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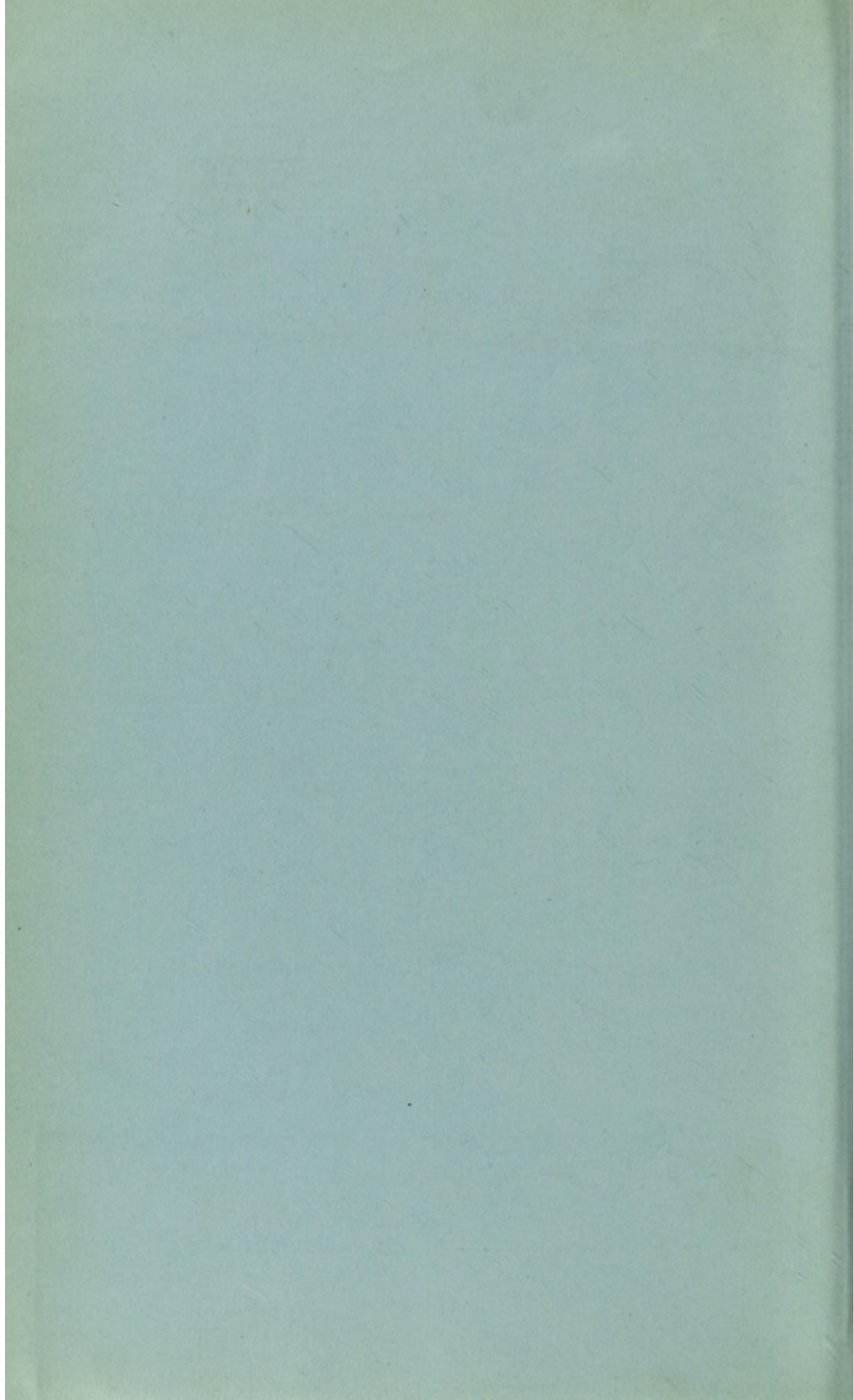
THE SCIENCE OF ORGANISATION

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THE
SCIENCE OF ORGANISATION

A Preliminary Lecture on the Science delivered by Colonel B. R. Ward, R.E., to the Members of the Marlborough Lines Military Literary and Debating Society (affiliated to the Organisation Society) in November, 1911.

The last 200 years mark a period of advance in science such as has never been seen in the history of the world. In the Eighteenth Century the coping stone was placed on the edifice of Astronomy by Newton's discovery of the Law of Gravitation. In the Nineteenth Century Sir Charles Lyell placed the science of Geology on a firm foundation. A natural classification of plants by Jussieu and De Candolle changed Botany from an empirical study into a true science. The names of Cuvier in Zoology, of Darwin in Biology, of Pasteur and Lister in Medicine, Surgery and Bacteriology indicate not only the various directions, but the vast field covered by the Physical Sciences.

Up to this point the advance of Science has been from inorganic to organic nature as revealed in plant life and animal life, finally culminating in man.

Next to claim the attention of mankind is the Science of Psychology—the Science of the Mind—usually called Education in England. Education is the practical side of Psychology, and Englishmen with their practical instincts naturally emphasize that side. The Science itself, however, is much wider than is generally supposed in this country.

For great names in the Science of Psychology we have to look to Germany, America and France. Herbart, Stanley Hall, and General Bonnal, are three names that mark some of the highest points yet reached in the Science of Psychology.

It might now be supposed that the whole field of Science had been at least reconnoitred, if not completely mapped out. The survey has been carried out from inorganic nature to man as the highest organism in nature; and lastly, man has been explored both in body and mind, leaving, one might suppose, no further sciences to be discovered.

A further science has, however, been put forward by Mr. Marshall Bruce-Williams, and named by him ANDROLOGY.

Andrology is the science of the Individual as an Individual. It covers the whole man, considered psychologically as well as physically.

"Would you understand History," said Napoleon, "look at your neighbour. It is all contained in him."

Napoleon had never heard of the Science of Andrology, but his intuition—as was so often the case—guided him to the Key of the problem solved by that Science.

Look at your neighbour, then; of what does he consist?

He consists of a head or directive portion, of a stomach or nutritive portion, of a physical or motor portion, and of a sexual or reproductive portion.

This description of an individual may be transferred by graphic methods to a chart in this form:—

Portion of Body	Head	Stomach	Frame	Sex
Function ...	Direction	Nutrition	Movement	Reproduction

This chart is purely functional and therefore practical.

In each case the question to be asked is: "What does each portion of the body DO?"

The most complex of these various portions of the body is undoubtedly the head.

We may take it that the brain has four principal functions to perform.

First—intellectual—the apprehension of Truth ;

Second—moral—the apprehension of Justice ;

Third—æsthetic—the apprehension of Beauty ;

Lastly—emotional—the apprehension of Love ;

We may now draw a complete functional chart of the sevenfold man.

Intellectual	Moral	Æsthetic	Emotional	Vital	Physical	Sexual
Truth	Justice	Beauty	Love	Nutrition	Safety or Movement	Reproduction

The various uses to which this chart may be put will be apparent later on.

For the moment—before quitting our rapid survey of the Science of Andrology—it will be sufficient to say that it forms part of an Instrument of the Mind which it helps to prompt and protect, thus fulfilling a function which Bacon foresaw when he wrote :

"The unassisted hand and the understanding left to itself, possess but little power. Effects are produced by the means of instruments and helps, which the understanding requires no less than the hand; and as instruments either promote or regulate the motion of the hand, so those that are applied to the mind prompt or protect the understanding." (Aphorisms, 1: 3.)

Anyone who has to deal with the organisation of human beings, is intellectually prompted by this chart, for it reminds him of the sevenfold constitution of each member of the organisation he is dealing with.

His intellect is also protected by the chart, for it obviates the necessity for his thinking out the human problem from first principles on every occasion on which he has to deal with a particular question arising out of his work.

We now pass on to the second Science of which Mr. Bruce-Williams is the pioneer, *i.e.*, the Science of ORGANISATION.

Here we may usefully quote Bacon again: "It is in vain to expect any great progress in the sciences by the superinducing or engrafting new matters upon old. An instauration must be made from the very foundations, if we do not wish to revolve for ever in a circle, making only some slight and contemptible progress." And again: "The ancient authors and all others are left in undisputed possession of their honours; for we enter into no comparison of capacity or talent, but of method, and assume the part of a guide rather than of a critic." (Aphorisms, 1: 31, 32.)

As we have already seen, the Science of Andrology deals with the individual as a complete man. It binds together in one survey the various Sciences dealing with a human being as an organic entity. Of the various representative Sciences given at the commencement of this paper, it will therefore be seen to deal with all the Sciences from Biology onwards. Thus Biology, Medicine, Surgery, Bacteriology and Psychology, all come within the province of the Science of Andrology, whereas the Sciences of Astronomy, Geology, Botany and Zoology fall outside its province.

The Science of Organisation, on the other hand, deals with all these latter Sciences, and not only with these Sciences, but also with those falling within the province of the Science of Andrology.

It is thus seen to be the most comprehensive of all the Sciences, and enables us to get a grip of the general scheme of things, such as has not been possible even to scientists until the present day.

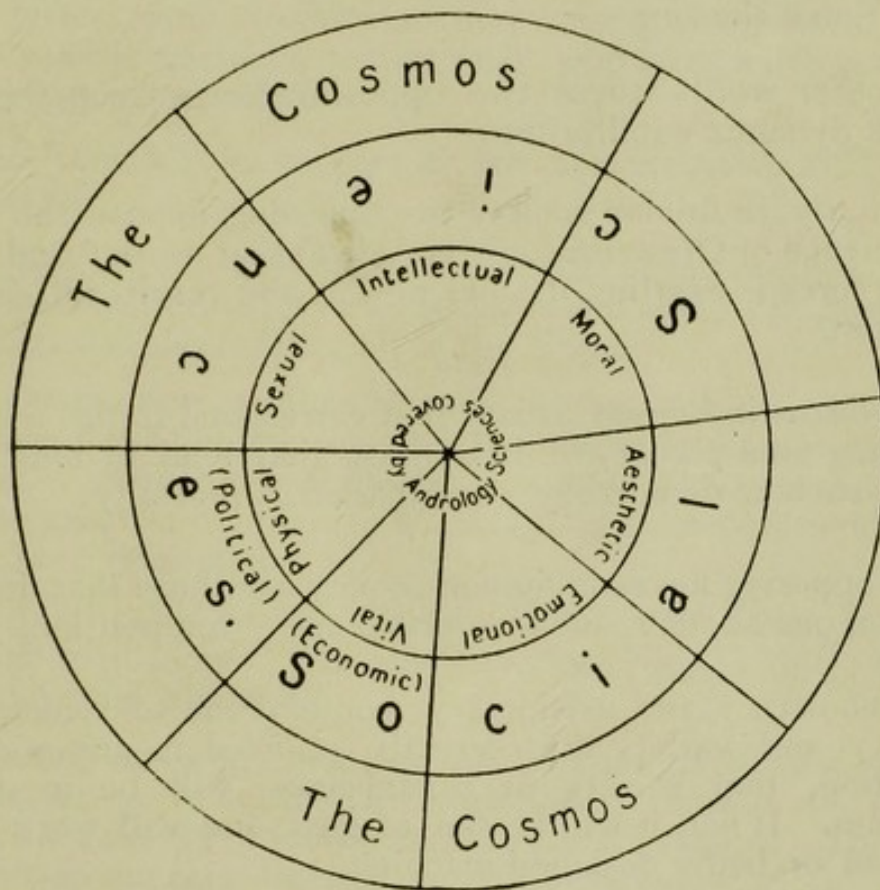
The Science of Organisation rests on an Axiom, and contains three Principles.

The Axiom is to the following effect—"All Society is an extension of the Individual."

Although the Axiom refers to human society only, it will be seen that its scope is far wider than this. For practical purposes, however, human society is the chief pre-occupation of the organiser, and it is as a rule unnecessary to travel outside this.

The Axiom is well illustrated by Napoleon's remark already quoted, and by Emerson's saying: "All Society comes from the Individual."

It can best be described by a chart based on the Andrological Chart, but slightly different in form :—



In this chart the inner circle represents an Individual.

As the Individual extends into Society, the next circle represents the Social sciences arranged in functional order for the Statesman. It will be noticed as regards this circle that the Vital and Physical portions of the individual become, when extended into Society, Economic and Political.

The third circle represents the extension of the functional thought of the Individual through Society into the Cosmos.

Of the three principles underlying the Science of Organisation the first is the Principle of Duality.

Throughout nature there is a universal law of attraction and repulsion—of a flying together and a speeding apart. This alternation of concentration and dispersion—or to describe it in other words, of creation and destruction—is a law of Nature that holds good in all the Sciences, and finds its counterpart in human history.

One illustration of the Principle of Duality is seen in the movement of a planet round the sun. The planet is all the time being acted upon by two forces—a centripetal force, which tends to draw it towards the centre of the sun, and a centrifugal force which tends to push it away from the sun. The resultant of these two forces is a force tending to keep the planet in an elliptical orbit rotating round the sun.

In other words, these two opposing forces keep the whole system in dynamic equilibrium.

Similarly, in human society two opposing forces—the Duality of the Science of Organisation—are always at work; and if each opposing force is exerting its due power, the result will be social equilibrium.

The forces in human society that correspond to the centripetal force acting on a planet are those forces that tend to bind society together, such as democracy, combination, uniformity.

The opposing forces in human society are those that draw men apart from one another, such as aristocracy, competition, variety.

If democracy and aristocracy, combination and competition, uniformity and variety are correctly adjusted in any society or organisation, that society or organisation will be in dynamic equilibrium. If not, it will be out of gear, and will work like an ill-adjusted or badly designed machine.

Military organisation, having been designed for purposes of aggression and protection—two of the oldest and most essential of human needs—gives many useful illustrations of this principle. The test of war having been applied to military organisation at recurring intervals during a countless number of centuries, the general system of organisation has had no chance of deviating seriously from a condition of equilibrium. Any military organisation that did or does seriously deviate from such equilibrium could not and cannot for long escape disaster.

A vast amount of wisdom derived from the practical experience of our ancestors is therefore embodied in military institutions and customs all over the world.

Take for instance the organisation of armies into officers, non-commissioned officers and men.

This organisation is universal in all armies, and he would be a bold heretic indeed who should refuse faith in so catholic a doctrine.

In this organisation into officers, non-commissioned officers, and men, we see a due *proportion* observed between the opposing principles of democracy and aristocracy.

The officers form a democracy among themselves, but an aristocracy with reference to the non-commissioned officers.

The latter, again, are a democracy among themselves, but an aristocracy with reference to the men, who form a democracy on which the whole system rests.

Again, consider the officers or the non-commissioned officers by themselves.

Two institutions, evidently of pre-eminent importance, judging by their universality, exist in each of these bodies—the Institution of the Mess, and the Institution of the Parade.

The Institution of the Mess is democratic in its essence. Democracy aims at happiness, and happiness is impossible without equality. The motto of Democracy is: "The greatest happiness of the greatest number." To attain this democratic ideal the Mess has been instituted.

The Institution of the Parade is, on the other hand, an aristocratic institution. The ideal of aristocracy is duty, and its motto is "Noblesse oblige."

On parade an order is carried out because given by a superior to an inferior. Whether the superiority consists in a day's seniority or a seniority of ten years makes no difference. The order, having been given by a superior, must be obeyed.

If no democratic institution, such as the Mess, were in existence, and officers or non-commissioned officers were therefore always "on parade" with reference to one another, the aristocratic side of this particular Duality would be over emphasised, and tyranny would result.

If, on the other hand, there were no aristocratic institution such as the parade, to accustom the mind to the idea of duty, nothing effective would ever be done, and the result would be general slackness and inefficiency.

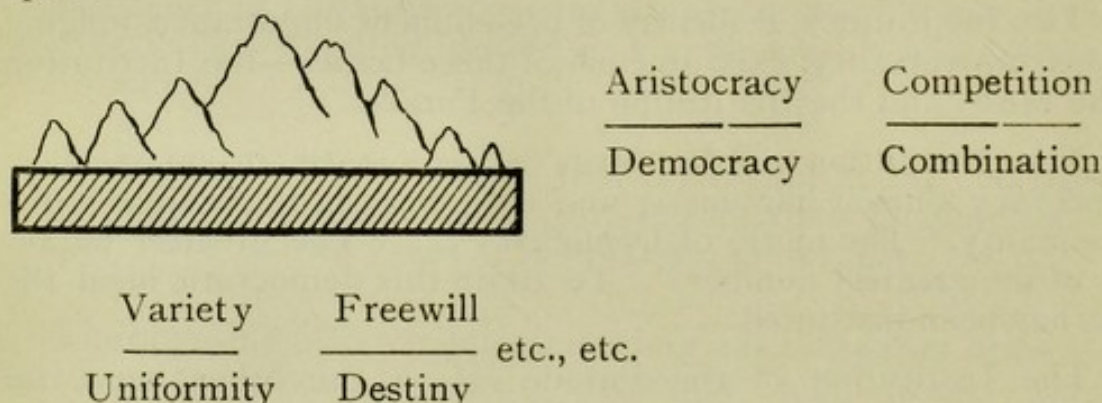
The due mixture of the two opposing principles leads to equilibrium and well-being in the Organisation.

One more illustration of the principle of Duality, taken from military life, may be given before passing on to the Second Principle of the Science of Organisation.

The clothing of the whole army in khaki-coloured uniforms represents a general uniformity. If, however, no variety at all were allowed—such as is given by the various regimental cap badges—would the efficiency of the army be as high as it is?

One has only to think what effect an edict abolishing the patch of red cloth and Maltese Cross on the caps of the men of the King's Royal Rifles would have on that distinguished Corps. They would no longer be, using the word literally, a "distinguished" Corps at all. The variety which is now their pride, would be lost in a general Khaki uniformity, with disastrous results as regards efficiency.

The Principle of Duality may be represented graphically by a mountain chain rising out of a plain. The plateau represents the forces that bind men together, the peaks the forces that draw men apart :



If we use mathematical symbols we may take the plus (+) sign to represent the forces that bind us together and the minus (−) sign to represent the forces that tend to drive us apart.

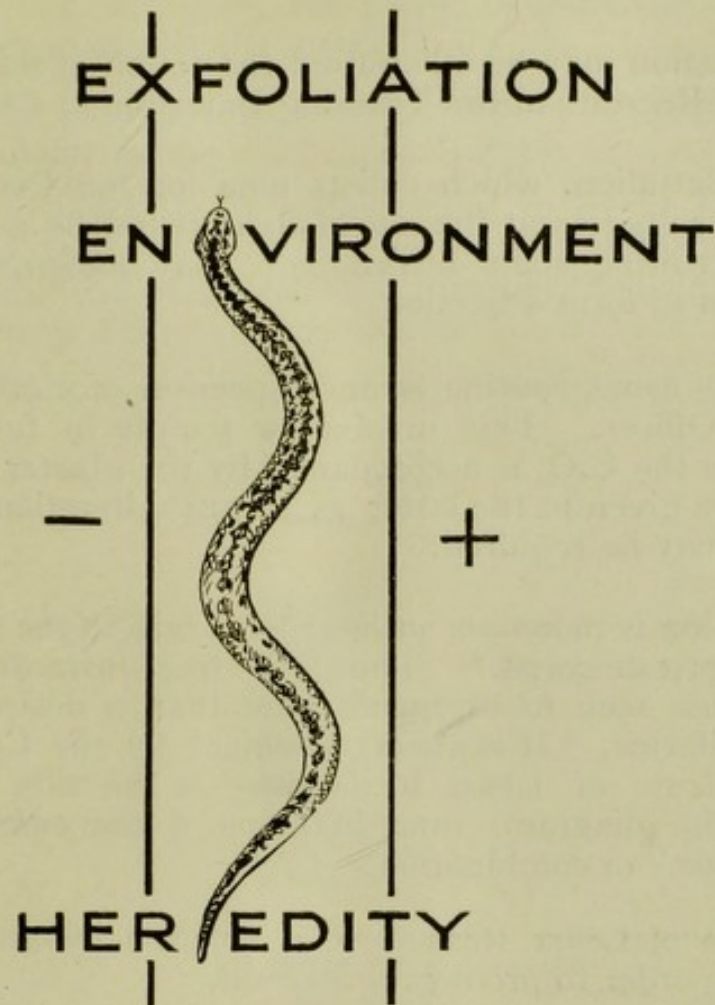
The second Principle in the Science of Organisation is the Principle of the Line of Least Resistance. This Principle is best illustrated by considering human life or the life of some definite human society or organisation under the form of a serpent moving through a dense medium.

The path of life may always be considered under a three-fold aspect :

Heredity, Environment, and Exfoliation,
Past, Present, and Future,
Power, Conditions, and Result,

are examples of this method of considering the Progress of Life.

Statesmen must know the Past, and so act in the Present that the Future will find Society in an improved condition.



In the above sketch the serpent of life is represented as moving upwards through a dense medium bounded by two vertical lines. On the right, the plus (+) sign represents the forces which bind men together, viz.: Democracy, Combination, Uniformity, etc. On the left, the minus (—) sign represents the other side of the Dualities, namely those forms which tend to keep men apart, viz.: Aristocracy, Competition, Variety, etc.

The serpent of life is moving through a dense medium. He must therefore move in curved lines, his dynamic force causing him to move always along the Line of Least Resistance.

The organiser of society has no power over the past, but he must know something of the hereditary tendencies of the society of which he has control.

He does, however, exercise power over the present, inasmuch as he can so arrange the environment about the head of the serpent

that the latter will find the Line of Least Resistance to lie between him and that side of the Duality towards which the organiser or leader wishes him to go.

An illustration may be taken from the action of the Captain of a Company of Recruits in the Training Battalion at Chatham.

In that Battalion, which enlists men for the Corps of Royal Engineers, recruits join at the rate of about two daily. After about a week of recruiting some fifteen men have joined, a sufficient number of men to form a Section.

Part of the usual routine is an inspection of clothing by the Commanding Officer. This involves a parade in full dress, on which occasion the C.O. is accompanied by the Master Tailor, and instructions are given to the latter as to any alterations in fitting clothing that may be required.

The occasion is moreover utilised for a talk to the men on the subject of "esprit de corps." Thus the true inwardness of the whole function is seen to be much more than a desire to ensure well-fitting uniforms. It is an arrangement by the Commanding Officer of a Line of Least Resistance on the side of the plus (+) sign in the diagram, thus inducing a movement towards "esprit de corps" or combination.

This Line of Least Resistance is ensured by arranging the environment in order to produce this result.

Part of the environment consists in the uniform worn. All are in red tunics of the same pattern, and the remarks, also a part of the environment, about "esprit de corps" indicate that the great traditions of the Corps cannot be upheld in the future without the willing co-operation of all men joining the Corps.

The result of an environment scientifically arranged in this manner is that the dynamic force in the life of the group urges them, without being driven, to move in the direction desired.

Later on, the Commanding Officer may desire that the Section or Company should move towards the opposite or competitive side of the Duality.

An announcement that a Lance Stripe will be given to the best man at Drill, Musketry, and Field Works is equivalent to arranging the Line of Least Resistance so that the dynamic force already alluded to shall cause the serpent to move of his own accord towards the minus (—) sign.

Psychologically considered, the Line of Least Resistance correctly applied means that the power of suggestion should be utilised to the fullest extent, and that the motor-activity of the men should be called into play, the power of authority being held in reserve rather than actually applied.

The last Principle in the Science of Organisation is the Principle of Degree.

It was a saying of Havelock that in every Company of a hundred men, there would always be ten who would storm the gates of Hell, eighty who would follow if they got the lead, and ten who would run away if they got the chance.

This principle may be represented graphically thus :



The object of the organiser of society is to encourage and give Lance stripes to his ten per cent. above the average, to raise the general level of the average, and to eliminate the unfit.

In military life, in a Battalion of Recruits, elimination is provided for by a paragraph in King's Regulations, which enjoins the discharge of any man within three months of enlistment if "not likely to make an efficient soldier."

Illustrations have been given from military life of all the foregoing principles, but—as pointed out at the commencement of the lecture—the Science of Organisation applies to human society under all its sevenfold forms, and governs systems of suns and planets as well as all systems of life on this planet of ours. Its practical application lies however in human society, and its truth must be tested in the case of intellectual, economic, and political institutions, if we desire to help and not hinder a true and natural evolution.

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