PELMANISM

Lesson X

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LESSON X
THE PURSUIT OF TRUTH

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LESSON X
THE PURSUIT OF TRUTH

FOREWORD

The process of thinking is not *one* process; it is a single result which is the outcome of many processes.

Thinking calls for a knowledge of the facts involved.

It requires certain states of mind.

It exercises the memory and the imagination.

It demands a study of words and their uses.

It presupposes an acquaintance with the principles of evidence.

It demands a knowledge of human nature.

How is such complete equipment to be secured? By careful practice on approved lines. The complete truth in many things may even then elude the thinker: but the approximate, sometimes even the *exact* truth will be his, and he will at least have the interest, the joy, and the education which arise out of the search. The student is advised to grip the ideas and methods contained in the following pages and carry out all our instructions.

I—ABOUT LOGIC

In the sections that follow we shall endeavor to explain the working of certain factors that are necessary to success in reflection and reasoning. We invite the student's careful attention to these sections on account of their importance. The right conduct of mental operations can be secured only by the synthetic method. It used to be imagined that if a student trained himself in the arts of formal logic he would think, feel, and act in a manner that was unimpeachable; but experience brought to light a fallacy which a little analysis would have made clear at once.

Logic is concerned with purely intellectual processes, whereas life calls for decisions and actions in which knowledge, feelings, emotions, and imagination occupy a prominent place; consequently the true method of reasoning cannot be arrived at until these very real factors are taken into account. It may not be amiss, therefore, to spend a few moments in a brief discussion of this matter.

LOGIC AND DISAGREEMENT

Why do so many men and women—some of them with logical and well-trained minds—fail to agree on such vital issues as politics and religion? The question can be answered best by offering an illustration.

Suppose, for instance, in a group of twelve

men that four are clergymen, four are professors, two are business men and two are skilled mechanics. They probably represent all shades of religious belief and unbelief; likewise they are of diversified political opinions. Can we be surprised if they become antagonistic when discussing a highly debatable topic? The faculties of the great Universities of the country, like Harvard and Yale, boast some of the greatest thinkers of the nation; but it is possible to take five professors in a specific field and discover that their conclusions are as far apart as the poles.

These professors may have attended the same University, they may have used the same text-books in logic and obtained the B.A. degree in the same year, yet their studies do not prevent them from coming to quite opposite conclusions. Why? Because opinions and convictions do not spring primarily from reason, but from feeling and self-interest; they are profoundly affected by temperament and training.

DOES REASON GUIDE US?

This explains why some Professors believe in capital punishment and others oppose it; and why some professional men are reactionary whilst others are progressive. We might have a much more correct world if this were not the case, but as a world it would not be quite so interesting. At any rate, we have to admit that

few of us follow the dictates of pure reason. *WE LIKE TO THINK THAT WE DO.* But life is a very complex affair, and prejudice and hate, as well as open-mindedness and love, have a free run through human consciousness.

Besides, there are scores of matters on which it is not possible to arrive at the truth in a manner that convinces everybody. Indeed, on most questions we must be content with arriving at decisions which have a high degree of probability. Few things are more conclusively proved than that the earth is round; yet even men and women with some claim of education who find it impossible to harbor a doubt on the subject might, if submitted to a ruthless cross-examination by an ingenious flat-earther, find themselves at a loss for conclusive arguments in support of their opinion.

HOW DIFFERENT OPINIONS ARISE

Outside of mathematics and self-evident truths (such as the knowledge of our own existence), human opinions present the spectacle of a mass of contending forces: witness the battles we fight in economics, in art, philosophy, religion and politics. In many of these spheres there is room for what we call "two opinions;" and both of these may be equally rational. Simply because there is diversity of judgment, even in matters of the highest importance, we cannot argue that therefore the laws of formal logic

are of no value. They are a *test* of our reasoning processes, a kind of footrule, or measure, by which we estimate the accuracy of an argument.

The premise in a "deductive" argument is the introductory statement from which one begins his reasoning. In the subsequent illustration A, is the premise, the statement accepted or agreed upon as true. (a) All men are mortal. (b) Socrates is a man. (c) Therefore, Socrates is mortal. An argument may be quite logical in structure but may rest upon a false premise, as is seen in the subsequent illustration "Johnson to Boswell." False premises may, by a happy chance, lead to a true conclusion. For example, rickets (an abnormality of the bone, due to lack of lime)may be partially cured by the ultra-violet rays found in sun-light. Such rays, however, do not pass through the ordinary plate window glass, so that the patient must be subjected to the direct rays of sun-light or to artificially produced ultra-violet rays. Before these facts were known, fresh air was credited with the cure for rickets. But nearly all our disputes are not about logic; they are about facts. It is simply as a test of our inferences from facts and as a means of detecting deceit or confusion of thought that formal logic is of service. The student's method should be twofold: (a) he should institute an inquiry into the data of the case, and (b) he should exercise extreme caution in making his deductions.

Johnson to Boswell—Let us take an illustration.

Dr. Johnson to Boswell: "Keeping accounts, sir, is of no use when a man is spending his own money, and has nobody to whom he is to account. You won't eat less beef today because you have written down what it cost yesterday." This sounds clever and almost conclusive; but a little inquiry soon arouses a feeling of doubt. The first statement is: "Account-keeping is of no use to a man who is spending his own money." We ask why, and the reply is twofold:

(a) Such a man has no one to whom he is accountable.

(b) The act of writing down what you spent on beef yesterday does not affect your appetite today, or the money you spend in satisfying it.

Income and Responsibility—Is it not true that even when a man is spending his own money he must exercise care, lest he should exceed his income? That being so, it may be stated that he is accountable to himself. He must, in the exercise of that responsibility which covers not only the present but the future, keep just as careful watch to preserve a balance between his debit and credit as though he were administering funds entrusted to him by another person.

SUPERFICIAL REASONING

The second reason offered by the great Lexicographer, Dr. Johnson, is still more superficial. As a matter of fact, many a man, in a secondary sense, is compelled to eat "less beef" or even to restrict himself to bread and cheese, because his recorded accounts will not allow him the luxuries in which he once indulged.

If your business books show a loss instead of a profit, you cannot very well afford to have the extended holiday you took last year; and, although being hungry, you may eat as much beef as before, your general spending is modified by the painful discovery of a serious deficit.

It frequently happens that a little investigation into the *statements*, or *premises* of an argument is enough to disclose inherent fallacies, or to raise serious doubts as to the inferences that have been drawn. But the study of formal logic is not really necessary in order to accomplish this end; ordinary analysis is sufficient. Formal logic as a means of *testing* conclusions is admirable but as a means of *discovering* truth it can hardly receive scientific sanction.

ON THE USE OF AUTHORITIES

A student wrote, sometime ago, to this effect: "What am I to do with an argument where there are six good authorities on one side and six equally good on the other?"

This is a reasonable question and we answered

it in the following way. "Take the authorities one by one and examine their credentials, remembering that there are authorities *and* "authorities;" experts *and* "experts." The opinion of a *practical* chemist of high standing carries more weight than that of a philosopher who has only *studied* chemistry, however diligently. Further, it seldom happens that six men of the highest rank disagree *in toto on vital points* with six men of the same rank. There may be divergencies in matters of detail and still greater differences in speculative hypotheses, but these are probabilities, not proofs.

"Next, study closely what the authorities say. Refer to the very text; do not be content with excerpts. Draw up a statement showing agreements and differences. Note carefully the tone of their statements; are they positive, doubtful, or emphatically negative?

"Lastly, find the general drift of authoritative opinion. Is it in a positive direction, or a negative, or does it seek to suspend judgment? In such a subject as telepathy one perceives that the general drift of opinion is in a positive direction. In regard to other psychic phenomena it is mainly one of suspended judgment."

Party Government—When the subject advanced has immediate practical issues, as in politics, action is of course necessary, and the tragedies as well as the fortunes of a State are

dependent on how far democracy understands, and votes upon, the difficulties of the situation. This is one of the reasons why Party Government came into being.

The party stands for a definite solution of pressing problems, and does the thinking for those who have little or no time to look closely into matters for themselves. In one's own calling, however, and in one's private reading, one must do his own thinking. The two simple rules laid down at the beginning of this book will, if acted upon, save the student from many mistakes, even if they do not make him fully proficient in the science of thinking correctly.

II—MENTAL DETACHMENT

It is not difficult to provide an illustration of the lack of mental detachment. Here is one. You are discussing general questions with a group of men and women, when someone suddenly proposes the question: "Are women less Truth-seeking than men?" Instantly a champion of women asserts that he cannot allow the subject to be discussed in his presence, because there is an implied slur on womanhood. Murmurs and objections are offered but without avail. If the subject is discussed (he says) it constitutes an attack on the good name of his mother and his wife, and he will be obliged to leave the room, expecting the women to follow him. At this, some of the women laugh, and he

replies: "Already women are becoming shameless."

THE PERSONAL EQUATION

What is wrong with this man's intellect? First, he fails in discrimination, thinking that truth-seeking means telling the truth. Next, he has no mental detachment; he cannot discuss a subject apart from his own personal feelings in connection with it.

Now we admit that under certain circumstances his protest might be perfectly justified. What is called, in popular phrase, the "slanging" of women by men, and of men by women, needs an occasional demur, especially in desultory conversation; nevertheless such a topic as that suggested is not only possible, but lends itself to a most interesting reflection of matters psychological and sociological, and one ought to be able to approach it, *as an inquiry*, without injecting one's own personal feelings.

THE TRUTH OF THINGS

"Then what am I to do with my personal feelings?" a reader asks. The answer is: "Leave them out of account when you are seeking the truth of things." Huxley was anxious that scientific experiments should prove the theory of spontaneous generation; that life came originally from inorganic matter and not from some previous but unknown form of life. He was

disappointed when the results went against him, although he accepted them unhesitatingly. This was a case in which personal feeling was likely to prevent a detached and wholly unprejudiced view of research into life origins.

The same attitude is manifested by thousands of people in regard to what is called psychic phenomena. When these phenomena have been divested of their charlatanism—and there is a good deal of nonsense to be got rid of—there remains a residuum which at any rate is worthy of investigation; but to hold back from the work of inquiry on the ground that we hope the phenomena do not occur, or that they are of no value, or that we feel perfectly indifferent to them, is to allow personal feeling to stand in the way of knowledge, and to be deficient in the love of truth for its own sake. That psychic phenomena may have a perfectly natural psychological explanation is beside the mark.

World-Truth—Now it is this personal or subjective attitude which often prevents the intellectual advancement of the average man and woman who usually seek that kind of truth which brings an advantage to themselves; little truths, not world-truths. Take a few illustrations of seekers after world-truths. Newton, lost in the contemplation of the heavens; Galileo, immersed in the possibilities of a pendulum; Shakespeare, absorbed in the motives and the actions of mankind; Darwin, eagerly

carrying out experiments in biology; these geniuses typify selfless thought, in which the whole mind is concentrated on some external object. In Schopenhauer's opinion, this is the chief mark of men of genius; "The objective tendency of the mind as opposed to the subjective which is directed to one's self." Possibly this is a reason why genius is sometimes comparatively unconscious of its great gifts.

GENIUS AND SELF-INTEREST

We can imagine a reader, at this stage, urging an objection. He will say, "I grant that genius is disinterested, whereas the average mind is always *self-interested;* but is not *interest* and all that comes from it the very essence of PELMANISM?" Quite right. It is; and all people who have to work in order to gain a living are compelled to think on the lines of advantage to self and to those for whose welfare they are responsible; moreover, they will think all the better if their interest-power is bright and joyous.

But in this section we are, for the moment, leaving all personal considerations behind; we desire to arrive at conclusions about phenomena which do not represent a cash value, or increase personal prestige. For instance, it will not affect your bank account if you decide that ghosts do or do not occasionally obtrude themselves on our notice; but if their appearance, or their non-existence were discussed with a keen eye to the

possibility of making money out of them, that possibility would have an unjust influence on the formation of your conclusions. You would be lacking in mental detachment, because the subject would not be the Truth, but ghosts as a source of money-making.

Darwin and Theology—When Darwin published his *Origin of Species* many people with strong religious convictions took up a hostile attitude toward his teaching, and we suspect they took this attitude mainly because they feared his findings would undermine the foundations of their faith. It is not long since a small town in Tennessee gained a certain notoriety by taking a stand similar to the one taken by the University of Oxford in the sixties of the last century. Both argued the whole question, not in the interests of Truth, but in the interests of Doctrine, and hence there was an absence of that disinterested spirit which is one of the requisites of clear and accurate thought. Today faith is still found on the earth, and all the burning disputes of the past might have been spared us had the men and women of those days ventured to look at Darwinism with a sense of detachment. They failed to cultivate "the open mind," as we now call it.

Even if a new theory of life or conduct seems to impinge unpleasantly on some favorite conception, causing irritation, and maybe, a little concern, face the question boldly; probe it to its

very bottom. "Great is Truth," it has been said, "and it shall ultimately prevail." It is for every man, according to the measure of his ability, to see that this optimistic outlook shall be justified.

III—MENTAL ADJUSTMENT

The word *adjustment* may need some explanation, and we cannot do better than give an illustration of its use in the sense that is here proposed. A prominent critic has said that, "of all races of men they are the mightiest and most noble who are, or by self-adjustment can become, most fit for all the new conditions of existence in which by various changes they may be placed." Self-adjustment means that there has been successful effort to adapt the old functions to new circumstances.

For instance, the English rabbit, when transported to Australia, adapted itself in a striking manner to the new conditions. Ask an English boy in the country if a rabbit can swim a river or climb a leaning tree, and he will laugh derisively. But when it was necessary to do so in Northern Australia the rabbit learned the trick quite easily. He proved himself to be capable of adaption to new environment.

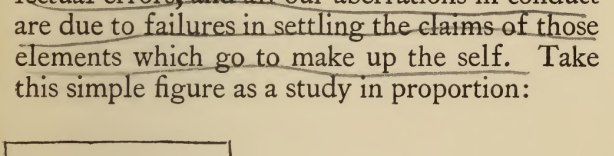
ENVIRONMENT

Now we ourselves are continually in need of adaptation. For instance, we find ourselves in antagonism to certain facts in our environment,

and we have to adjust ourselves to them if we are to possess security of life and peace of mind. Again, there is often an internal conflict in the center of our very being; one element is in enmity with another element, and adjustment is the only safe policy to pursue. A man who steals may be said to have failed in the difficult task of adjudicating between the claims of his desires, his thoughts, and his conscience. He allowed too much rope to his desires, and his thoughts (i.e. his judgments) were robbed of their rightful voice in arriving at a decision. When he takes his place in prison it may be truthfully said of him that he will be there because of a mental maladjustment, congenital or acquired.

LACK OF MENTAL PERSPECTIVE

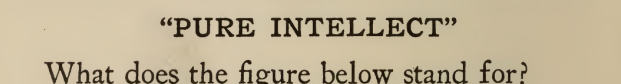
But how many of us are free as we might be from these maladjustments? All our intellectual errors, and all our aberrations in conduct are due to failures in settling the claims of those elements which go to make up the self. Take this simple figure as a study in proportion:



Do you suppose a man with a mind like that represented above can arrive at correct conclusions? Would you call it a synthetic mind, in which all the forces are so arranged that right conduct is inevitable? Certainly not. Such a man would probably be a reader of novels almost exclusively; if he sought a religion he would choose one which promised the very acme of ecstasy; and in politics he would follow the school which, however well intentioned, aimed at an ideal state impossible of realization. If someone called him a fool, it is not unlikely that a wakeful night would ensue. Harsh words sink deep into his consciousness and he feels them acutely. On the other hand he would probably be highly sensitive to impressions and influences which less sensitive people could not appreciate. We find compensations everywhere.

"PURE INTELLECT"

What does the figure below stand for?

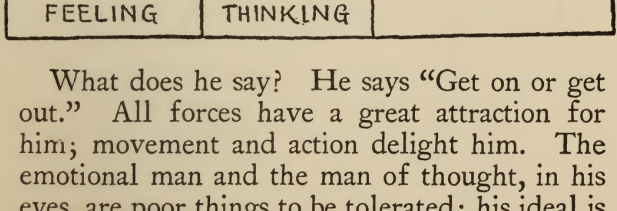


It stands for another disproportionate individual. He is the sort of man who wants to talk Plato with his breakfast, and the while he

chews his chop at luncheon time he discourses on the latest attempts to solve the problem of the *thing-in-itself*, or on the false logic of modern economists. His interests are wholly intellectual, and he will probably find it difficult to read a light novel. A very learned person, no doubt, but he has failed in his adjustment. He is not heartless, but there is a danger that his life of feeling will die out, and with it will go some of the best things that are possible to human experience. He would not be a safe judge of the common people; indeed his opinions of them would be vitiated by the lack of proportion in his mental make-up.

THE MAN OF ACTION

The third type is not unfamiliar to us.



What does he say? He says "Get on or get out." All forces have a great attraction for him; movement and action delight him. The emotional man and the man of thought, in his eyes, are poor things to be tolerated; his ideal is to be *active*. There is one saying which he regards as the true universal motto: it is Welling-

ton's "Up, guards, and at them." To him, that attitude is of more value than all the profundities and emotionalisms of other men.

But he has a definite value for the community. Were it not for men like him we might be forever engaged in debating a commercial policy, whereas he and his fellows forego words for deeds. He and his kind are men of action and it is they who usually undertake and manage successfully the larger activities of life.

Some Disproportion Inevitable—These are brief indications of some of the disharmonies which are more or less native. But it must be confessed that in the specialized work of the world a certain amount of disproportion is unavoidable; we need the men of fine sensibilities, and the men of profound thought as well as the men of vigorous action. Nevertheless this fact ought not to prevent the average man from seeking the best adjustment that is possible. In a moment or two we shall offer some pertinent suggestions; meanwhile we must refer to the maladjustments which have their origin in the tribulations of life.

A man who passes through a severe illness, consequent upon a failure in business, is bound to exhaust his powers of mental endurance. If he can hold out, resolving to retrieve his health and his position, he may be none the worse for his misfortunes; but if he fails, he will have to begin life again, under many handicaps.

The partial loss of hope, the definite curtailing of energy, and the advent of cynicism, are certain to end in a maladjustment wherein Feeling is disproportionate to intellect. Such an individual becomes soured and, beginning to rationalize his failures, vents his discontent by criticizing others who have been more fortunate. No one who has suffered at all will have anything but sympathy for such a man. Had he learned the secret of self-adjustment, however, ere the trouble overtook him, he might have preserved the original balance of his mental powers, even though illness had somewhat depleted his physical energy.

THE VALUE OF A CREED

To know how to think about the events which happen to us is to have knowledge that is priceless. We are not concerned, as Pelmanists, with the direct inculcation of moral and religious teachings, but we have observed that those people whose creed is based on a belief in "a power outside ourselves making for righteousness" are enabled both to endure reverses of fortune and to preserve their mental perspective.

Any rational view of life which promotes optimism is better than one which, however logical in quality, leads to pessimism and leaves the individual resourceless and alone.

Synthesis and Salvation—The vicissitudes of life are responsible for much mental lopsided-

ness. A great sorrow will drive a man into seclusion. He becomes a hermit, totally unfitted for the pleasures of society or the needs of progress. Some sorrows indeed, drive men into the asylum. Are these tragedies avoidable? In most cases they are. If men only knew the value of cultivating *all* their mental powers, if they followed the synthetic method, they would emerge from their trials victoriously. *We cannot avoid the storm but we can learn to avoid shipwreck.*

The Régime for Adjustment—Now a word or two about the régime which makes adjustment an easier thing. It is best to begin by cross-examining yourself. First, take a sheet of paper and map out the hours you can call your own, as you did in the time-table in Lesson II. Then make an analysis on this basis:

A. Hours in which the life of *Feeling* mainly is developed.

B. Hours in which the life of *Thought* mainly is developed.

C. Hours in which the *Will* mainly is strengthened by action.

When you have done this you may be unpleasantly surprised at the seeming disproportion, or pleased with the apparent balance; but do not jump to conclusions. Feeling is dominant in a variety of activities, such as worship, reading, poetry, studying pictures and other works of art, musical expression in any of its forms, and

action, or dramatization. Similarly, Thought and Will manifest themselves in many activities, and before you can properly apportion the leisure hours now under scrutiny you must classify accurately. Having done this, you can then judge, from the total hours per week devoted in each section, whether or not the way you spend your time is lacking in proportion. Bear in mind, however, that in every deliberate act all three elements have a place, just as all the colors of the rainbow are fused in the sun's white light.

"NO LEISURE"

Someone says: "I have no leisure time." That may be true in the sense that after the day's work is done, body and mind are too jaded for anything except games, or the lightest of books. But economic conditions are bound to improve rapidly, and people will have more time for recreation. Very few people indeed, in the near future, will be able to say they have no leisure.

Let us imagine a case. Here is Henry Johnson (engaged in the office of a Real Estate Agent) who is keen on making headway. Henry's hours are from 9 A. M. to 5:30 P. M., and very frequently he must remain till late in the evening. After the evening meal he has a few hours' leisure, and on Saturday afternoons or Sundays his time is his own, unless extra pressure at the office interferes. How many hours

in a week can he claim for himself? Much depends on the time he rises and retires and not a little on his ability to use odd moments to advantage. Probably he can depend on 40 hours in a full week. How does he spend them? At least 15 hours will be given to some form of physical recreation and to meals; 14 hours to amusements, indoor games and the like; 6 to reading, lectures, meetings and so forth; some time also will be spent lounging about, and in journeys.

With this rough apportionment of leisure hours, he would set about answering the question before us by analyzing the doings of each day for a week. At the end of one day he would say: "I read Real Estate Law for an hour before breakfast. Went with Smith to see the new Portrait Gallery at 6 p. m. and with Turner to see the new comedy in the evening." By estimating the length of time taken up by these occupations, and making suitable allowance for journeys, he can decide how much attention is given to the activities of Feeling, Thought, and Will. On this particular day, Will does not appear to be prominent, but Thought and Feeling are well represented. If, instead of going to the comedy, he had spent two hours in municipal duties for the good of the community, he could claim that social action had been part of his program. Our experience with this kind of critical self-investigation proves that a vast amount of time is con-

sumed in feeling about one's self; what is needed is more Thought, and more Will or action.

IV—THE PRINCIPLES OF EVIDENCE

A knowledge of the principles of evidence is of great importance.

By evidence we mean material of any kind which constitutes the *proof* of any claim or proposition. If we state that the shape of the earth is an oblate spheroid, we make the statement on the basis of certain scientific experiments which we describe as the evidence or proof. A series of thefts from a cash-box may be traced if the coins have been cunningly marked; and the man found in possession of the coins immediately after the loss may be said to carry the evidence of his crime in his pocket. These are instances in which little difficulty is met with; but there are others in which opinions are widely and sometimes bitterly divergent. In these cases the same evidence is weighed by all sides, yet the conclusions arrived at are vastly different.

TELEPATHY

For instance, there is a good deal of material which is asserted to be evidence for telepathy. One group of men of science will consider it flimsy, another group will say that a *prima facie* claim has been set up; but one or two will agree that the evidence is completely satisfactory. The

average man and woman, unversed in the technic of weighing of evidence, will naturally accept the verdict of those leaders of opinion with whom they find themselves in agreement *on other vital points of experience*, a course of action that is not unreasonable, but which can hardly be described as conclusive.

Strictly speaking, the ideal is to be able to form one's own opinion by a personal scrutiny of the evidence. We do not say that this can be done in every case, or that it would be wise to attempt it. There are several spheres, indeed, as in medicine, in which we have to rely on the diagnosis and advice of an expert. There are, however, quite a number of situations which demand personal decision and personal action; and this makes it all the more necessary that we should be acquainted with the science and art of estimating the value of "proofs," real or alleged.

EVIDENCE CLASSIFIED

Evidence may be either demonstrative or probable. The former is such evidence, whether physical or moral, as carries absolute conviction in the mind of the normal man. Short of this there is evidence that induces an opinion of various degrees of certitude and leaves room for wide differences of opinion among men equally qualified to form a judgment. Of this kind are the evidences for most of our philosophical and political opinions.

The same evidence is studied by two classes of politicians, and to one side Free Trade seems the only possible course; the other side is equally confident that the evidence constitutes a final and crushing indictment of Free Trade methods. Now the student, in facing practical problems, is naturally anxious to get at the truth for himself. He knows that either the presentation of evidence, or the interpretation of it, is wrong. To aid the student in comprehending a practical method of evaluation, we offer the following suggestions.

(a) *Look for the Essentials*—In analyzing any question look first for the *essentials*, for those facts, or principles, or methods which make things what they are. To employ other tactics is to "beat about the bush," to "miss the point." Learn to distinguish the trivial from the important. Becoming proficient in this is not as simple a matter as it sounds, any more than it is easy at all times to avoid the confusion of words with things. Distinguish between mere sequence and the relation of cause and effect. It does not follow, however reasonable in some cases may be the presumption, that because prosperity has followed the institution of Free Trade or of Tariff Protection, that Free Trade or Tariff Protection is the cause of the prosperity.

(b) *Avoid Prejudice*—Seek the objective Truth, not the particular truth which you favor. The most significant weakness displayed by the

average man in weighing evidence is his ready acceptance of that which is favorable to his predisposed ideas and his rejection of everything else. He gives "good" reasons for his acts and beliefs but not the "true" reasons. He may not know that he does this; indeed, he may for a long time be convinced that he is most impartial. But later the growing weight of evidence may undermine his cherished ideas; and if those ideas concern living questions, like religion, ethics, or politics, he will undergo a sudden transition from certainty to doubt, and from doubt to chaos, which may prove extremely demoralizing. A gradual transition and progressive accommodation is more in accordance with the laws of mental health.

FARADAY ON RIGHT THINKING

The surrender of what we thought was a truth is commonly accompanied by a sense of loss. We should accustom ourselves in good time to love Truth for its own sake, and in its interest willingly to sacrifice our prepossessions. It is infinitely better for our manhood that we should arrive at a state of certainty after a close and critical scrutiny of the evidence than that we should maintain an inferior kind of certainty by turning a blind eye to evidence which we fear will be fatal to our position.

Faraday, in his lecture on *Mental Education*, made some emphatic remarks on this point: "I

will simply express my strong belief, that that point of self-education which consists in teaching the mind to resist its desires and inclinations, until they are proved to be right is the most important of all, not only in things of natural philosophy, but in every department of daily life."

A Ghost Story—Follow the available *evidence* rather than your *wishes*. Evidence can be rightly interpreted only after the strictest analysis has been made. This is not as obvious as it seems. That the same evidence is accepted as conclusive by one man and repudiated by another often is due to haphazard as compared to critical analysis. Further, a good deal of evidence calls for a combination of the scientific and historical methods if it is to be accurately judged. Here is a letter from a Pelman student:

"Last evening I was trying to cheer up J—— after his great loss. We were in my sitting-room smoking and talking of old times. Suddenly he stood up and exclaimed excitedly, 'Look there!' I looked in the direction indicated, but could see nothing. 'What is it?' I asked. 'A ghost' he gasped, breathing quickly. I looked again and walked into the corner of the room, expectantly. I saw nothing and felt nothing. 'Hallucination, old chap,' I affirmed confidently. He held his arm over his eyes as I returned to my seat, and he said: 'You walked right through him.' I jocularly excused myself for this unintentional rudeness, and tried to change the subject. But

he would not permit me. He described the ghost—that of an old man with a long beard, sorrowful eyes, and stooping figure. What did it mean? another death? his own?

"He quieted down after a time, for, as you know, normally he was more level-headed than most men, but he maintained that what he had seen was no subjective fancy, no figment of the imagination. It was to him an objective reality."

CRITICAL QUESTIONS

Examine this narrative. What are the facts? Of two men, one is in deep despair, the other is moderately cheerful. A sees a shadowy ghostly form and is alarmed; B can neither see it nor feel it. *Problem*: was it a hallucination? *Tentative theory*: probably it was, for A's mind, predisposed towards morbid or abnormal impressions was not quite normal. *Questions.* Have people who are sound in mind and body ever seen such appearances? If so, is their testimony reliable? On the other hand B could neither see nor feel anything, and he was in a normal condition, physically and mentally. What bearing has this on the theory?

To deal satisfactorily with these questions, one must recall the principles of historical and scientific evidence. The first deals with the value of testimony; the second with the truth of alleged events. But here we are thinking mainly of the *setting out* of a problem, and success in

that direction can be obtained only by a strict analysis of the evidence. Such an analysis is based on the asking of skillful questions.

V—THE SCIENTIFIC METHOD

Every man who desires to arrive at the truth, or even to approximate it, must have a theoretical appreciation and a working knowledge of the Scientific Method. The following study will be sufficient as a working model of the mental processes involved. The reader will find that any question in connection with his calling or his secondary studies can be dealt with on these lines.

THE USE OF HYPOTHESIS IN THE DISCOVERY OF TRUTH

In Mill's *Elementary Commercial Geography*, the following passage occurs (p. 3): "In many instances, however, the reason for the concentration of industries in particular towns does not appear until the commercial history of the locality has been studied; for example, the great jute manufacture in Dundee, which is one of the most distant seaports of the United Kingdom from the source of raw material."

A close examination of Mill's text-book, and of all other geographical text-books we have seen reveals no possible answer to the question, "why has the jute industry sprung up in Dundee?"

We must therefore frame our own hypotheses and put them to the test, trusting in the end that all impossible theories, will be eliminated, and that we shall be left with one which most probably explains the problem under discussion.

Hypothesis No. 1. *Climatic conditions are favorable for spinning the jute yarn.*

This is obviously so, but there does not seem to be any reason for supposing that Dundee is the only place in the United Kingdom where jute could be manufactured. The hypothesis does not tell us why 39 out of every 43 people who work in the jute industry in Great Britain should be employed in Dundee.

Hypothesis No. 2. *Other conditions have especially favored the growth of the industry.*

In order to test the truth of this theory we shall need to look into the history of Dundee, and so we consult an encyclopedia. From its pages we learn the following facts, some of which appear to be more relevant than others.

(a) Dundee is the chief seat of the manufacture of coarse linen fabrics, as well as of jute.
(b) It is the seat of a great marmalade industry.
(c) It is the center of the whaling and seal-fishing industry.

Can it be possible that the secret is connected with one of these facts?

Hypothesis No. 3. *Dundee provides a natural resource which is very necessary in the manufacture of jute products.*

How shall we test this hypothesis? What occurs to us at once is to read up the articles in the encyclopedia upon the following subjects (a) linen, (b) marmalade, (c) jute, and (d) whaling and seal-fishing.

Results:

(1) The article on linen reveals no information which brings us nearer the solution of our problem.

(2) The article on marmalade casts no light.

(3) The article on jute contains some significant information which would have meant nothing at all for us had the foregoing fact (c) been overlooked. The information is "Owing, however, to the woody and brittle nature of the fibre, it has to undergo a preliminary treatment peculiar to itself. . . . In order that the fibre may become soft and pliant . . . the jute receives with great precision a proper allowance of oil and water."

Formerly *whale-oil* had been used for the purpose, but of late years a heavy paraffin oil or some similar mineral oil has been largely substituted for it. This change caused a great fall in the price of whale oil. Once these facts are gleaned, we can easily arrive at the truth we were looking for, namely that the jute industry was concentrated in Dundee because Dundee was the centre of the whaling trade which provided an essential agent in the process of manufacture.

The article on "whaling" tells us in confirmation that whale oil had formerly been in great demand for "batching" jute.

This short exercise shows us how an hypothesis may give direction to our thoughts. The hypothesis itself may not contain the truth, but in testing its plausibility we may be sure of narrowing the field of speculation and thus of arriving somewhat nearer to the truth.

RÉSUMÉ

Let us see how far forward this lesson has brought us. Our ultimate aim, as always, is mental efficiency, and we want to discover in what way the preceding pages have helped us. In the section on Logic we showed you the great importance of exact facts and of drawing exact inferences. Truth, in every sphere, is ever obscure and practical logic is the only science by which we clarify the obscurities. The reason eminent men, however skillful they may be as logicians, do not agree in their findings on matters of extreme importance is to be found in the presence of factors like temperament, training, and education. Accurate reasoning, therefore, is more than an application of formal logic. The syllogism or mode of reasoning, can *test* a truth, but it cannot necessarily *discover* one.

This brings us to the question of what to do when the verdicts of authorities are in conflict. A discussion of the Mars "canals" may have no

more than passing academic interest; but a similar discussion on Tariff or Prohibition may give rise to action. When learned and experienced disputants are to be found on both sides, what is the average man to do in order to arrive at a proper conclusion? He can begin by evaluating the authorities themselves. In forming such an estimate he will do well to be guided rather by the esteem in which they are held by their equals and rivals than by the verdict of that group whose opinions he accepts on other matters of policy.

Again, he can form his own opinion to some extent from a personal knowledge of both sides of the subject. But where there is weighty authority on the side opposite to the one which he elects to follow, he ought to possess sufficient conscience to feel that, at any rate, the whole truth cannot be found in the lap of any single group.

Unless we can pursue an inquiry without permitting ourselves to be partial to any individual interest we have in the matter, we shall not be likely to arrive at the truth. Of course, it is difficult to eliminate completely this personal element from the search, but its infusion is not likely to help us in the discovery of the facts, or in drawing right inferences from them.

Furthermore, unless mental detachment is followed by mental adjustment, which means the correction of our mental vision in the same

manner that an oculist would correct a defect in sight, we cannot expect to escape the penalty of disproportion. Thus a man who is mainly emotional will drift in the direction of emotional solutions, and a man who, to use a popular expression, is "all intellect," will try to solve his riddles by reason alone. We are all creatures in whom Feeling, Intellect, and Will are intended to work in harmony and in true perspective; consequently our pursuit of truth must be regulated by this synthetic method.

The ability to know evidence when it is produced, and to feel its want when it is absent, is of paramount importance. Failure in this respect is just as significant to the man of business as it is to the scientist or the psychologist. All our thinking which deals with facts of which the meaning is not immediately clear should be conducted on the basis of the scientific method which we have briefly described.

It is evident, therefore, not only that the methods taught in this lesson will prove of the greatest interest to the student, but that the practice of them will direct him on the road towards complete mental efficiency. If we are to understand life in its length and breadth we need the power for all kinds of reflection. The development of such power is the subject of this Lesson.

VI—DON'TS

1. Don't deny the existence of Logic. At the same time, don't give it a greater place than it warrants.

2. Don't imagine you have *complete* Mental Detachment. There is probably a prejudice somewhere.

3. Don't look continuously for Maladjustments. Attend to those that you know already.

4. Don't delude yourself into being satisfied with "good reasons" for your thoughts and acts; seek for the "true reasons."

5. Don't forget to ask this question: "How can this lesson improve my personal culture and prove of benefit to me in my calling?"

VII—THIS DO

1. Aim at the Truth, cost what it may.

2. Make internal harmony your ideal—the synthetic working of all your powers.

3. Understand *words;* their popular meanings, and their history. It is one secret of clear thinking.

4. Use every device in this Lesson which will increase speed, and assure Recollection. You cannot afford to ignore any factor of efficiency.

5. Begin to observe the mental disproportions of men and women you know, but do not make it a cult.

VIII—MENTAL EXERCISES

EXERCISE XXXV

Criticize the following arguments:

(1) "David said in his haste, 'All men are liars.' But, if all men are liars, David, being a man, was a liar. From this it follows that what David said was not true. Consequently David was not a liar. But if David was not a liar, what he said was true, namely, that 'all men are liars'."

(2) "Good laws are for good people. It is useless to offer good laws to bad people." What conclusion is suggested? Does it follow? Why, or why not?

EXERCISE XXXVI

Select a subject on which you have such pronounced convictions that you are irritated when opposing views are presented. Ask yourself, what are the justifications for the opposite conviction? For instance, the Free Trader should face the apologists of Tariff Reform, and the proponent of private judgment in religion may consider the tenability of the principle of Authority in matters of belief. The Baconian theorist can review the arguments of those who credit Shakespeare with the authorship of the famous sonnets and dramas. The Wet can reflect once

more on the claims of the Prohibitionist and vice versa. Indeed, all the people we have mentioned ought to learn on occasion to view their opponents' case without prejudice. We do not say this attitude of detachment is possible or desirable as a permanent thing. But as an occasional effort to correct errors due to one's own individual prejudice, this exercise can result only in good; it removes the blind which prevents us from seeing any truth or merit in the convictions of others.

EXERCISE XXXVII

On a sheet of paper, draw up a list of the subjects, or affairs, in which you are deeply interested. They may belong to business, art, science, politics. The kind of subject is not important. What is important is that you shall see, and be able to express clearly, the fact or idea on which evidence is to be collected. If, for instance, the subject is the relation between Brain and Mind, you must first know exactly what is meant by each word; then state the theme with the utmost precision, e.g.:

"That which we call the mind is a function of the physical organ called the brain; consequently, psychology is a branch of physiology."

Or you may take another view:

"That mental life is in its essence different from physical life. Therefore, to find the true nature of Mind we must argue that the opera-

tion of thought is above and beyond all the energies in physical Nature with which we are acquainted."

Having thus defined the subject, you proceed to collect the evidence.

A theme for a lawyer might be:

"That experience teaches the advisability of reform in legal phraseology."

For a business man it could be this:

"That our ignorance of foreign languages and customs is responsible for the loss of hundreds of thousands of dollars annually."

The evidence for any of these propositions should be collected from authoritative sources. There must be no mere guessing; neither, above all, should you set out with a desire to "prove" a contention. The proof can come only when all available facts have been found and analyzed.

EXERCISE XXXVIII

You have friends and acquaintances whose intellect, character and personality you can study in a friendly spirit. The aim is to discover how they have made their adjustments and maladjustments. Let us suppose you select two at random: Joseph Waite and Margaret Canning. Joseph is a solid, steady, plodding fellow. He earns a good salary, and saves a substantial sum yearly. He goes to Church and his mother thinks no girl is good enough for him. Evenings

he will go for a walk, visit his friends, or attend the theatre. Occasionally he reads a novel. His friends have tried to persuade him to buy a motorcycle and side-car, but without success.

From these details draw a diagram similar to those on pages 19, 20 and 21, illustrating the degree to which Feeling, Intellect, and Will contribute to Joseph's makeup.

Margaret is *petite* and dark; and is a stenographer in Joseph's firm. She earns enough to make ends meet, but not enough to satisfy her intellectually. She has one great dread, old age —although as yet she is only twenty-eight. She glories in music and in books. She does not believe in the economic independence of women, and would prefer to have a home and a husband to earn a living for two. At times she is very excitable; even in ordinary matters she easily bubbles over with excited talk; and her gestures are animated. She helps to keep her widowed mother. She boasts that she has a strong will, but her dearest friends accuse her of perverted obstinacy. Her life is not without some measure of happiness, but she has far from attained to a state of complete happiness. Will she ever reach it? Draw a diagram, as in the previous case. Place the two diagrams side by side, and, assuming Joseph and Margaret link their fortunes together, estimate the probability of a harmonious marriage.

EXERCISE XXXIX

A well-known firm of watchmakers, famous throughout the world, received a gold watch for repairs. It was brought to them because their name was inscribed on it. They found, on examination, that the watch was not of their manufacture, so they removed the inscription. The owner said they had no right to do so and took legal action for damages.

(a) Argue the case on behalf of the manufacturers, trying to see their point of view in removing an emblem which had been illegally inscribed.

(b) Argue the case on behalf of the owner, and endeavor to imagine the objection he registered to the removal of the inscription, the contract being for repairs only.

(c) Ignoring, for the moment, the law on the subject, what, in your opinion, ought the law to be in such a case?

IX—HEALTH EXERCISES

TENTH LESSON

You may be very conscientious and faithful in your efforts to maintain your physical condition at maximum efficiency. The daily or twice daily round of efficiency exercises may be performed with the greatest enthusiasm; and though the results will be beneficial, you must not forget that it is the efforts that are made hundreds of times a day rather than the periodic efforts made once or twice daily that have the greatest effects upon the body and its functions.

One would be most unreasonable to expect the five or ten minutes of exercise to have very permanent results if the body is allowed to remain in a slumped position for five or ten hours. You must not feel that you have finished your work of bodily improvement after the morning's exercise. These few minutes are only a reminder that you have your personal welfare in mind. As suggested in a previous lesson, keep in mind, while you are walking around or sitting at your desk, that good posture is not only a splendid muscular and visceral tonic but it is also an asset from the purely aesthetic point of view.

HOOCHY KOOCHY

Begin your day stretching in bed, rolling, twisting, and so on, and then try Standing Straight against the door edge just to renew the

feeling of Good Posture. Sit down in a straight back chair, if you have one, or place your stool or dressing bench against the wall. Sit with the hips and the shoulders against the chair back and have the feet and knees together. Your hands should rest comfortably on your thighs. Without moving your shoulders or your hips try to push your left side as far over to the left as it will go. This brings into action the muscles of the side and abdomen. When you have pushed your abdomen over as far as it will go, try to twist your body to the left. The whole movement is similar to that made famous by the old time hoochy-koochy dancers. Having completed the exercise on the left side repeat on the right. Once you have mastered the left and right moves you can begin to perform them to a regular rhythm. There will be some slight shoulder movement at first, but as the muscles, hitherto never used, begin to respond you will find no shoulder action is needed. In an earlier lesson you tried contracting and distending the abdomen while lying flat on your back. Try to do the same thing while sitting in the chair. Here is an exercise that one can easily take while sitting at one's desk. It will be found an excellent means of keeping superfluous fat from accumulating around the waist. Two or three minutes at a time of this exercise, repeated frequently during the day, will be all that is needed.



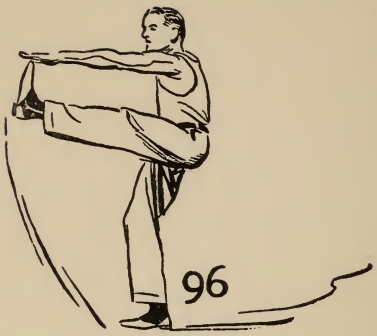
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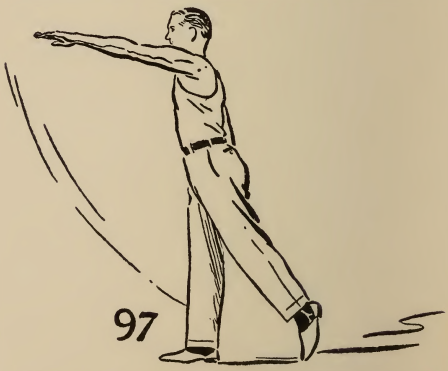


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RIDING BICYCLE

The next exercise is also an imitation of an actual form of activity, namely, riding a bicycle. Lie down on your back either in bed or on the floor. A soft place is better. Raise your legs up toward the ceiling, stretching them as far as possible. Then push them just a little higher by placing the hands in the small of the back, fingers pointing to the hips and the elbows resting on the bed or floor. You are now almost standing on your shoulders. The hands and elbows act as support for the body and allow of free leg action. Now imagine that you are riding a bicycle. Bend the knees well down onto the chest (Fig. 94). Begin by swinging the left foot forward, upward, and backward, stretching the left knee as the foot goes forward and upward, and bending the knee as the foot goes backward and downward. As soon as the left leg has reached the top of its upward swing start the right leg forward-upward in the same manner (Fig. 95). Alternate the two leg movements and, to all outward appearances, you will seem to be riding a wheel in an inverted position. The action of the feet is similar to that of working the pedals. This can be made slightly easier by keeping the hips on the bed and holding the arms at the sides of the hips. In either case the knees should be brought well up on the chest each time. Thirty circles with each foot will do to start with.


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While the above exercise is apparently all leg-work, you will find that there has been considerable movement of the trunk muscles. Hence we will omit any purely upper body movement in this lesson. In case you feel that one is necessary you have plenty to draw from and we refer you to Tree Swaying.

HIGH KICK

Very few people are able to kick as high as their head. You may be one that can, in which case try to go just a little higher. In the beginning, as you will have to balance on one foot while working with the other, it will be better to have one hand on the back of a chair, the foot of the bed, or the dresser in order to steady yourself. Grasp your support with your right hand, hold your left hand level with the shoulder, palm down, and then keeping the left leg as straight as you can keep it, try to kick your left hand (Fig. 96). Perhaps you can; if so, raise the hand a trifle. If you can not reach the hand, lower it a bit. In either case try to have the hand just high enough so that the kick will be a real effort. Now, as you lower the leg, do not stop when it comes opposite the left foot but swing it on backward a little way (Fig. 97) and then with the added momentum try the kick again. It then becomes a continuous motion which should be taken ten times before changing to the left leg. A little practice will make



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shoulder-high kicking an easy matter. If you raise the hand to heighten the kick you may find it helpful to rise on the toes of the foot,—that is, on the floor. In this way you will soon be much higher than the head. After you become proficient, remove the form of support and work without anything to balance you.

JUMPING JACK

For the heart, lungs and general circulation we will describe the Jumping Jack Step. The beauty of this movement lies in the fact that it employs the large muscle groups and also furnishes plenty of stimulation. The step is not graceful, instead it is, as its name implies, a jerky stiff arm mechanized movement that derives its name from the mechanical jumping dolls. It is described by counts to make it simpler. To make the description easier, whenever a motion is given as left or right, remember that the direction is a diagonal one and not front or sideward. The first count will be given using the term diagonally; in all the rest, assume that the direction is similar. (1) Jump *diagonally* to the right onto the right foot and about two feet away. The jump is made from the left foot. At the same time throw the right arm *diagonally* upward to the right and the left arm *diagonally* backward to the left (Fig. 98). (2) Hop on the right foot, arms remaining extended. (3) Jump to the left onto the left foot. Arm position is

reversed; that is, left is up and right is back. (4) Hop on the left foot, arms remaining as in (3). Count No. 5 same as No. 1. Count No. 6 same as No. 2. Count No. 7 same as No. 3. Count No. 8 same as No. 4. Now we change the movement as well as the direction and instead of going diagonally forward we will go diagonally backward. (9) Jump backward onto the right foot and swing the arms so that the right arm is diagonally up to the right and the left diagonally down to the left. (10) Hop on the right foot, arms as in (9). (11) Jump back onto the left foot and change arm position, left arm up and right down. (12) Hop on the left foot, arm remaining the same. (13) Same as No. 9. (14) Same as No. 10. (15) Same as No. 11. On count No. 16 bring feet together with hands at the sides. Sixty four counts taken in rapid time and with big swinging arm motions will be enough at first. Increase as endurance increases.

RUNNING IN PLACE—SPRINTER

Stand up and go through the motions of running in place; that is, make believe you are running without actually advancing. Bring the knees well up in front, rise upon toes and swing arms. Imagine you are running. Try to do about one hundred to one hundred and twenty steps in a minute.

SUGGESTION

Of all the ills that man is heir to perhaps the most common is foot trouble. Corns, bunions, callouses and weak arches and all the attendant aches and pains that are associated with these conditions are directly traceable to improper shoes. Many so-called rheumatic pains are, in fact, nothing but symptoms of faulty footwear. A cheap shoe is always a cheap bargain but a very expensive investment. Improper fit, poor last, cheap leather and poor workmanship have long been recognized as causes of many of the middle age ailments that doctors are called upon to treat. The recent war had a very healthy effect on the style of shoes. The broader toe, the straight inner edges, and the longer and flatter heel are all very important items in foot ease.

Give your toes room to move, tie the laces loosely over the instep or ankle, bathe the feet daily, change hose daily, keep nails cut straight across and have several pairs of shoes to permit constant changing and the pain of tired, swollen, and aching feet will soon be alleviated.

Reference:

BRIDGE.

8 COUNT WARM UP.

LIVER MASSAGE.

CANOEING OR ROWING.

IRISH LILT (LESSON IX).

SPECIAL INSTRUCTIONS AS TO PROGRESS SHEETS AND TEXT BOOKS

1. Write your name and address legibly on every Progress Sheet.
2. Your number should appear on all your communications, otherwise much unnecessary labor devolves on the staff.
3. Do not think that your answer must be confined always to the space beneath the question. Use additional sheets if you desire.
4. The Text Books should be kept by the student for future reference. Remember you will want to use these attractive and durably bound books for years to come. They will be a library of practical value for you.
5. From seven to ten days are usually sufficient for the mastery of a Text Book and the completion of the Progress Sheet, but it is possible to do these things in a briefer period. Everything depends on the student's leisure. There is no fixed time for the return of Progress Sheets.

PELMAN LESSON XI

It has been deemed advisable to include a lesson on "Books and Reading." The treatment is on new lines and has been found very effective. If you have never cared for serious reading before, you will delight in it after a study of Lesson XI.