

A LESSON FROM THE SCIENCES
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Philosophy stands like a bridge between the sciences and the humanities. Like the sciences, it attempts to develop general ideas; but like the arts, it depends upon personal insight. It cannot experiment, measure, control much of anything, or predict; it can speculate, try out hypotheses, make inferences from any idea which comes within its neighborhood, and above all treat seriously those ideas which no one has taken the trouble to consider. It gets its start sometimes in science, as when certain nineteenth century philosophers tried to draw out the implications of evolution; sometimes it gives a start to science, as when Einstein asked what was a satisfactory definition of simultaneity at a distance. But if mathematics, physics, chemistry, and biology are sciences, then philosophy is surely not a science; and if painting, music, and poetry are arts, then philosophy with equal certainty is not an art. It is a grand mixture of old problems reinterpreted and sometimes merely repeated, of information picked up wherever its practitioners can find it. It asks questions which normal people do not ask, such as what is the nature of knowledge, or even what is the nature of nature? It is the most mutable of intellectual disciplines, for if it cannot find something else to do, it turns upon itself and wonders what it is up to. To be a philosopher requires having so open a mind that anything can enter into it and almost anything can be expected to issue forth from it. The beauty of philosophy is that anyone can do it and almost everyone does do it. All you need is a restless curiosity and the ability to reason. It is obviously the most perfect mediator in the quarrel between the sciences and the humanities. And, it goes without saying, philosophy is my philosophy. What else could it be?

By playing upon the different senses of such adjectives as deeper and higher, real and apparent, both the sciences and the humanities have been claiming exclusive rights to truth. Each has invaded the other's

territory and established ownership by squatter's sovereignty. In such cases no court has jurisdiction and the quarrel will go on until people get tired of it. You will recall that in the Renaissance there was a similar quarrel about whether painting or sculpture was the higher ~~form~~ of art and during the Enlightenment it was the priority of something called Reason as against ^{usiasm} ~~Enthusiasm~~ or the Heart which troubled the waters. Such debates have been argued since the earliest days of occidental history. The Sophists vs. the Platonists, the Stoics vs. the Epicureans, the Monophysites vs. the Nestorians, the Thomists vs. the Scotists will do to exemplify this sort of thing in ^{philosophy and} ~~theology~~; the quarrel between those scientists who believed in the plenum and those who believed in the void, the empiricists vs. the rationalists, the Neptunians vs. the Plutonians, the evolutionists vs. the believers in fixed species may represent ~~the~~ same sort of conflict in the sciences. One could go on almost indefinitely and describe our intellectual history as one long series of wars between opposing points of view. And whenever one side seemed to win, its proponents immediately began to split up into what we now call splinter parties. In the present debate between science and the humanities, one can easily see the source of most of the trouble. It lies, I ~~suspect~~, in the assumption that every interest which is given a special name must be satisfied in one way and that the individuals who have that interest must never under any circumstances develop any other. This is of course an oversimplified account of the affair. For it also has its source in man's desire to know everything accompanied by an equally intense ~~desire~~ to prove that other people are wrong. If you are a scientist, you are not supposed to say anything about the arts, and if you are a humanist -- one cannot always say a student of the humanities -- you had better keep away from science.

In fact knowledge has become so compartmentalized that a specialist in one ~~field~~ scarcely dares speak to one in another. It was

once true that a poet could write a philosophical poem witness Lucretius, in which an essential part of the poetry was the atomic theory of Epicurus. I doubt whether anyone would have thought it strange before the time of Kant that a man should see the poetry in that balance between centrifugal and centripetal forces which lay behind the Law of Gravitation, in the extraordinary variety of carbon compounds, in the exquisite geometry of the radiolaria. In fact, the eighteenth century is full of didactic poems, pretty awful according to our present standards, about the Art of Preserving Health, on wool (The Fleece), on the Sugar Cane, on breast feeding, on hop gardens, on the nature of women, not to mention that fantastic set of verses by Darwin's grand-father, The Loves of the Plants, Zoonomia, and Phytologia, or the Philosophy of Agriculture and Gardening. I admit that my own liking for such works of art is a bit perverse, but then no one who was normal would be an historian of ideas. The public who read them was not a society of fools. As Miss Nicolson has shown in Newton demands the Muse, men of intelligence and sensitivity felt the same emotional stirrings over the Opticks as we do over the rumblings of the Id.

Now one of the effects of Kant's Critique of Pure Reason was to convince the philosophic public that science could deal only with the world of appearance and that its complementary world, that of reality, was accessible only to philosophers, by which he meant Kantian philosophers. But most respectable philosophers turned out to be Kantians and the harm done by the idea was immeasurable. For though philosophers continued to talk about things which scientists were also talking about, they seemed to be under no compulsion to tell the truth about them. The various philosophies of nature, as they were called, published by the ~~next~~ generation immediately following that of Kant, are amusing enough to those of us who are interested in intellectual curiosities, but in general their scientific data were fantasies. Schelling's principle of polarity, for instance,

according to which positive and negative electricity, male and female, spirit and matter, freedom and determinism, and pretty nearly everything which could be coupled together in antithetical terms, were hitched up to explain the universe, was an edifying principle but totally lacking in any relation to fact. But this was no worse than what Oken and in ^{ra} France Azais, cooked up and no one would any longer feel that his education was frustrated by not knowing them. But after all they are not worse philosophically than Emerson's essays on Nature, Poe's Eureka, or much of Wordsworth.

Such metaphysical fancies were bad enough but worse was the gradual contempt for science which developed in humanistic circles as humanists became more and more ignorant of science. By the end of the nineteenth century when the Aesthetic Movement was in full swing, it was not only unfashionable to know any science, it was apparently considered harmful to one's art. If we think of Walter Pater as the progenitor of Wilde, Dowson, Arthur Symonds, Beardsley, and their fellows, the reluctance to go beneath the perceptual surface of thing turns out to be a philosophy of life. Ironically it was a philosophy derived from the work of a man who ruled out faith in anything but science, Auguste Comte. For the positivism of Comte denied that there was any truth to be found beyond perception, and at times even beyond the perceptions of the naked eye. If the perceptual screen concealed nothing whatsoever, it was reasonable to confine one's attention to what was painted on this surface. And the very metaphor of a surface was misleading. Since science could be nothing more than the organization of percepts into patterns which recurred with more or less regularity, it was obviously inferior to art which made its organization according to the desires of the artist and furthermore enhanced them with an emotional aura. The patterns of science might give some faint pleasure to the scientists, but they were too general to provide any stimulus to the artist.

Then as the nineteenth century turned into the twentieth, the work of the Curie, Rutherford, and Soddy, Einstein, Planck, and Bohr, Freud, Adler, and Jung, the new geneticists, just became too hard for most of us to understand. When something is too hard, one resigns himself to ignorance or says it is not worth understanding anyway. The latter seems to have been the course followed by the poets, novelists, historians, and philosophers. Where only a generation earlier Zola had built a whole series of novels on a theory of heredity whose only fault was that it happened to be wrong, the outstanding novels of the inter-bellum period were descriptions of small town life in the Middle West, as dull as their subject matter. It is easy to inflate such novels into global importance by chauvinistic puffs, but anyone who compares Dreiser or Sinclair Lewis with Dostoevski or Flaubert knows perfectly well that we had no one before the second World War who could equal their talent.

Meanwhile by a stubborn adherence to the German university system of entrusting instruction to Ph.D's, the humanities become more and more anti-scientific. They became anti-scientific curiously enough because of their pretensions to scientific method. To be truly scientific in humanistic studies to to develop ~~unworkable~~ a technique of study appropriate to them which will give one conclusions which are verifiable. But the Ph.D's proceeded to strip literature, if they were studying literature, of all human interest and thought that this was the way to scientific truth. To write a dissertation on the genitive in Aeschylus, cum-clauses in Lucretius, the sources of the Canterbury Tales, the Cinderella-motif in the English novel was to treat literature objectively, though if there is one thing on this planet which is dead once it is treated objectively it is literature. After all books are written to be read by human beings, not by calculating machines and though a writer's intentions have little to do with a reader's appreciation of his works, the effect of a book upon a reader might be thought of as an integral part of the literary experience. But to admit this would have been to admit to a non-scientific

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attitude, for scientists were supposed to be the most glacial of men and moreover without imagination. Consequently if one was to study the humanities in a scientific spirit, one must also be cold and unimaginative. If you don't believe me, look up some of the articles in the scholarly magazines of the first half of this century. The humanist seemed to be maintaining the following theses: (1) the scientific method alone will give us truth; (2) the scientific method is purely objective and the scientists' likes and dislikes must be suppressed before they draw up their conclusions; (3) we need not study any science because we have a specialty of our own which is scientific.

If the humanists had known enough about the sciences, they would have seen that there is no one scientific method. The sciences use now one method, now another. Sometimes they are experimental, sometimes purely descriptive. Sometimes they rely on deduction, as in mathematical physics, sometimes on statistical inferences. If mathematics is a science and ornithology is a science, surely it is not their common method which is the principle of classification. In the second place, scientists are objective in the sense that they are not supposed to let their emotions run away with them, but their objectivity is sometimes deceptive. The basic reason why anyone studies any science is because it interests him and the more interested he is, the greater will be his discoveries. The excitement of devising a new experiment to demonstrate what starts as a hunch is nothing that I have discovered. The emotional aura which surrounds every idea is no less visible in science than in art. And to say, "I have a headache," is no more nor less objective than to say, "'Heat cannot be transferred by any continuous, self-sustaining process from a colder to a hotter body.'" The difference between the two sentences is their range, one referring to one individual alone, here and now, the other to all instances energetic processes. Next it should be noted that what we call a science is a shear of answers to questions which have been asked in the past and which have been traditionally given one name. They are given one name because

originally they proliferated from one question. Physics is still defined in small dictionaries as the science of matter in motion, but the question of why material objects move no longer means what it did to Aristotle. For to his way of thinking they ought to stay home. When a man asks a question, he need not first decide to what science it properly belongs. As long as the question makes sense, he has a right to answer it in his own way. And when he answers it satisfactorily, his answer is scientific. When enough people ask the same kind of question, their answers become a science and that science is frequently given a new name, like biophysics, ~~geobiology~~ biogeography, ecology, or demography. Hence definitions of a science are usually obsolescent. For flesh and blood scientists are likely to be asking questions without regard for the men who try to catalogue their answers. I recall vividly the anguish of a librarian in my university who had to catalogue Husserl's phenomenology. The word "phenomenology" was not in the Library of Congress list of subjects.

In the meantime we fought two horrible wars and the scientists did their share in winning them. It cannot be denied that the weapons developed with their help in both wars were pretty revolting. But then war itself is revolting. On the other hand it makes little difference to the dead whether one is choked to death by gas, punctured by rifle bullets, or burned to a crisp by thermo-nuclear bombs, though it might make some difference to those who do the choking, [^]puncturing and burning. And though science made these methods of mass-extinction possible, it was men who brought the possibilities into actuality. It is folly to argue that since Hiroshima could not have been annihilated without nuclear physics, nuclear physics is to blame for Hiroshima. It is one or two men who are to blame for Hiroshima and neither of them is or was a scientist. To emphasize the potential nightmares of scientific progress is to forget the potential blessings. We are of course producing more nightmares than blessings. But there again it is human beings who are to blame and not the information which they utilize. Human beings have always used their

knowledge for evil ends when they felt like it. The bow and arrow were used not merely to kill game but also to kill people.

Part of our anxiety is attributable to the spread of news. We are more aware of the dangers that surround us than our forefathers were and good news is not news. Part of it also is due to our ignorance of history. The centuries between the fifth and the tenth were much more disorganized than our own time. Those idols of the Nazis, the Northmen, sailed up the rivers of France one after the other in the ninth and tenth centuries and laid waste to everything that they could burn or pillage. The Thirty Years War was as bad as the Second World War, as far as devastation goes, and it took much longer for the conquered countries to recover from it. We now rehabilitate our enemies so as to be able to fight them again in twenty or thirty years. After all the goodness or badness of a time must be measured against its people's satisfaction or dissatisfaction with it, and it is possible that the barbarians who lived in the sixth century were not displeased with their ignorance and superstition. They knew little of Augustan Rome and Periclean Athens. They did not know that they were living in a degenerate age. On the contrary, they were living in the first years of a new age, that of Christianity triumphant. They had everything to hope for and nothing to regret. To us the decrease in intelligence which would permit men to substitute Martianus Capella for Quintilian seems horrible. But just as our fellow Americans substitute Melville, surely one of the most turgid and bombastic writers that ever lived, for Dickens, Balzac, and Gogol, so those men may have since rely thought that The Marriage of Mercury and Philology ~~it~~ was a masterpiece of literature.

But I am wandering. When I say that we humanists are ignorant of science, I do not simply mean that professors of the humanities should also be scientists, for that would be impossible. I mean first that there are certain general scientific theories which have humanistic implications. To mention only a few, no one can really understand the human situation who does not know about the laws of genetics, the present state of the theory

of evolution, a good bit of psychology, both normal and abnormal, and above all some cultural anthropology. It is not that one should be able to state the conditions under which mutations appear in Drosophila and the genealogy of D. persimilis and D. melanogaster. But he should know that mutations do occur and that the laws of probability govern the inheritance of ancestral traits. At least it would prevent biographers from writing, "From his Irish mother he inherited his sense of humor and from his Italian grand-father his love of music." If we humanists knew such things our conception of teaching might be different. Similarly I am not saying that we should know all the conditions of speciation, the factors of hybridization and geographical isolation, of natural and sexual selection, but at a minimum we should know enough to stop reading moral and social implications into the differentiation of species. If we knew a bit more psychology, we might think twice before inflating our personal experience into that of the whole human race. In criticizing the arts, we might make allowances for the human element in aesthetic appraisals. And if we knew more about cultural anthropology, we might be willing to acknowledge the influence of social structures on the arts and the sciences and indeed on religion and philosophy. I say that all this might be possible, not that it would happen. For we all have a happy faculty of not applying what we know.

But there is much more to the situation than this. To begin with, one of the inevitable lessons of any science is that in order to make generalizations, one must abstract from individuals everything which makes them individual. This is a tautology. For a generalization is precisely a statement of only what things have in common. The question therefore arises of whether what we want to know in the humanities is what works of art, ideas, and historical events have in common or what individualizes them. Both interests are of course legitimate. But within the context of human life, just plain day by day living, do our problems arise because of the resemblances between things or because of their differences? If I fail to understand a poem by Dylan Thomas or a

a picture by Rothko or a piece of music by Webern, it is surely not because of what they have in common with Tennyson, G  r  me, and Gounod. And if I have trouble grasping the leading ideas of Heidegger, it is again not because they are so much like those of Husserl. Strictly speaking it is perhaps bad usage to talk of understanding individuals. For understanding normally comes about through universals, common nouns, adjectives, and relations. Individuals have to be seen or heard or otherwise perceived. But at the same time every individual is a member of some class or other and our problem as humanists is to approximate the individuality of the individual through a language incapable of doing the job.

The problem becomes clarified when we listen to uncritical talk about works of art. I am thinking of such questions as, "What is that a picture of?", "What is that poem about?" Or, "I just don't see what he's getting at," "I don't get the meaning of this." It becomes clear at such moments that many people think that they must be able to translate the perceptual into the conceptual, which in the long run means no more than the ability to classify everything into what they think of as its natural and proper class. But we now know that even in biology the idea of natural classes has been abandoned and that every organism has a right to be whatever it is. If this is so, then those of us who insist on treating works of art, historical events, ideas, and people as if their individuality were of greater interest than what they have in common with other members of their various classes are right. I realize that on this point that is bound to be a dispute. There have been people, particularly the so-called Romantics, who simply asserted dogmatically that individuality was a good thing in itself. In order to be more of an individual than nature intended them to be they went in for eccentricity. This is not the thesis which I am maintaining. I am saying on the contrary that individuals are no better than classes, but that we are confronted with them and that if we wish to appreciate them, sympathize with them, get their point of view, then we must assume an attitude which is the reverse of the scientific. But in

order to understand what the scientific point of view is, we had better know something about science. We shall not then attempt to be scientific in solving problems to which science is irrelevant.

Science, I am arguing, is irrelevant when problems arise out of individuality. The particular members of a class always vary, some more, some less, from the standard of the class. If this seems strange, it is because we forget that scientists have developed a technique when they are looking for generalizations, for purifying their subject matter to the point where it will obey their laws. Where this is not possible, as in dealing with large groups of human beings, they resort to statistical collections in which variation is admissible. We are so indoctrinated with the idea of mathematics and mathematical physics, that we feel that everything ought to exemplify some natural class and exemplify it perfectly. We feel that just as a geometer can talk about The Circle and The Triangle, the physicist about The Electron and The Neutron, and the biologist about The Frog and The Rose, so the literary critic ought to be able to talk about The Tragic and The Lyric, and the historian of War, Revolution, Empire, without specifying what tragedy or lyric, what war, revolution, or empire is being talked about. But what bogs us down in, let us say, Hamlet is not its tragic essence but its hero's hesitation to kill his uncle. (At least that is what a great many articles about that play deal with.) And what interests us in the American Revolution is not simply the fact that Washington, Jefferson, Adams, Hamilton and their associates engaged in un-British activities, but that unlike the French Revolution or the Russian Revolution, it was more of a political than an economic or social upheaval.

As a matter of fact, science can never give us the cause of any historical event. Causes can be given for classes of events and if we mean by explanation causal explanation, then no cause can be assigned to the Second World War or the War of 1812 except insofar as they were wars. One can paint a portrait of an individual man or write his biography, but

except in those particulars in which he resembles all other men, one cannot explain him. Of course one can always say that he is a fertilized ovum and that he inherited a determinate number of chromosomes from his mother and certain others from his father and that strung along these there were chemicals called genes and that the original cell divided and the resultant couple of cells went on dividing and if one keeps the account general enough one will be telling the truth. But none of this explains why he is Joe Dokes rather than Jim Dukes. For even if we could attach all his traits to specifiable genes and groups of genes, this would be simply a portrait in miniature. As an explanation it would be about as intelligent as saying that the reason why I am thirsty is that water is composed of two atoms of hydrogen and one of oxygen. This seems important to me for it is one of the differentiae of humanistic as distinguished from scientific studies. The humanist can produce a portrait of an individual person or thing or event, if he is sufficiently gifted to do so, and contemplating the portrait becomes a substitute for contemplating the individual. Many a biography is more intelligible than the person whose life is written in it. And many a history clarifies an historical situation without explaining it or even attempting to. The distinction between description and explanation, as I use the terms here, is that between the description of a class and the description of an individual.

Just as science cannot explain any existent historical being, so it cannot predict the occurrence of any historical event. It can say that if certain generalizations are true, then, other things being equal, certain consequences will follow. But the things which have to be equal are precisely the things which happen in the world of space and time. And if you ask what has to be equal, the only reasonable answer would be, The things which would prevent my prediction from coming out right. I emphasize this because one of the commonplaces of the philosophy of science has been that one of the tasks of science is prediction. But this is a confusion between logical and chronological consequences. Prediction

in science is the prediction of logical consequences and when the future keeps repeating the past with only the slightest deviations from the rule, those consequences are almost exactly corroborated by events. But when one gets down to earth from the astronomical heavens, there are all sorts of factors which have to be taken into account and which make our predictions go astray. Outside a laboratory the future has but the most general similarity to the past. A physicist can predict that water will boil at 100 degrees centigrade; but the kettle of water which I hold in my hands and which I am about to put on the stove for tea may never get to the boiling point. It may fall out of my palsied hands; I may trip and spill it; I may forget to turn on the gas; I may think it is boiling and begin pouring it over the tea leaves before it reaches the boil. But all this is history and is irrelevant to physics. The same is true of statistical generalizations. The advertisements for tooth paste which used to tell us that four out of five people have pyorrhea may be right; but they never could tell us which four out of which five. That could be discovered only by personal examination.

This being so, the humanist might cease to explain the rise of certain styles in the history of the arts and to predict what the regnant styles of the future will be. It is true that many artists develop a style early in their careers and spend the rest of their lives repeating it. But there are others, Picasso is an outstanding example, who not only change from year to year but in any given year are quite capable of painting in two manners. Why this should seem strange is perhaps because we take it for granted that a man stands for a consistent way of doing things. Something called his character is supposed to determine whatever he does. But what is the difference between what a man does and his character? Few of us behave in a consistent way. Regardless of Horace, Achilles was not always Achilles. We have it on even better authority than Horace that he hid among the women to escape the draft board and also sulked in his tent. If Achilles had been a writer, Mr. Burke would no doubt have discovered

his rhetorical strategy, but even strategy varies as the problem varies, one strategic plan being fitted for only one problem or type of problem. Now a scientific object either must not change or, if it changes, it must show a clear and demonstrable pattern of change which itself is permanent. The immutable scientific objects are best exemplified in the chemical atoms of the pre-Curie period, the mutable in growing things and processes. I know nothing of the vagaries of chemical substances, but have observed that vegetables and animals seem to have about the same constancy and inconstancy ^{as} ~~of~~ human beings. No one who has ever planted a ten cent package of nasturtium seeds can have failed to notice the difference in fertility, in rate of germination, in growth, and in longevity. Part of this difference is of course due to the slight differences in soil, in amount of water, in care, no matter how much the amateur gardener struggles to equalize conditions. In fact the struggle itself is predicated on the assumption that if all conditions are the same the results will be the same. But the one condition which the gardener cannot reduce to sameness -- and I am not talking of the botanist -- is whatever is inside the seeds. He has to take them as they come. But such plants are not scientific objects; they are real material things. And the difficulties of prediction are exactly the same as they would be if instead of vegetable seeds you had fertilized human ova. The poets, painters, statesmen, criminals, school teachers, merchants, saints and sinners who are all mixed up in what we call society have to be taken as they come too, at least until such time as life is more under the thumb of authority than it is at present. And consequently the disparity between what one might call the scientific human being and the historical human being remains too great for us to make more than very general predictions. Such predictions may be true of the group as a whole but cannot be expected to hold good for any individual.

These two lessons arise from the nature of scientific knowledge, not from the conclusions of any particular science. For whether a science is experimental or formal, descriptive or explanatory, causalistic or legalistic, it will always attempt to deal with classes of things or events and not with individuals. If I were not afraid of using too highly charged emotional terms, I should say that the sciences speak of the eternal and that experience is always of the historical. It is true obviously that an experimental science deals with real spatio-temporal beings, here and now, before us in the laboratory. But these beings stand for concepts which are universals and only insofar as they are good samples of the class which is under investigation do they do the work which is required of them. The things which the humanist studies need not represent anything. It is the job of the humanist to find out what they represent, to give them some intellectual significance, to see into what pattern they may fit, if he feels like it. But he need not feel like it. He may prefer to isolate his objects from all others -- though his aim will be impossible of attainment -- and try to make them intelligible in their isolation. Sometimes understanding comes from description, description so purged of irrelevant material that the object or event described stands out against its background and surroundings as if its real nature were being revealed to us. We sometimes speak of great works of art after this fashion, of novels such as Mme Bovary, A la Recherche du Temps Perdu, of great portraits such as Fouquet's Etienne Chevalier and St. Stephen, Titian's Paul III, of the inner conflicts of Beethoven's last quartettes. It is foolish, I realize, to speak about such works of art as revealing the real nature of anything for nothing is more real than appearance and actually they create a nature through interpretation. But when a bright light is thrown on something, we say that we see it more clearly, failing to define what the antecedent of "it" may be. For we seem to be creatures who want things cut off from one another as they are in our language, cut off with definite frontiers, so that we may say

to ourselves, "Here is where it begins and here is where it ends." We want objects and even events which retain their natures through time, for language is an escape from temporality.

All thinking becomes ritualized and frozen both in the life of an individual and in that of a group. And the thinking of scientists and humanists is not exempt. But the humanist has an opportunity to evade the rituals of tradition since his subject matter need not be studied in terms of species and genus and universal laws. It is possible, if unusual, to study individuals by emphasizing their uniqueness rather than their similarity to other things which are customarily classified with them. It is not inevitable nor obligatory that a man reading King Lear compare it with King Oedipus; he may read it as a specimen of nothing other than itself. He may read it as if no other human being had ever read it before. And I imagine that that was the way in which its author would expect it to be read. For he certainly knew nothing about Ph.D's and required reading lists. There is also the possibility that humanists admit that they are human beings and live in history, not eternity. I am no great lover of impressionistic criticism, but that is because the impressions usually recorded have been recorded by dull people. But I fail to see why the experiences of a sensitive mind are not worth reading. After all poems are not written, music composed, pictures painted, ~~and so forth~~ for machines and there is no reason that seems valid to me why a complete human being should not put down in black and white just what such works of art have meant in his life. If they do not mean the same thing to others, so much the worse. They cannot be expected to be more uniform than the people to whom they are addressed. They are not like chemical substances, moving masses, electric charges, unicellular organisms the effect of which on our emotional life is irrelevant to the man who investigates them. They are, to misuse Milton, as active as that soul whose progeny they are. Suppose you do find a poem by Keats that is built on a criss-cross pattern and another by Shelley

which moves in an S-shaped curve; if the discovery is simply a bit of
ol
morphology and nothing more, I cannot see that it amounts to much. I
remember two young men in the Fogg Museum standing before Gauguin's
Two Tahitian Women, whose torsos glow with bronze reflections. "You
must approach it from the point of view of the inter-relation of ^{areas} ~~lines~~,"
one said to the other. It was only by the greatest self-control that
I kept myself from telling them that Gauguin did not leave home and
take refuge in Tahiti to organize areas. The only advantage in reducing
a painting to a spatial pattern is that it makes it easier to describe, is
pseudo-scientific, and leaves you without any responsibility for liking or
disliking it. A banded snail shell would do as well as a Gauguin.

Fianlly let me say that the general is no better than the
particular, the eternal no better than the historical. We may admire
Robert Boyle for having thought out Boyle's law, but we needn't admire the
perfect gases which obey it. If one could produce a perfect gas, one
might expect a medal, but the medal would go to the inventor, not to
the gas. There is no reason to admire a tragedy which perfectly exemplifies
the three unities than to admire one which does not. Suppose Macbeth
is not a perfect tragedy, whatever a perfect tragedy may be? What of it?
"Perfection" is simply one of those question begging terms which pester
readers of literary criticism. It is not the perfect thing which is
admirable but the mind which has produced the perfect thing. But that
is praise of virtuosity, of which I have no disparagement to offer, but
one might as well be clear about it. In artistry it amounts to being able
to do something which is very hard. And that is exactly what excellency
in sport amount to too. If there is one thing which above all that we
might learn from the sciences it is to keep cool and look at the facts.
And here endeth the lesson for today.