1906

From Smoke to Pen [String-Bound Sermons]

Earl Clement Davis

From Smoke to Pen.

The fellow who has ever given himself up to the delight of quiet half dreamy thinking as he watches the curling winding clouds of smoke fade away into the atmosphere has entered into a world of peculiar fascination and charm. Seated before a crackling fire, as the flames and smoke flies hide and seek in an out among the carefully arranged bits of wood, and finely chase each other up the chimney, and disappear from our view forever, there is a peculiar charm which comes from contributing to the merriment of the hour by blowing from our oldest and strongest pipe, great clouds of smoke, and watch them gracefully follow the ever moving currents

of air, and find their way into the midst of the smoke and the flame of the burning wood. Some how, I can quite explain it, but some how, it seems to form a connecting link between our own inner minds and the great universe out there beyond the walls which shut us out from its glories, as well as its terrors. If, by good fortune, we are permitted to enter into a free life, less conventional, and more invigorating, the mystic beauty of such an hour of meditation is multiplied many fold. If in place of the room of a comfortable house, we can bask in the balmy air of God's out of doors seated or half reclining against some great tree, while the flames of a great camp fire, mount higher and higher before us, and shut us from the world by the ever thickening walls of darkness which the on coming night erect

about us. there is even a better and a freer opportunity for that quiet kind of thinking in which we delight. In the clouds of smoke from our pipes we create for ourselves a world of imagination, and with delight watch it as it is carried away to the great world beyond, and make ourselves believe that the mirage of the mind is the photograph of the world printed upon the sensitive mystic films of our secret being.

It is one of the evidences of "good manners" in this hour of mystic thought among fellows of the craft, to tolerate with seeming interest the narration of the experiences of the wondering mind, and excuse personal idiosyncracies as they present themselves, in the name of good fellowship. By the aid of my pipe, I try to bring to you some of the thoughts which I delight in when the strange hour of the pipe and the fire

are upon me.

It may seem to the uninitiated that such an hour can bring only the most common-place frivolous ideas, which are really not worthy of it-for, perhaps they are not but each fellow feels that his own are very important, and in such an hour he is ~~forced~~ bound to come into the presence of the best thoughts of his life. To him at least they are valuables, and who does not like to present some of his valuables for public examination.

But one observes that in this feeling would ~~that~~ the great habit is to build from the few gleanings of our experience and our readings, a wonderful and beautiful world of imagination, true only to what we for the moment think is true, or what we would like to have true. Then we carefully examine our own world of awakes to discover how it will stand the test of working, to use a term which belongs to the shop. For examples we ~~have~~ quietly draw

our plans of weeks camping trip. We start in with a few facts such as ~~in fact~~ there time when our vakation comes, how much money we have to devote to it, what kind of a vacation we want. Perhaps it comes during trout fishing season. We want to be out of doors and our supply of funds is limited. These few facts we have gleaned from our daily experiences. With them as a stock in trade for some hour before the fire, we light our pipe, settle back into the easy chair, and take our preliminary fishing trip right there before the fire. The first step after the dream wood is on us is to picture to ourselves ~~the~~ just the kind of a trip that we would like to take, under the existing limitations of time and money. So we let our fancy take us along to the shores of some quiet lake, where fish are plentiful, black flies and

mosquitoes are few. Firewood abundant and a good spring of water near by. Our first use being together all the facts that we know about fishing and in the quiet of our room plan the ideal fishing trip. But Of course this ideal does not exist in any concrete place, and we begin to hunt about for some spot that is within reasonable distance, which conforms more or less closely to our plans. We gather our outfit. Look up the schedule of trains and plan in detail the arrangements necessary for the execution of the contemplated vacation.

Thus insensibly we have been dragged from our meditation up through the chimney, or down out through the door into the active world. In due time we take our vacation, and submit our delightful ideals to the test of actual workability. Come home square up our accounts, and store up the fruit of the trip into the storehouse of experience.

In this rather commonplace round

of experiences, we have run the gauntlet of the philosopher, the prophet, the scientist, and the man of affairs. The only excuse that I ~~had~~ have for presenting this rather tiresome illustration, is that it contains the essence of what we sometimes call the scientific habit of mind or what is coming to be the common method of dealing with all the various problems that confront us in business, social, and intellectual activities.

You must bear with me if such abstract thoughts are uninteresting to you. I present them in sufferance of the manners of fellowship.

The one time method of philosophizing was very strenuous, and exacting as regards the imagination. The old time philosopher didn't deal very much with what we call facts of experience He was a logical sort of a chap so he preferred. He dealt with great big assertions, and logical conclusions.

He knocked about amid the thin air of speculative systems, not giving much weight to facts of experience, except in so far as they served as rests and bases of reaction for shooting their logical sky rockets, and watching them explode into the gaseous glories of syllogisms and theories. So far did some of these thinkers abut things allow themselves to be carried by their child like delight in these philosophical fireworks of the imagination, that in the so-called realists of the middle ages, who held that the ideal, or the unrealized pattern, was the reality. This characteristics of the habit of thinking, which is more or less Platonic in its nature, is well brought out in the famous controversy over the doctrine of Transubstantiation. On the one hand the Realists as they have come to be called held to the notion that in the celebration of the Eucharist, the wafer and wine were actually transformed into the body and blood of Christ. The fact that the wafer and

mine, looked, tasted, and acted as ordinary bread and mine, did not disturb them in the least. Those are mere accidents, said the wise ones, the revealed wisdom says that they are the body and blood of Jesus, and so they are. If come the modern chemist would have taken the material into his laboratory, subjected them to analysis, and said, "See for yourself what they are. The old realist would have been such a one as would have said that the fishing trip we flew in our mind is the real one, regardless of the black flies, rainy weather, and poor luck that may be in store for us.

How much of the change in habits of thought is due to the subtle influence of meditation tempered by the fragrance of tobacco I cannot say. But it still remains time to history that at about the time that Sir Walter Raleigh introduced the gentle art of smoking

into English society, that a movement was under way which was bound to change the habit of mind among ~~all~~ men who try to think.

Amid the discordant, strange, and varied philosophical systems, which are being advocated in our time, there seems to be emerging a sort of unity of method which is very interesting and encouraging to one who likes to feel himself free to think. It is the subtle influence of the scientific man, upon those who like to style themselves philosophers. This new method is in essence the method which we followed in taking our vacation trip, ~~[illegible]~~. It is nothing more or less than common sense, enriched by knowledge.

I said that it is the product of the laboratory, so let us examine this method there. The engineer with his knowledge of mechanics, and science is working day after day upon problems related to

the interests of his labor. He has a certain number of rather clearly defined principles which are common stock among workers of science. Acting in conformity to these laws, he makes the arc-light, the Electric motor, the steam engine. The success of the particular machine depends upon the ~~same and~~ extent to which the machine in its detail conforms to these laws.

But it happens that one day as he is working over those same old machines with which he is so familiar, he suddenly thinks that they can be made after another pattern which will make them work effective, or less expensive. or the machine which has been used to propel cars on a track, can be used to propel carriages running free ~~from~~ on the road. This new idea he sets out to demonstrate by actual experiment After he has proved that it will work

he accepts it as a new adaptation, and sets about a new flow of applying his old methods. His projected flow, his ideal is accepted or rejected according to the decisions of ~~its own~~ actual experiment. Following this method the world of science has made its conquests, and achieved the wonders which have stunned, not to say fascinated the the last century. To put the whole method of science into a nutshell, it might be framed something like this: The scientist takes it for ~~granted~~ granted that all phenomena conform to law or a system of law, i.e. ~~that~~ by reproducing conditions, you can repeat experiments. He further work takes it for granted that he is capable of ~~understanding~~ discovering how these laws work, and of making use of this knowledge.

This much he takes for granted, or at least assumes the possibility of its being true, and sets himself about the proof of its actual truth by the process of experimental test. If this general assumption is true this law ought to act in this fashion, clear way. Then begins experiment upon experiment, to prove or to disprove the truth of the temporary hypothesis. If the experiments confirm the temporary hypothesis it is accepted as true. If they do not the temporary hypothesis is rejected or at least is held in abeyance until further investigations have been made. The great test is "Does it work?" If it does, accept; if it does not, reject.

Following this method the scientific world is in a constant state of

progress, and is able to make great advances, because it is always open to the possibility of accepting new discoveries as fast as their truth and validity are demonstrated. It even stands ready to overthrow some of its ~~hypotheses~~ long established hypotheses, if the important new discoveries of law ~~point~~ go to show that they are in error. Witness the recent discoveries in regard to Radium. ~~In~~ The nut shell statement is this that the authority of the scientist rests upon the truth which he has been able to glean by experimental demonstrations.

But the scientist has not been entirely free from manners, and in some cases we have had occasion to witness the rather

absurd conclusions of such men for example Haeckel who has gone beyond the limits of hypotheses where workability can be shown and given himself up to the vagaries of which have no foundation upon in undemonstrated hypotheses of science.

Be that as it may, this method of work is a great contribution to the arts and sciences of life, aside from any consideration of the great scientific truths which the use of the method has given us. But greater still has been its influence in other fields than there commonly supposed to be tilled by the scientist. Physics in all its various and widely divergent subdivisions, Chemistry, Biology, and Geology and

other subjects have for years been under the sway of this method of investigation. Gradually the method has found its way into other fields where its application is producing a revolutionary effect. An illustration is the introduction into the study of history. Up to within a hundred years, the historian except the mere chronicler of events, has been in the habit of starting out with some theory of history and selecting his material for the purpose of demonstrating the truth of his theory. Of illustrations of this method you are familiar. Of late years there has been a wholesome change, and men are beginning to gather the material, the recorded facts of history, and try to give a picture of the actual course of events

for the sole purpose of arriving ~~at the~~ as near as possible to the real truth. ~~Such~~ The results of the new method are particularly noticeable in biographical literature. The old method of ~~describing~~ working ~~the world of~~ ~~it~~ ~~into saints~~ and sinners, to dis- offended, and we are coming to the rather more sensible habit of painting men as they are. "Paint me warts and all" said Cromwell. There is yet much to be done in the way of rewriting history. Clinging tenaciously to the old ideas in regard to history has offered serious obstacles to the acceptance of the conclusions of the modern historian. His work has been in many respects more difficult than that of the true scientist. The scientist was working upon virgin soil

while the historian has been reclaiming old, and in many cases abandoned soil. But in the free and unprejudiced use of this scientific method in the field of history rests the hope of arriving at a comparatively true conception of the movement and significance of historical development.

In other fields of ~~the so called~~ ~~social~~ intellectual activity which deal with the facts of ~~mental~~ social, and moral ~~life~~ phenomena this method is finding a wider application. For example in the study of law, the case system ~~has~~ is ~~been~~ taking the place of the old time legal text book, and the law student becomes the experimenter ~~of to~~ in a legal laboratory. In this branch

of social science, there is at present
the most urgent need of a wider appli-
cation of the scientific method.
Precedent is a great factor in
the administration of justice,
and the adherance to precedent
in legal affairs is the bugaboo
which holds our court adminis-
tration in the strong grasp of al-
most unbearable conservatism.

You are already accusing me
of smoking an unbearably dry
brand of tobacco. That is true, but
I am coming to the heel of the dry tobacco when quickly cured
Just another stray idea concerning
this scientific method. The psychol-
ist has taken it up, and with great
vigor is applying to the strange
fascinating facts of the mind both

in its normal and its abnormal conditions. Most interesting than all it has worked its way into the invulnerable strongholds of the philosopher. In place of the old logical machine, we find about us to-day the philosopher who is applying this scientific method to the problems of ultimate explanations. He takes the facts which the pure scientist gives him, the scientific historian, the scientific psychologist, and all the rest, and with these as the working tools and material of his laboratory he tries to formulate a tentative hypothesis as to the underlying laws which are manifested in all the complex activities of the universe. This tentative

hypothesis he tests, and verifies by all the possible experiments at his command. If it meets the requirements of conditions, he accepts the hypothesis as an approximate approach to the absolute truth, and makes it the working faith of his life. This is the kind of a philosopher that is coming to the front to-day. He is already quite well intrenched at Harvard and Chicago Universities, as well as at other places of learning, and bids fair to become the dominant factor in philosophical circles of this country. The significance of the application of this scientific method to problems of philosophy is not so much in the specific ideas that are at any particular

moment held, but in the some=
what novel situation of always having
in the house of Philosophy
an open door, through which new
truth may be admitted, and always
forging a possium on all new
truth that is offered it.

It has the immense practical
advantage for every man, in that
it permits him to become to a
large extent his own philosopher.
~~That is~~ If every scientist, and philosopher
is putting forth only such ideas
as have been tested, we who are
less sophisticated are more free to
accept them as true, than we are to
accept the productions of a man
who is grinding an ax. Not the
claims on the muffler, but a practical
examination of the contents is to
be the method by which we
shall accept and reject alleged truth,

When the promoter in these fields of intellectual activity has been left behind, and the honest unbiased scientific truth seeker has taken his place, we shall expect to find a true exposition of contents on every wrapper, and we shall be much more free to accept the conclusions of the historian, psychologist and philosopher for what they claim to be just as we now feel certain that when the scientists tells us that certain lines are true, they are generally accepted as true among scientists.

After all this smoke, your org. true has only been a very small conscious flame trying to find its way out. After all the

smoke has cleared away, what have you done but to show that all this "scientific method business" is just flamed old fashioned commonsense. I am glad to say that this is true. But I believe that there is one improvement in it. The scientist prides himself on never going off at half-cock, or flashing in the pan. This scientific method is simple common sense, supported, and backed by wide investigation, and broad range of knowledge.

The wonderful thing about it is this: ~~tho~~ while common sense has been very common among common people

who were doing the ordinary commonplace jobs of life, it has been a mighty rare thing among those who have devoted themselves to these problems which are of a speculative nature.

The last puff of the life is at hand, and very naturally it contains all the strength of accumulated juices, if there be juice in such shy to boot. It is this. This scientific method, can be and is being applied as a clarifying reagent to all the problems which confront us. Its great power, and significance are not found in the method of which the work is done there are three steps in the scientific system

(1) The necessary assumption of some kind of a provisional hypothesis.

(2) The subjection of this hypothesis

to the actual tests for the purpose of ~~asking~~ answering the question as to whether or not it will work.

3rd If the tests hypothesis stands the test, accept as a truth. If it does not, stand the test reject, and try another.

From Smoke to Pen

Earl C. Davis

Pittsfield, MA

1906

The fellow who has ever given himself up to the delight of quiet half-dreamy thinking, as he watches the curling winding clouds of smoke fade away into the atmosphere has entered into a world of peculiar fasciation and charm. Seated before a crackling fire, as the flames and smoke play hide and seek in-and-out among the carefully arranged bits of wood, and finally chase each other up the chimney, and disappear from our view forever, there is a peculiar charm which comes from contributing to the merriment of the hour by blowing from our oldest and strongest pipe great clouds of smoke, and watch them gracefully follow ever-moving currents of air, and find their way into the midst of the smoke and the flame of the burning wood. Somehow, I can [not] quite explain it, but somehow it seems to form a connecting link between our own inner minds and the great universe out there beyond the walls which shut us out from its glories as well as it terrors. If, by good fortune, we are permitted to enter into a freer life, less conventional, and more invigorating, the mystic beauty of such an hour of meditation is multiplied manyfold. If, in place of the room of a comfortable house, we can bask in the balmy air of God's out-of-doors, seated or half-reclining against some great tree, while the flames of a great campfire mount higher and higher before us, and shut us from the world by the ever thickening walls of darkness which the oncoming night erect about us, there is even a better and a freer opportunity for that quiet kind of thinking in which we delight. In the clouds of smoke from our pipe we create for ourselves a world of imagination, and with delight watch it as it is carried away to the great world beyond, and make ourselves believe that the image of the mind is the photograph of the world, printed upon the sensitive mystic films of our secret being.

It is one of the evidences of "good manners" in this hour of mystic thought among fellows of the craft, to tolerate

with seeming interest the narration of the experiences of the wandering mind, and excuse personal idiosyncrasies as they present themselves, in the name of good fellowship. By the aid of my pen, I try to bring to you some of the thoughts which I delight in when the strange hour of the pipe and the fire are upon me.

It may seem to the uninitiated that such an hour can bring only the most commonplace frivolous ideas, which are really not worthy of its pen. Perhaps they are not, but each fellow feels that his own are very important, and in such an hour he is bound to come into the presence of the best thoughts of his life, to him at least they are valuable, and who does not like to present some of his valuables for public examination.

But one observes that in the peculiar world the great habit is to build from the few gleamings of our experience and our readings, a wonderful and beautiful world of imagination, true only to what we, for the moment, think is true, or what we would like to believe is true. Then we carefully examine our world of smoke to discover how it will stand the test of working, to use a term which belongs to the shop. For example, we quietly draw our plans of [a] week's camping trip. We start in with a few facts such as the time when our vacation comes, how much money we have to devote to it, what kind of a vacation we want. Perhaps it comes during trout fishing season. We want to be out of doors and our supply of funds is limited. These few facts, we have gleaned from our daily experience. With them as a stock in trade for the hour before the fire, we light our pipe, settle back into the easy chair, and take our preliminary fishing trip, right there before the fire. The first step after the dream mood is on us is to picture to ourselves just the kind of a trip that we would like to take, under the existing limitations of time and money. So we let our fancy take us along to the shores of some quiet lake, where fish are plentiful, black flies are mosquitoes are few, firewood abundant and a good spring of water nearby. In fact we bring together all the facts that we know about fishing and in the quiet of our room, plan the ideal fishing trip. Of course, this ideal does not exist in any concrete place, and we begin to hunt about for some spot that is within reasonable distance, which conforms

more-or-less closely to our plans. We gather our outfit, look up the schedule of trains and plan in intricate detail the arrangements necessary for the execution of the contemplated vacation.

Thus insensibly we have been dragged from our meditation, up through the chimney or out through the door into the active world. In due time we take our vacation, and submit our delightful ideals to the test of actual workability. Come home, square up our accounts, and store up the fruits of the trip into the storehouse of experience.

In this rather commonplace round of experiences, we have run the gauntlet of the philosopher, the prophet, the scientist, and the man of affairs. The only excuse that I have for presenting this rather tiresome illustration, is that it contains the essence of what we sometimes call the scientific habit of mind, or what is coming to be the common method of dealing with all the various problems that confront us in business, social and intellectual activities. You must bear with me if such abstract thoughts are uninteresting to you. I present them in sufferance of the manners of fellowship.

The one-time method of philosophizing was more strenuous and exacting as regards the imagination. The old time philosopher didn't deal very much with what we call facts of experience. He was a logical sort of a chap so he professed. He dealt with great big assertions, and logical conclusions. He knocked about amid the thin air of speculative systems, not giving much weight to facts of experience, except in so far as they served as rests and bases of reaction for shooting their logical sky rockets, and watching them explode into the gaseous glories of syllogisms and theories. So far did some of these thinkers about things allow themselves to be carried by their child-like delight in these philosophical fireworks of the imagination that among the so-called realists of the middle ages we find a few who held that the ideal, or the unrealized pattern, was the reality. This characteristic of the habit of thinking, which is more-or-less Platonic in its nature, is well-brought out in the famous controversy over the doctrine of transubstantiation. On the one hand, the Realists, as they have come to be called, held to the

notion that in the celebration of the Eucharist, the wafer and wine were actually transformed into the body and blood of Christ. The fact that the wafer and wine looked, tasted and acted as ordinary bread and wine, did not disturb them in the least. Those are mere accident, said the wise ones. The revealed wisdom says that they are the body and blood of Jesus, and so they are. Of course, the modern chemist would have taken the material into his laboratory, subjected them to analysis, and said, "See for yourself what they are." The old realist would have been such a one as would have said that the fishing trip we plan in our mind is the real one, regardless of the black flies, rainy weather, and poor luck that may be in store for us.

How much of this change in habits of thought is due to the subtle influence of meditation tempered by the fragrance of tobacco, I cannot say. But it still remains true to history that at about the time that Sir Walter Raleigh[1] introduced the gentle art of smoking into English society, that a movement was under way which was bound to change the habit of mind among men who try to think.

Amid the discordant, strange, and varied philosophical systems, which are being advocated in our time, there seems to be emerging a sort of unity of method which is very interesting and encouraging, to one who likes to feel himself free to think. It is the subtle influence of the scientific man, upon those who like to style themselves philosophers. This new method is in essence the method which we followed in taking our vacation trip. It is nothing more-or-less than common sense, enriched by knowledge.

I said that it is the product of the laboratory. So let us examine this method there. The engineer with his knowledge of mechanics and science is working day-after-day upon problems related to the interests of his labor. He has a certain number of rather clearly defined principles which are common stock among workers of science. Acting in conformity to these laws, he makes the arc-light, the

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[1] Sir Walter Raleigh (c. 1552-1618), English stateman, soldier, writer and explorer, remembered, among other things for popularizing smoking at the English court.

electric motor, the steam engine. The success of the particular machine depends upon the extent to which the machine in its detail conforms to those laws.

But it happens that one day, as he is working over these same old machines with which he is so familiar, he suddenly thinks that they can be made after another pattern, which will make them more effective, or less expensive or the machine which has been used to propel cars on a track can be used to propel carriages running from upon the road. This new idea he sets out to demonstrate by actual experiment. After he has proved that it will work, he accepts it as a new adaptation, and sets about a new plan of applying his old methods. His projected plan, his ideal, is accepted or rejected according to the decisions of actual experiment. Following this method, the world of science has made its conquests, and achieved the wonders which have stunned, not to say paralyzed the last century. To put the whole method of science into a nutshell, it might be framed something like this. The scientist takes it for granted that all phenomena conform to law or a system of laws, i.e., by reproducing conditions, you can repeat experiments. He furthermore takes it for granted that he is capable of discovering how these laws work, and of making use of this knowledge.

This much he take for granted, or at least assumes the possibility of its being true, and sets himself about the proof of its actual truth by the process of experimental test. If this general assumption is true, this law ought to act in this particular way, then begins experiment upon experiment to prove or to disprove the truth of the temporary hypothesis. If the experiments confirm the temporary hypothesis it is accepted as true. If they do not, the temporary hypothesis is rejected or at least is held in abeyance until further investigations have been made. The great test is “Does it work?” If it does, accept; it if does not, reject.

Following this method the scientific world is in a constant state of progress, and is able to make great advances, because it is always open to the possibility of accepting new discoveries as fast as their truth and validity are demonstrated. It even stands ready to

overthrow some of its long-established hypotheses, if the new discoveries of law go to show that they are in error. Witness the recent discoveries in regard to radium. The nutshell statement is this, that the authority of the scientist rest upon the truth which he has been able to glean by experimental demonstration.

But the scientist has not been entirely free from narrowness and in some cases we have had occasion to witness the rather absurd conclusions of such men, for example Haeckel[2], who has gone beyond the limits of hypotheses whose workability can be shown and given himself up to vagaries which have no foundation in undemonstrated experience.

Be that as it may, this method of work is a great contribution to the arts and sciences of life, aside from any consideration of the great scientific truths which the use of the method has given us. But greater still has been its influence in other fields than those commonly supposed to be tilled by the scientist. Physics in all its various widely divergent subdivisions, chemistry, biology and geology and other subjects have for years been under the sway of this method of investigation. Gradually the method has found its way into other fields where its application is producing a revolutionary effect. An illustration is the introduction into the study of history. Up to within a hundred years, the historian, except the mere chronicler of events, has been in the habit of starting out with some theory of history and selecting his material for the purpose of demonstrating the truth of his theory. Of illustrations of this method you are familiar. Of late years there has been a wholesome change, and men are beginning to gather the material, the recorded facts of history, and try to give a picture of the actual course of events for the sole purpose of arriving as near as possible to the real truth. The results of the new method are particularly noticeable in biographical literature. The old method of making a saint up out of a {???} has disappeared, and we are coming to the rather more sensible habit of painting men as they are. “Paint me warts and all” said

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[2] Earl Davis is most likely referring to Ernst Haeckel (1834-1919), noted German zoologist, naturalist and eugenicist.

Cromwell.[3] There is yet much to be done in the way of rewriting history. Clinging tenaciously to the old ideas in regard to history has appeared serious obstacles to the acceptance of the conclusions of the modern historian. His work has been in many respects more difficult than that of the pure scientist. The scientist was working upon virgin soil, while the historian has been reclaiming old, and in many cases, abandoned soil. But in the free and unprejudiced use of this scientific method in the field of history rests the hope of arriving at a comparatively true conception of the movement and significance of historical development.

In other fields of intellectual activity which deal with the facts of social and moral phenomena this method is finding a wider application. For example, in the study of law, the case system is taking the place of the old-time legal text book, and the law student becomes the experimenter in a legal laboratory. In this branch of social science, there is at present a most urgent need of a wider application of the scientific method. Precedent is a great factor in the administration of justice, and the adherence to precedent in legal affairs is the bugaboo which holds our court administration in the strong grasp of almost unbearable conservatism.

You are already accusing me of smoking an unbearable dry brand of tobacco. That is true, but dry tobacco burns quickly and I am coming to the heel of the fill. Just another stray idea concerning this scientific method. The psychologist has taken it up, and with great vigor is applying to the strange fascinating facts of the mind both in its normal and its abnormal conditions. More interesting than all, it has worked its way into the invulnerable strongholds of the philosopher. In place of the old logical machine, we find about us today the philosopher who is applying this scientific method to the problems of ultimate explorations. He takes the facts which the pure scientist,

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[3] Oliver Cromwell (1599-1658), Lord Protector of England from 1653 until his death in 1658 during the English Civil War, is said to have instructed portrait painter Peter Lely (1618-1880) to portray him “warts and all,” as he truly was without concealing his blemishes.

the scientific historian, the scientific psychologist, and all the rest. With these as the working tools and material of his laboratory, he tries to formulate a temporary hypothesis as to the underlying laws which are manifested in all the complex activities of the universe. This temporary hypothesis he tests, and verifies by all the possible experiments at his command. If it meets the requirements of conditions, he accepts the hypothesis as an approximate approach to absolute truth, and makes it the working faith of his life. This is the kind of a philosopher that is coming to the front today. He is already quite well entrenched at Harvard and Chicago Universities, as well as at other places of learning, and bids fair to become the dominate factor in philosophical circles of this country. The significance of the application of this scientific method to problems of philosopher is not so much in the specific ideas that are at any particular moment held, but in the somewhat novel situation of always having in the house of philosophy an open door, through which new truth may be admitted, and always paying a premium on all new truth that is offered it.

It has the immense practical advantage for every man, in that it permits him to become to a large extent his own philosopher. If every scientist and philosopher is putting forth only such ideas as have been tested, we who are less sophisticated are more free to accept them as true, than we are to accept the productions of a man who is grinding an ax. Not the claims on the wrapper, but a practical examination of the contents, is to be the method by which we shall accept and reject alleged truth. When the promoter in these fields of intellectual activity has been left behind, and the honest unbiased scientific truth seeker has taken his place, we shall expect to find a true exposition of contents on every wrapper, and we shall be much more free to accept the conclusions of the historian, psychologist and philosopher for what they claim to be just as we now feel certain that when the scientist tells us that certain laws are true, they are generally accepted as true among scientists.

After all this smoke, you say, there has been only a very small commonplace flame trying to find its way out. After

all the smoke has cleared away, what have you done but to show that all this "scientific method business" is just plain old-fashioned commonsense. I am glad to say that this is true. But I believe that there is one improvement in it. The scientist prides himself on never going off at half-cock, or flashing in the pan. This scientific method is simply commonsense, supported, and backed by wide investigation, and broad range of knowledge.

The wonderful thing about it is this, while commonsense has been very common among common people who were doing the common jobs of life, it has been a mighty rare thing among those who have devoted themselves to these problems which are of a speculative nature.

The last puff at the pipe is at hand, and very naturally it contains all the strength of accumulated juices, if there be juice in such dry tobacco. It is this. This scientific method can be and is being applied as a clarifying reagent to all the problems which confront us. Its great power and significance are found in the methods by which its work is done. These are the three steps in the scientific system:

(1) The necessary assumption of kind of a provisional hypothesis.
(2) The subjection of this hypothesis to the actual tests for the purpose of answering the question as to whether or not it will work.
(3) If the hypothesis stands the tests, accept as truth. If it does not stand the test, reject and try another.