Face Values: How Portraits Win Friends and Influence People

Patricia Fara

Does it matter what a scientist looks like? Old beliefs in physiognomy and phrenology have long ago been laughed out of court, yet no biography is complete without a portrait. Isaac Newton’s *Principia Mathematica*—his celebrated book on gravity—became a non-denominational Bible that spread the faith of Western science throughout the world. Newton epitomizes the disembodied genius, the secular saint who is above such earthly requirements as food and sleep. Nevertheless, we remain fascinated by his appearance.

Promoters of science have always appreciated the power of pictures, and one of the most famous is Godfrey Kneller’s Newton (see the figure, right), painted in 1689, 2 years after the *Principia* was first published. All the signs of a dedicated solitary scholar are there—the unkempt gray hair, the thin pale face, the delicate hands, and the dark robes. Modern viewers immediately recognize the world’s greatest scientific genius, and some even liken this Newton to Christ Himself.

But how confident can we be that Newton really looked like this? As science’s publicity machine whirred into action during the 18th century, pictures became an important propaganda tool. Because portraits showed how the new scientific experts wanted to be seen, they also reveal information about the history of science itself.

Newton’s biographers maintain that he shunned fame and was uninterested in art. This might be the appropriate behavior for a reticent genius, but the visual evidence suggests that Newton actively fashioned his public persona. The sheer number of images testifies to his concern—over 20 busts and portraits, several of them paid for by Newton himself. He put some of them on display in his London home, including an expensive ivory plaque in the dining room, where guests could admire the good taste that only comes with wealth. To impress the international community of natural philosophers, he donated a large portrait to the Royal Society, labeling it prominently in gold letters—“Sir Isaac Newton, President.”

To reach still wider audiences, Newton sent out pictures of himself as rewards for favors. Hoping to sway negotiations for a deluxe French edition of the *Opticks*, he commissioned an expensive oil portrait for the Bishop of Rochester, who knew Newton for 20 years, remarked to a friend that “in the whole air of his face and make, there was nothing of that penetrating sagacity which appears in his compossures [portraits]”.

By tracing the physical history of this and other portraits, we can learn which representations of Newton were available at different times. For around 150 years, the best-known versions of Newton showed him as a prosperous, well-dressed, sociable gentleman. Correspondingly, biographers reverentially described a courteous, dedicated researcher, a “Christian philosopher” very different from the acerbic obsessive who is featured in modern documentaries. But from the middle of the 19th century, Kneller’s 1689 Newton became increasingly popular, initially in black and white and more recently in the full original colors. Gradually, it became the iconic image of a scientific genius.

The changing interpretations of portraits tell us how scientific stereotypes altered. Every picture tells a story—but the same picture can tell different stories at different times. Although we may see a scientific genius when we look at Kneller’s Newton, in his lifetime, the social category of “scientific genius” did not exist. It originated around the turn of the 18th and 19th centuries, and Newton was the first member. His reputation helped to forge the defining characteristics of how a superlative scientist should look and behave.
ESSAY

In 1689, when Newton visited Kneller's London studio, he was an obscure Cambridge scholar, author of an esoteric book incomprehensible to all but a few learned mathematicians. Drawing on 17th-century artistic conventions for depicting religious anchorites, Kneller produced a picture of a melancholy recluse enclosed in a windowless cell-like study and driven to the verge of illness through obsessive reading. Almost two centuries later, when the engravings first made this model of Newton public, the situation had changed dramatically. Newton was acclaimed as a national hero, and science was a prestigious activity, the source of Britain's exploding industrial wealth. Kneller's fragile, privileged scholar became the "yeoman's son...at work in the wells of truth, and wresting from nature secrets hidden from the foundation of the world...a very beagle of truth." Phrenology was at its peak, and Kneller was praised for showing Newton with "a brow that could measure the universe" (4). (However, Newton's profile did present a problem for phrenologists, since his sharply receding forehead left no room for the organ of causality and bore disturbing resemblances to that of a native American Indian).

Victorians worried about calling Newton a scientific genius. The badge of genius was awarded to Romantic poets, men inspired by an internal fire of originality. Could a flash of artistic creativity be equivalent to Newton's revelation beneath the apple tree? Scientists were supposed to work methodically and industriously, to observe the world with icy detachment. How could Newton be a paradigmatic scientist if he behaved like an inspired genius and so contravened all those Victorian ethics of hard work and sober respectability? (3).

Portraits like Kneller's, hailed for showing Newton at the peak of his career, helped to confirm that being a genius could be compatible with being a brilliant scientist. In our post-Freudian age, we delight in crises rather than providing role models to be admired and emulated. Unlike Kneller and his contemporaries, we attribute a thin pale face, disheveled hair, and fine fingers not to melancholy but to mental brilliance. For modern viewers, the closest relatives of this detached Newtonian intellect with a minimalistic body are Sherlock Holmes and Stephen Hawking.

Several different versions of Newton circulated during the 18th century, but Kneller's 1689 portrait was not among them. Although nowadays we may feel that we intuitively recognize Newton in this picture, very few of his contemporaries ever saw it. Newton and his colleagues carefully monitored the public image, and this picture was never engraved for dissemination—it was for private viewing only. After Newton died, Kneller's portrait went to the country mansion of the Earls of Portsmouth and hung at the end of a gloomy corridor until 1857, when it was displayed at a large exhibition in Manchester, England's northern industrial capital. A local scientist was so delighted to discover what was effectively a brand-new picture of Newton that he commissioned and marketed an engraving. For the first time, this portrait—now so familiar—had become publicly available.

One of Newton's favorite portraits showed him as a visionary Roman seated next to a classical column and swathed in a "banyan," a sumptuous gown worn by intellectual gentle men relaxing at home. Like Newton, Enlightenment men of science regularly exchanged portraits and encouraged their public circulation. These pictures did resemble their sitters, but they were also designed to advertise their best features and to show the world how an ideal natural philosopher should appear.

Benjamin Franklin evidently liked a London portrait of himself surrounded with electrical equipment, since he enrolled his son to help him mail out engravings to every potentially useful contact (6). Franklin noted smugly that his "popularity has occasioned so many Paintings, Busto's, Medals & Prints to be made of me...that my Face is now almost as well known as that of the Moon." Similarly, during his long reign as president of London's Royal Society, Joseph Banks carefully monitored the engravings and caricatures of him that were produced. Portraits showing him in different guises helped to establish two new scientific role models: the young adventurous explorer and the influential administrator (7). As prints became cheaper in the 19th century, scientists such as Michael Faraday built up large collections (8). And with the advent of photography, Charles Darwin and his colleagues invented still more ways of advertising their appearance and their achievements (9).

Historians can learn a lot about science's publicity methods by examining who received and sent pictures, and—equally significant—which ones were chosen for distribution. But portraits don't only belong to the past. Modern scientists are just as media-conscious as their predecessors and take great care to put their best face forward for public presentation.

References and Notes

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