



Editorial

The Stakes of Eponymy

Physicists have a penchant for eponymy. Laws, principles, constants, equations, instruments, and research centers are frequently named for individuals who contributed to their establishment, or whom the community seeks to commemorate. In fact, a single physicist will suffice to illustrate the prevalence of this practice. Max Planck has lent his name to Planck's law, Planck's principle, Planck's constant, the Nernst–Planck equation, the *Planck* space observatory, the Max-Planck-Gesellschaft, and much more. Wikipedia hosts an entire article entitled “List of things named after Max Planck.”

In this issue, Cormac O’Raifeartaigh and Michael O’Keeffe discuss one such exercise in eponymy: the effort currently under way to rebrand Hubble’s law—the observation that the speed of galaxies’ motion away from the Earth is proportional to their distance from it—the Hubble–Lemaître law. O’Raifeartaigh and O’Keeffe oppose the move, arguing that it mistakenly conflates the contributions Edwin Hubble and Georges Lemaître made to cosmology. Their argument about the appropriateness of a specific name is an occasion for us to reflect on naming practices in physics more generally. Naming itself has a history. In his book *The Invention of Science*, David Wootten, observing that Ptolemy’s and Euclid’s laws were first named in this way only in 1567 (by Petrus Ramus), wittily introduced his own law: “where a scientific discovery took place before 1560 and is named after its discoverer (or supposed discoverer), the naming of the discovery took place long after the event.” What are the stakes of attaching the names of individuals to so many and such diverse elements of physical practice, given that it is itself a historically situated practice?

The stakes of eponymy have occasionally been made central to naming decisions. The International Congress of Electricians, in 1881, cemented the ampere, the coulomb, the farad, the ohm, and the volt as standard electrical units, selecting names representing scientists from across the European nations that had contributed to the development of electrical science over many decades in a bid to support internationalism and mollify opponents of standardization. At other times, however, naming is both less deliberate and more closely tied to local research practices. Informal conventions of small specialist communities become standardized; name choices reflect parochial interests, or aim to score points in priority disputes or other squabbles. What had been thought of as an approach to electron

theory in the early 1900s was soon described as the Lorentz–Einstein principle of relativity, sometimes as Minkowskian electrodynamics and later as Einstein’s theory of relativity.

The practice of honoring individuals through naming conventions also poses deeper problems in an increasingly collaborative scientific community. The myth of the lone genius fails to capture the rich intellectual connections that have characterized science since its inception (whenever one locates it), and it only becomes more problematic when considering the twentieth and twenty-first centuries, when long-distance communication became faster and more abundant and the size of research groups ballooned. The critique levelled annually at the Nobel Prize—that the three-person cap prevents it from capturing the remarkable group cognition by which modern science proceeds—can be applied equally well to naming conventions.

Given such problems, should we be naming the furniture of physical practice after people at all? We hesitate to go so far as to claim that we should not. If nothing else, naming is a mechanism by which the contemporary practice of physics connects with its history. It reminds us that science is a human endeavour, which both benefits from the most aspirational reaches of the human imagination and suffers from characteristically human failings, such as pettiness, vanity, and tribalism. But as we survey the names of physics, we should remind ourselves that they inscribe particular, necessarily imperfect versions of that history, ones that, for now, value individuals over collectives and encode the many biases that have historically constrained both membership in and the recognition of the scientific community.

Robert P. Crease
Joseph D. Martin
Richard Staley

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.