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From Smoke to Pen [String-Bound Sermons]

Earl Clement Davis

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From Swoke to Pen, The fellow who has ever given himself of to the delight of quiet half cheavy thinkings as he wother the curling minding church of swohe facle away into the atworker. has entered into a world of feculiar facination, and chaus. Sested before a crackling fire, as the flances and swohe fly hide and reed in an out awang the carefully arrayed bits of word, and finally chase each other up the chimney, and disaffear from our niew forever, there is a feculiar chause which comes from centributing to the meriment of the Sourby blowing these furn our oldest evil storgert fife, greatelirlds of swahes, and which them gracefully follow the Ever woring currents

of air, and find their way into the wicht of the swohe and the flame of the bruning wood, Some town I am quite explain it, but some true, it seems to four a connecting link between our our inner minds and the great universe out there beyond the walls which shelt us out Junits glories, or well as its terus. If. by govel fortune, we are formitted to enter into a free life, less conventional, and work insignating. The mystic beauty of such an four of weelitation is multiflied worm fold. If in flace of the room of a comfortable bouse, me em bask in the balungain of Joels out of doors sected or half rellining against some great tree, while the flower of a great cour fire, wount higher and higer before us, and shit us from the mould by the ever thickening woll of darkness which the on soming night erect

about is, there is even a better and a free offertunity for that quiet kind of thinking in which me delight, In The clovels of swake from our fife me reate for our relues a world of in: agination, and with delight worth it as it is carried away to the great world heyoul, and woke ouselver believe that the word of the wind is the floting wife of the world frinted ufor the sensitive myster films of one secret being. It is one of the suidences of good makiness in this how of mystice thought awing fellows of the exeft, to tolerate with reming intent the warration of the experiences of the wondering mid, and excuse fersonal idiocycracies as they fusent themselver, in the une of good fellowship. By the aid of my few, I try to bring to you some of the thoughts which I delight in when the strange fore of the fife and the fire

are upon me,

It way seem to the uninitiated the meh

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exornination. But one observer that in this feculiar sevaled the great fabit is to build from the few gleanings of our exferience and our readings, a wonderful and peantiful world of imagination, true only to what we for the woment think is the, or what we would like to have. the. Then me conefully exornine on our swell of swoke to discover four it will struck the test of working, to use a term which belongs to the shop. For examples me tote quietly drow

on flow of week's counting trif. WE start in with a few faits such as in free there time when our vakation comes, four week woney we tone to devote to it, who kind of a waration we wont, Pertop it comes during trout fishing season, me want to be out of doors and our suffly of Junelo is limited. There few facts, we have gleaned from our clairly experiences. With them as a stock in tracle for the four before the fire, me light our fife, settle boch into the easy chair, and toke our felininary fishing triferight the before the fire. The first step after the cheam wood is on us is to fictive to ourselver the just the kind of a trif that we would like to take under the existing himitations of time, and wring. So me let ou foury toke us along to the stores of some quet like, where fish are flentiful, black flies and

warquitaes are few, firewood obundant and a good spring of water near by. Die fort me bring together all the forts that we how obout fishing and in the quiet four wormflow the ideal fishing trip. But Of course this toot ideal does not exist in any concrete flace, and me begin to him some for some spot that is within reasurable distance, which conforms were or less closely to our flows. We gother our outfiel. look of the schedule of trains and flor in interest detail the aringe: ments necessary for the execution of the contemplated vacations. Ilms insensitly me fore hem dragich from our westitation, uf through the Chine way, or down out though the down into the active world, and In che Time me toke our war cation, and submid-our delight ful ideals to the test of active workshilly. Come some square of our accounts, and store of the fruit of the trif into the storebouse of experience. In this nother commenflace round

of experiences, we have me the gamtlety the flidorger, the profet, the scientist, and the wor of offairs. The only excuse that I had have for fresenting this nother tresome illustration, is that it contains the essence of whit we sometimes call the scientific habit-of windor what is coming to be the common method of dealing with all the various feobleus that confirmt us in business. social, and intellectual activities. you must bear with me if such abstract thoughts are uninteresting to you I fresent them in sufferance of the manner of fellowship. The one time method of flilosofhiging wor were sten vous and exacting as regards the imagination. The old time fliloropher dichit deal very much with what we call forts of experience HE was a logical sut of a chof so he Justered. He chart with great ling assertions, and logical souchuseines.

He knocked about amid the Thin air of speculative systems, vot giving much meight to forts of experience, except in av far as they served as nests and baser of reaction for shorting their logical sky wekets, and wothing them explode with the gaseour glovies of syllogisius and therees. In far did some of there thinker about things allow themselves to be carried by their childline delight in there fhiloroflical frierowhs of the realists of the middle ages, who held that the ideal, on the unealized fatters, was the reality. This characteristics of the hold of thinking, which is were as less. Platrice in its notines is well brought out in the favour continuers over the doctrine of Laussabatus historia. On the one hand the Realists as they have come to be rolled held to the notion that in the selebotion of the Eucharist, the wafer and wine more actually hours: formed into the body and blood of christ. The fort that the wafer and

nine, brokeel, tosteel, and acted as orchivary head and wine, did not disturb them in the least. I fore one were accidents, said the mise ones, the revealed suidou says that they are the body . and blood of Jesus, and so they are. Uf some the woden chemist world for to her the moterial into his loboting, subjected them to analysis, and said, be for you self what they are. The old realist world have been such a one as would fine said that the fishing trif me flu in our mind is the real one, regardless of the black flier, raing weather, and four look that way be in stree for us.

thorough of the change is the to the softle influence of weditation terrfued by the fragrance of tobacer I round soy. but it-still remains true to history that about the time thet die wolter Roleigh sintur. duced the gentel art of swohing

into English society, that a wenement was under work which was bound to change the hobit of mind away men who try to think, Quick the discordant, strange, and naried fhilosofhicol systems, which are heing allowerted in our time, their seems to be emerging a sort of weity of wether which is very interesting and encoun: aging to one who likes to feel himself free to think. It is the sulthe influence of the scientific man, who there who like to style themselves flislosoflers. This new wether is in essence the method which me followed in toking ou vacation trip, bons. It is nothing worr or less thou commen seuse, enrichel by Rounladge. I said that it is the fooduct of the labratory, so let us examine this worthol there, The engineer with is howeledge of weekness, and science is working day after day when froblews related to

the interest of his lobor. He has a certain number of rather clearly defined frin: cifles, which are common stock who awing workers of science. acting in conformity to these lives, he wohen the one light, the Electric water, the steam engine. The sucress of the fartierlar machine defends ufor the same and extent to which the machine in its detail conforms to thre lows. But it roffens that one chyas he. his working over those some ald machines mithwhich he is so he waste familiar, that they can be waste ofter another father which will woke their worr effective or less expensive. or the machine which for hear med to firfel cars on a track, can be used to pople carriages mining free from the wad. This new idea he sets out to demonstrate by actual experiment Often he far funed that it will work

he accepts it as a new acloflotion, and sets about a new flow of offlying his odel wethols. His firjected flue, his ideal is accepted or rejected according to the decision of its war activel experiment. Following this method the world of science has made its conquests, and achined & wonders which have stringed, not to say faral= ized the the last century. To fut the whole method of sclence into a nutshell, it night he framed something like this! The scientist toker it for granted that all fheromena conform to law or a system of four, iz. that by re= foducing conditions, you can refeat experiments. HE furtherwork to bes il-for granted that he is cofoble of understanding discovering for these loves work, and of working me of this Knowledge.

This much he toker for granted, or at least assumer the forsibility of its heing true, and sets himself about the prof of its actual truth by the focein of experimental text, of this general assumption is true this low ought to act in this fartic: olan way, Then begins exferiment ufor exferiment, to five or to dis: for the truth of the temporary hyfothesis! If the enferiments sinfin the temforay hyfothesis it is accepted as true of they downt the tempory hypotheix is rejected or at least is held in aboyance until futher investigations have been made. The great test is does it work? If it does, accept; if it does not, reject. Following this wether the scientific world, is in a constant state of

frogress, and is able to woke great adverces, because it is olvoys ofen to the forsi hility of arcefting new discoveries as fort as their truth and volidity one demonstrated. It even structs reachy to overthern some of its try fortheris back estab. lished hyfotheses, if the infortint new diserveries of low friet to go to show that they are in error. Mitwes the recent discover: ies in regard to Rachim. & The unt shell stolement is this that the authority of the scientist rests whom the truth which he has heen able to glian by exferimental dewen: shotions, But the scientist for vot heen entiely free from manumers, and in some cases we have had accasion to withers the rather

obsurd conclusions of such men Jor example Harchol, who has give beyond the limit of tyfotheres where workshifty can be shown and given himself of to the nagaries & which have vo Journdotin ufon underen = strated by fotteres, y ferreure. Be that as it way this wethol of work is a great contribution to the arts and sevences of life, asicle from any consideration which the of the great scientific truths which the use of the method has given us. But greater still has been its in other fields then thre commonly sufficiel to be tilled by the scientist. Physics in all its various and office midely diverget subdivisions, Chemistry. Viology, and Geology and

other subjects have for years here under the sway of this wether of investigation. Grachvolly the wether has found its way with other fields where its offlication is fivelining a revolutionary effect, An illustra: Tim is the induduction into the study of history. If to within a hundred years, the historian exceft the were chronicle of events, has been in the trahabit of starting out with some theny of history and selecting his moterial for the furfore of dewnistrating the truth of his theory. Of illustrations of this wether you are familiar. Of lote. years there has been a wholesene chonge, and were are beginning to gother the wateriol, the recorded forts of history, and try to give a fictime of the actival course of events

for the sole furface of arriving at the as near as farsible to the real Truth. Such the results of the new method are fartievanly noticeable in hiographical literature. The old welf of churching the worth of with single provide in the parties and sinners, tosdis: offened, and we are coming to the rother work sensible broket of fainting men as they are, Paint me maits and all' said Currell, Thee is yet much to be cline in the voy of rewinting history. Chinging tenacionsly to the old ideas in regard to histing has offered serious obstacles to the acceptance of the conclusions of the worlen listorion. His work has been in many respects worr difficult than that of the fine scientist. The dientist was working ufon ningin soil

while the historien has been reclaiming old, and in mony cases abouthered soil. But in the free and unfregudired use of this scientific method in the field of history rests the fole of arriving at a confaratively true conception of the swonement and significance of historized development. In other fields of the worked nowed intellectvol activity which deal with the forts of wentel. social, and word to the flewomena this wethood is finding a miden afflication. For example in the study of low, the case system has the to keing the flace of the old time legal text book, and the low student becomes the experimenting to in a legol labating. In this branch

of social science, there is at fresent the wort used of a mide offi: cation of the scientific wettral, Precedent is a quest factor in the achievestiation of Justice, and the adherance to frecedent in legal offairs is the bugaboo which folds our court achinis: testin in the strong granf of al: wort un hearable soussel con : servatirm. you are ahearly accurring we of swoking an unhearoly dry trand of tobacco. That is true, but dry totown them quickly the heel of the fill first another strays idea concerning this scientific method. The psycholog= ist for tohen it of, and with great rigor is offlying to the strange facinating facts of the mind both

in its nowol and its obvorwal all it to working its way with the in undverable strongfolds of the fliloropher, on flare of the old logical machine, we fivel obout us to-dry the flibrafher who is afflinging this scientific method to the feableur of ultimate ex= florations. He tokes the facts which the five scientist gives him, the scientific his brion, the scientific fryelologist, and all the rest, and with there as the working tools and material of his laborating he tries to formula a lengthing hyfothesia on to the underlying lour which are manifested in all the conflex activities of the minere. This tempory

hyfother's he tests, and neufies 21 by all the farsible exferiments at his command. If it weets the requirements of conclitions, he accepts the lyfotheris as an offixiwate afferech to the absolute truth, and when it the working faith of his life. This is the Ruich of a shilversher that is coming to the front to : dry, He is aheady. quite well intrenched at Haward and chicago Minerity as well as at other flaces of learning, and bick fair to become the dominants. factor in fhilosofhial circles of this country. The significance of the offlication of this scientific wether to problem of flulosofly is vot so much in the specific idear that are at any factivelar

woment held, but in the some= what wovel situation of always having in the toure of the truth which were truth way he achnitted, and always forging a prossium on all new truth that is offered it. It has the immense fraction action toge for every won, in that it fermits him to become to a lange extent his over skilosofker. Ht is If every scientist, and Shilugher is futting forth only such iclear as have been tested, me who are less suffisherted one wor fee to accept them as two, then me are to accept the fivelieties of a way who is grinding an ax. hot the claims on the wroffer, but a fracticol examination of the contents in to be the method by which we sholl accept and regist alleged truth,

when the foundti in there 23 fields of intellectual activity for heen left believed, and the fovert. un hisred scientific truth seeker for token his flace, we stoll exfect to find a true exposition of contents on every unaffer, and we stoll be much worr free to acceft the conclusions of the historian frychologist and shilosopher what they claim to be certain that when the scientistatells us that certain hours are true, they are generally accepted as true away scientis. after all this swohe, you say. the has only hear a very swoll knownflore flame trying to find its way out. Ofter oll the

swohe has cleared away, what have you done but to show that all this scientific wettrel businer" is just flance old fashined kommiseure. I am glad to say that this is true. But I believe that there is one inferrement init. The scientist frider him self or nevergoing off at hoef-cock, or flashing in the face. This scientific method is single common. seure, sufforteel, and backed by mide in nestigation, and broad iange of Knowledge. The wouderful thing about it is this; the while course has hem very commer among common ferfle

who were doing the activary 25 jobs of life, it has been a wighty sare thing awing three who have devoted themselves to these froblens which me of a speculoting notive. The last fuff at the fife is at hand, and very notworky it contains all the strength of accum: wholed juices, if there be juice in such shy to bover, It is this This scientific wethool, non be and in heering offlied as a clarefying reagent to all the furthering which confront us. Its great former, and significance are not formel in its wether of which

their are formatters three step.

(1) Ele necessary assemption of some Kind of a furt poursinol hyfotheris. (2) The subjection of this hypotheris

to the actual tests for the surface of asking ausmering the question as to whether or vot it will 3 the tests hyfothesis stones the test; accept as a truth. If it closs vot, struck 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 evermoving 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 halfreclining 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 childlike 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 Raleigh¹ 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

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 Haeckel², 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

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,

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.