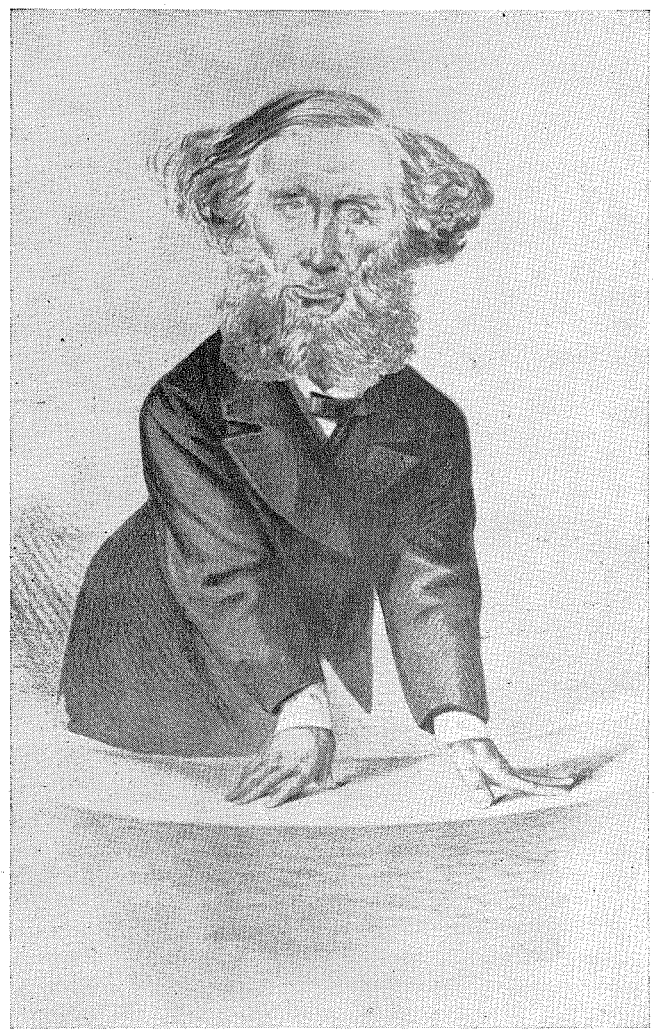
Caricatures of men of science

by E. C. WATSON

IN 1869 Carlo Pellegrini, in the English *Vanity Fair*, began a series of portraits of public men that must be considered the most remarkable example of personal caricature ever attempted. The unextenuating likenesses of "Ape," as Pellegrini signed himself, were continued by "Spy" (Leslie Ward) and others until about 1910. In all, over 2000 portraits were published and many men of science of the period are to be found among them. On the whole the artists chose remarkably well and most of the scientists caricatured would be recognized even today as among the most outstanding of the period.

The likenesses were published with the purpose of providing "a permanent gallery of portraits of living men, drawn in their habit as they live, with their tricks as they move—not with a desire to caricature them, but with the desire to give the honest and brutal truth about them. . . . The attitude, the gesture, or the expression of face which often so cruelly epitomizes the man has been seized and recorded." Clever, observant to the point of mischievousness, but with caustic, penetrating and convincing truth, they show us better than written accounts can possibly do what these scientists were like as men and individuals.



John Tyndall, "a man of muscle . . . of imagination . . . and of conversation, almost as much as a man of science."

Each caricature was accompanied by a tersely written account of the man portrayed. The writer, who signed himself "Jehu Junior" (he was actually Thomas Gibson Bowles) states that "whatever else they may be they are honest; they have been written with the single object of telling the exact truth . . . there are no generalities in them nor any vagueness of purpose, because they represent distinct and clear conceptions. Every phrase rests upon the basis of fact, and is intended to have the full weight of its words and to suggest an opinion which the reader is left to work out for himself in the direction indicated." He says also regarding both the caricatures and the written accounts that "features are exaggerated which have the effect of stamping the personality more

vividly on the mind than an ordinary portrait would do. A photograph, which gives every feature with absolute correctness, may yet fail to convey the distinct idea of character at which the artist and the writer have alike aimed."

Some of these caricatures have been reproduced, but to the best of my knowledge the written accounts have not. This is unfortunate as "the written account and the printed effigy are each the complement of the other" and should not be separated. Moreover, the written accounts are often very revealing, not of the mere facts of the subject's life—these are easily learned elsewhere—but of the attitude of the public of the time towards him and his work.

From Huxley to Marconi

Among the scientists caricatured in this remarkable series are Thomas Huxley, Charles Darwin, John Tyndall, Lyon Playfair, George Biddell Airy, Richard Anthony Proctor, William Robert Grove, Louis Pasteur, Rudolf Virchow, William Thomson (Lord Kelvin), John William Strutt (Lord Rayleigh), William Crookes, William Huggins, Oliver Lodge, the Curies, William Ramsay, Robert Ball, Guglielmo Marconi, and many others. It would be interesting to reproduce all these caricatures in this series of historical reproductions. Unfortunately, however, the copyright laws prevent and so we must content ourselves for the present with reproducing during the next few months a few of the earlier ones.

John Tyndall, whose picture is shown here, was probably better known to the general public during his own lifetime than he is today even among physicists. The friendly account, reproduced below, that accompanied his caricature, makes this clear, as does the excellent biographical sketch in the eleventh edition of the *Encyclopaedia Britannica*. It also shows the high regard in which science was held by the general public during the Victorian era.

Tyndall; A caricature in words

"Science is before long to rule the world, and Mr. Tyndall is one of the pioneers of its kingdom. He is one of the most distinguished of that band of eminent men whose devotion to methods and subjects of research, by which the bases of prejudice are sapped, is by this time condoned, or on the road to condonation, by the children of prejudice themselves. He is an Irishman, and has the combativeness of his race; but he has its persuasiveness in a still larger measure, and though never known to decline a challenge, and generally victorious in the issue, knows the arts which make him a little less challenged than some of his brethren in the same pursuits. Only lately we have seen him, in the enthusiasm of friendship, exercising his rhetoric to convince the Philistine that Mr. Huxley was less a foe to his tribe, and therefore better fitted for the London School Board, than had been commonly supposed. Mr. Huxley and Mr. Tyndall are generally classed together in popular estimation in virtue of their approximate parity of years and standing in their respective pursuits, as well as of their high philosophical and literary ability and stirring ways in our midst. Mr. Tyndall is for Europe and America the representative of English chemistry and physics as is Mr. Huxley of English physiology; and Science is proud of both her sons. As an experimentalist and also as an expounder, the mantle of Faraday is popularly understood to have fallen upon Mr. Tyndall, who succeeded to his place at the Royal Institution. There his lectures make the delight of young and grown-up audiences in a scarcely less degree than those of his famous predecessor, though the riotous spirits and self-conscious arts of the brilliant junior are very different qualities from the modest and absorbed simplicity of Faraday. It is in adding to the great discoveries of German *savants* concerning heat and light as modes of motion, the results of masterly original research and experiment of his own, that Mr. Tyndall's most characteristic fame as a leader of Science has been won. But he is a man of muscle, and a man of imagination, and a man of conversation, almost as much as a man of science; and it is these three gifts by which he is appreciated in unscientific circles, and at the hands of society at large. His muscle makes him so that he delighteth in his own legs; and he scales virgin Alps one after another, for the pleasure of the exercise as well as for the study of natural phenomena. His imagination makes him bring home fascinating accounts of these exploits, or sometimes, during the course of an excursion, takes to meditating on itself, with a result embodied in that famous lecture, which most people have read, on "The Scientific Use of the Imagination." Social habits have taught him also the scientific use of conversation, and he is one of the most welcome and expansive of table companions. In a word, whether in the laboratory where he conducts his investigations, whether in the theatre where he charms crowded audiences in showing off their results; whether on the peaks and passes where he risks his neck with so much enthusiasm, whether in the smoking-room of his club, whether in those corners of drawing-rooms where Birth and Beauty encircle Intellect in a sea of muslin and attention—Professor John Tyndall is a man at all times to be envied, and at nearly all to be admired."

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John Tyndall, born in County Carlow, Ireland in 1820, first became known through his magnetic investigations, and was elected a Fellow of the Royal Society in 1852. In 1854 he was chosen Professor of Natural Philosophy at the Royal Institution, where he was a colleague of Michael Faraday's—whom he succeeded as superintendent of the Royal Institution in 1867.

His investigations of the transparency and opacity of gases and vapors for radiant heat are perhaps his chief scientific work, but his scientific activities and interests covered a broad field. With his friend Huxley he studied the motion of glaciers. He established the absorptive power of clear aqueous vapor—a point of great meteorological significance. He made brilliant expositions elucidating the blue of the sky, and discovered the precipitation of organic vapors by means of light. He called attention to curious phenomena occurring in the track of a luminous beam. He examined the opacity of the air for sound in connection with lighthouse and siren work. And he finally verified what had already been substantially demonstrated—that germ-free air did not initiate putrefaction.

His contributions to science, however, are probably due more to his personality and to his gift for making difficult things clear rather than to his original researches. One of his early books, *Heat as a Mode of Motion* was the first popular exposition of the mechanical theory of heat. Others included *The Forms of Water, Lectures on Light, Floating Matter in the Air*, and *On Sound*.

He died in 1893, at the age of 73.