

To this second essay I have added an appendix the chief aim of which is to give the sources at which may be found the original manuscripts written by Newton and Leibniz when they were discovering their respective calculuses. This has not been done hitherto and it is all the more necessary that it should be done as modern authors, such as Moritz Cantor in his monumental *Vorlesungen über Geschichte der Mathematik*, neglect the fact that any early manuscripts of Newton's on fluxions are extant or that some have been published—by Rigaud, for example—and some still remain unpublished.

In 1855 appeared Sir David Brewster's *Memoirs of the Life, Writings and Discoveries of Sir Isaac Newton*, and De Morgan, in a critique of this work in the *North British Review*, showed clearly that Sir David had fallen into hero-worship. Here the faults of Newton are pointed out with an unwavering finger and the merits of Leibniz are recognized and his character defended against Brewster more at length than in De Morgan's biography of Newton. This review is printed as the third of De Morgan's essays on Newton. I have added two appendices to this third essay: the first is part of a biography of Leibniz which De Morgan wrote and which illustrates a laudatory reference to that great man in the third essay; the second is an extract from a later work of De Morgan's and deals with Newton's character and the relation to it of the Royal Society down to De Morgan's own times.

Numerous notes of either a bibliographical, explanatory or critical nature have been added to all the essays but all that is not De Morgan's is put in square brackets. Such notes have become necessary and it is hoped that the present ones will reply to all the calls of necessity and will make the book both useful and complete. Very little has to be criticized in De Morgan's history or conclusions. Like everything he wrote, these essays of his are marked by scrupulous care, sanity of judgment and wide reading; and one hardly knows which to admire most—the breadth or the height of his mind.

The frontispiece of De Morgan's *Essays* is from an engraving by E. Scriven of Vanderbank's portrait of Newton in the possession of the Royal Society of London. An engraving from this picture accompanied the original of De Morgan's biographical sketch; but the present frontispiece is from a much finer engraving prefixed to the biography of Newton in the first volume of *The Gallery of Portraits: with Memoirs*, of 1833.

THE PHILOSOPHY OF TAMERLANE.

We have received from Prof. Michelangelo Billia of Pisa (formerly of Milan) a pamphlet entitled *Le ceneri di Lovaino e la filosofia di Tamerlano* ("The Ashes of Louvain and Tamerlane's Philosophy"). It gives the text of a lecture delivered several times by Professor Billia in Milan and elsewhere. The spirit of the whole is characterized by the concluding pages which read in English translation as follows:

"Some barbarian has dared to compare Goethe to Dante, but what a gulf between them! Marguerite is a caricature of Beatrice, or rather an abortion. "Poor little German university professor" is the term Rosmini applied to Mephistopheles. The redemption of Faust comes finally in the very last part (added as an afterthought) in the Lutheran fashion without either works or faith. Although in the conception of Goethe Faust is supposed to be a German university professor he is nothing but an imbecile old man, a puppet in

the hands of the Evil One, and then finally (I might almost say in spite of himself) he is saved only because the patched-up work must needs end well—a spatial redemption, so to speak, crude and external. Faust is not transformed; he goes up to heaven because the good angels simply must bring redemption to that poor Devil's devil. But the real devil is Goethe himself, the embodiment of German egotism and immorality. As he sacrificed "the restraint of art" in forced allusions and in sounds and words as hard and thankless as the *Spezerei* in the song of the women at the sepulcher, so he sacrifices morality to the preconceived idea that the facts of history are justified provided only that they serve to enhance the greatness of man, that is to say, of the German; and in this he anticipates Hegel and follows Spinoza. Baucis and Philemon, the two little old people around whom tradition has thrown a halo, are burned alive in order to clear away the forest—and plant the Krupp factory in its place.

"Compare this philosophy of history from the *Frankfurter Zeitung* with the first and second cantos of the *Inferno* and the thirtieth and thirty-first cantos of the *Purgatorio*, and then tell me what German art and religion are!

"The German by his own conduct puts himself beyond the pale of humanity in wishing to impose on mankind his blighting domination, whence it necessarily follows, as with the usurer, that he becomes subject by his very nature, since he has annihilated within himself the finer human elements.

"Who, if not the Prussian, has kept the Christians of the Orient in fetters beneath the Ottoman ax? Thus would he bring about German industry and expansion! Who is it that has kept the highway of nations in the Hellespont closed for so many years and has obstructed all the avenues of trade and commerce? Who has even made science—which is everywhere universal and human—a harness of commercial domination in Europe by invading university chairs and the book market and scorning every sort of human worth which was not German? And this is almost worse than political oppression and the fury of war for it is the vice of the whole people; it is the fixed national purpose; it is the height of corruption by which the whole nation is indeed dehumanized in its loftiest nature, the spiritual. And when we were shuddering at the latest massacres in Armenia and at the other excesses of the Young Turks and felt that such infamy ought not to be expected in our day, even from the Turks, we committed a grave error in overlooking the explanation of this in the fact that the Turkish hordes received their instructions from Prussian officials.

"Belgium, then, has deserved well of the human race, of civilization itself, for by sacrificing herself for her sworn word she has delayed and to some extent frustrated the murderous attack of the enemy of the human race. Blessed are all the arms that are resisting and punishing him; blessed are the arms of commissioned men in the regular armies that are opposing the invader and mowing him down; blessed are the arms of the people who will maintain the fixed purpose of laying him low in the ground he now so insolently treads or will tread; blessed are those who are sparing blood and refraining for the present, while preparing to vindicate Italian rights and to dictate peace, a peace which may also be of the greatest benefit to the enemy himself, for when his degenerate pride has been humiliated it will direct him to that regeneration and that grace by which a nature once human may be restored and transformed. May that day come; but for the present, in order

to defend ourselves, in order to put an end to oppressions, in order to maintain our existence, it is highly desirable, it is necessary, it is right, that we disregard the shock to our feelings and fix our attention on the apparent and indeed profound paradox that the German is not a human being; and this is not alone due to his murderous arms, but also to the philosophy of Tamerlane which for a century academic lackeys have been distilling in the service of the king of Prussia."

STRIKES AND THE PUBLIC: THREE STAGES.

The great and short-lived Chicago strike in the field of intramural transportation came unexpectedly, in spite of weeks of talk and futile negotiations. It came unexpectedly and as a shock, not because the people of the United States have not suffered from tie-ups of elevated and street railroads; not because the paralysis, the losses, the hardships and inconveniences caused by such industrial conflicts have not been endured many times, but because the average man had somehow formed the flattering and comforting idea that such things belonged to a closed era, and that in our own more enlightened day they were practically impossible. Would either of the direct parties—the employees and the representatives of the capital invested in the public utilities—dare to defy or even ignore the great "third party," the innocent public? Have we not had a moral awakening in this country? Have we not had industrial investigations without number, commissions, new legislation, arbitration machinery, tremendous campaigns of education with reference to the wastes and the criminal folly of labor wars, and the duty of prompt and earnest resort to conciliation and arbitration? Why, then, neither capital nor labor, at least in the field of public utilities, would venture to offend the moral sentiment and the common sense of the great public. Needless and causeless strikes must therefore be regarded as impossible!

The Chicago strike of over 14,000 motormen and conductors caught the city and the public mentally unprepared; for the strike talk had not been taken seriously. When the order to walk out was issued few outsiders actually knew what the trouble was about. The cheerful assumption that everything would end happily after more or less strategic jockeying and bargaining, had rendered study and inquiry of the question altogether unnecessary.

But the ugly and unpleasant fact shattered the public illusions. Here was a great and needless strike; here was deliberate disregard of the rights and interests of the great public; here was confusion worse confounded. Aldermen, members of the state legislature, official arbitrators, utility commissioners, editors, civic reformers, were severally willing and anxious to help, but the calling of the strike found them bewildered and impotent. They had to work in the dark.

Is there any lesson in the episode? There is. The developments of the short and sharp Chicago strike, when properly analyzed and interpreted, attested very considerable advance in social and public sentiment. The strike was unfortunate—but it had new features, features that had not characterized former strikes. The attitude of the public was changed; the comments of the average man as he ran—or walked—or pathetically tried to get into a jammed "jitney bus"—were different from the old, conventional comment.