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MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

DANIEL G. BRINTON.

IN the death of Dr. Brinton American science has suffered a grievous loss. Notably brilliant and versatile, endowed with exceptional acumen, and an indefatigable worker, he investigated much of the broad field of anthropology with signal success; a fluent and forceful speaker and a clear and cogent writer, he was remarkably successful in putting the results of his work before general auditors and readers as well as students; exceptionally public-spirited and appreciative of the normal human demand for better knowledge, he strove constantly to extend and improve instrumentalities for the diffusion of science. Thus through rich natural endowment, coupled with wise and persistent effort, he materially advanced the Science of Man and placed himself in the front rank of the anthropologists of the world. His activity continued undiminished (despite the weight of well-guarded suffering consequent on military service) until checked by the illness which terminated with his life.

Born in Chester county, Pennsylvania, May 13, 1837, Daniel Garrison Brinton graduated from Yale (A.B.) in 1858, and from Jefferson Medical College (M.D.) in 1861, and assimilated his thorough training during a year in Europe, with special studies in Paris and Heidelberg. Stimulated by the martial spirit of the time, he then returned and entered the Federal army as

acting assistant surgeon. His energy and trained skill were quickly felt in the medical department of the army, and he was rapidly promoted; commissioned as surgeon within six months after enlistment, he was soon after made surgeon-in-chief of his division, and was appointed medical director of his corps fifteen months after entering the service. During this period he participated in several notable engagements. In consequence of the severe strain attending the battle of Gettysburg, he suffered a sunstroke, which compelled his retirement from field duty, and from which, in his own judgment, he never completely recovered. He resumed service, however, as superintendent of army hospitals at Quincy and Springfield, Illinois; and, on the close of the war in 1865, he was brevetted lieutenant-colonel and honorably discharged. Returning to Philadelphia, he became, in 1867, editor of the *Medical and Surgical Reporter*, a position retained (always in connection with other work) for twenty years; he was also editor of the *Compendium of Medical Science*, and, in 1885, edited and made important contributions to one of the volumes of the 'Iconographic Encyclopædia.' In 1882 he began editing and publishing the 'Library of American Aboriginal Literature,' one of the notable scientific enterprises of the country. In 1884 he was made professor of ethnology and archæology in the Academy of Natural Sciences in Philadelphia, and in 1886 professor of American linguistics and archæology in the University of Pennsylvania. For some years he was President of the Numismatic and Antiquarian Society of Philadelphia; and in 1886 he was Vice-President and in 1894 President of the American Association for the Advancement of Science, filling these positions with great ability and dignity.

Dr. Brinton's literary contributions to American anthropology in its various aspects have been many and important. His bent toward the science began in early manhood; spending the winter of 1856–7 in Florida, he yielded to the excellent opportunity for archæologic and ethnologic work. Some of the results of his operations were incorporated in 'The Floridian Peninsula, its Literary History, Indian Tribes, and Antiquities,' 1859. With the return to civil life and opportunity for original study in 1865 the early impressions were revived and led to researches concerning the symbolism represented in the prehistoric relics and surviving among the aboriginal tribes, and the fruits of these researches saw the light in 'The Myths of the New World, a Treatise on the Symbolism and Mythology of the Red Race of America,' published in 1868, and in revised edition in 1876. Various minor publications followed, marking the progress of studies constantly increasing in breadth and depth, notably the 'Essays of an Americanist,' 1870, and 'American Hero Myths, a Study of the Native Religions of the Western Continent,' 1882; and in 1876 the impulse awakened by the Floridian symbolism found further expression in 'The Religious Sentiment, a Contribution to the Science and Philosophy of Religions.' Meantime the confinement and restriction of field work imposed by editorial duty, combined with growing mental activity, led him to seek original sources of information in the languages and recorded traditions of the native tribes. Various contributions to aboriginal philology resulted, and the impulse in this direction found full expression in the six volumes of 'Brinton's Library of Aboriginal American Literature,' 1882–1885. As his field extended his grasp strengthened, and comparisons of the Amerindian and other peoples were made with great acumen and comprehensiveness, as shown by his succeeding works: 'Races and Peoples,' 1890, and 'The American Race,' 1892; these being among America's most important contributions to anthro-

pology. Taught by professorial work to adopt diverse methods of exposition in order to reach wider circles, some of his results were dressed in literary or even dramatic form, like 'The Pursuit of Happiness,' 1894, and 'Maria Candelaria, An Historical Drama from American Aboriginal Life,' 1897; yet it was appropriately prophetic of the final rounding-out of his life work that a recent publication should be a review of the researches of two score years into the motives of primitive symbolism and a summary of his scientific studies, under the title 'Religions of Primitive Peoples,' 1897—his latest, and in many respects, his greatest contribution to the literature of science.

Largely by reason of his versatility, it is not easy to define Dr. Brinton's original additions to the body of increasingly definite knowledge comprehended under the term anthropology; his range was broad, and his touch vivified many lines of thought. Perhaps his richest gift to scientific method was that embodied in his unique library, designed "to put within reach of scholars authentic materials for the study of the languages and culture of the native races of America;" perhaps his richest contribution to the body of science is the second chapter of his 'Religions,' entitled 'Origin and Contents of Primitive Religions,' which has well been characterized as a work of genius; while certainly the influence of his eloquent advocacy of the doctrine of mental unity will long remain in the minds of the anthropologists of the world. Yet despite the difficulty of signalizing special features of well-rounded work, the great fact remains that Brinton's investigations and expositions have served to set forward the outposts of the Science of Man along almost the entire front.

During the last two decades workers in various branches of science have benefited much by Dr. Brinton's readiness to promote and diffuse knowledge by all means at his command; he conducted a large and varied correspondence in which he freely gave of his information to numberless seekers; he contributed voluminously to current periodical literature, both special and general; he was given to attending scientific meetings, and was particularly free in formal and informal communications and discussions; and he was a frequent and attractive lecturer. He was no less generous in editorial work; his name has added strength to the editorial corps and his pen has added interest to the pages of SCIENCE since the beginning of the present series in 1894; he was one of the original editors of the *American Anthropologist* (new series), and at various times he had editorial connection with other journals of scientific character.

Among scientific associates Dr. Brinton was noted for courtesy and urbanity even more than for the vigor and insistence whereby his convictions were enforced. Clear and trenchant in statement, clever and terse in debate, incisive and even sharp in criticism he was instinctively fair and tolerant; and no forceful thinker was ever readier to recognize the right of free opinion. These and other qualities united to form a strong personality, which served the world well in attracting auditors and pupils toward useful lines of thought.

It was among intimates that Dr. Brinton was seen at his best. Of refined social sense and of peculiar delicacy in word and manner, an easy and often brilliant conversationalist, and a pleasing raconteur, he was a delightful companion, charming host, or ideal guest, as occasion demanded. Naturally his associations warmed into friendships, many and deep; and the passing of his life has rent unnumbered ties and wrought widespread sorrow.

Surviving more than three-score years despite an infirmity of war concealed with

Spartan care, and living a remarkably busy life, it is but natural that Dr. Brinton should become a prominent figure of his times. His death creates a void that must long be felt; yet few American scientists have left worthier monuments in the form of finished works.* W J M.

PRESIDENTIAL ADDRESS BEFORE THE SOCIETY FOR THE PROMOTION OF ENGINEERING EDUCATION.†

The presidency of a Society which embraces in its membership representatives of all the leading schools of engineering and applied science in this country is an honor which one may not lihgtly accept or indifferently bear. Although not established by its organic law, its traditions make it the duty of the presiding officer to present an address which should be, in spirit, at least, worthy of so important an occasion. Happily for those upon whom this honor may fall, custom has not yet restricted or defined the sphere of discussion which shall be thought suitable for such a paper; on the contrary, one may properly take advantage of this opportunity to become temporarily a *ronin*, a free lance, attacking everything and everybody, seeking only to give full and fair exposition of one's own personal, and, may be, peculiar views. This is the one compensation going with the burden which the Society insists must accompany the honors which it bestows. No apology is needed, therefore, for the selection of a topic the consideration of which may seem more or less irrelevant and unnecessary to some and, perhaps, unwelcome to others. In the present instance the choice is due to a strong conviction that schools of engineering are, for the most part, far from doing their full duty in an important matter, namely, the inculcation and dissemination of sound views, both theoretical and practical, relating to scientific metrology.

We cannot ignore the fact that the general public, even the intelligent public, receives its information regarding scientific and technical questions almost entirely from daily newspapers and popular magazines, than which, we will all admit, there could hardly be a more untrustworthy source. The widespread taste for sensationalism by which we are now cursed, a taste which seems to grow with the efforts made to satisfy it, offers a premium upon anything startling or revolutionary, giving little heed to sober, every-day truth. If one-tenth of the wonderful scientific discoveries that have been announced with glaring headlines in the public press within the last five years had *actually been made* it would, indeed, have been an epoch-making period; but, fortunately for everybody, they existed mostly in the brilliant imagination of the space writers who alone were benefited by their publication. If this were all we could afford to be indifferent, but there is the further disagreeable fact that a large number of intelligent people are led to look upon this sort of thing as real science, and few of us have an adequate conception of the extent of this delusion. One of the results is that in science, as in many other things, those who do the real work of the world fail to be credited with it, while the people are lavish in their praise of those whom they *believe* to be worthy. Only a few weeks since I found in an article on teaching history, written by the superintendent of schools in a large city, the names of a quartet of Americans most distinguished in war and peace. Three of the four were Washington, Lincoln and Franklin. As this is not meant to be a humorous paper, I will not mention the fourth, contenting myself with saying that in this instance the newspaper had done its work well.

*The portrait published as frontispiece is from a photograph taken in April, 1898, by F. Gutekunst, Philadelphia.

† Given at the Annual Meeting, Columbus, Ohio, August 17, 1899.