

THE
100
A RANKING OF
THE MOST INFLUENTIAL
PERSONS IN HISTORY

Michael H. Hart

A Citadel Press Book
Published by Carol Publishing Group

CONTENTS

| | |
|-------------------------------|--------|
| LIST OF ILLUSTRATIONS | xi |
| PREFACE TO THE SECOND EDITION | xxi |
| INTRODUCTION | xxvii |
| HISTORICAL CHART | xxxiii |
| 1. Muhammad | 3 |
| 2. Isaac Newton | 11 |
| 3. Jesus Christ | 17 |
| 4. Buddha | 22 |
| 5. Confucius | 27 |
| 6. St. Paul | 31 |
| 7. Ts'ai Lun | 36 |
| 8. Johann Gutenberg | 42 |
| 9. Christopher Columbus | 47 |
| 10. Albert Einstein | 52 |
| 11. Louis Pasteur | 60 |
| 12. Galileo Galilei | 64 |
| 13. Aristotle | 70 |
| 14. Euclid | 75 |
| 15. Moses | 79 |
| 16. Charles Darwin | 82 |
| 17. Shih Huang Ti | 87 |
| 18. Augustus Caesar | 92 |
| 19. Nicolaus Copernicus | 99 |
| 20. Antoine Laurent Lavoisier | 103 |
| 21. Constantine the Great | 107 |
| 22. James Watt | 111 |
| 23. Michael Faraday | 115 |

| | |
|---|-----|
| 24. James Clerk Maxwell | 119 |
| 25. Martin Luther | 123 |
| 26. George Washington | 129 |
| 27. Karl Marx | 133 |
| 28. Orville Wright and Wilbur Wright | 138 |
| 29. Genghis Khan | 144 |
| 30. Adam Smith | 148 |
| 31. Edward de Vere (better known as "William Shakespeare") | 152 |
| 32. John Dalton | 170 |
| 33. Alexander the Great | 174 |
| 34. Napoleon Bonaparte | 181 |
| 35. Thomas Edison | 188 |
| 36. Antony van Leeuwenhoek | 192 |
| 37. William T. G. Morton | 195 |
| 38. Guglielmo Marconi | 201 |
| 39. Adolf Hitler | 205 |
| 40. Plato | 213 |
| 41. Oliver Cromwell | 217 |
| 42. Alexander Graham Bell | 222 |
| 43. Alexander Fleming | 225 |
| 44. John Locke | 228 |
| 45. Ludwig van Beethoven | 232 |
| 46. Werner Heisenberg | 236 |
| 47. Louis Daguerre | 240 |
| 48. Simón Bolívar | 244 |
| 49. René Descartes | 248 |
| 50. Michelangelo | 254 |
| 51. Pope Urban II | 258 |
| 52. 'Umar ibn al-Khattab | 261 |
| 53. Asoka | 266 |
| 54. St. Augustine | 268 |
| 55. William Harvey | 273 |

| | |
|----------------------------|-----|
| 56. Ernest Rutherford | 277 |
| 57. John Calvin | 281 |
| 58. Gregor Mendel | 286 |
| 59. Max Planck | 291 |
| 60. Joseph Lister | 294 |
| 61. Nikolaus August Otto | 297 |
| 62. Francisco Pizarro | 303 |
| 63. Hernando Cortés | 309 |
| 64. Thomas Jefferson | 315 |
| 65. Queen Isabella I | 322 |
| 66. Joseph Stalin | 328 |
| 67. Julius Caesar | 336 |
| 68. William the Conqueror | 341 |
| 69. Sigmund Freud | 348 |
| 70. Edward Jenner | 351 |
| 71. William Conrad Röntgen | 355 |
| 72. Johann Sebastian Bach | 359 |
| 73. Lao Tzu | 363 |
| 74. Voltaire | 367 |
| 75. Johannes Kepler | 373 |
| 76. Enrico Fermi | 377 |
| 77. Leonhard Euler | 381 |
| 78. Jean-Jacques Rousseau | 385 |
| 79. Niccolò Machiavelli | 390 |
| 80. Thomas Malthus | 395 |
| 81. John F. Kennedy | 399 |
| 82. Gregory Pincus | 403 |
| 83. Mani | 408 |
| 84. Lenin | 414 |
| 85. Sui Wen Ti | 420 |
| 86. Vasco da Gama | 424 |
| 87. Cyrus the Great | 432 |
| 88. Peter the Great | 439 |

| | |
|-----------------------|-----|
| 89. Mao Zedong | 445 |
| 90. Francis Bacon | 450 |
| 91. Henry Ford | 456 |
| 92. Mencius | 461 |
| 93. Zoroaster | 464 |
| 94. Queen Elizabeth I | 468 |
| 95. Mikhail Gorbachev | 475 |
| 96. Menes | 488 |
| 97. Charlemagne | 491 |
| 98. Homer | 498 |
| 99. Justinian I | 502 |
| 100. Mahavira | 506 |

HONORABLE MENTIONS**AND INTERESTING MISSES** 509

| | |
|--------------------|-----|
| St. Thomas Aquinas | 511 |
| Archimedes | 511 |
| Charles Babbage | 512 |
| Cheops | 514 |
| Marie Curie | 515 |
| Benjamin Franklin | 516 |
| Mohandas Gandhi | 518 |
| Abraham Lincoln | 519 |
| Ferdinand Magellan | 520 |
| Leonardo da Vinci | 521 |

SOME FINAL COMMENTS 524**APPENDIX** 527

| | |
|---------|-----|
| Table A | 529 |
| Table B | 530 |
| Table C | 531 |

PICTURE ACKNOWLEDGMENTS 532**INDEX** 533

PREFACE TO THE SECOND EDITION

Today, a dozen years after *The 100* was first published, the book is still selling well, and translations into other languages keep appearing. Why then, should there be a revised edition of the book?

One reason for making revisions is that history did not come to a halt in 1978, when the first edition of this book was written. On the contrary, many new events have occurred since then—some of them quite unanticipated—and new historical figures have emerged. Even had my knowledge of the past been perfect twelve years ago, this book would still need revising, because the world has changed since then.

Of course, my knowledge of the past was far from perfect in 1978. In the intervening years, I have (I hope) learned a lot from my own studies, and in addition, the response to my book has been educational. Many of the letters I received from readers mentioned historical facts that I had overlooked; or they pointed out new—and often better—ways of interpreting the facts I already knew. The same is true of many remarks made by callers-in to radio talk shows where I was a guest. A second reason, therefore, for this edition is to correct some of the shortcomings of the first.

One of the most difficult (and interesting) tasks involved in writing *The 100* was evaluating the relative importance of various political leaders. We all tend to overestimate the importance of current heads of state. They seem to us like giants; whereas statesmen who lived a few centuries ago—and who seemed every bit as important to *their* contemporaries—are now nearly forgotten.

It is far easier to evaluate the significance of an ancient leader. We can see the consequences—or at least the aftermath—of his or her actions, and can use that information to estimate the person's importance. To estimate the importance of a current political figure is much harder. No matter how powerful a leader seems today, and

no matter how innovative, it is difficult to foretell how long his or her influence will endure.

A case in point is my ranking (#20) of Mao Tse-tung (now spelled *Mao Zedong*) in the first edition. That edition was written shortly after the death of Mao, when the memory of his achievements was still fresh. Of course, I realized at the time that Mao's importance would probably fade as the years went by; but I greatly underestimated the extent and swiftness of that decline. Within a few years of Mao's death, the reforms instituted by his successor (Deng Xiaoping) have drastically altered many of Mao's most cherished policies. Since Deng seems to be undoing a good deal of Mao's program; it has been apparent for some time that the first edition of this book seriously overestimated Mao's long-term importance.

But this edition is not being written merely in order to change the ranking of a single person. Much more has happened in the past decade than just the decline of Mao's influence. When the first edition of this book was being written, it seemed as though the Communist movement—as dreadful as it appeared to me—was so firmly entrenched in so many countries, and so skilled and ruthless in its hold on power, that it might well endure for many decades, perhaps even for centuries; indeed, it might even succeed in triumphing over a West that was more humane, but less determined.

If that was so, then the founders of the Communist system (Marx, Lenin, Stalin) were all extremely influential men. However, the events of the past few years have shown that the Communist system was not nearly as powerful, nor as firmly entrenched, as I had feared. In fact, the decline of Marxism is the most striking historical feature of the past decade.

The entire Soviet empire in Eastern Europe has collapsed, and the liberated countries have all renounced Communism. Various other countries (such as Ethiopia and Mongolia) that had once been client states of the Soviet Union have also abandoned Marxism. The Soviet Union itself has disintegrated and has been re-

placed by fifteen independent republics, and none of them are retaining the Marxist-Leninist system.

There are still a few Communist governments remaining in the world—Vietnam, North Korea, Cuba, Laos, and the People's Republic of China. But none of those are strong economically, and none seem secure. Although over a billion people still live under Communist tyrannies, and though a resurgence of Marxism is still theoretically possible, it would not be surprising if, ten or twenty years from now, there was not even *one* Communist government left in the whole world!

It follows that the founders of the Communist system were far less important figures than I had originally estimated. And it suggests that various persons whose ideas are particularly antithetical to Communism—men such as Thomas Jefferson and Adam Smith—were probably more influential than I had estimated in the first edition.

It also suggests that a new name should be added to the list of influential persons. Mikhail Gorbachev was the leader of the Soviet Union during its last fateful years (1985–1991). His policies and his actions—and his inactions at critical junctures!—were a major factor in the end of the Cold War, the decline of Communism, and the breakup of the Soviet Union. In view of the enormous importance of these events, Gorbachev has been included in this edition. He has been ranked in position #95, somewhat below Lenin, but far higher than most of the famous political leaders of the past.

Another revision—and one which is likely to be controversial—is my inclusion of Edward de Vere as the real “William Shakespeare,” rather than the man from Stratford-on-Avon who is described as the author by most “orthodox” textbooks. This change was only made reluctantly: It represents an admission that I made a serious error in the first edition when, without carefully checking the facts, I simply “followed the crowd” and accepted the Stratford man as the author of the plays. Since then, I have carefully examined the arguments on both sides of the question and have con-

cluded that the weight of the evidence is heavily against the Stratford man, and in favor of de Vere.

I regret that, in a book this size, space does not permit the inclusion of *all* the arguments which show that Edward de Vere, rather than the Stratford man, was the author of the plays. I hope that the facts presented in my article will be sufficient for most readers. For a fuller and more detailed exposition the interested reader might consult the excellent book by Charlton Ogburn, *The Mysterious William Shakespeare*, which is perhaps the definitive book on this interesting topic.

Besides Gorbachev, two other persons—Ernest Rutherford and Henry Ford—have been included in this revised edition who were not in the original book.

Rutherford was one of the most celebrated scientists of the twentieth century. I am not sure how I managed to overlook him when I wrote the first edition, and several scientists expressed surprise at my omission. On reviewing his scientific accomplishments, I have concluded that his contributions to modern atomic theory exceed those of Niels Bohr (who was #100 in the first edition), while his contributions to our knowledge of radioactivity were more important than those of Becquerel (who was #58).

Henry Ford was one of the “honorable mentions” in the first edition. However, many readers wrote in, claiming that I had underestimated his importance, and presenting reasons why he should have been included in the first hundred. On reconsidering the matter, I have concluded that the critics were right, and I have altered this edition accordingly.

One should not infer, though, that the revised edition is simply the result of a poll. It was not the *number* of objecting letters which caused me to change my mind about Ford—indeed, I received more objections on some other points—but the soundness of the reasoning in those letters. The rankings in this book are, for better or worse, my own opinions, not some consensus of readers or experts.

To make room for the three additions to the top hundred (Gorbachev, Rutherford, and Ford), it was necessary to delete three

persons who had been included in that group in the first edition. Those three men are: Niels Bohr, Pablo Picasso, and Antoine Henri Becquerel. This, of course, does not in any way imply that I consider them to be *unimportant* figures. On the contrary, those three—like most of those listed as honorable mentions, and like many other men and women whom I have not had the space to mention—were talented and influential persons who have helped create this fascinating world we live in.

Michael H. Hart
January 1992



2

ISAAC
NEWTON

1642 - 1727

*Nature and Nature's laws lay hid in night:
God said, Let Newton be! and all was light.*

ALEXANDER POPE

Isaac Newton, the greatest and most influential scientist who ever lived, was born in Woolsthorpe, England, on Christmas Day, 1642, the same year that Galileo died. Like Muhammad, he was born after the death of his father. As a child, he showed considerable mechanical aptitude, and was very clever with his hands. Although a bright child, he was inattentive in school and did not attract much attention. When he was a teenager, his mother took him out of school, hoping that he would become a successful farmer. Fortunately, she was persuaded that his principal talents lay elsewhere, and at eighteen, he entered Cambridge University. There, he rapidly absorbed what was then known of science and mathematics, and soon moved on to his own independent research. Between his twenty-first and twenty-seventh years, he laid the foundations for the scientific theories that subsequently revolutionized the world.

The middle of the seventeenth century was a period of great scientific ferment. The invention of the telescope near the begin-

ning of the century had revolutionized the entire study of astronomy. The English philosopher Francis Bacon and the French philosopher René Descartes had both urged scientists throughout Europe to cease relying on the authority of Aristotle and to experiment and observe for themselves. What Bacon and Descartes had preached, the great Galileo had practiced. His astronomical observations, using the newly invented telescope, had revolutionized the study of astronomy, and his mechanical experiments had established what is now known as Newton's first law of motion.

Other great scientists, such as William Harvey, who discovered the circulation of the blood, and Johannes Kepler, who discovered the laws describing the motions of the planets around the sun, were bringing new basic information to the scientific community. Still, pure science was largely a plaything of intellectuals, and as yet there was no proof that when applied to technology, science could revolutionize the whole mode of human life, as Francis Bacon had predicted.

Although Copernicus and Galileo had swept aside some of the misconceptions of ancient science and contributed to a greater understanding of the universe, no set of principles had been formulated that could turn this collection of seemingly unrelated facts into a unified theory with which to make scientific predictions. It was Isaac Newton who supplied that unified theory and set modern science on the course which it has followed ever since.

Newton was always reluctant to publish his results, and although he had formulated the basic ideas behind most of his work by 1669, many of his theories were not made public until much later. The first of his discoveries to be published was his ground-breaking work on the nature of light. In a series of careful experiments, Newton had discovered that ordinary white light is a mixture of all the colors of the rainbow. He had also made a careful analysis of the consequences of the laws of the reflection and refraction of light. Using these laws, he had in 1668 designed and actually built the first reflecting telescope, the type of telescope that is used in most major astronomical obser-

vatories today. These discoveries, together with the results of many other optical experiments which he had performed, were presented by Newton before the British Royal Society when he was twenty-nine years old.

Newton's achievements in optics alone would probably entitle him to a place on this list; however, they are considerably less important than his accomplishments in pure mathematics and mechanics. His major mathematical contribution was his invention of integral calculus, which he probably devised when he was twenty-three or twenty-four years old. That invention, the most important achievement of modern mathematics, is not merely the seed out of which much of modern mathematical theory has grown, it is also the essential tool without which most of the subsequent progress in modern science would have been impossible. Had Newton done nothing else, the invention of integral calculus by itself would have entitled him to a fairly high place on this list.

Newton's most important discoveries, however, were in the field of mechanics, the science of how material objects move. Galileo had discovered the first law of motion, which describes the motion of objects if they are not subjected to any exterior forces. In practice, of course, all objects are subjected to exterior forces, and the most important question in mechanics is how objects move under such circumstances. This problem was solved by Newton in his famous second law of motion, which may rightly be considered the most fundamental law of classical physics. The second law (described mathematically by the equation $F = ma$) states that the acceleration of an object (i.e., the rate at which its velocity changes) is equal to the net force on the object divided by the object's mass. To those first two laws, Newton added his famous third law of motion (which states that for each action—i.e., physical force—there is an equal and opposite reaction), and the most famous of his scientific laws, the law of universal gravitation. This set of four laws, taken conjointly, form a unified system by means of which virtually all macroscopic mechanical systems, from the swinging of a pendulum to

the motion of the planets in their orbits around the sun, may be investigated, and their behavior predicted. Newton did not merely state these laws of mechanics; he himself, using the mathematical tools of the calculus, showed how these fundamental laws could be applied to the solution of actual problems.

Newton's laws can be and have been applied to an extremely broad range of scientific and engineering problems. During his lifetime, the most dramatic application of his laws was made in the field of astronomy. In this area, too, Newton led the way. In 1687, he published his great work, the *Mathematical Principles of Natural Philosophy* (usually referred to simply as the *Principia*), in which he presented his law of gravitation and laws of motion. Newton showed how these laws could be used to predict precisely the motions of the planets around the sun. The principal problem of dynamical astronomy—that is, the problem of predicting exactly the positions and motions of the stars and planets—was thereby completely solved by Newton in one magnificent sweep. For this reason, Newton is often considered the greatest of all astronomers.

What, then, is our assessment of Newton's scientific importance? If one looks at the index of an encyclopedia of science, one will find more references (perhaps two or three times as many) to Newton and to his laws and discoveries than to any other individual scientist. Furthermore, one should consider what other great scientists have said about Newton. Leibniz, no friend of Sir Isaac's, and a man with whom he engaged in a bitter dispute, wrote: "Taking mathematics from the beginning of the world to the time when Newton lived, what he has done is much the better part." The great French scientist Laplace wrote: "The *Principia* is preeminent above any other production of human genius." Lagrange frequently stated that Newton was the greatest genius who ever lived, while Ernst Mach, writing in 1901, said: "All that has been accomplished in mathematics since his day has been a deductive, formal, and mathematical development of mechanics on the basis of Newton's laws." This, perhaps, is the crux of Newton's great accomplishment: he found



Newton analyzes a ray of light.

science a hodgepodge of isolated facts and laws, capable of describing some phenomena but of predicting only a few; he left us a unified system of laws, which were capable of application to an enormous range of physical phenomena, and which could be used to make exact predictions.

In a brief summary like this, it is not possible to detail all of Newton's discoveries; consequently, many of the lesser ones have

been omitted, although they were important achievements in their own right. Newton made significant contributions to thermodynamics (the study of heat) and to acoustics (the study of sound); he enunciated the extremely important physical principles of conservation of momentum and conservation of angular momentum; he discovered the binomial theorem in mathematics; and he gave the first cogent explanation of the origin of the stars.

Now, one might grant that Newton was by far the greatest and most influential scientist who ever lived but still ask why he should be ranked higher than such major political figures as Alexander the Great or George Washington, and ahead of such major religious figures as Jesus Christ and Gautama Buddha. My own view is that even though political changes are of significance, it is fair to say that most people in the world were living the same way 500 years after Alexander's death as their forebears had lived five centuries before his time. Similarly, in most of their daily activities, the majority of human beings were living the same way in 1500 A.D. as human beings had been living in 1500 B.C.. In the last five centuries, however, with the rise of modern science, the everyday life of most human beings has been completely revolutionized. We dress differently, eat different foods, work at different jobs, and spend our leisure time a great deal differently than people did in 1500 A.D. Scientific discoveries have not only revolutionized technology and economics; they have also completely changed politics, religious thinking, art, and philosophy. Few aspects of human activity have remained unchanged by this scientific revolution, and it is for this reason that so many scientists and inventors are to be found on this list. Newton was not only the most brilliant of all scientists; he was also the most influential figure in the development of scientific theory, and therefore well merits a position at or near the top of any list of the world's most influential persons.

Newton died in 1727, and was buried in Westminster Abbey, the first scientist to be accorded that honor.