human relations. That is why the big industrial city is so much harder to govern than is the rural area of equal population. The leaning tower of Pisa is deemed to be one of the greatest wonders of the world, yet it is an infinitely less complicated affair than an urban metropolis like Chicago in which one can find at this very moment, side by side, much of the best industrial technique and some of the worst municipal government on earth.

To be safe, our progress in the art of government ought to go faster than the advance of applied science, but unhappily it is doing nothing of the kind. It is steadily dropping behind. If the fathers of the Republic were to return to life, after their long sleep of a century, they would be equally appalled by the stupendous progress of the American people in all material things and by the relative lack of it in the art of government. Would they perceive any marked improvement in the way the laws are made, or the revenues raised, or the taxes spent? Would they note a conspicuous betterment in the caliber of the men elected to public office? Would they find our current political discussions above, or below, the plane represented by the letters in *The Federalist*? To ask these questions is to answer them.

Our immediate goal, therefore, should be to release political science from the old metaphysical and juristic concepts upon which it has traditionally been based; likewise to keep it clear of the sociologists and social psychologists who, if they could have their way, would only get us deeper into the morass of meaningless terminology. It is to the natural sciences that we may most profitably turn, in this hour of transition, for suggestions as to the reconstruction of our postulate and methods.

Political science should borrow from the new physics a determination to get rid of intellectual insincerities concerning the nature of sovereignty, the general will, natural rights and the freedom of the individual, the consent of the governed, majority rule, home rule, the rule of public opinion, state rights, laissez-faire, checks and balances, the equality of men and nations, and a government of laws. In place of these formulas it should seek to find concepts that will stand the test of actual operations, and upon them it should begin to rebuild itself by an intimate observation of the actualities.

By analogy from the new physics, moreover, it may well turn part of its attention from the large-scale and visible mechanism of politics to the invisible and hitherto much-neglected forces by which the individual citizen is fundamentally actuated and controlled. Three-quarters of a century ago the new biology suggested to us the abandonment of old ideas concerning the spontaneous creation of government; to-day the new physics may well suggest the discarding of our atomic theory of ultimate, equal and sovereign citizens in a free state. It is doubtless true that the natural scientist, as such, can never guide us to the true purposes and policies which should direct human action in matters of government; but it is equally true that only by paralleling his objectivity of attitude and his process of operational study can the political scientist ever hope to reach that goal.

WILLIAM BENNETT MUNRO

## A LAYMAN'S VIEW OF HISTORY[1]

SOME time ago I received a pleasant letter from an honored officer of our Association. Among other things he said that his friends and colleagues would be glad to have one more book from me telling how it was that I came to write history. He added friendly words as to the interest of professional teachers of history in the thoughts of laymen like myself. So I am moved to give you a layman's view of history.

The muster-roll of laymen who have written histories is not a mean one. The old world offers us Herodotus, Thucydides, Xenophon, Polybius, Tacitus, no one of whom held a chair at any university. In modern times, in England, we pass from Gibbon down to Grote, and, in our own country, from Parkman to Rhodes. For myself, hovering, as I faintly hope, somewhere on the fringe of this rather Olympian company, I will endeavor to answer in a few words the query in the very friendly letter.

When I was a young man I became bent on devoting my mind and energies to the best things I could find. Not having original and creative gifts, I set myself to the study of what other men had deemed best, and had striven to attain in thought and work and conduct. I had ardently studied law, had practiced a very little, and had written a book on *Private Corporations*. But the law seemed too narrow—very far from covering the whole human field; and I turned to look beyond it. Being inclined toward the humanities rather than the sciences, I soon saw that I at least should find the most humanly interesting elements in the aim and the endeavor—the forming an ideal, and the struggle through the man's years, or perhaps through the longer life of a people, to accomplish it. The accomplishment itself, if indeed it is severable from the endeavor, might be beyond the strength either of individual or of race. Achievement lies on the knees of the gods. The true human story is a story of endeavor—the endeavor for the end conceived.

So I began with the ancient world, which is the pit

[1] Presidential address delivered before the American Historical Association at Washington, December 28, 1927.

whence we have been digged. And I devoted the ten years that were my supreme education to writing *Ancient Ideals*. That brought my notion of the story down to the time of Christianity. I gave all my time to the book, working eight hours a day, and traveling to see some of the things and countries I was studying. I had very little money, but I used it, and at last sweated blood to pay for the publication of my work.

Then, with the advantage of this discipline of knowledge, I devoted four years to *The Classical Heritage of the Middle Ages*. During two of them, I held a lectureship at Columbia, but gave it up as interfering with my real work. Profiting by this further time of studying and training, I next put ten enthusiastic years on *The Mediaeval Mind*, and, after that, six or seven years on *Thought and Expression in the Sixteenth Century*. There have been two or three smaller books, *Freedom of the Mind in History*, taking three years; and one that is now in the press bringing me to the present time.

Curiously enough I find that through all these books, if I have not been implicitly saying the same thing, I have, without intending it, been speaking with the voice of my first conviction as to the central human interest of the endeavor and the aim. Forty years, and all my mind and energy, have been put upon these books, which I mention to show the time they have taken. Such as they are, I could not have written them had my time been taken by teaching or academic administration. So much for this layman, now for his view of history.

Our ideas to-day of things about us are neither particular nor static. Rather we conceive a ceaseless movement to pervade the world; and we imagine that a like unbroken movement has brought all things to the present state of heterogeneous correlation as parts of a prodigiously variegated whole. Apparently it is one and the same universal movement that extends throughout our present world and reaches back through time. Within its sweep, past and present become a continuum, and our contemporary happenings are drawn into some real or conceptual unity. We recognize one vibrant current constituting an energizing and effective process. Each event is harnessed to the other, and the present emerges from the past. All seems an organic and possibly intelligent becoming. Perhaps this becoming is manifested most concretely in plants and animals. They *are* their past: phylogenetically as the present form of a somehow evolving species, and ontogenetically, since each living individual carries its line of ancestry to be handed on. These notions are not wholly new, yet they work in us to-day with new meaning.

If we turn from this universal process to our experience or knowledge of its phenomena, we find a like absence of barriers and separation. Fences are down between the fields of knowledge, which have become one vast *un*enclosure. Save for convenience of designation and prosecution, the sciences are no longer distinct and separate, but phases of each other, while philosophy would enfold them all in its consideration. Not unallied with them are philology, archeology, all scholarship if you will. Indeed, knowledge would conceivably become one, were there a mind genial enough to grasp it in its entirety.

Every element of our knowledge of the present world of man and nature is necessarily connected with our knowledge of that past through which man and the world he lives in have come to be what they are. We need make no distinction between our knowledge of living animals and contemporary human institutions and our knowledge of their antecedent stages. Every political or legal institution has come into existence gradually, or has arisen by notable mutation. The laws regulating corporations are of divers origin, yet there is continuity between the present body of corporation law and its multifarious past; and there need be no division in our knowledge of the past and present of this legal Briareus.

The continuity, or even oneness, between past and present is evident in the forms or provinces of knowledge. The science of physiology, for example, is a gradual and beautiful growth; its present state implies and includes its past, just as the animal organs, whose functions it treats of, contain their past genetically. Physics, so called, is also an emergence from its past, but more apparently by the way of mutation. Its fundamental conceptions appear to have suffered reversal. Yet if the old solidities of matter have been replaced by nimble units of electric energy, still the group of principles applying to the action of tangible bodies are as valid as they have ever been, and carry over the bulk of the science in its continuity. A more concrete illustration of mutation accompanying continuity is the manner in which relativity has, for a time at least, been grafted upon Newtonian gravitation.

And philosophy, that elastic method of ultimate consideration, of thinking any and all problems of the mind out to their final conclusions or despairs—this method or tissue of ultimate thinking assuredly becomes its whole self only in the oneness of its present with its past.

Yet changes come, and each age has its intellectual tendencies. Scientific or philosophic conceptions of the world are, of course, part of the thinking, even the temper, of a period. In modern physics the concepts of relativity and the substitution of electricity and motion for stolid matter are expressions of the spirit, the dynamic restlessness, of our times. So is

our science of psychology, not to mention psychoanalysis specifically. A future age, with another temperament and mentality, may not be satisfied with them.

Knowledge is experience. But not all experience is knowledge, since experience may come in the guise of feeling or intuition. Such experience is direct, and is not apprehended through cognition and statement. Indeed much of our experience is rather untranslatable into knowledge or rational statement. Experience of the past, however, commonly takes the form of knowledge, or of doubt or conscious ignorance—the two latter being a mode of cognition or failure to know. Yet contemplation of a past event may stir our feeling and, as it were, arouse an intuitive sense of its import. To that extent our experience of the past might not take the form of knowledge.

In philosophy, realists and idealists still dispute as to the relation of all forms of experience to the assumed external world—the world past and present, I would add. Whatever be this relation, the point I wish to make is that our knowledge of the past and our knowledge of the present bear a like relation to the data or objects of their respective worlds. Knowledge of the past is the same sort of absorption or mirror of events as knowledge of the present. And if in any way knowledge of the present world should be held to reach practical identity with the assumed objective data, so one might hold as to knowledge of the past.

Again, as each man's knowledge, or other experience, of the present differs from that of his fellows, so will his knowledge of the past. This is strikingly true of historians living in different ages. Each age, with its own interests and view of life, will find in the past a different range of facts and interests. To different succeeding ages the past will appear, and even *be,* different.

As touching the intellectual identity in us of past and present, we should distinguish between evident forms of knowledge, like the sciences, and the material, for example, of past politics and war. The scholar may identify his knowledge of philosophy with philosophy's past as well as present, but will pause before identifying the Battle of Waterloo with his knowledge of it. In this respect, I should group religion and the fine arts of expression with philosophy and the sciences. For they also are an intrinsic part of the growth of the human spirit, of its feeling, its intuition; part, indeed, of the whole nature of man. To be sure, the whole nature of man, including reason, may exercise itself in battles. But in them there is more physical fact and violence than in the growth of poetry and painting, or the sweeter modes of religion.

With such rather crude distinctions in mind, I introduce the word "history." As applied to modes of human growth—science, philosophy, religion, and art—I regard their history as identical with the stages of their past, which is projecting itself into the present. This is one of the two current meanings of the term. For "history" is taken sometimes as descriptive narrative and sometimes as the subject-matter itself in its evolving course and processes. Both senses of the word exist, whatever be the topic. Thus the "history" of the earth may be either the narrative called geology, or may be the very changes which geology is attempting to describe. And a "history" of mankind may be the narrative, or, on the other hand, the very actual series of poignant human facts which follow on throughout the ages. In this sense the history of mankind would be mankind itself coming gradually to its present state; or the history of institutions would be the institutions themselves in the course of their growth; and, of course, the history of art or science would be art or science in its checkered course.

Clearly enough, if history, taken as narrative, is to be a thing of life and truth it must embody the verity, or veritable history, of the past; that is, must keep itself vitally one with the unfolding subject-matter which it is presenting. And it should absorb and re-express the elements of power moving the drama of mankind.

But a narrative composition is itself an event. It is part of the substance of its age, part of the intellectual conditions (which are actualities) of the time of its composition. The mind of Thucydides and the history which he wrote were elements of the period of the Peloponnesian War. So the sardonic Roman temper of Tacitus and the histories he composed were part of his epoch. Obviously contemporary documents and state papers are part of the event which they record. But Gibbon's *Decline and Fall* was one of the events of the eighteenth century, and part of the linkage between that century's consciousness of itself and understanding of the past. We may speak in the same way of Mommsen's very Prussian *History of Rome.*

More brilliant examples of things which are events and also narratives are the works of imaginative literature and the figurative arts. They too are records and also profoundly part of the substance of events. The *Iliad* or the *Divina Commedia* is a concrete manifestation, a supreme expression, of the qualities of an epoch. On the other hand, if these poems are not what are called historical narratives, they are records and masses of evidence. So the Parthenon, or Chartres Cathedral, is a document, a piece of evidence, even a vehicle of narrative. But each of these temples is also a concrete and monumen-

tal embodiment of the skill, the resources and capacities, and the intellectual and spiritual qualities of an epoch.

So the works of Plato and Aquinas are demonstrative evidence of the Greek and medieval minds. They are also part of the substance of their respective epochs just as truly as the Battle of Plataea or the Babylonian captivity of the Holy See.

For the purpose of this address, I am taking "history" in the more vital sense of the very life and actuality of the past, out of which the present has arisen. And the two points which I have endeavored to bring out are, first, the oneness between the present and the past, and, secondly, the view of "history" as this very living past and present which, as narrative, it seeks to bring to a descriptive statement.

There is a further point of view which seems proper for us. We are historians and scholars and I would say humanists, rather than physicists, mathematicians, or biologists. Whatever may be the view of our brethren the scientists, man is for us historians the centre of the world. We regard the sciences humanistically, as manifestations of the human mind and a phase of its growth. We are not investigators of the substantial data of the sciences, nor judges of their hypothetical accuracy or possible falsity as descriptions of the world. We are concerned with science as one of the modes of advance of human thought. And we bear in mind that physical science, and each branch of it, is a unity and a whole, made of its present and its past; so that the history of any science is verily that science itself in its entirety and continuous course from its beginning to what it is now and hereafter shall come to be.

We take similar interest in philosophy, that method and mass of ultimate consideration of fact or verity. We would regard it in its totality, which is its unity, and consists in an age-long and necessary mode of thought.

Many of us believe that religion is from God; but for us as historians it is another mode of the flowering of the human spirit, yet rather in the way of intuition and immediate conviction than by the gray path of reason. For us the past and present of religion, in all its manifestations, is one, even as philosophy is one. And we would make and keep our history of religion a true expression of its manifold growth and being.

In the same way we would work as historians of those glories of the mind which come to us in the forms of poetry and imaginative prose, and in the forms of the visual arts. And similarly would we view all human institutions, social, political, and belligerent—for man is a warring animal. We consider them in their time-unity, and, in studying them, should hold their past as one with their latest manifestations. So we weave into their growing web the salient events —battles, dynastic changes, executions, famines, and noisy revolutions, through which they have wound their course.

If we seek a further and universal unification of our conceptions of these manifold courses of human growth, perhaps we shall find it in a conception of humanity, of human life, one in its fruitful past and pregnant present. Human life may well be held a universal and dynamic unity in its manifestations, past, present, and to come; though for our intellectual and classificatory convenience we divide it into branches.

And now, if our considerations are valid, it becomes clear in what spirit and with what thoughts in mind we should write and teach history. We should strive to maintain this twofold unity, that of the time-dimension of past and present, and the pervasive unity of human life through its divers manifestations in religion, philosophy, science, institutions, and conduct. We should teach and write history as the veritable mirror, the *alter ego,* of this vibrant whole and unity of human growth. No one can compass this universal story. But each of us may set forth what he has to teach so that all the facts shall be constituent, and each fact shall appear in its topical relationship and exhibit its causal bearing. The story, and every part of it, is a linked emergent growth; and the facts which possess the broadest rational and connective value will best show its succeeding stages. Through the choice of such cardinal and potent facts, perhaps we may be able to present our topic in its furthest truth—as a chord in the symphony of man.

An awful time-honored figure looms before us, demanding to be dealt with. Its name is "historical fact." Since our history, taught or written, is to be truthful, the very *alter ego* of the course of events, one must take pains to be accurate. There is no telling when some small accuracy may prove a luminous link in the causal sequence. But usually accuracy relates to details and circumstances rather than to the larger features of the story. How can one be accurate about the Battle of Salamis or the assassination of Julius Caesar?—even though one were a contemporary with access to the newspapers of the following day. One will look to them for obvious details, which buzz about the fact. As for the event in its more essential nature, the historian will have to construct it out of his best knowledge and intelligence. Using our points of data, we form a conclusion as to how the event must have taken place, or probably took place. This is what every historian does of necessity. When he has determined the

details, he has the more arduous task of their joinder and interpretation. Insight and judgment apply to this process, rather than accuracy. The result must be largely a matter of wise inference.

There are still two further considerations touching the conception of "historical fact." One is the human equation, and the other the multiple significance of every so-called fact.

Mark well the disturbing function of the human equation. Not merely is the fact's interpretation affected, in ways dependent on the interpreter's intelligence and bent of interest. But, beyond this, a molding and creative manifold of understanding enters and makes part of the fact itself. Caesar's death had different significance for each one of those Roman notables whose swords met in his body. It was differently intended, and also bore different results, according to the temperament, motives, and situation of each. Indeed it was for each a different fact. No fact can be in and of itself alone. Every fact comes to pass in its relationships and bearings, as well as in itself—if indeed there be any clearly marked and delimited *itself*. The causes of Caesar's death had worked up to it through the whole antecedent history of Rome—of mankind, if you will. More immediately it was brought about by the tempers and motives of the conspirators. Neither its causes, its manifold significance, nor its effects could be the same for an ethical intellectual like Brutus and for the sweaty mob about to take the air in Caesar's gardens beyond the Tiber.

Not only a striking event like Caesar's death, but every incident in life is exhaustless in its bearings; and since its substance extends to its relationships and effects, a multiplicity of actuality as well as meaning is very part of it.

But, furthermore, the understanding of a fact by contemporaries is part of its bearing and effect, and so part of the fact itself. This would, of course, apply to divergent understandings of it. Accounts that differ may be equally justifiable and equally true. Each one may set forth a different phase. Divergent histories, contemporary or future, may be each a receptacle and true expression of some actuality. But such histories are also part of the bearing and result of the fact, and so a part of it. And this is the ground of the justifiability, and indeed of the transcendent unity, of history as narrative and as one and the same with the course of the events described. As the events form an organic continuum, so should the expression be.

There is still a last complexity—perplexity it may seem. The very notion of fact, and what the real fact is, has varied marvellously among men; and this too, with no conscious weighing of the metaphysics of the matter. The phenomena, for example, of what we call the physical or natural world have been very differently viewed. Ordinary people accept them for what they appear. But the old Greek philosophers sought to find beneath them a profounder and causally explanatory fact. Such was the water of Thales, the atoms of Democritus, or the substance of Aristotle, or, if you will, the Ideas of Plato. None of these was either visible or tangible. Each was rather an explanation, an hypothesis, an assumed fact thrust forward, or thrust under, to explain things as they appeared. The nuclei and electrons of our modernized atoms may be a fact of this character. The ether at all events is such an explanatory fact, or hypothesis; and comes and goes at the call of physical theory.

Again, physical facts may be accepted symbolically; regarded as symbols of the verity which they carry, or which indeed they *are*, to the rightly instructed mind. The Church Fathers of the fourth and fifth centuries were prone to regard the facts of nature as symbols of the spiritual verity which it was their function to shadow forth. And, for some philosophers of the Middle Ages, the natural world, both in its creation and as presented before their eyes, was a divinely ordered allegory. Its actual reality, which appearances merely shadowed forth, lay in its spiritual and saving import.

As for so-called historical events, the Church Fathers, and after them the medieval theologians, admitted rather grudgingly the literal truth of the Old Testament narratives. That was but "the letter that killeth." The profounder verity, the deeper fact, was the salvation prefigured in them. It was their saving prefigurative meaning, which held "the spirit that maketh to live."

Some of us moderns, our Wordsworth for example, would still tend to find the deeper reality in the lesson, the teaching, the spiritual import of Nature. And in philosophy our extreme idealists, from Bishop Berkeley on, can find no reality beyond our thought.

Many of us to-day who are neither given over to allegory nor idealists of Berkeley's type still hesitate before our choice of fact or truth. We are haunted by the faith that the surest and most veritable fact is that which our whole human nature, passionate, spiritual and intellectual, might somehow conspire to substantiate. Fact may not be just as we see it, or scientifically observe it. And perhaps fact is not just as reason argues it. Assuredly it is not what impulse and emotional conviction would declare; our intuitions will not suffice. We crave the concurrent verdict—if we could only get it—of all the faculties of our cognitive and assertive selves.

Thus I have tried to set before you a layman's view, in which history shall not be mere narrative,

nor merely the series of events forming the past; but shall incorporate and be the onward-striding thought, the interwoven tissue of event itself, the element of continuity without which nothing is or can ever have been. Every object in nature, every bit of science, every philosophic theory, every phase and kind of religion, and every constructive or destructive act of life, possesses the constituent of being and becoming which is time. And the history of politics, of science, of philosophy, of art, or of religion, is politics, science, philosophy, art or religion in its genesis, its emergent growth, its present, or even future, culmination and decay, through which its elements pass into other phases of the cosmic process.

HENRY OSBORN TAYLOR

## SAMUEL GARMAN—1843–1927

SAMUEL GARMAN or Samuel W. Garmann, as he styled himself during his early life, was born on June 5, 1843, in Indiana County, Pennsylvania, and died on September 30, 1927, at Plymouth, Massachusetts.

Although he was for a while a student in the Lawrence Scientific School, he did not graduate but received an honorary degree of B.S. from Harvard University in 1898 and an A.M. in 1899. Garman told the junior author that as a young man he took part in surveying the routes for the Union Pacific Railroad and that having left home very early, he fought Indians and shot meat for the working crews while hardly more than a boy. This was a strange beginning for one who became almost completely a recluse.

In 1870 he became, for a year, the principal of the Mississippi Normal School and in 1871 taught natural science, again for one year, at the Ferry Hall Seminary in Illinois. Always keenly interested in natural history, he went to California, met Professor Agassiz at San Francisco when the *Hasslar* docked there after her voyage through the Straits of Magellan and Agassiz, immediately appreciating Garman's potential usefulness, hurried him on to Cambridge at once where he became one of his favorite pupils.

The senior writer's first acquaintance with Garman dates from the inception of the Anderson School at Penikese. Here Garman was one of the little group who, with Professor Agassiz, laid the floor of the barn with their own hands, on that memorable Sunday before the day on which the first modern marine biological laboratory ever opened its doors to students. Garman kept the books of the school and helped in practical as well as in scientific matters. Then, and later when he returned from the west after fossil hunts in the Bad Lands, he appeared in a broad hat and a flaming red necktie. But even as a young man he possessed a most firm dislike for personal publicity. He saw in the West the rivalry of Cope and Marsh to secure each other's specimens and to forestall each other's descriptions of their discoveries. Moreover, the somewhat unkindly attitude which they maintained towards each other's work evidently impressed him very deeply, for all his life long he maintained a singular reticence and it was only after years of intimate friendship that he would discuss any scientific work which he had in hand. Indeed he habitually put away his manuscript and the specimens which he was dissecting when a visitor rang the bell to his room. This was not by any means all from a fear that others might anticipate his results, although he did at times have this fear, as was so commonly the case with the zoologists of a few decades ago, but rather because he disliked discussing any of his work until his studies were completed. Those who came to know Garman early in their career, and the junior author was one who worked at his side almost daily for many years, appreciated that gradually he became more warm and kindly in his companionship, while his thorough and most accurate methods of work and his methods of training were always of the very best.

Johannus Müller was his guiding genius and of American workers he had vastly more intellectual respect for Jeffries Wyman than for most of his immediate predecessors. His affection for Louis Agassiz and his lifelong friendship for Alexander Agassiz amounted almost to hero worship and betokened a fine spirit of loyalty.

For many years his biography was not to be found in "Who's Who" nor even in "American Men of Science," although in his field of science he was easily one of the world leaders. The senior writer remembers a gathering on Penikese Island in 1874, six months after the death of Agassiz. Each one then present expressed in his own way his indebtedness to the great teacher. Finest of all were the words of Garman, depicting "the best friend that ever student had."

Garman, in 1874, accompanied Alexander Agassiz on his survey of Lake Titicaca and occasionally when in an unusually expansive and reminiscent mood he could be persuaded to tell how once while perched on a high Andean precipice catching frogs, he shot, with his suspender button, a gigantic condor which regularly swung past him on outstretched wings finally to fall a prey to his ingenuity. The details varied a little from time to time and while always told with the utmost seriousness there was nevertheless an unmistakable twinkle in his eye.

Garman also served for a while as Alexander Agassiz's assistant on *The Blake* and this gave him the opportunity to visit most of the Antilles and to