more importance to brain development than is the character of William the Conqueror, the

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wives of Henry VIII., the date of the supposed Norman Conquest, or any other such useless matter.

"Time" is the next of the Perceptive Faculties whose position in the Frontal Lobes of the brain are such that in their development they affect the shape of the forehead in a line with, but on each side, roughly speaking, of the position of the Faculties of Locality—there being two faculties, one located in each Lobe of the brain. The fulness, or depression in these parts being the only forehead indications of either strength or weakness of that mental power which appreciates, judges, estimates, and remembers, duration, and interval. This faculty has relation not only to sound in musical instruments, but it operates upon any object that is capable of being put into a state of movement. It follows then, that it must be an essential feature in all games where the players have to bring their brain, nerves, and muscles to act upon an object that has first been put into movement by another player. It also enters, to a considerable extent, in all gun sports, where the marksman has to fire at a moving object.

"Tune" (or Tone) is of course, the Perception of sound, and can therefore have relation only to sound, that is the noise produced by the vibration of anything, whether stationary or in a state of mobility. Time, the faculty previously mentioned, has relation to duration and interval when anything has been put into a state of vibration, travelling along the ground, passing

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through space, or a combination of these two states, that is bouncing. But the function of the Faculty of Tune is to perceive and remember Sound or Tone however produced. It has its location on each side of Time and is, therefore, situated near the outer angles of the forehead; but its development must not be confounded with what are known to Anatomists as the Temporal Ridges, for in those persons who have the Osseous and Nervous Temperaments predominating over the other Temperaments, these Ridges are more or less prominently or sharply defined. The observer must therefore train his sight, or rather exercise his powers of perception, to look for the developments either immediately in front, or immediately behind, the Ridges referred to.

“Language” is the faculty whose function may be said to cognise words, that is, forms of verbal expression, verbal resource, and, to a great extent, verbal memory; there, of course, being two faculties having their positions in each of the Frontal Lobes of the brain, and in their development they give prominence and fulness to the eyes. Though this description, as to the development, needs some discrimination on the part of the observer, as in some cases there would appear to be a muscular weakness which produces the unnaturally protruding eyes, thus giving the appearance as if they were not properly held in their positions.

This ends for the present our consideration of the Perceptive Faculties, and their respective

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functions. When we deal with Games, Sports, and Pastimes, we shall have so frequently to refer to the action of these faculties, their functions, and their combining influences with other faculties, that their nature perhaps will then be still better understood.

The Reflectives, which form the second group of the Intellectual Faculties, consist at present of the following, namely,

Comparison,
Causality,
Congruity,
Intuition,
Consequentiality, or
Inferenciality.

As the name of this group implies, their functions are purely of a cogitative nature, they have no observant power; they may be compared to our digestive system, as they can only digest—turn into nutriment—from that which the Perceptive Faculties have given them. Again, the Perceptive Faculties may also be compared to the commissariat of the army: they are the providers to the Reflective Faculties. The unobservant philosophers reason upon what they have either read or heard, and also from the examination of their own consciousness, and therefore their conclusions are inconclusive, and even, at times, absurd.

The development of these faculties give elevation to the upper region of the forehead, and when properly developed should not protrude, that is

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overhang, the Perceptive Region, but rather slightly slope away from the lower parts of the forehead where are situated the Powers of Observation.

In the centre of that region of the forehead which is above the position of the second line of the Perceptive Faculties, the centre of which is Eventuality, there will be found the external indication of Comparison. It is the first of the Reflective Powers, as it may be said to be the commencement to every process of Reflection. Its usual function is to compare things and statements which have been observed. Its name so completely signifies its office that any further explanation need not here be entered upon.

On each side of Comparison are the external indications of the development of Causality. The office of Causality is to stimulate the Perceptive Faculties to supply it with information in order that it may seek for the causes of present effects. Man, then, in contradistinction to the lower orders of creation, has been described as a tool-using animal, a communicating animal, &c.; but his still higher distinction is that he is a cause-seeking animal. It is in virtue of this faculty that he possesses this second power of Reflection.

The verbal expressions indicative of the action of this faculty are, Why? How? When? Where? and so on. The observant cause-seeker is a discoverer, whilst the non-observant cause-seeker is often but a mere questioner—one who wants

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to know on easy terms, and in extreme cases a mere idle or objectless enquirer.

“Congruity” is the next Reflective Faculty. Its position on the forehead is in a line with Comparison and Causality, but outside the latter faculty. Its development gives fulness and roundness to these parts of the forehead. It may be said to be the chief element in all judgment, and harmony, both as regards thought and action. It is the Court of Appeal, and, in this respect, may be said to be the controller of the Intellect. Like a Chairman of a meeting, or Speaker of a Parliamentary assembly, this faculty does not assert its presence until discord has occurred, or is anticipated, that is, when something incongruous has happened, or is likely to happen. When the Speaker usually says “Order! Order!” he thus implies that his sense of Congruity has been disagreeably affected.

The other Reflective Faculties are Intuition—a leading feature in general diagnosis.

We have now to conclude with the last of the known Reflective Powers, which we have named Consequentiality, or the power of inference. As Causality stimulates the rest of the Intellect to seek for causes of present effects, this faculty impels the rest of the intellect to seek for future effects from present causes. In its operation it tends to prediction, and thus the unobservant predictor is, what may be called, the False Prophet. The French Revolution, though predicted by many, came upon the unreflective as a

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surprise; the American Civil War was long predicted; the present Trust System of commerce was predicted. Gigantic financial crises are predicted throughout the entire commercial world due to the monopoly of gold, which is the enforced medium of exchange.

We now pass to a still briefer review of the Moral Faculties. They consist, for the purpose of classification, of four groups:

The Poetic, or Sentimental,
The Religious,
The Controlling, or Guiding, and
The Personal.

The first group, the Poetic or Sentimental, consist of

Sympathy,
Imitation, and
Ideality.

The second group, the Religious—for want of a more explicit term—consist of

Faith,
Hope, and
Veneration.

The faculties which form the third group—the Controlling and Restraining Powers—are

Firmness,
Conscientiousness, and
Caution.

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And, finally, the Personal group consist of

Self-Esteem,
Love and Approbation, and
Independence.

Though, in a sense, the names of these faculties convey their respective functions, yet much popular misconception as to their powers and influence on the mind are almost universally entertained. Many are under the impression that Sympathy is synonymous with Generosity, though they are distinct. Self-Esteem is considered as a kind of vice, whilst its opposite condition, that of Humility, is, theoretically considered, a virtue. Faith is another faculty which is greatly misunderstood. Excessive Faith is upheld by Religionists as a heavenly gift, whilst excessive credulity, when met with in social and business affairs, is looked upon as a sign of weakness. Almost similar comparisons can be drawn with regard to the misconceptions as to the function of the other Moral Faculties.

Limited space compels us now to pay our attention to some of the so-called Animal Faculties; they are classified into at least three groups: the Social, the Protective, and the Provident.

The first includes a great number of faculties, but as only one of them has really a direct and important bearing upon Games, Sports, and Pastimes, it will only be necessary to name them,

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and thus bestow more particular attention to Concentrativeness.

The first group then consist of :

Amativeness,
Conjugality,
Philoprogenitiveness,
Concentrativeness,
Personal Adhesiveness,
Communal ,,
Generosity, and
Communicativeness.

It will be our endeavour now, before passing on to the consideration of the other groups of faculties, to pay, as far as possible, as much attention to Concentrativeness as space will permit.

This faculty when first discovered was named Inhabitiveness, since then its function has been variously described, such as Attachment, Attention, the Power of Pursuit, Fixity of Purpose, &c. Such words and expressions, however, it must be admitted, all convey to the student of Phrenology certain phases of its function. Some of the lower animals possess this faculty in a very high degree; the domestic cat being a marked instance, notwithstanding the fact that there are individual cats to be found which are comparatively weak in this respect. This power will also be found to be well developed in many breeds of dogs, such as Pointers, Setters, &c., though there are individual dogs of these breeds, which have shown a marked

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weakness as regards this Power of Pursuit, and have, therefore, been worthless for such sports as require dogs with great concentrative power. These fickle animals never do credit to their trainers, as they cannot be relied upon to steadily follow up a scent, being always liable to be drawn off the scent they commenced to pursue for some other attraction. Staunch dogs are not so easily drawn off; they follow up a scent until they find the object of their pursuit, or until the scent is entirely lost. In describing, then, this faculty in the lower animals Fixity of Purpose would be a very appropriate term to use; but in regard to man, the word Concentrativeness would best describe its function. It is a marked characteristic in some races of men and nations, whilst in other nations or tribes it is by no means a leading feature, though it may be found strongly developed in some individual case, and very weak in others.

It can therefore be easily realised that this Faculty of Concentrativeness, this Fixity of Purpose, this Power of Untiring Pursuit, must naturally play an important part in all the affairs of man, both as regards his occupations and his recreations, whether such be of a sedentary or of an active nature.

The amount of development of this faculty in anyone with sporting instinct must determine whether such a person is either a staunch or a fickle player or sportsman, because the latter will take up with any particular game or sport that his

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fancy may direct, and make more or less rapid progress with it, in accordance with the strength of his other mental endowments, but he never attains a high degree of proficiency, as he is always liable to cool off, or to be drawn away by some other attraction, which, however, does not last long. In fact, such men are unreliable as regards the power of continuous pursuit. On the other hand, men endowed with a good development of Concentrativeness are just the reverse, consequently they are staunch, their Fixity of Purpose is strong, their Power of Pursuit never fails them. But good Concentrativeness alone will not of itself make a successful player in any game, notwithstanding the constancy of the player. His failure, therefore, would be due to other causes; but in any case the power of Concentrativeness enables him to make the best of what he has got: with the necessary intellectual gifts the Concentrative man is bound to attain proficiency.

In the home education of children and youths the study of this faculty by parents and guardians in relation to competitive games is of the greatest interest: this has been referred to in a previous work.

THE PROTECTIVE GROUP.

This consists of at present four well-known faculties, viz: Aggressive Energy usually called Destructiveness; Defensive Energy, formerly known as Combaticiveness; Secretiveness; and

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Vitality. Aggressive Energy is the first faculty of this group. It has hitherto been called Destructiveness, but we have thought fit to discard this term, as we consider that our expression best indicates its function. It is that energy which impels to attack; to destroy; to kill or injure; to disable; to overcome; to tear aside; to cut asunder; to break; to force aside; to knock down, &c. All these acts may be done either by the weight of the aggressor's body, or with the hands, or feet, or indirectly through the medium of a weapon, or an implement, such as a sword, or a bat, &c.; or by an object thrown, bowled, rolled, or pitched, such as a ball. In outdoor games which necessitate the exercise of such an energy, the infliction of personal injury is, of course, not the object in view. This point must be continuously kept in mind when estimating the brain value of any game or sport. When such muscular exertion as is necessary is delegated to an outside force, such as in the case of guns, &c., where the energy is derived from an explosion, then the sporting value of the pursuit decreases in proportion to the amount of force thus delegated. A comparison between such sport-games as Golf and Cricket on the one hand, and the various gun-sports on the other, will well illustrate our contention. For the sake of further illustration, however, we will draw the odious comparison between a destructive urchin on the one hand, and some pampered sportsman on the other. The former having his faculty of Aggressive Energy

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excited by the sight of a small bird, selects his weapon of destruction, a stone, impels it with his own energy, controlled and directed by his faculties of Individuality, Size, Weight, and Locality, aims to hit the bird and usually fails. Whilst the latter stands in a selected spot in a well-packed game preserve. A loaded gun is handed to him, and all he has to do is to level his gun at one of the numerous birds that are driven past him, and pull the trigger. His success is great. But after all, there was more of the true sporting instincts in the boy's effort than with the favoured sportsman.

DEFENSIVE ENERGY.

This faculty, though it may call to its aid the entire muscular system and many of the other faculties of the mind, it is always exerted with a defensive object in view. It was at one time known to Phrenologists as Combativeness, but we have discarded this term, as it implies general contention rather than only defensive action. Contention requires the use of both the Aggressive and Defensive Energies, while the Animal Energy, which we are now endeavouring to explain, has its office only in acts of defence, such as in avoiding attack by temporarily retreating; stepping back or aside; warding off; guarding; and parrying, as in fencing. All such acts are recognised as legitimate, and must work to success in all contentions. In Football, as it is sometimes played in the United States, Defensive Energy

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appears to be ignored, both sides endeavouring to win, simply by acts of more or less violent aggression. Such, of course, is not true sport, and therefore not scientific play. Defensive Energy is also well illustrated in such games as Cricket, Football, &c., and will be occasionally referred to when treating of games of this nature later on. It is well exemplified in such personal combats as boxing and fencing, where the opponents have to be on the *qui vive* to use either Aggressive or Defensive Energies. The former energy, in delivering a blow with the fist, or in cutting, or thrusting with either a sword or rapier: Defensive Energy, in either warding off the intended blow, or dodging or stepping aside, or jumping back; in guarding or parrying the cut or thrust of the opponent's sword. It is not caution alone that controls such acts, any more than the faculty of Caution controls the Aggressive Energy, though both acts may be regulated or controlled by Caution. Acts of defence, be it remembered, require just as much strength and skill as acts of aggression. What we wish to point out is that those two distinct acts emanate from separate faculties.

SECRETIVENESS

Is the next faculty of the group. It comes into operation in both aggression and defence. It is that power of the mind which expresses itself in concealment, whether in relation to acts of

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aggression or defence, muscular intentions, or facial expression. The use of this faculty has no connection whatever with the Moral Faculties, as it can be exercised for either a good or a bad purpose; both by the honest and the dishonest; with good, as well as evil intent.

VITALITY.

This faculty, which here can briefly be described as the Love of Life, or Tenacity of Life. For further information we can only refer the reader to our previous work, where a chapter devoted to this faculty will be found.

The next and concluding group of the Animal Faculties are the Provident, which consist of

Alimentiveness,
Acquisitiveness, and
Constructiveness.

They, of course, have their influence on all Games, Sports, and Pastimes; though, for our present purpose, they need not take up any more of our limited space.

With a few concluding remarks on the Eye, that is, the eyesight, we will close this portion, and then commence our task of trying to analyze the brain side of such Games, Sports, and Pastimes as we intend to dwell upon.

There is an ingrained tendency with many experts and judges of Sports and Pastimes, which require more or less intellectual exertion in their

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execution, to ascribe too much to the eye, as if the eyes had in themselves intelligence. Hence we often come across such men, when speaking of any particular game-sport, to ignore the brain side of the question altogether, and, in consequence, to ascribe quickness, dexterity, and pedesterity to functions appertaining solely to the eye. According to their reasoning, everything rests with "a good eye." Thus a good eye for Cricket makes a man a good cricketer, &c. When closely questioned, however, they are forced to acknowledge that such skill does not entirely depend upon either long or short sight, as they well know that such powers of vision can be rectified by suitable lenses. The eyes are but a means of conveying impressions to certain Perceptive Faculties, such as Form or Shape, Size or Dimensions, Weight, Colour, &c. The eyes possess in themselves no more intelligence than do the fingers, the hands, the arms, the legs, the knees, the feet, or the toes. Anyone possessing in sufficient strength the brain gift of estimating the weight of any object capable of being moved, can convey impressions to this faculty through the medium of any such parts of his muscular system as may be convenient. Impressions thus gained are conveyed through the medium of his nervous system to certain parts of the brain. It is the same with the eyes; they are but the media of communication to some part or parts of the brain.

In accounting for proficiency in Games and

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Sports which require in their execution either dexterity, pedesterity, or visual accuracy, the hands, the feet, or the eyes will not therefore need our special attention, as in our analyses of Games, Sports, &c., we shall confine our investigations to the faculties of the brain. Finally, if proficiency in such games as Cricket, Billiards, Golf, &c., depended upon good eyesight, then every man who had perfect eyesight would excel equally well in all these games, which we must admit is not the case. To ascribe, therefore, proficiency in such games as we have instanced to either good eyesight, or even to great muscular strength, is just as absurd as to ascribe maternal love in a woman to the strength of the arms or the quantity of nutriment which Nature provides her with; because maternal love rests neither with the muscular or the nutritive systems, but from that social faculty known as Philoprogenitiveness.

This misconception on the part of some game and sport experts, who have been questioned by investigating Phrenologists as to the mental powers necessary to excellence in such a sport-game as Cricket, for instance, prevents the enquirer from obtaining any useful information from them. At the word "Brain," they usually shake their heads, shrug their shoulders, or laugh, and stop further questioning by saying, "All that you want is a good eye."

CHAPTER II.

INDOOR GAMES, OR GAMES OF MEDITATION.

IT is necessary, in order to comprehend what is to follow, to understand that the independence of the faculties must be continually kept in view (though no one faculty in any work can act absolutely alone as other faculties are requisitioned), before we can follow the amount of brain-work entailed in most Games, Sports, and Pastimes.

On this occasion, we can only deal with a few of these, but those which we have selected for our purpose will, to a considerable extent, be typical of all those which we have not been able to refer to.

With games in particular, it will be necessary at this stage, to divide them into two main groups or classes, and speak of them as the Sedentary and the Active, the non-muscular and the muscular, or the indoor and the outdoor games.

Of the first group—the Sedentary—we will select Cards, Chess, Draughts, and Dominoes.

In the execution of these games, it must be admitted that the muscular system is necessarily employed to such a limited extent as to render muscular energy on such occasions as being worthy of little notice.

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WHIST.

Of Cards, we need only instance two games. To commence with we will take Whist and its kindred pastimes. In Whist, which is typical of so many other games, many of the Perceptive and the Reflective Faculties are actively employed, such for instance as Individuality, Number and Locality, of the Perceptives, and Comparison, Causality, and Consequentiality, of the Reflective Faculties. From the card that is first played, the careful player will at once commence to observe, and a process of reasoning is naturally started, Causality is excited, for when the first trick is off the table the other players are naturally disposed, as the game proceeds, to reason through Causality and seek to know why such and such cards were played. Comparison is actively employed in comparing the cards that have been played (if remembered) with the cards exposed on the table, and those in hand, and, if during the play, a player's process of reasoning is upset, Congruity is disagreeably affected in expectation of what should have been played and not fulfilled. Whist exercises Caution, as consideration before each card is played is necessary ; also Secretiveness as it is of all things a game of concealment, not only as regards speech, but also as regards each player's facial expression. Hope is likewise affected as to the expectations of making the best of one's hand ; and Conscientiousness is required to continually keep oneself within the rules of the game. If, then, this game can call into activity so many faculties of the

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brain, its educational value for youth even in school hours should not for a moment be ignored. The mistake is in allowing young players to find out nearly all the rules and penalties for their infringement for themselves, whereas all rules and regulations should be systematically taught and penalties rigidly inflicted for their infringement from the first. Many occasions where enforcements of penalties come upon a player as a vexatious surprise, often disagreeably affecting Veneration, Hope, and Love of Approbation, would be avoided.

It is much to be regretted that so many educationalists and even parents are, to a certain extent, prejudiced against the use of cards as a means of education for the young. They used to be called the "Devil's Books," and, at the best, only another form of idling. Consequently, few educationalists have ventured to advocate their use in the school-rooms. In order to avoid the prejudice against the use of cards, either in the schoolroom or at home, other objects, printed on cards, might take the place of the old style. Thus instead of clubs, diamonds, hearts, and spades, these might give place to other signs, such, for instance, as races of men, birds, beasts, or fishes. Trumps in such cases might be called conquerors, cannibals, &c. By this means, the educational part of the game could be retained and the cards might become more attractive to children. The proper learning of all rules, &c., should be coincident with ordinary instruction before playing the game; and not, as in ordinary school lessons, merely to be committed to

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memory and soon to be forgotten, as all "cramming" lessons usually are. The faculty of Concentrativeness is exercised in Whist as each player has to try and fix his attention not only upon the cards in his hand, but also on the cards which he, his partner, and his opponents have played. In teaching this game to youth, discrimination must be used, as there are some young brains which it would not be advisable to have this faculty much exercised, this power being quite large enough ; but with the Anglo-Saxon race Concentrativeness, as a rule, is not very well developed, and, therefore, requires some means of stimulation ; such non-Concentrative youth should therefore be encouraged to attentively play a game, or at least one round, with strict attention, and not allowed to fly off to some new attraction and leave a game half finished. It is not advisable for educational purposes that children should be forced to play out a whole game, a few rounds played under instruction would only be necessary.

Another good effect of this game on the young mind is teaching the practical value of Secretiveness. This faculty is universally misunderstood both by parents and teachers, because large Secretiveness is often erroneously associated with deceit, a quality much more due to small Conscientiousness than to large Secretiveness, whilst these two mental powers are entirely distinct from each other. Both parents and educationalists must bear in mind that whatever is a source of innocent intellectual amusement to adults, must necessarily contain much that is of great educational value to both children and youth.

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BRIDGE.

In considering the intellectual efforts in playing this form of the Whist game, we must not lose sight of the fact that it is nothing more nor less, as far as the playing of the cards is concerned, than "dummy" Whist, where one of the four packs is exposed to view on the table; each of the three players, therefore, starts with the advantage of having twenty-six cards in view, whereas in ordinary Whist each player sees only his own hand, viz., thirteen. Therefore, in this respect, the mental work of each player is somewhat less than that in true Whist.

The superiority of Bridge over Whist exists only in the scoring the relative value of the different suits as regards trumps, honours, and other details of relative value. The rules and regulations as regards combination, chances, and relative value of the cards make the game essentially speculative, bringing into action Acquisitiveness and Hope, together with the Reflective Faculties of Comparison and Causality.

The commercial element of the game may be eliminated by excluding stakes, &c., but the mere love of the intellectual work of the play will ever fail to give the proper zest to this game. To gratify the commercial instinct, as well as the love of conquest, there must be a reward to hope for.

The elaborate system of scoring, so essential to this game, to be a proper brain test, the printed rules, &c., should be kept out of sight during the play and referred to only in cases of disputed scoring,

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when either side should be at liberty to claim penalties for mistakes.

CRIB.

This is a game requiring less mental effort than most games of the Whist nature. The Reflective Faculties are less called upon for much work, the powers of the mind only being attracted by the cards actually in sight. It is, therefore, purely a perceptive game, and then only requiring the use of Individuality and Number; when played properly, that is with great rapidity, and all infringements duly pointed against him whose duty it is to score his own advantages, brings into operation the Faculty of Eventuality. The brain efforts are, therefore, not very various, but a more pleasing way of teaching the young mind to exercise the Faculty of Number with card games it would be somewhat difficult to devise.

CHESS.

In the execution of any game or sport which requires the particular use of one or more of Perceptive and Reflective Faculties, it must not be lost sight of by educators, that not only are the faculties developed and strengthened, but their respective memories are likewise improved. In the game of Chess, which exercises in such a marked degree Individuality and Locality, and Comparison, all the numerous attributes of these faculties are therefore duly educated. Memory, as regards the

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relative position of objects, is likewise cultivated ; there being, of course, as many memories as there are faculties ; but such is not yet fully realised by either many parents or educators. As an instance of this, a gentleman having a knowledge of Phrenology, called one evening on a friend, who said to his visitor, " Just wait a moment whilst my daughter finishes her home lessons." The girl then handed to her father a book, and proceeded to repeat a long account about King John, who collected an army and marched to Wisbech, where he fought a battle ; and then did a number of other things.

When the task was over, and the girl had left the room, the guest said to the parent, " What's the use of all that to the education of your daughter ? "

" Oh," said the father, " it educates the memory."

" The memory of what ? " asked the visitor, " when there are so many faculties of the intellect that each require their fair share of exercise, why devote so much of the girl's time to the mere memory of words connected with useless and discredited history ? "

The father's rejoinder was that, " Memory was memory," thus implying that verbal memory was all that was necessary.

Had the father devoted the same amount of time which the child had spent in committing to memory this useless matter in order to be able to repeat it to her father to instructing the child in such a game as Chess, he would have exercised and strengthened in the child's brain many of the most important faculties of both Observation and Reflection. But

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in the case above referred to, everything was thus sacrificed to mere verbal memory ; and this is typical of much of the education that goes on in some schools, even now.

Chess, like many other games, is both a recreation and an instruction : a recreation for elders as it often causes them to use faculties which, to many, have not had their fair share of exercise during business hours, hence the pleasure ; but as a source of instruction to the young it is of the greatest value, as it develops and strengthens faculties which certainly should be exercised in youth, and is therefore a means both of pleasure and education to them.

The Perceptive Faculties exercised are especially Individuality, the perception of objects in their totality ; and locality, the perception and memory of the relative position of objects. The Reflective Faculties exercised are chiefly Comparison, Causality, and Consequentiality. Comparison seems to be a very important faculty in this game ; as it has been noticed to be well developed in all good Chess players. Of the Moral Faculties, Veneration and Conscientiousness are well exercised, and of the Animal Faculties, Aggressive Energy, Defensive Energy, and Concentrativeness are all called into active operation. As the relative positions of the men are continually changing, as the play proceeds, it is necessary to be continually comparing the relative positions, not only with regard to your own men, one with another, but also to the relations that they bear to your opponent's men, and thus it

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should be necessary to him whose duty it is to move that at least three of the powers of observation and nearly all the reflective powers be brought into a state of activity ; and when a move has been made, a similar mental process is equally necessary before the opposing player should take action. That this mental process is often done with great rapidity, and without any apparent effort, by some players, in no way detracts from our intellectual analysis of the game ; as these players are so mentally constituted that reflection and action follow observation in a flash, due principally to good Eventuality and other gifts such as Firmness, Self-Esteem, and perhaps moderate Caution.

Chess being, in fact, a contest, a battle, every aggressive move on the part of one player often calls for some defensive act on the part of the other player ; except when the aggressor has blundered, when a defensive response is not needed, aggression then should follow. Aggression alone will not win, nor will defence alone win the game : these energies must be continually in action with both players. Chess exercises Concentrativeness, and in this respect, it is to some, who are weak in this power, a most valuable mental training. It tends to make people aware of their weakness in this respect ; not that playing Chess will make strong that which is inherently weak ; the tendency being rather to make what is weak, less weak.

With regard to this want of Concentrativeness in children, who are too young to be conscious of this mental failing, instruction in this game needs careful

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attention by their elders. All children should be taught with method to understand the powers of the men, the rules which regulate the game, then they may be taught the openings, the attacks, and their recognised defences. If this is done systematically, the young would learn the spirit of the game, but such instruction should be little at a time. When Non-Concentrative children show signs of restlessness and a desire to fly to some other attraction, compulsion to continue the play should cease, but not the game; they should be encouraged to remember the relative positions of the men on the board, with a view of renewing the same game in the near future. This endeavour to get them to remember the relative positions of their own men on the board is one of the best of trainings for the Faculty of Locality.

With highly concentrative children, they should not be allowed to become too much absorbed in this game, and not permitted to finish a game right out especially late at night. Their Concentrativeness does not want strengthening but rather suppressing. At any rate, if parents wish to educate their children properly, those school tasks, called "Home lessons," which children are expected to do at home, must be considerably curtailed, and thus make time for more varied and valuable brain-work.

Draughts exercise the same faculties, but in a less degree.

CHAPTER III.

ACTIVE GAMES.

WE can now pass from what we have called games of Reflection and Meditation, that is, of a sedentary or passive nature in which the muscular exertion required is of no importance, to those games in which the brain has to direct the muscular system to carry out its behests. But these games will require classification into two main groups, and in order to appreciate this division we must place them side by side.

<i>Group 1.</i>	<i>Group 2.</i>
Archery.	Cricket.
Billiards.	Baseball.
Bowls.	Football (Association and Rugby.)
Golf.	Hockey.
Croquet.	Lawn Tennis.
Quoits, &c.	Polo, &c.

We commence now to consider group one; they may be considered as being purely competitive, as the players merely have to compete against one another's play. They are not, as in group two,

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opposed to one another in warlike combat, consisting of efforts of both aggression and defence ; for in group one there is no position to defend. The ball or other object with which the play commences is, at the opening, in a state of rest, and when such object or objects have been put into movement, the play, as regards the operators, ceases until the ball, or other object, has again returned to a state of rest, when one or other of the competitors continues the play. Eventuality, the sense of mobility, together with the perception of Time, do not enter into games of this class in any way. Thus the first group may be further described as Games of Premeditation, as instanced both in Billiards and Golf, where the players can calmly survey all the conditions before making a stroke.

ARCHERY.

This form of competition may be considered by many as an unintellectual pastime, but it must be kept in view that the force which is expended in propelling the arrow from the bow has to be provided from the brain and muscles of the archer, and in this respect would rank with such games as Billiards, Croquet, &c., and be justly entitled to be looked upon as true sport. There is much skill necessary in target practice, and in such competitions some of the Animal Faculties, especial Aggressive Energy would be exercised. The force which the archer has to put into the bow in propelling the arrow is a muscular effort, yet the judgment of that force comes from the faculty of Weight, that sense of force which is

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deemed necessary to overcome the resistance of the atmosphere, &c. In this respect, it is far superior to either gun or rifle practice, where the force which propels the shot or ball comes from the explosion of a cartridge, whilst the archer has to generate this force for himself. The power of judging the amount of elevation to be given to the arrow on special occasions, certainly exercises the faculties of both Individuality and Size, together with such reflective faculties as Comparison and Causality. The bow is not provided with compensating sights and gauges as in rifle and gun, the archer therefore must observe for himself, and act upon his own judgment, thus exercising many of the intellectual powers.

Archery, then, has its educational advantages, and were it not for the danger of putting such an implement into the hands of the young and irresponsible persons, it might be recommended in many respects; but the same exercises, for both the Perceptive and Reflective Faculties, can be obtained from other games, which are much more accessible and less dangerous.

BILLIARDS.

For the mental analysis of all games of Billiards, the ordinary cannon game as played on the English or American table, with two players, will be sufficient for our purpose.

The Intellectual Faculties immediately concerned are Weight, the sense of Force, or Resistance, the judgment of the amount of muscular energy to be put into a stroke in order to obtain a desired result.

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Size is much exercised in estimating the distance from one ball to another, or from a ball to a particular part of the cushion, and in gauging the dimension of angles. Locality is also exercised. It is that Intellectual power which gives to the mind the sense, the judgment, and also the memory of relative position. Some of the Reflective Faculties are called into operation in deciding as to how a certain stroke should be made, the chief of which would certainly be Comparison.

With regard to the force which the player has to put into any particular stroke, it is not a question of either muscular development or bodily position, as in the same position and with apparently the same effort a player can impart such an amount of force to a ball with his cue, that when it has received its impulse it may travel one tenth of an inch, an inch, ten inches, or one hundred inches, and so on. It is purely one of force judgment—that power which would appear to emanate exclusively from Weight; but the judgment of force is, after all, only one of the brain efforts of this game.

The next of importance in every game of Billiards is Locality, for the question that has to be decided by the player, before a stroke is made, is on what part of the ball shall he bring the cue-point to bear, so that when the force has been imparted to the ball it shall also have the required direction; and more than this, when it comes into contact with another ball, the desired force and direction shall be imparted to this ball also. The power of estimating distance in relation to the ball to be played upon,

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the points on the cushion, and the relative distance to other balls, together with the size of angles, are other very important Perceptive and Reflective Faculties which this and other billiard games so admirably educate and strengthen.

It must not be assumed, for a moment, that the brain-work necessitated in any game of billiards only exercises some of the Perceptive and Executive Faculties, for there is much in all play for the co-operation of many faculties; for instance, in Pool, the player in his first stroke has no option, he must play on a certain ball; but in a cannon game, the player usually has a choice, and in making a choice is a proof that he has reflected upon what he has perceived. The powers of comparison would appear to be the first aid in all such processes of reflection. Of course, there are players who don't reflect much, because they are weak in certain powers of reflection, as, also, there are players who don't perceive correctly. But such persons play *at* Billiards rather than play the game of Billiards. There generally is a consequence attached to every stroke; either the balls are required to come to rest in a favourable position for the following stroke, or else, where the position of the balls is such that scoring is next to impossible, there is then opportunity for reflective work in guiding the player to attempt to so play the balls as to make scoring as difficult as possible to the following competitor. As Causality stimulates the other intellectual faculties to seek for causes from present effects, it would appear that the action of Consequentiality encourages the mind to think of

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future results from present causes. In every stroke there is, or should be, a thought of the stroke which will probably follow. In fact, the game should be played with that intent in view. This latter faculty (Consequentiality) is perhaps the highest form of reflection that there is in the entire intellectual system; and Billiards most probably lead to the stimulation of such a process of reasoning.

Of course, there is the animal side to this game, as there is in all games. The principal Animal Faculties exercised are Aggressive and Defensive Energies. Although the players are not in actual simultaneous combat with one another, as in the various forms of fencing and boxing, yet a proper game should be a contest, and not merely a pastime. If the nature of these two energies are properly understood, together with the action of Self-Esteem, and Love of Approbation, the character of a player will be more or less reflected in his play and behaviour. A sporting game, then, is where the two players are fairly matched. It is quite true that equality can be, to a certain extent, established by the giving of points, but such has not the same charm as where the players are about equal. The more equal the contest, the better the brain side of the game.

Defensive Energy certainly plays an important part: where it is well developed in a player, he plays better when his opponent leads. It acts as a stimulant to his intellect, and therefore braces a player up. On the other hand, where it is weak, let such a player get behind in the score, his lack

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of Defensive Energy has somehow a slight paralyzing effect on his intellect ; he is often apt, in consequence, to fall below his best, and thus frequently loses the game, and perhaps his temper also. Those who attentively watch players are apt to account for this lagging effect to loss of nerve, but their assumption never gets further than this. Self-Esteem and Love of Approbation certainly affect different players at times, but the subject requires too much consideration for our immediate purpose.

Billiards, of whatever nature, cannot fail to be of an intellectual exercise of the highest order when played as an intellectual competition. In its educational value it is far superior as a stimulant to the Intellectual, Moral, and Animal Faculties than can be found in those classical studies which, even now, hold such an exalted position in our colleges, and the study of which entails so much exercise upon one particular faculty, "Language," to the detriment of the rest of the Intellectual Faculties, not to speak of the neglect of general bodily health, which excessive book study necessitates. To those who are brain-gifted, as regards the memory of words and verbal resource, Classical studies are to them a property of easiness ; and do no harm ; but the thought should be for those who have not these gifts, and study in vain, often to the detriment of both brain and muscles.

BOWLS.

There are two games of Bowls, the British and

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the Continental. It is with the former that we have to deal ; though we will refer to the other game later on, which is so much played in the South of Europe and South America.

The intellectual value of Bowls has not yet been fully realised, or else it would be played more in schools, especially those high-class schools for the daughters of gentlemen where lawns and paddocks are generally accessible. To attempt to describe the game here is not at all necessary ; we want only to point out its mental side, and thus exemplify its educational value.

The chief advantage of the game is that whatever mental powers have to be put into the ball in giving it its impulse, must come directly from the hand of the player, and this does more to get the brain and the muscles of the arm, hand and fingers to act in unison than would be in such a game, for instance, as Croquet, where the brain and muscular systems have to act indirectly on the object to be impelled through the medium of a rather awkward and badly constructed implement. It is this direct handling of the object to be put into movement for a definite purpose that throws a great responsibility upon the player, and leads either him or her (especially the latter) to realise that there is more brain-work in such an effort than could be imagined. We can quite understand that a young lady who has never been called upon to do anything that required so much work, would be somewhat surprised at the amount of brain effort necessary in what would appear to be such a simple thing. In Hockey, which

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young ladies are now playing so much, objectless hitting on the part of some gentle player, who is deficient in one or more of those commonplace Perceptive Powers, is not noticed in the excited scramble; but in Bowls, such an objectless effort cannot pass unnoticed; and for this reason many girls who ought to practise at this game, shirk doing so, as bad play would make them appear to disadvantage, and disagreeably affect their faculty of Love of Approbation. It would certainly be to the mental advantage if a course of exercises in this game were to precede Hockey, as it better exercises those faculties which Hockey calls forth, viz., Individuality, Size, Weight, and Locality.

Apart from its educational value, there is its recreative pleasure for adults, as in city life, especially in some office work, there is but little occupation for such faculties as Size and Weight, and as this game sets these faculties directly on to the object to be impelled, there arises a conscious effort which is, in a sense, almost peculiar to Bowls; and not only are the Perceptive Faculties directly employed, but each ball is differently centred; all these points require to be duly perceived and reflected upon before any impulse is imparted to the ball, and it is in this mental effort that the Reflective Faculties are employed. The relative position of the balls, played in their relation to the jack, have to be observed and duly thought out before another ball can be judiciously rolled up. The fact that some men will, with apparent carelessness, start the ball rolling and it comes to rest with good results, does

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not prove that such players do not observe and reflect previous to the effort; they do both, but by the fact that some of their Perceptive and Reflective Faculties are both well developed, the mental effort is done so rapidly that very often these gifted players are themselves under the impression that the game is an easy one, and thus assume, from a process of introspection, that anybody can play it equally well if they will only try.

BOLA.

This game is probably of either Greek or Roman origin. The balls have no artificial bias, and can either be rolled, bowled, or pitched up to the jack, the latter effort with either an over, or under-hand, drag. The fact that the play seems simple has led many British sportsmen to neglect it, and perhaps speak derisively of it; this, of course, arises from a mistaken notion as to its brain merits. As with lawn bowls, before mentioned, it is well suited for the young, both for its educational and recreative value.

CROQUET.

This game has been much subjected to the sport of fashion. It has alternately appeared and gone out of favour, and has recently come again into vogue. On each revival it has been slightly improved upon; and now, as may be supposed, the intellectual work affords a greater exercise for those faculties which are immediately concerned in

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the execution of the game, and thus bring into action such faculties as Individuality, Size, Weight, and Locality. Objects have to be seen, force has to be applied in ever varying degrees, as in a game no two strokes can be said to be exactly alike, and the judgment of force to be exerted calls for due consideration.

Distances have to be estimated, and of all things position, that is, the sense of relative position, must be continually in evidence ; and that is not all, the conditions of play vary with the nature of the soil upon which the grass is set. All lawns are not exactly level, and what is more, the character of a lawn will vary in accordance with the length of grass and the moisture that it contains. All these little things should be taken into consideration, and thus exercising not only the Perceptive Faculties, but some of the Reflective Powers as well. Because, if from observation you decided to alter your play, it is done after a process of reflection, involving the exercise of Comparison, Causality, and, in a modified form, we must admit, Consequentiality. But Croquet, after all that can be said in its favour, is not mentally equal to the other lawn game, previously referred to, for the simple reason that in Bowls the force is applied to the ball directly from the hand, whereas in Croquet it is applied indirectly through the medium of an implement, a mallet, which cannot, as in Billiards, so readily become, as it were a part of the muscular system ; so, although each blow of the mallet is controlled or influenced by many of the Perceptive Faculties, there cannot be

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that nice judgment of force as with Billiards. Each stroke of the mallet is rather happy-go-lucky to the generality of players. It is only those who are brain-gifted as regards force and direction who can make a croquet ball obey the mallet, or rather the player's brain.

The attractions of the game are mostly associated with social functions. Friends and acquaintances are brought together, and the intellectual work involved in the play is far healthier both for body and brain than objectless conversation, &c.

GOLF.

As far as the intellectual efforts of this game are concerned, it can very well rank with Billiards, and all other games where a dead ball, or other dead object has to be put into motion for a definite purpose, either directly from the hand, or indirectly through the medium of an implement; and when once the ball, or other object, has been put into motion, the play, as far as the players are concerned, ceases, until the same has spent its force and returned again to a complete state of rest. Consequently, Golf can be compared with any such game of this nature, but it would be somewhat odious to compare it, for instance, with Cricket and such like games, because in Cricket and other kindred games of this nature, the most important mental efforts have to be applied to the ball *after* it has been put into a state of movement. To say then that Golf is a better game than Cricket, or *vice versa*, is absurd, as the

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two classes of games, in consequence of this difference, are incomparable.

The game of Golf then opens, as with Billiards, by the player placing his ball within a prescribed area: the Baulk in Billiards, the Teeing ground in Golf. But it is here where the departure from Billiards comes in; whilst the golfer has the option of selecting from a number of tools, the billiard player is practically confined to one implement—the Cue. He uses his Perceptive Faculties in imparting force and direction to the ball, by estimating upon what part of the ball he shall strike with the cue point in order that the ball shall obey his desires. In Golf, direction and elevation rest with the selection of the Club or Iron and how it should be wielded.

Strange as it may appear, there are cushions in Golf, as the direction and varying force of the wind practically makes cushions.

Golf, then, we do not hesitate to say, is a finer game, in some respects, than Billiards; for there are conditions to be taken into consideration by the golfer which can have no existence in the mind of the billiard player; they are the varying contour of the ground; the obstacles; the dangers to be avoided; whether the ball shall be made to travel high or low; or, on account of wind direction, be driven either to the right or the left of the desired rest-place of the ball. Such conditions, after they have been perceived, excite a process of reflection before action can be taken.

The Perceptive Faculties that come into operation

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in this game are Individuality, Form, Size, Weight, Colour, and Locality. The Reflective Faculties would naturally be more exercised than with other games of this nature, that is, hitting a dead object, from the fact that there are so many conditions to be reckoned with, and, consequently, more processes of Observation and Reflection are required than are needful with a good many other dead ball games. It may be here mentioned that one of the chief uses of Locality is in adjusting the player's position in standing to a ball preparatory to driving it with any particular club, cleek, iron, &c. Men with good Locality would be inclined to ignore the idea that there is any brain power needed in standing correctly to a ball, for the simple reason that the effort, to stand correctly, is to them a mere nothing. They are, therefore, disposed to assume that there is no brain-work necessary in standing correctly to a ball, because they unconsciously could not stand incorrectly, unless they purposely wished it. But it can be accepted that the position of standing to a ball is one of the most important elements necessary to obtain the correct direction of the ball's flight and travel. A good player, on some occasions, may not appear to stand correctly to his ball, but he really does so, because he often has to drive the ball in a resultant direction, influenced from a process of observation and reasoning, of course, knowing well that the direction and force of the wind will correct his apparent error. Of course, it will be duly taken into account that in spite of accurate observation and correct reasoning, there are still elements

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of chance in Golf which no player can guard against.

The selection of the Club or Iron for each particular stroke is, most certainly, a brain element in this game, and such work, therefore, should be left entirely to the player's own discretion, except, we may venture to suppose, that in the case of a Foursome, where a player may be permitted to consult with his partner when necessary. It would appear that custom has permitted the club carrier to be consulted by the player, and on many occasions the caddie has gone so far as to volunteer advice, and even to anticipate the requirements of the player by handing to him a certain Club or Iron, which the officious attendant may deem best suitable for the occasion. But in considering the brain side of this game, we must not allow our faculty of Veneration to bow down to and accept established custom without protest. We would, therefore, be inclined to regulate the caddie's position to that of a carrier only, and would also be tempted to push the case even further than this, so that even the player should himself alone be compelled to mark the flight and probable position of rest of the ball he has played on. Where a fore-caddie is used, all well and good ; but what we object to, as phrenologists, is that of a porter taking part in a game and thereby relieving the actual player of some part of the brain-work. If a ball is lost sight of, after some stroke, &c., whose fault is it? The five minutes' rule for a lost ball should be more strictly adhered to. If this were so, the player in a single,

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or the player and his partner in a Foursome, would be compelled to depend more upon his or their own powers of observation than is done at present, when they leave to the caddie that which should be the duty of the player, or players, to do for himself, or themselves. But if the custom, as at present established, is not to be altered, then a new form of contest should be instituted, to be called a Strict Brain Game. In such a case, there should be no attendant caddie; the number of clubs, &c., to be limited by mutual agreement, and each player to transport his own implements, and the time limit for a lost ball to be fixed and strictly adhered to. The other side to take no part in the find of the opponent's ball, as it is his or their duty to play his or their own game, and, of course, to look after the ball. Such an innovation might, if possible, increase the sporting character of this intellectual game, thus preventing the caddie lending his intellect to his employer, and, consequently, the man who employs the best caddie has a certain advantage, which, we imagine, is not fair competition. Of course this subject bristles with difficulties, as some men with large Independence would play with more ease without the caddie; whilst, on the other hand, players not so gifted would much prefer the assistance of the caddie.

The first stroke being, as a rule, one of full swing, the faculty of Weight is not so much in evidence as in subsequent strokes when the force has to be curtailed; and it is in curtailing the force, when necessary, that this faculty is most exercised. The

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finest judgment of force to be exerted is in the approach, also when the ball is on the Putting Green, it is then that some fine billiard-like strokes may be witnessed with the Putter, as force may be required to move the ball from yards to an inch or less.

To return to the drive, the faculty of Weight appears to come into play more in applying the greatest velocity to the club in the most business part of the stroke. Such efforts are perhaps difficult to analyse, but this is certain, that the strongest man is not necessarily able to drive a ball the greatest distance. The proper swing can only come from practice, together with such brain gifts of Weight and Locality.

As to the animal aspect of this game, that is to say, what Animal Faculties are used, it is very certain that there is not such scope for defensive tactics as there is in Billiards, as the players do not contend against one another. It is not, in this respect, a combative game. In Billiards, where one player finds that he cannot play to score, he can at least play to leave the balls in such positions as to render scoring for his opponent more or less difficult. This is, of course, an act of defence, but it is not so in Golf, as the competing players can only play so as to try and do the course in the least number of strokes. That is all. There is no fight as there is nothing to defend, and it can never be made otherwise. Its worth, therefore, is purely intellectual and muscular, and nothing should be done to deprive the players from doing all the intellectual work for

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themselves, hence our remarks with regard to the caddie.

QUOITS.

In a useful work on sports and pastimes, the writer says that strength, as indicated by the development of the muscles of the arm and shoulder, is an advantage in the playing of this game; but the actual size of these muscles is not a consideration, as there have been known good players who appeared to lack development in these parts. The various powers so necessary to accurate quoit pitching have not their origin in the muscular system.

The actual animal force which the player has to impart to the quoit is generated in that faculty of the brain called by phrenologists Aggressive Energy, the directing powers coming from such Perceptive Faculties as Individuality in observing the object to be aimed at; Size, in imparting to the quoit the necessary elevation; Weight, in regulating the force exerted by Aggressive Energy, together with Locality, the sense of direction and relative position. All these cerebral powers manifesting themselves through the muscular system, not alone of the arm and shoulder, but almost the entire muscular system is requisitioned in the swing and delivery of the quoit.

The Reflective Faculties do not appear to be called upon for work in the exertions of this game, to any noticeable extent, as there are no varying conditions which need consideration with each delivery of the quoit.

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The faculty of Concentrativeness, or fixity of purpose, must play an important part in this game. From the commencement of the swing of the arm and until the quoit has finally passed from the hand of the player, this faculty has to fix the attention of certain perceptive powers upon the effort of pitching the quoit near the object to be aimed at, called by some, the Hob. Those players who are at all weak in this power of Concentration of mind, are apt occasionally to make bad pitches, due to the fact that just at the most critical part of the delivery some other object catches their restless vision, and diverts their attention from the object which should be aimed at.

Thus Quoits, like a good many other games, is a good brain developer in certain directions, and therefore a mind strengthener.

CHAPTER IV.

PREFACE TO MOVEMENT.

IT will be remembered that in our consideration of the brain side of games, we found it necessary to divide them into two main groups. The first group, consisting of those games which in their execution the players had to commence operations on a dead object, that is, the game opened with a ball or other object in a state of rest, such as in Billiards, Golf, &c., where a ball at rest has to be put into movement, and as long as that movement lasts, the players can take no active part until the ball again comes to rest, when the play can proceed. Such games may be said to consist of acts taken after due deliberation. Each player can leisurely observe, reflect, and act. The result of each act being due to the ability of certain parts of the brain to direct the muscular system when in the act of imparting force and direction to the ball, or whatever object may be played upon, whether directly from the muscular system or indirectly through the medium of an implement. Now, though such work may entail much mental effort of a perceptive and reflective nature, yet, as the play is on a dead object, there

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are therefore certain faculties of the intellect which cannot come into operation to any considerable extent. In the following games, which may be considered as typical of many others of a live ball nature, in respect to the intellectual features which we wish to emphasize, are Badminton, Base Ball, Cricket, Football (Association and Rugby), Hockey, Polo, Lacrosse, and Lawn Tennis.

Though the opening of each of the above games commences with a ball or other object in a state of rest, just the same as in the games we have previously dealt with, the distinguishing intellectual feature of our present games consists in operating on a ball after it has been put into a state of movement. It is mobility, then, that makes the division of games into two distinct classes so necessary, because it simplifies the process of analysis. Movement, or rather the power of appreciating when and how to act upon a moving object, calls into operation other Perceptive Faculties to which we had no occasion to especially refer in those games of the first group.

It may be said, most truly, that all games of skill are intellectual in their nature, calling to the aid of the players most of the intellectual faculties, but some games are of greater import, in this respect, than others, hence, again, why we have divided them into two classes. The class we now intend to analyze is of a higher order, for the simple reason that certain faculties are called into operation which were, to a great extent, absent from the other games. We speak now of Eventuality, Time, and, perhaps, Tune. In our explanation of the Mental Faculties we have, as far

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as space permitted, endeavoured to explain all the Mental Faculties in general, and the Intellect in particular; so we would advise the reader, at this stage, to refresh his mind on the particular faculties above referred to.

The first set of games was called "Games of Deliberation." In those that are to follow we can only describe them as games requiring the appreciation of movement. A moving object has to be observed, reflected upon, and action taken almost at the same moment; though of course, this is not so, as there is on all such occasions an interval (though often inappreciable to the onlooker) between Perception, Reflection, and the execution of the act. Eventuality, Time, and probably in some cases, Tune, just give to the mind this power of grasping the situation, and thus enabling the muscular system of the player to act as the Perceptive Faculties may direct, or rather instigate.

With this brief explanation as to Eventuality, Time, and Tune, more especially as regards Eventuality, we can now proceed on our task of analyzing those games of the second group.

CRICKET.

Of all outdoor sporting games Cricket demands our first and most serious attention, as there is more brain-work entailed in its play than in any other recreative game sport that is within our knowledge. It is warlike in its nature, that is, it is combative, as it stimulates many Animal, Moral, and Intellectual

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faculties to a very high degree. It is, as we have said, a war game, but it will bear comparison only with the war of olden times, where the contending parties had to stand within range of one another's means of attack, and therefore each man had to depend upon his own mental and muscular resources for whatever acts of aggression, defence, and deception that he was capable of exerting. With present warfare, cricket can have but little comparison, for the principal reason that chemical explosions accomplish what, at one time, had to be done by direct muscular exertions. All that remains of old-time warfare are to be found in such arts as wrestling, boxing, and fencing. As mental and muscular exercises, there is much to be said in their favour; but, after all that can be said in recommending them, they but exercise in a limited sense some of those very faculties which are called into such pleasurable activity in Cricket, and also in some other games, to which we shall have occasion to refer, as we proceed in our task.

It is as well at this juncture to thoroughly explain the animal side, that is, the combative, the fighting, the warlike nature of this game; much attention, therefore, should be paid to Aggressive Energy, Defensive Energy, and Secretiveness, as they affect the play of the bowler, the batsman, the wicket-keeper, and the field. The bowler's office then is purely aggressive, his object being either to knock down the wicket, or to get the batsman caught or run out. After a ball has been delivered, his aggressive office, for the time being, is over. He

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becomes one of the field, and in that capacity can act on the defensive, or become aggressive, as opportunity arises. To stop or catch a ball is, in the first place, a defensive act. But to throw a ball in, with a view of stumping a batsman, is, of course, an aggressive act. In commencing each attack, the bowler says "Play," which is the same as saying to the batsman, "Defend your wicket." In such attack the bowler can adopt any arts or feints, which his faculties of Secretiveness, Caution, and Imitation may prompt, and which his intellectual powers may execute. To explain the many tactics by which a bowler can deceive a batsman would be somewhat exhaustive, for many deceptions are both numerous and legitimate. The batsman's object being to defend his fortress, the wicket, he is naturally prompted by Defensive Energy. The defensive batsman always has a certain advantage; but defence alone will never win the fight, though there are certain deliveries which compel an experienced batsman to defend his wicket, by either playing forward or playing back, in accordance with the delivery and pitch of the ball. It is only when an attack is imperfectly delivered that a good batsman can at once realise his chance, and assume the aggressive. In matches, the public are always ready to applaud aggressive play, whilst often the good defensive work on the part of a batsman passes unnoticed by the majority of the onlookers. A successful defence gains no applause. When the brain side of this game becomes better understood, a keener interest will be taken in all

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acts of successful defence, which may perhaps lead to some revolution in our present methods of scoring. Whilst the over-defensive batsman will not add to his score, the over-aggressive batsman is often sent out for his eagerness. Good play consists in the proper exercise of both energies. When to defend, and when to attack, being just as important as how to defend and how to attack. The batsman's fort is liable to attack from the rear by the wicket-keeper. To stop or catch a ball are his acts of defence, but to take any subsequent advantage is prompted by Aggressive Energy, not forgetting Eventuality in being able to act on the spur of the moment.

As regards the field, to catch, to pursue, and to stop a ball, are all acts impelled by Defensive Energy. When the ball is in hand, then any act which follows should have a destructive purpose, emanating, of course, from Aggressive Energy. Thus we see how clearly cricket resembles war.

We cannot leave the Animal Faculties without some mention of Concentrativeness. It is only to read carefully what we have previously said of this faculty to realise that this primitive power is a very important element in the mental outfit of a really good, steady, and competent cricketer. However well a young cricketer may shape to the game in response to his intellectual capacity, and however promising his prospects may appear, if this faculty is poorly developed, such a player is ever liable to cool off, to get tired of the game ; or else to be seized with an insatiable desire for some other form of recreation. Though such a player may return to his old love,

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yet he is ever liable to change and can never be trusted, though he may be full of good resolutions. There is another fault with these non-concentrative cricketers ; a concentrative bowler, with his one style of delivery, will tire out the non-concentrative batsman, when he is soon sent out through becoming tired or careless of a constant style of delivery. The grand scoring is where the Greek meets Greek. The batsman who is not to be tired by one style of delivery may be bowled to by a man who cannot change his style. Part of the art in bowling consists in being able to judge your man, and treat him accordingly. Some men are incapable of much changeability of delivery, whilst others seldom bowl twice alike. The constant and the inconstant bowlers have both their strong and their weak points. Concentrativeness is an important element in Cricket, as it is with all games which require a special aptitude. Practice makes perfect, but it is only those with good Concentrativeness who are capable of constant practice. And then, again, it is no use having the power of concentration if it is not backed up by certain intellectual gifts ; without these gifts, constant practice will never lead to perfection.

We pass to the intellectual aspect of Cricket in relation to bowling, batting, wicket-keeping, and fielding.

The art of bowling is, of all things, being able to impel a ball with the desired amount of speed, spin, and direction. How, when, and where a ball shall be made to pitch at or near the batsman's wicket, apparently from one combination of muscular exertion, but involving the exercise of many

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Intellectual Faculties, the chief of which would be Size, Weight, Locality, and Time. Apart from the exercise of these faculties, the bowler's play has to be regulated by other forms of observation and reflection, to wit, the condition of the ground, &c., the disposition of his field, of course, not forgetting the batsman's mental characteristics, for some men will display as much character in batting as they will in their social life or in their business affairs. A bowler has to be a very keen observer before he will get much inspiration from a batsman who has large Secretiveness. A good bowler will soon find out whether his man is inclined to act too much on the defensive, or too anxious to score off every ball that is sent in to him. Whilst the former often requires to be coaxed into aggression, the other requires very different treatment.

In this game the mentality of the batsman is most worthy of our attention, as he is open to be attacked from all quarters. As regards the executive powers of batting they may be said to be the same as in bowling where force and direction have to be imparted to a ball, directly from the hand, or through the medium of a bat; but it must be remembered that the batsman has to deal with a moving object (a live ball) against well-directed attacks, and must therefore be prepared to either simply defend his wicket, or to so manipulate his bat as to make the ball almost stop dead, or rebound from his bat in a desired direction with accelerated speed. It is a question as to when, how, and where, is this moving ball to be hit, in order that it may be

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made to travel with a desired amount of force, in a desired direction, with desired elevation. The bowler's task, then, is comparatively simple, but the batsman's efforts, whether in defence or attack, are complicated, because it is with the batsman that a Mental Faculty has to come into operation, which the bowler, when bowling, has no need to exercise; and, furthermore, this particular mental power has, so far, not entered into our consideration in all the games previously described. The faculty in question is Eventuality—the perception of, and the sense of, mobility. The batsman then, before he can decide how to act, has to perceive a moving object, judge of its speed and direction, and act on the spur of the moment; all this has to be done in a flash. It is not necessary now to further dilate on the functions of this faculty as it has already been explained, as far as our space permits. It only remains to point out that in batting, this faculty is used to a very high degree, though, of course, other faculties are employed in batting, especially Time, the faculty that cognises either interval or duration, as this is a most important element in batting.

To pass to the wicket-keeper, his Perceptive Faculties are in a continuous state of tension, more especially Eventuality and Time. It is this power of taking advantage on the spur of the moment that is often illustrated by the exclamation from the wicket-keeper, "How's that"—often a question of a fraction of a second.

From the wicket-keeper we pass to those who constitute the field. As soon as a ball has left the

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hand of the bowler his office as such is over, and he becomes simply one of the field ; so it is with the wicket-keeper, who is at first all on his defence ; until the ball is in hand, when the one who holds it must, right then and there, on the spur of the moment, perceive all the conditions, and then throw in with aggressive intent, *i.e.* to destroy.

In bowling then, those faculties which are immediately concerned with force and direction, namely, Weight and Locality, are mostly exercised. In batting, though the above faculties are essential, yet the greatest stress is upon Eventuality and Time, the same with wicket-keeping, as with the field, the entire intellect of any one individual may be called into play at any moment.

When we say that an umpire must be, or has been, a good cricketer, we have said all that can be said of this part of the game. He has to be observant, and be able to have a keen sense of mobility. A good umpire must possess that power which we have described as the function of Concentrativeness. His entire attention must be confined to the acts of the bowler, the batsman, the wicket-keeper, or the field. Now as all these powers are so well exercised in Cricket, it stands to reason that a good cricketer is a good umpire ; providing also that he has good Conscientiousness, Self-Esteem, and Firmness.

TRUE FOOTBALL.

Commonly named the Association game. We give this game the preference, not that the players require

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more skill in its execution than with the Rugby game ; but because it is more deserving of the name of Foot-Ball than its near relative.

In watching the Association game played, anyone not well conversant with it, would, to a certain extent, be mystified by what appears to be a medley of indiscriminate kicking. But the bewildered observer must first realise the fact that every effort put forth by the players in either stopping a ball, in kicking, or in quietly nursing it between the feet, and often making but little material headway in either direction, that each act on the part of these players is impelled by either one or other of those two great energies which excite men in actual warfare, or in the general affairs of life, to persistent and often to deadly violent and dangerous exertion. These two energetic forces which have their seat in the brain, and can only manifest their action through the medium of the muscular system, are what we call Aggressive and Defensive Energies, using these terms in preference to the old names "Destructiveness" and "Combateness." Every act in this game has, or should have, an aggressive or defensive intent. It does not follow that every aggressive act must be to send the ball in the direction of the opponent's goal, or that every act of defence must necessarily be to drive the ball away from the goal which is to be attacked. The game is actually a battle where aggressive and defensive acts on the part of the players pass so quickly from one to the other that, unless the animal part of the game is continually

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kept in view by the onlookers the players would appear to indulge in a perfect carnival of aimless kicking. The rapid interchange of Aggressive and Defensive Energies is the spirit of the game. This will be most noticeable in "dribbling." It is essentially war which calls into action, on the part of each individual player, those very intellectual efforts which are supposed to be the stock-in-trade of our Military and Naval Officers. But we would go much further than this, and say that the work of a footballer must call into action more Animal, Moral, and Intellectual Faculties than any one commanding officer ever has done in the past, can do in the present, or ever will do in the future death-dealing game of war. A footballer has no advisers outside of himself. All the information that he is able to glean, as to the course of the battle, must come from his own individual observations. He cannot do, as a general of an army does, conduct operations from some safe coign of advantage removed from the risks attendant on warfare. The brain of the footballer with his Perceptive and Reflective powers, with his Animal and Moral Faculties, commanding a perfect army of Nerves and Muscles, must be right on the spot in the thick of the fight, to either attack or defend, as circumstances may arise. Then, as compared with the soldier, whether he be either officer or private, his work in the field is much superior. He makes his own observations, gives his own orders and executes them himself, and not only so, but he does not depend on mechanical or chemical aid

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for the energy he has to exert. He manufactures this from the food he eats, stores it up in his body, controls it with his brain, and expends it as required through the medium of his own muscular system. In this, and many other such games, the entire intellect may be said to be in a state of excitement; but the most important work is thrown on the Perceptive Faculties in general, though more particularly on the Faculties of Individuality, Size, Weight, Order, Locality, and Eventuality. The players on each side being divided into groups, it stands to reason that this formation must, as far as circumstances permit, be maintained during the whole course of the play, each class of players must do their best to maintain their respective positions in both aggression and defence, and at the same time be prepared to do the work of any. The faculty which must be the commander-in-chief is Locality—that faculty which in its action gives the sense of position, both as regards the object of contention and pursuit, and the ultimate object of the game, viz., to drive the ball into the opponents' goal. There is practically no such thing as position of an object, even without remembering that it is the relative position.

Position may be said to be like value; neither has any definite meaning, unless in relation to other things. Both terms are comparative. In mentioning Locality, we of course always refer to the relative position of objects, friend or foe, ball or goal.

To start the game then, is an act of aggression.

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If centre forward runs up to the ball and kicks it in the right position, that is on the exact spot on the ball which he desires, the ball will travel with the correct elevation and direction. It is usually a forcible kick and no very nice sense of that faculty which regulates force is required in this case. For anyone of the opposing team to stop the ball is an act in the first place of Defensive Energy. Then the fight has commenced. To follow the combat beyond this first attack and defence would be impossible; but from the start to the finish nearly the whole of the Intellectual Faculties are continually in evidence, both in attack and defence. The amount of steam or force that each player utilises when his chance comes, the direction he wants the ball to go, and the quickness with which he has to avail himself of opportunities, must all come from the action of some of these faculties. Take for instance what is called *dribbling a ball*, which is such an important feature of the game. The man who dribbles with success must keep in view the relative position of his near opponents in order that he may defeat the attempt of anyone of them to kick the ball from him, and at the same time he must have a cognisance of the position of his supporters that he may as a defence, when he deems it necessary, send the ball in the direction of one or other of them in order that the attack may not be lost. A dribbler must also exercise caution, and to a certain extent, Secretiveness. In such work all his supporters must maintain their relative positions as regards the player with the ball at his feet, in order that they

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may either support the aggression, or defend a counter attack. The over-aggressive dribbler who wants to do too much on his own account, and neglects to use the support of his fellows, often loses important advantages. To pass to others, which a player should do when his position becomes untenable, is good and discreet play. Too much cannot be said as to the important part played by the Faculty of Eventuality. To be able to grasp the conditions in the fraction of a second, and to act there and then, is one of the grand intellectual exercises of the game. He who cannot grasp the conditions, and at once put his ideas into immediate action, fails on account of a want of sufficient Eventuality, exemplifying the old saying that "He who hesitates is lost." This expression is so frequently used in commenting on the action of people in everyday life, proving that the exercise of this faculty should not be neglected in early education. In fact, all games of mobility exercise it, and well prepares the youthful football players for the battle of life. Every act in this game, except when penalties are enforced, must be performed at the right moment without the slightest hesitation. To mention such a value of time as seconds does not convey to the mind the rapidity with which some good players grasp the advantage which the chances of the game sometimes places at their disposal.

We must not leave this most interesting game without referring to the influence which it has on one of the leading Moral Faculties, that is, the organ of

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Conscientiousness. The player, in training himself to keep his arms and hands out of the sphere of operation, must have a stimulating effect upon the development of this faculty; because the natural inclination of human beings to use their arms and hands in all acts of aggression and defence must be very great indeed; as the rules of this game are very strict in prohibiting their use, and as each player has to watch his opponents in order to claim penalties for any infringement in this respect on their part, the effort to prevent oneself from doing what both the Aggressive and Defensive energies would prompt, must have a very good influence on this moral faculty in particular, and also upon Self-Esteem and Love of Approbation. It is lowering to one's dignity to be proclaimed an "Infringer," and lowering to one's Love of Approbation to do anything that would incur the disapproval of both your confederates and opponents, not to speak of the onlookers. It may be said that all such outdoor sports, bar the killing ones, stimulate the Moral Faculties, and so they do where rules have to be obeyed, and their infringement publicly proclaimed. But in this game, seeing that the most important muscles of the body (those that are worked in using the arms, hands, and fingers) have to be kept under constant control, the educational training of the Moral Faculties in this game call for more than general notice. Therefore, we have no hesitation in saying that there is more moral training for youth in the play of this game than there is in going to church, and listening to dull sermons, and in the

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monotonous repetition of dull formula. So then, let the County Councillors get this fact into their brains, it will germinate, and in time they will see their way to give permission for the playing of Football and other innocent games on Sunday as well as weekdays, as such games bring nearly all the faculties of the mind into healthy and wholesome action.

RUGBY FOOTBALL.

Much of what has already been written of the Association game, both as regards the Animal, Moral, and Intellectual Faculties, applies, with almost equal force to this game ; but as the two games are most distinct in their nature, they require also distinct treatment.

In Rugby, it is necessary in order to appreciate the value of the game as a stimulant for some of the Animal Faculties, to understand the action of such faculties as Aggressive and Defensive Energies.

Like the Association game, it is a combat between two opposing teams ; but the means of attack and defence are greater in this game than in the other. Whereas, in the Association play the arms and hands are rigidly excluded from the fray, in this game players are permitted to use the arms and hands in catching, holding, and throwing the ball, both for aggressive and defensive purposes. And not only that, the players can actually clasp and hold in any way a player on the opposite side who is in possession of the ball. In order to thoroughly

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understand the nature of these two animal energies which enter so much into the spirit of this game, it would be as well to examine some of these aggressive and defensive tactics.

In carefully studying the rules it will be noticed that they are so framed as to prevent players on either side obtaining any aggressive advantage from defensive acts, or *vice versa*. The first kick-off, then, must be purely aggressive, consequently a kick-off into the side touch-lines is not permitted. Again, running with a ball in hand towards the opponent's goal is an aggressive act, but when the holder of the ball finds that his powers of aggression are over, he is at liberty to throw the ball, this is a defence, consequently no aggressive advantage is allowed from such an act, the ball must be passed back. A kick into the side touch-lines is a legitimate defence, but in order that no aggressive advantage can be gained thereby, the ball must be thrown back to the players a certain prescribed distance behind where the ball touched the line. In a scrimmage both sides are aggressive, though the ball may be on one side of the centre line or the other. Both are animated with the same animal forces or desires. The ball for the time being is between the players. Enough has been said on the subject of these two stimulating energies to explain the parts they fulfil in the game.

It will now be necessary to point out some of the intellectual features. It would be impossible for any players at this game, however young or old, not to exercise and therefore strengthen many of their

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Perceptive and Reflective powers. The objects of the play are so definite that every act of each individual player comes as a result of the action of some of these faculties. The intellect has to act through the entire muscular system, but the chief of these faculties would, most undoubtedly, be Individuality, Size, Weight, Locality, and Eventuality of the Perceptive Faculties. As an instance, there is kicking a goal, an act which entails the use of Size, Weight, and Locality in the actual effort to kick the ball over the goal. But this act is regulated by a process of perception and reflection; as the ball is not, as a rule, right opposite the goal, and as the atmospheric conditions should affect the player in selecting the exact direction in which the ball must be kicked, the kicker has often to aim for a resultant direction on account of the effect the wind has on the direction the ball will be carried after the force has been imparted to it.

In passing a ball the passer must, or should, pass to one or other of his supporters. As all concerned are running at the top of their speed, it needs a good sense of Locality on the part of the passer in order to pass in the right direction, and on the part of his supporters in order, as far as possible, to maintain their respective positions. This sense of, or knowledge of, relative position pervades the whole game. Again, as the ball is not round but elliptical, a very correct sense of position is of the utmost necessity, in order that a kick should be properly delivered. This sense of Locality, this judgment of position, has to work in conjunction with the Faculty of Eventuality,

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the power of the mind of grasping the numerous opportunities and taking immediate action. The advantage of such a mental power in this game cannot be overestimated. Little opportunities are continually falling at the feet of each player, which if not at once acted upon, are lost, and immediately taken advantage of by some opponent. All the players then, have to keep their wits about them. This idiomatic expression means that the Perceptive and Reflective Faculties must be kept in a high state of activity in the midst of apparent hurry and confusion, in order that every momentary advantage, either for aggression, or defence, may be at once perceived, and acted upon. But certain perceptions alone will not avail unless the Faculty of Eventuality, in particular, is active enough to enable the necessary orders to be at once passed from certain parts of the brain to the nervous and the muscular systems, and immediate action taken.

It is the Eventuality, Locality, Weight, and Individuality, as far as the action of powers of perception are concerned, that win the game. But it must ever be remembered that propelling forces do not reside in the intellectual region of the brain. These forces proceed from the Animal regions in general and from those two faculties, so frequently spoken of, Aggressive and Defensive Energies in particular. All the Animal Faculties are under the controlling influences of the Moral Faculties, and not of the Intellectual Faculties. As, for example, anyone contemplating, designing and executing an immoral act has to use his Intellectual Faculties, just the same

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as when another person may think out and execute a kind and honourable action. In the first case the Moral Faculties are weak, and therefore have very little restraining influence. The powers of control, in all cases, rest with the strength of the Moral Faculties, the chief amongst which would be Conscientiousness, the emotion, or desire of duty; Firmness, Caution, Self-Esteem, &c. To deliberately break rules is therefore immoral. All players should try, to the best of their abilities, to play fairly, that is to be just, to avoid doing anything undignified. Rugby Football, like all other games of open contention, not only exercises and therefore strengthens the intellect and the animal energies, but also tends to develop the Moral Faculties. Of course, professionalism in this game may do harm to the players in a moral sense, but when the game is played for pleasure it cannot fail to have a beneficial effect on the intellect in general, and a healthy stimulus to both the Moral and the Animal Faculties.

BASE BALL.

We class Base Ball as similar to Cricket for the reason that the players have to deal with a moving object, a ball being in this game, as in Cricket, the moving object to be dealt with, and therefore exercising the same intellectual faculties to either a greater or lesser degree than Cricket. Base Ball has not taken on in these islands to any great extent, so far, though almost a similar game called "Rounders" was much in fashion at one time. No doubt Rounders must have been in the minds of

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some of those enterprising emigrants who sailed to America in the "May Flower." But the game has lost its original name in America, together with some of its original characteristics. Perhaps the influence of the native Red Indians and the imported negroes have introduced into the old English game of Rounders some of the elements of the tomahawk and the assagai into Base Ball, as it will be seen, according to our ideas of true sport, it appears to lack one of the important elements of combat. In proof of this assertion we must ask our readers to again consider those two Animal Faculties to which we have so frequently had occasion to refer, especially in regard to the brain side of Cricket, &c. A true combat is a struggle between two or more men, with or without artificial weapons, in attack and defence for a definite object where each side has equal means in contending for certain results. When soldiers fire upon, or bayonet, unarmed men and women, the conditions are unequal, that is, it is not a combat but a massacre. We don't wish to infer that Base Ball is a massacre; but there is too much of the element of Aggressive Energy, and consequently not enough of the defensive spirit in the game for anyone conversant with the Mental Faculties of the mind to place this form of recreation on a par with either Cricket, Football, Hockey, or the like. In this respect Base Ball seems to stand alone. This objection to the game on our part may be due to not being sufficiently conversant with it; but we have seen it played both here and in America, and have come to this conclusion.

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Let us compare it with Cricket, for instance. The batsman at Cricket has something to defend. His main object is to defend his wicket with his bat from the attacks of the bowler, who has to either roll, bowl, or pitch the ball, not at the bat, or the batsman, but at the wicket. The aggressive action on the part of the batsman, be it remembered, comes to him as an after-thought. The wicket is his citadel; once that is fairly and successfully attacked he is *hors de combat*. But the batsman at Base Ball stands to be attacked, and if the ball is fairly thrown or pitched within the prescribed area, his only option is to attack and run to his first base, and to the other bases, and thus claim his advantage from his responsive attack. With the batsman at Cricket it is entirely different; he need not assume the aggressive at all if he deems defensive tactics better play. It is this absence of defence, which we think will render the game eventually as unpopular in America as it appears to be here.

With regard to the Intellectual Faculties employed in Base Ball they appear to be, to a certain extent, the same as in Cricket; but as regards Locality, the sense of position and direction; and of Eventuality, the sense or cognisance of mobility, the game calls upon these faculties even to a greater extent than in Cricket. The feeding is swifter, and therefore the response on the part of the batsman necessitates greater acuteness. Mr. T. P. O'Connor said that New York commercial life was "a tiger pit." This game is a tiger pit; all attack, too much tomahawk, too much assagai, whilst there appears

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to be no call for Defensive Energy. How the game is to be improved so as to admit more of the element of defence it is difficult to imagine, because if any form of wicket is to be introduced, it would become, in fact, Cricket.

HOCKEY.

Hockey has gradually developed from one of the primitive games which boys devised for themselves, with a view, no doubt, of finding a pleasurable and instructive means of exercising, in the open air, those Intellectual and Animal Faculties which their overwise teachers did all they could to suppress in school hours. But fortunately we have in this game an acknowledged and fashionable school recreation, which even now is admitted, but only as a pastime, in such educational institutions as Girton and Somerville and other ladies' colleges. But this game, let it be remarked, must not interfere with the time that is so piously expended in the various studies and classes devoted to verbal memory, and the Higher Mathematics. Hockey is a game in which two sides contend, under well recognised rules and regulations, for certain results, to depart from them is and ought to be condemned as bad play, if not dishonest. To play this and other such games must stimulate into activity, and therefore develop, many of the Moral Faculties, not to speak of the Intellectual and Animal Faculties. The military part of the game is, of course, in the contention, the desire to conquer, to prevent defeat, to succeed in

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the main object without committing any illegal act, to fight (that is to attack and defend), yet, in the heat of battle, to fight fairly.

The Animal Faculties employed are the same as with all the other games in which the contending parties are called upon to either attack or defend on the spur of the moment. That is, to exercise Aggressive and Defensive Energies through the medium of the intellect, which can only manifest their powers through the medium of the muscular system. The implement used, when well manipulated, being a part of the muscular system, and becoming as it were, an elongation of the arms and hands. In order that this should be done to the best advantage, all these tools, such as the cue, the bat, the hockey stick, &c.—for they are tools—should be so held as to give the greatest freedom to the muscles employed. Therefore there are only two ways of handling a hockey stick during active operations, and they are either the right way or the wrong way.

The Intellectual Faculties most exercised are Individuality, Size, Weight, Order, Locality, and Eventuality. As the actions of these faculties have been so frequently explained in the preceding games, it would be unnecessary to again refer to their functions here. It is a game in which qualified force and direction have to be imparted to a ball, with a definite object, that is, with aggressive or defensive tactics always in view. Wild hitting, that is, where objectless force is imparted to a ball, is an evidence of thoughtlessness or an inability on the part of any

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particular player to appreciate the value and nature of the game. Unless the precise object of the game is ever kept in view by the players, the intellectual value of the game is lost, though in other respects it may be highly beneficial as an exercise.

As some young ladies play this game, it would appear to the ordinary onlooker that there is an absence of that display of Aggressive and Defensive Energies which take such an important part in the animal side of all games of contention ; but not so to the Phrenological observer, because he knows that the average size of the female head is slightly less than that of the male head, at all ages, the chief difference being in the development of both Aggressive and Defensive Energies. But this does not apply to all girls and women, as there are a great number of them who have these energies far more developed than many individuals of the so-called stronger sex. It is, however, safe to say that in a team of either young women or girls, the absence of go, spirit, verve, is more marked in some individual players than would be the case with a team of young men and boys. This difference is due to hereditary cerebral development.

All young women should play such games as Hockey, as it is a most enjoyable means of developing the intellect, especially the Perceptive Faculties, and above all it tends to develop those Animal Faculties which are so necessary to the battle of life. Some Phrenologists go so far as to assert that if you exercise the Perceptive Faculties, you can afford to let the Reflective Faculties

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look after themselves, as perception stimulates reflection.

MOUNTED HOCKEY OR POLO.

This is a sport game which we rank with, but after, Hockey, because we consider it is a higher class of sport than Polo ; for the simple reason that the Hockey player's powers of locomotion is provided by himself, his own brain and muscular force carries him about the field, whatever has to be done in this way he alone does it. But with the Polo player it is different, because being mounted he therefore delegates the powers of locomotion to a horse. The polo player though he may, by his own brain and muscles, control the horse's movements, yet he (the rider) is carried about the field by the muscular energies of another animal, and thereby he throws upon another what all true sportsmen should naturally desire to do for themselves. Even Polo played from bicycles, as compared with the orthodox game of Horse Mounted Polo would be better sport, as everything in the way of locomotion emanates from him who rides the bicycle. There may be a mental satisfaction in knowing and feeling that the rider is compelling a horse to do that which he ought to do for himself, the horse being his servant.

The game came to us from the East ; probably from Persia, the land of slavery ; and it is only those whose mind is imbued with the bygone notions of slavery who are able to appreciate its pleasures. When men come to truly appreciate all the enjoy-

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ments of perfect freedom, this game will no doubt return to the place from whence it came. Now that we have all forms of motor-cars, perhaps these polo players, these half and half sportsmen, will endeavour to play this game from motor-cars with blindfolded chauffeurs. The player could then direct the course of the car by word of mouth to him who drives. No doubt there is a sport in Polo, but it can be as well played from a bath-chair impelled by a blindfolded hired attendant as from a horse, and therefore Hockey is the more manly game, because it is more manly to provide all the energy required for yourself, than it is to have those energies provided for you by others, whether it be by horses, chauffeurs, or bath-chair men.

LAWN TENNIS.

In dealing with this game, we must of necessity include Badminton, as, to a certain extent, they are somewhat similar in their nature ; and both, no doubt, have evolved from other and more primitive games. As the human intellect improves, both children and youths naturally seek means of education which call for greater skill in their execution than are afforded by those parent games which have been abandoned. Men and women now play Lawn Tennis and Badminton not for educational purposes, but mainly as a recreation, because in the execution of these games faculties of the brain, and especially of the intellectual portion thereof, are brought into activity, which in the ordinary course of their daily

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occupations are very seldom used. But for the young, these games are a means of education ; for adults they are a recreation, because they stimulate those parts of the brain which have been forced into an inactive state through the exigencies of circumstances ; for those who have no business occupation simply play these games only as a kill-time, they have no other object than affording a healthy means of getting through some of the twenty-four hours. But even when these games are viewed as a kill-time, they are of a more intellectual form of pursuit than those to which we will subsequently refer.

We class both Badminton and Lawn Tennis with such games as Cricket, Football, and Hockey, as they are what we may describe as "Live" ball games, and as such they must necessarily call into activity those particular Intellectual Faculties which are not needed in the play of Billiards, Bowls, Croquet, &c., which are "Dead" ball games. It must also be recollected that with these two games there is a limitation of the amount of either Aggressive or Defensive Energies required. The players, to a great extent, depend upon the spring of the racquet, which provides a certain amount of force, so that each stroke requires but little extra force to be imparted to each delivery. The judgment of force, that is that intellectual power which regulates the amount of muscular energy to be exerted on any given occasion, has more to do in controlling the muscular energy than in letting such force out. The chief Intellectual Faculties employed in these games would

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then be mostly with Size, Weight, Locality, Eventuality and Time, that is to say the judgment of the sense of direction and relative position: of observing one object in movement and naturally in observing all the attendant conditions such as may be suggested by the promptings of Aggressive and Defensive Energies, and acting upon them on the spur of the moment. Such games, of which these two are a class, call for this power of instantaneous and simultaneous thought and action, apparently without reflection, but the Reflective Faculties are at work. However rapidly actions may be taken, yet, so quick is the brain action transformed into muscular action that often a process of reflection may determine the play, when to an ordinary observer there appears no time for such a mental process.

There is no doubt that good and accurate play requires the assistance of that faculty which takes cognisance of time: that is, the power of estimating and of judging the length of duration or interval. Owing to the method of construction of the racquets which are respectively used in these games, they have a power of considerable rebound, so that a ball will leave a racquet which is held in the right position with almost the same force which it possessed when it came into collision with it; yet each return requires such an amount of force imparted to the ball, or in the manipulation of the racquet so as to either maintain, increase, or decrease its velocity. The chief object of both serve and return is the direction the ball shall be made to

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travel, and also the behaviour of the ball after it has touched the ground.

The faculty of Weight then, would appear to act mostly through the medium of the muscles that control the action of the wrist, for it is just this amount of wrist-work which determines both the force and direction of each service and return. It would be a good instruction for the child or youth before they start to learn Tennis to play the game entirely with the flat of the hand alone, this being so controlled as to represent, as far as possible, a racquet or bat. The learner would then be able to realise how much of the play really depends on the control of the wrist. In learning afterwards to use a racquet with ease and freedom, it is necessary that a racquet should be so held as to become as it were the hand. When such an accomplishment has been attained, the power of good play must depend entirely upon the brain in general, and the intellect in particular, more especially with those faculties which we have emphasized, viz :—Eventuality, Locality, Time, Weight, and Size.

Let, then, all the professors who are now engaged in what is called the higher education of young men and young women, search all the ancient, medieval, and contemporary literature of the world, and with the aid of pen, ink, paper, and books of reference, see if they can devise some intellectual process, either in the class-room or in the seclusion of the private study-room, by which students can better exercise and develop such Faculties as Size, Weight, Eventuality, Locality, and Time, more effectually than

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can be done in the field, on the tennis lawn, or the badminton court. No, these professors, however good intentioned they may be with all their Latin and Greek, can only succeed in cultivating verbal memory to an extent that is entirely unnecessary to modern requirements. The extraordinary verbal memory cultivation of the ancients, so necessary to their civilisation, is not needed now. Any system of study that exercises only one of the Perceptive Faculties, Language, to the almost entire exclusion of the other Powers of Observation, is, to say the least of it, a false system of education, if not actually injurious to both brain and body of the student.

CHAPTER V.

KILLING SPORTS.

MAN possesses many Faculties, especially as regards the Intellectual and the Moral Senses, which raise him far above the level of the lower animals ; but he also possesses those Animal Faculties which are common to many of the lower orders of creation, and which, when uncontrolled by moral guidance, reduce him to the level of the lowest of the ferocious animals. Man, in consequence of his higher intellectual gifts, is a comparing animal, a cause-seeking animal, a criticising or judgment-passing animal, an anticipating animal, and a diagnosing animal. Notwithstanding all these gifts, he is still, under certain conditions, a fighting animal ; and will carry that innate desire to such an extent as to kill his fellow-men under the most dreadful circumstances. In the process of evolution man will no doubt evolve out of the military stage ; but, however he may improve his intellectual and moral status, as long as certain Faculties form part of his mental constitution, he will always be an aggressive animal, a defensive animal, &c. ; and the exercise of these faculties will always be a source of the greatest

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gratification to him. War may disappear, but the desire to contend man against man will still remain. It will be many generations of culture before we shall be able to eradicate from our minds the pleasures derived from the wanton destruction of even harmless animals. We find these death-dealing sports in our midst, and as Phrenologists, we must take them into consideration, as far as we are able, and classify them, so as to separate the true sportsman from the false ones.

The true sportsman is a man who seeks to destroy animals by the exercise of his own Intellectual and Animal Faculties, through the medium, to a great extent, of his own muscular system.

The false sportsman is nothing more than a mere sightseer, an idler, whose object is more to kill time, to take part in society gatherings, and justify all these under the name of Sport, than to sport for sporting sake.

One of our objects, then, will be to separate the wheat from the tare, the true sportsman from the false one.

There are many sports indulged in by the wealthy classes, which a better system of land-ownership and land-usership will render impossible. We speak particularly of Pheasant Shooting; without the powers of wealth, excessive preservation and protection of certain birds and beasts, these would become so scarce as to render the shooting of them, as a means of seeking amusement, practically impossible.

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game preservation would be out of the question; even Partridge Shooting has undergone considerable change, which has rendered it less of a sport than it was previous to the introduction of machine harvesting.

With the march of the human intelligence, land reform will alter many of our present ideas as regards sport, and therefore some of them will probably disappear.

True Sport, whether in Fishing, Shooting, or Hunting, must be done by the man or men direct; such work should not be delegated to a hired attendant, although many interested in the sport may, in a sense, assist.

Such sport would be Snipe Shooting, Woodcock Shooting, Quail and Wild Duck Shooting. The next would be Partridge or Grouse Shooting, where, of course, the sportsman has to walk up his game. The same as regards Pheasant Shooting and Ground Game Shooting, Deer Stalking, and Otter Hunting. The false sports would be shooting birds liberated from traps, shooting birds driven to the gun, such as cover shooting in game preserves; fox hunting; deer hunting; rabbit and hare coursing. We shall have occasion to refer to all these false sports when we treat of Pastimes.

SNIPE SHOOTING.

We place Snipe Shooting first on the list of gun sports, as, in this work, there appears to be required the greatest amount of intellectual exertion on the part

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of the sportsman. The bird is migratory and therefore cannot be artificially reared and preserved ; it makes its appearance only in accordance with the season. Therefore, those who want to indulge in this form of shooting must go and seek the birds, for owing to their wild nature and habits they will not be driven to the gun, as is the case with some other forms of game shooting. These birds are usually found singly, even with the assistance of a dog, and in unfrequented places. The sportsman must then walk up his bird, and confine his attention to such places where he assumes these birds are likely to be found. So quick is their flight that the work of the sportsman is of the highest intellectual quality, for not only are most of the Perceptive Faculties employed in finding these birds, but owing to their quickness in getting away, and the erratic nature of their flight, the greatest strain is, therefore, upon the powers of Perception, and more especially on Eventuality. The marksman has to be continually in a state of active observation and be ready to mark and fire on the spur of the moment. The slightest hesitation or unpreparedness on the part of the marksman renders the chance of a successful shot very difficult, for there is hardly another gun sport which requires so much quickness. We can see in this respect that Snipe Shooting requires excellent brain-work. It stimulates the Perceptive Faculties in a way that no other gun sport can do. Of course, such sport is not equal to the intellectual efforts of batting at Cricket, or in games such as Football, or Hockey, &c. ; but in it there is the animal satis-

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faction that something has to be killed, which has to be picked up and ultimately eaten. This, to the idle man is, for a time, an excellent substitute for earnest occupation. It is a rich man's sport, and a sport which only these men in particular can indulge in. As regards this excellent sport, it can never become universal, even were everybody free to shoot them, as there are not enough snipe to go round, and they would soon disappear from such districts where they are now said to be plentiful.

The value of these birds as a source of food supply is not worth discussing. They do no harm, and probably, a great deal of good, so, after all, they would be better left alone. Still, for all this, it is the finest of gun sports.

Woodcock Shooting may be classed with Snipe, as regards the quality of the sport. They are visitors, always wild, and he who wants to shoot them must go to the trouble of finding them for himself. In fact, snipe or woodcock shooters must be true sportsmen.

PARTRIDGE SHOOTING.

Partridge Shooting has, in comparatively recent years, undergone some considerable change, due to the mechanical process of reaping corn crops. Formerly, when such were reaped, with either sickle or scythe, a stubble was left anything between nine inches to a foot in height. This afforded an excellent cover for the birds at certain times of the day. Then the sport was productive of much intellectual and

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muscular exertion for those who held the guns. With the aid of dogs, the marksman had to walk up the birds. Usually they rose first as a covey, but after the first shot they separated, and the birds were then found singly, and thus the shooting afforded excellent brain-work for the marksmen. But now machine-reaping leaves practically no stubble, and there is little cover for the birds; they see their destroyers as soon as the enemy enters the field, and then take flight; therefore, at the present time, instead of the sportsmen going in search of his game, these birds are now, by a system of beating driven to the guns, which, of course, is not such good sport. It is not so intellectual a method of enjoying shooting as when the birds are to be found by him who wishes to shoot them. The sportsman has now simply to take up a covered and protected position, and wait until the birds are driven past him. Owing to the increased swiftness of the flight, which these birds have acquired since machine-reaping has been introduced, shooting them under such conditions affords, no doubt, excellent opportunities for marksmanship. But the men with the guns see the birds approaching and have time to prepare, whereas in shooting in the long stubble the birds, after the covey has been broken up, rose here and there, and, in consequence, gave excellent opportunities for the exercise of the Perceptive Faculties of the marksmen.

There is still some cover shooting with partridge from the turnips and such like crops; but it appears now that most of the shooting is done at driven

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birds. In the old-fashioned form of partridge shooting Eventuality, Locality, Individuality, and Size were used in the same way as in Snipe Shooting, but in a less degree.

QUAIL SHOOTING.

Owing to the fact that these birds are migratory they cannot be driven and therefore afford much better sport than Partridge Shooting in many respects.

PHEASANT SHOOTING.

This form of sport is somewhat different, and far less of a sport than is afforded by either partridge or quail. These birds are practically tame; they are well fed, and can be usually driven past any position that the beaters desire them to fly. The usual mode of shooting them is by the marksmen taking up a favoured position in some well-packed game preserve, with guns that are handed to them by the keepers, ready loaded. The pheasant shooter has the least possible amount of intelligence to exert in order to bring these birds down. We often see in the illustrated papers great masses of these dead birds in the foreground, the false sportsmen standing behind, and backed up by an array of diminutive game-keepers, beaters, and attendants.

FLY-FISHING.

We must deal with this form of fishing first, as it is of all things a true sport; because all the

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intellectual and bodily exertion which it entails rests entirely with him who holds the rod, casts the fly, hooks and kills the fish. From the start to finish the sportsman has to do all these for himself—he must hold the rod and whip the stream ; he cannot delegate these duties either to a hired attendant or to a trained animal. Whether royal or aristocratic fishermen sit down on the river bank and wait until some hired attendant has hooked a fish for them we do not know, but it is sincerely to be hoped not. Besides, Grayling, Salmon, or Trout will not permit themselves to be driven to or past the fisherman's fly ; but from the nature of these fish, it is not possible. The fly-fisher then must take unto himself all the intellectual and muscular efforts which the indulgence of this sport entails. The sportsman then is thrown upon his own resources. He may or may not choose his fly ; he generally does so in accordance with well-known conditions. Apart from the muscular exertion of casting the fly upon the water, the intellectual work requires the constant employment of many of the Perceptive Faculties. The mind of such sportsmen must ever be conscious of all the difficulties which may or may not affect the object in view. The fly-fisher must so handle his rod that the fly on the end of the line shall fall, as far as possible, on a destined spot ; and when it has touched the water the fly must be made to jump or skip, as it were, along the surface. This capacity for properly whipping the stream is a mental effort, in the first place ; for our object, the muscular system may be disregarded. To continue the work of

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casting the fly until success attend the effort, requires not only the use of the Intellectual Faculties but some of the Moral and Animal ones also ; for most certainly Firmness, Hope, Faith, and Concentrativeness must in turn be employed to support the efforts of the fisherman. This work of enticing the fish to take the fly has some sense of monotony in it, but at every cast of the line there is intellectual exertion supported by Hope ; when hope is gone then such intellectual efforts cease to be a pleasure.

When a fish has taken the fly, then the desire for destruction stimulates the entire brain of the angler, and particularly some of the Intellectual Faculties, besides those already referred to. When the fish has been hooked, then the struggle commences between him who holds the rod and the fish. Eventuality is called into active operation in keeping the mind on the *qui vive* for immediate and constant action throughout the contest. At the first strike of the rod a fisherman with a good development of the Faculty of Weight can tell to an ounce the weight and strength of his fish. He measures this by the tension on the line and by the amount of extra bend which has been put into the rod. By this information he can regulate the capacity of his line and act accordingly. From start to finish, the exercise of the Faculties of Weight and Locality are in constant requisition. It is, so to speak, a fight, a question of attack and defence. As long as the fish has the power of resistance, the angler must use not only his Intellectual Faculties, but especially Caution.

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To keep a proper tension on the line is the fisherman's means of Aggression ; when he sees that the intended victim's power of attack is for the moment likely to be beyond the capacity of his line, he then assumes defensive tactics ; he lets the fish run with the line until he feels that the fish's effort for the moment is exhausted ; then the angler recommences his Aggressive action by winding in his line, until he again feels his fish, and the struggle continues until one or the other is victorious. The too Aggressive sportsman is more apt to lose his prey than he who knows when and how to defend his line. Caution must also be on the alert, ever ready to control both his Aggressive and Defensive Energies. Apart from the bodily exercise entailed in this form of sport, as a mental exercise there is no better of its kind : it stimulates nearly all the powers of Perception : it is good for the exercise of such Faculties as Veneration, Hope, and Firmness ; and of all things it tends to the exercise of Concentrativeness or Fixity of Purpose. A man who has small Concentrativeness too easily tires of his sport, or is ever too ready to change his fly in the tedious process of whipping the stream, or relaxes his attention from his work when he has succeeded in hooking a fish, loses, in consequence, many chances which a man with more Concentrative power is sure to take advantage of.

In thus speaking of Fly-fishing we embrace both Spinning and Trolling, whether in fresh or salt water.

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BAIT OR GROUND FISHING.

Here the conditions of sport are entirely different from Fly-fishing, for the simple reason that whilst a fly-fisher is in a constant state of activity, the ground-bait fisherman is, comparatively speaking, in a passive state. Again, whilst the fly-fisher's tackle is barely up to all the chance requirements, the bait fisherman's line is always well within the powers of resistance of any fish that is at all likely to be hooked. When once a fish is hooked, the delicacy in handling the line is not of very much consideration. Still another item to be considered when comparing these two modes of sport is that the fly-fisher has to seek his prey, whilst in the case of the ground-bait fisherman it is the fish which has to seek the enticement which the sportsman so artfully offers. But, although this sport is, to a certain extent, a passive one, yet there is ample opportunity for the exercise of many of the Animal, Moral, and Intellectual Faculties, and though the muscular system has often to submit to hours of inaction ; yet, to the true lover of this sport, the mind is never (like the muscular system) allowed to sink into a temporary state of inactivity. Constant attention has to be given to either the line or the float, in order that the fisherman may be on the *qui vive*, ever ready to act in response to the slightest indication which may call for immediate action.

The only time when the Faculty of Weight is, to any great extent exercised, is in the effort to

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land a fish. The Faculties which this sport exercise are, of course, Weight, the sense of resistance, the judgment of force, and Individuality. But, although the rest of the Intellectual Faculties are not so much in evidence as in other and more difficult modes of fishing, yet the strain on some of the Moral Faculties is often very great indeed, and, in this respect, has more beneficial effects on the mind than hours of religious devotion, for he has to exercise Hope, Faith, Veneration, and Firmness. Hope must be his constant companion, for, as a rule, the fish which he desires to catch cannot be seen, it can only be hoped for. After the fisherman has measured his depth, and baited his hook, adjusted his float, he must exercise Faith; he must not cease from believing that the fish is about to go for his baited hook; then with these two faculties in a state of tension, he must practise Veneration, that is to say, he must submit with patient resignation until the sublime moment arrives. A man who loses Faith in the spot he has selected, before he has given it a fair and patient trial; and who soon ceases to believe that there are fish in his immediate neighbourhood; or gives away to despondency, had better make his attempts in solitude, as the irritable, despondent, disbelieving fisherman is a nuisance to himself, and, if he is out with companions, he is apt to make himself very disagreeable to them. He must exercise Firmness, and of all things Secretiveness. He must keep his doubts, his despondent feelings, and his dissatisfaction to himself.

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The Animal Faculty mostly used in this sport is Concentrativeness. The fisherman must fix his entire and undivided attention on the line held in his hand or on the float. It is doubtful if a really non-concentrative man could ever become a good and happy ground-bait fisher. The bad-tempered, non-concentrative fisherman had much better work on his own account ; he could then bait his hook, fix the end of his line to a tree or stone, or put the butt end of the rod into a rest ; and then do anything that his versatile mind may suggest ; returning to his spot occasionally, just to see what luck has thrown in his way ; or he could make arrangements for frequently shifting his position, changing his tackle, and bait, and so on ; until he is fairly exhausted, or hungry, or thirsty, or tired, when either food, or drink, or rest, may ease his troubled mind. The good fisherman is successful at this sport, because he is endowed with a good share of certain qualities which make him at once able to enjoy the pleasures of credulity, hopefulness, and resignation. A man so gifted can always find pleasure in this sport. Therefore let the man who has not a fair share of such gifts seek his pleasure in other directions.

OTTER HUNTING.

This is a means of enjoying an outing by those who take interest in this kind of sport. We rank it amongst the true killing sports for the simple reason that those who go out with the hounds actually take part in the find, the pursuit, and the

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kill. They therefore enter into the sport of the chase; and whatever walking, running, jumping or wading, has to be done, those of the hunt have to do all these things for themselves; such work is not therefore delegated to others. Whatever locomotion has to be done, those who have to assist in the hunt provide the energy for themselves. In hunting the otter, of course, dogs do most of the intellectual work, but still the human beings assisting have, at times, to use their intellects just in the same way as the dogs, from start to finish, from the first sight to the ultimate death.

Such work must be capital exercise for many of the Perceptive Faculties, as objects have to be continually noticed, exercising therefore Individuality, Form, Size, Weight, Colour, and Number, together with Eventuality and Locality. Also one or more of the Reflective Faculties have to be used by some of the human assistants to the dogs, from time to time. It must be admitted that such occasions for this particular work are rare, but those who take part in the hunt are there to help with all their mental capacities if needed, and in this respect it is far superior to many of those pastimes which are glorified as sport, and are often the theme of both poets and artists, but which are, from start to finish, nothing more than social pastimes, as we shall endeavour to prove later on.

Beyond these few words on the subject as regards Otter Hunting as it is followed in the British Isles, we have nothing to say.

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HARRIERS, BEAGLES, &C.

We have classed Hare Hunting with Harriers as sport; but we would exclude all those who take part in this sport who do not generate their own powers of locomotion, for it is only those who follow on foot who can truly enter into the spirit of the chase. The mounted followers are mere sight-seers, and cannot possibly take any part in the hunt; the hunt consisting of the find, the pursuit, and the capture or death of the animal hunted, and only those are true hunters who take part in these events by their own mental and muscular exertion. At the same time, it is only appropriate to remark that an almost equivalent amount of mental and muscular exertion can be obtained from a paper chase, but the animal delight which is derived from the expectation that a living creature has to be found, pursued, captured, and ultimately eaten, is absent from the paper chase, but the intellectual and muscular exercises are, to a certain extent, the same, bar that absence of brain stimulation which the exercise of Aggressive Energy gives to the circulation of the blood when there is a destructive object in view. In our previous work, entitled, "The Brain Book and How to Read It," it is there pointed out in our explanation of the function of Aggressive Energy that the late Dr. Donovan was fully convinced that there is a close relation existing between the Faculty of Destructiveness (Aggressive Energy) and the circulatory system. It is not surprising, therefore, to Phrenologists, that

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though a paper chase may entail a deal of mental and muscular exertion, yet in this form of recreation there is an absence of excitement—that blood circulating excitement—which is present in the minds of those who take an active part in a hunt that is intended to end with the death of the animal pursued.

It would, therefore, take a lot of educating, not to suppress Aggressive Energy, but to give it legitimate employment ; and this education is going on, not in Churches and Schoolrooms and Lecture Halls, but in outdoor sports of a combative nature, such as Cricket, Football, Hockey, &c., where young men and youths expend their animal energies to a far greater extent than can be found in the find, pursuit, and death of either a rabbit or a hare.

Hunting hares and rabbits with the harriers or other dogs, is sport only for those who provide their own means of locomotion, and overcome difficulties such as jumping hedges, fences, dykes, and ditches, by exertion emanating exclusively from their own brains and muscles ; to delegate these exercises to a horse is to deprive the hunt of its sporting character ; though it may be just as exciting to a carried sportsman, but the excitement is imaginary. He (the mounted one) thinks he is doing a lot, but he is really doing nothing at all ; the horse, in fact, is doing it for him.

The question of cruelty, in considering the intellectual and animal side of sports, must not be allowed to enter into the merits of the question at all ; cruelty can only be considered when dealing

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with any killing sport from a moral point of view. It is cruel, and, therefore, degrading for men and youths to take part with the dogs in the destruction of animals which are so mentally constituted that they cannot turn and attack their pursuers. The fight is, therefore, one-sided, all the aggression being on one side, and only a limited means of defence on the other, such as fleetness of foot.

Another objection to this form of sport is that it excites Aggressive Energy (Destructiveness), whilst, at the same time, there is no excitement of the other very important energy, that is Defensiveness. It is, therefore, only half a contest, whereas in legitimate game-sports both energies are, in their turn, excited ; and when both such energies, together with Secretiveness and Caution, are actively employed, there is much more call on the intellect for work, and such game must consequently be better sport than in the hunting of defenceless animals.

CHAPTER VI.

PASTIMES, OR FALSE SPORTS.

DEER HUNTING (I).

THERE are many amusements indulged in by the wealthy classes and spoken of as sports, but which have only a glamour of sport surrounding them, and are, in consequence, but too often viewed by the ignorant and thoughtless as something worthy of admiration and respect, as being the highest forms of sport.

No doubt in times long gone by, it was necessary to hunt certain wild animals, either as a source of food supply, or to keep in check pests which were at once dangerous and destructive. Most of the dangerous ones have long since been exterminated; whilst some of those animals which are destructive are artificially reared and protected in order to maintain their existence. The preservation of big game, as a source of food supply, is entirely unnecessary. It is with a view of considering the brain side of such hunts, that now remain, that we approach the subject.

We place Deer Hunting first, which in this country

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consists of two kinds. The first is when a captured poled stag, or a hind, is liberated, and after a run, is eventually recaptured, generally uninjured. The second is when a stag or hind is singled out, and driven from a wild herd and then pursued, captured, and killed.

Of the first form of Deer Hunting there is little to be said. As is well known, a paddock-reared poled stag, or a hind, is carted and taken to a rendezvous where there is waiting for it a pack of hounds, together with the attendants; also the ladies and gentlemen who are supposed to take part in the hunt, all well mounted, of course, and being under the impression that it is they who are going to hunt the quarry. The deer is liberated, and when the animal has been sufficiently frightened, it ultimately seeks safety in flight. The dogs, which have been kept well under control by their hired attendants, are then sent in pursuit. After the quarry and the dogs have had a fair start, the mounted ladies and gentlemen follow; the custom of the hunt being that the riders shall keep well behind the dogs. Thus the procession lasts until the master of the hunt calls the dogs off, either because the quarry has gone clean away, has been injured, or is held at bay by the dogs, which have come up with the quarry and prevented its escape by certain gentle means common to the nature of dogs and other carnivorous animals.

It is not our part to reflect upon the morality of the affair, but merely to try and find out what are the Intellectual Faculties which these ladies and gentlemen exercise in the hunt. If such hunting

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consisted in finding, pursuing, and capturing the animal, which is the object of the chase, then these deer hunters take no part in the affair from start to finish ; and, therefore, the task of the Phrenologist is somewhat simple, as such hunters do not seek for and find the quarry, as the animal is brought in a cart, it cannot be said that they seek for and find the object of the chase. When the animal has cleared off, it is the dogs which go in pursuit ; therefore, these hunting folks do not pursue, that is done by the dogs ; and at last, when for many reasons, the hunt is declared over, the result obtained is in no way due to those ladies and gentlemen who have followed the dogs. And what is more against these so-called hunters, is that the horses they ride have done all the work of following, which decent sportsmen would have preferred doing for themselves, that is to say, would have followed on foot. What part then, have these ladies and gentlemen performed in the hunt ? The answer is simply, "Nothing at all," as they have not taken part in the hunt, they have simply been entertained ; and will still be further amused when they participate in the other social functions which are usually attached to these so-called hunts ; such as dinners, dances, &c. Deer Hunting then for them is but a pastime. The fact that they are mounted in no way constitutes it a sport.

In Otter Hunting for instance, all those who take part in such a hunt help to find, to pursue, to capture, and kill by their own brains and muscles, as they are on foot, and whatever mental and muscular exertion is required of them, from start

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to finish, such hunters have to provide that for themselves. But these so-called deer hunters, as has been repeatedly pointed out, are mounted; they are in fact carried, and there is an end to it. They are therefore not hunters, and not even sportsmen.

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With this form of hunting the dogs and their attendants have to commence the affair by hunting a herd of wild deer, with the object of separating from it, either a stag or a hind; and when they have succeeded in doing this, the hunt is supposed to commence, and lasts until the pursued animal is captured, killed, skinned, and the carcass cut up. The case against these ladies and gentlemen, for whose amusement the whole affair is got up, is much worse than in the previous form of hunting.

In this hunting procession, which is formed as in the previous so-called sport, these ladies and gentlemen, mounted of course, guide their horses to follow the Master of the Hunt; Veneration makes this an etiquette—the Master endeavours to follow the attendants of the dogs; and the dogs, the real sportsmen on this occasion, pursue the quarry by the aid of their own Intellectual Faculties stimulated by their Aggressive Energy. The hunted animal's brain and muscular system being stimulated by Caution and his Defensive Energy in endeavouring to escape the pursuers, and regain the herd from which the dogs had so cleverly separated him.

The object of the hired attendants, in the case we

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have in view, was to get the dogs to so hunt the stag, when separated from the herd, as to compel him, after the chase, to finally take to the water; the river Exe in this case. It was a railway navvy who witnessed the final struggle and death of the stag, and related it to the writer. The stag having at last been driven into the river, the dogs cleverly managed, by all the arts and devices in their power, to prevent the hunted creature escaping, either up or down the stream. Several times it made desperate efforts to escape from the dogs by striking straight for the river bank, and it would have succeeded, but the huntsmen had taken the precaution of stationing a man at every likely opening, who was armed with a heavy cudgel, and when, on more than one occasion, the stag attempted an opening, it was knocked back, almost stunned, by a heavy blow on the head delivered by one or other of these attendants. At last the stag, as if by instinct, realised that his powers of defence, that is, by escape, would no longer avail him; he then assumed the aggressive and boldly attacked the dogs with his antlers whenever they would face him. In this fight he was able to reduce the number of his aggressors. Two dogs were killed and some injured. But, even then, a fair stand-up fight between the dogs and the stag was prevented. Whilst the stag's Aggressive Energy and Intellectual Faculties were busily engaged with the remaining dogs, a rope with lasso attached was thrown over the stag's antlers, and thus secured, he was drawn up the bank and slaughtered, skinned, and the carcase cut up, and distributed in

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accordance with custom. The offal and the blood fell to the share of the dogs, who, smothered in gore, gratified their Alimentiveness in lapping up the blood and scrambling for the edible portions of the offal.

All this is very fine indeed, and quite in the nature of an old-time stag hunt. But where were these ladies and gentlemen who were under the impression that they constituted the hunt, and who, no doubt, afterwards told their friends that they had been stag hunting? Such noble sport, too! From start to finish they were absolutely not in it. They had nothing to do but to start out from their homes in the morning, ride to the meet, and thence to the scene of the hunt; they followed when not looking on, and they looked on when they were not following. But they had their reward by seeing the final struggle; the battle royal between the stag and the dogs, which was so abruptly terminated by the stag being lassoed, brought to the bank and killed, &c., followed by some pretty little ceremony with the Master of the Hunt and the ride home; to be followed, in another season of the year, by society functions. People call this sport because they are under the impression that anything which is associated with the pursuit, capture, and death of a hunted animal, must be sport, but this is a mistaken notion altogether. Anyone who is at all conversant with the Intellectual and Animal Faculties must at once realise that any sporting work which is delegated to others must detract from the value of the sport in accordance with the amount dele-

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gated. Such hunting is simply sport by imagination. It reminds one of the American humorist who watched, from a seat in an hotel verandah, his friends climbing some Alpine mountain, and fully took credit for those efforts which he had delegated to his friends.

No, there is no sport in such hunts as we have above described. To look on is not sport, though it may be interesting. In all these hunts there is of course a great deal of sport, involving much mental and muscular exertion; but in all such cases the sport rests with the animals which are pursued, the dogs that hunt, and the horses which gallop, jump, and sometimes part company with their noble impediments. But for these mounted sightseers, these time-killers, there can be no sport whatsoever. If they want to enjoy the pleasures of true sport, they must take an active part in the execution of some pleasure-work where their own brains and muscles are actively employed. A looker-on either from the back of a horse, or from the seat of a trap, or a bath-chair, can be nothing more than a sightseer.

FOX HUNTING.

This is another of those ancient, venerable, and well-established sports; but which, on an analysis, will be proved to be nothing more than a mere pastime. That Fox Hunting is a sport no one is prepared to deny, for the simple reason that it is a very sporty thing to seek out from his hiding-place a thoroughly wild, secretive, and destructive pest,

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drive him into open country, then pursue him and ultimately capture and kill him in the open, or in some covert. Such is as true an example of a sporting hunt as one could well imagine ; but only for those who actually do all this work.

There are two kinds of this sort of hunting, called respectively Cub Hunting and Fox Hunting, but it is by no means necessary to especially describe the exact nature of each form of hunting.

There are numerous packs of hounds kept up at a great expense to be found in all counties in the United Kingdom. Each pack is generally associated with some system of co-operation, whereby the attendant expenses are provided by those who either favour this pastime or actually attend the meets, and call themselves fox hunters.

These hunts lead to such a number of social gatherings, that we will commence with the hunt breakfast, when people gather in friendly groups in order to gratify the natural instincts prompted by friendship, and eating and drinking : Adhesiveness and Alimentiveness, to be strictly phrenological. The next function consists in attending what is called " The Meet," a pre-arranged rendezvous where all those who are interested in hunting with a certain pack, collect at a certain time, mostly for the purpose of meeting friends and making acquaintances ; and exercising also their faculty of Veneration by paying their respects to the gentleman who is known as the Master of the Hunt, a man who is generally supposed to be rich, popular, and influential, who is at the rendezvous with the hounds

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and the hired attendants. At a signal from the Master, a start is made for the hunt, a procession is formed, and this function is called The Ride to covert—a place where those who have had the arrangement of the day's excitement expect to find a fox. When the pack reaches this place, then commences the actual work of the whole affair. The covert is to be drawn, consequently the dogs and their keepers are set to work, as it is only they who are allowed to enter the covert, as they alone have to do the work. The dogs use their Intellectual Faculties, and if a fox is there, they soon find him, and ultimately compel him to seek safety in flight.

As soon as the fox has gone away, a cry is raised, the fox hunters, mounted (don't forget that), follow the hounds at a respectful distance. There is, of course, much brain-work in all this affair. The fox being deeply interested, his entire brain and muscular system are naturally in a high state of tension ; his faculties of Secretiveness and Caution stimulate his Intellectual Faculties to do their best. But there are certain elements against him which are aids to his pursuers. The grass is usually wet, either from dew or recent rain, therefore the lower part of his body, and his tail, soon get more or less moist, and as his feet throw up either dust or minute particles of mud, his fur and bushy tail soon get clogged and weighted ; his tail now becomes heavy and a very serious impediment to him. His speed falls off. The dogs then begin to shorten the distance between themselves and their prey, and it is then

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It does not at all follow that those men and women who are supposed to "Hunt" either Deer or Fox with certain packs of hounds do so merely for savage delight of witnessing the find, pursuit, capture, and death of any of these animals. It may be justly said that the majority of them join these hunts for various other reasons, such as the pleasures of horse riding, local associations, friendship, and even commercial interests. The chief attraction, however, is the natural affinity between man and horse. Such are lovers of "horse flesh," and are, in consequence, ever ready to take part in any functions or recreations in which these animals are concerned. They may be variously described as horse men or women, horse fanciers, breeders, trainers, judges, &c. But horse culture, in all its various forms, however interesting it may be, cannot be considered in the light of sport. Those, then, who form the cavalcade, a function of these hunts, are simply cavaliers, and are not sportsmen in any sense whatsoever.



