

The article chosen—[“Giant Molecules Exist in Two Places at Once in Unprecedented Quantum Experiment”](#) by Rafi Letzter and [SPACE.com](#), published on the *Scientific American* website on October 8, 2019—describes quantum superposition and the recent breakthroughs in applying this phenomenon to large molecules in 677 words. The audience for this article is professional audiences, as shown by the careful explanations of each quantum physics term but unrestricted use of some fundamental terms lay audiences may not be familiar with. Letzter's article brought up atoms and molecules without discussing their relative masses or volumes and used terms like diffraction without explanation. This is backed up by their [media kit](#) page, which discusses their readership. This page puts their readers within the top ten most-educated among those of MRI-measured publications and fourth most likely to have a postgraduate education.

This page also places 19 percent of the readership for *Scientific American* in the C-Suite—they are CEOs, CTOs, CFOs, etc.—setting them in the upper tier of income and influence in the world, often with six-figure [salaries](#). As such, the income of the average reader of these articles is likely to be around \$100,000 per year. The average age of the readership is likely around 40 years old, as their professional audiences would begin reading in college and continue through their careers and retirements. The media kit page also designates the magazine's readers as most likely to read about and purchase new tech and spend more, on average, than other educated professionals in categories like Apparel & Accessories, Business & Leisure Travel, and Artwork & Collectibles.

The majority of the publication's readership likely live in cities of the United States, with a safe bet for the most frequent readers being white males given that that demographic is statistically most likely to be in positions of power in business and technology. This specific

article seems less targeted toward these demographics, however. It discusses a novel new experiment in the quantum world, one not likely to affect much in the world of business and technology for a long time. Its primary purpose must then be to inform and educate, as it offers no new tech to get behind or product to sell. Most of the words avoid jargon and keep the syllable count low, though the language can get technical when it comes to experimental procedure. The tone is informal but serious for most of the work, with a slight tonal shift toward the end of the work. In the final paragraph, there was a brief foray into humor.

“So, even bigger demonstrations of quantum interference are coming, though it probably won’t be possible to fire yourself through an interferometer anytime soon,” Letzter wrote. “Us giant beings are just going to have to sit in one place and watch the particles have all the fun.” This passage served to address the potential impact on the reader, with its irreverent style showcasing an important fact—like most experiments in quantum physics, the superposition of large molecules will not affect anyone directly for a long time (though it may pave the way for technological advancements in the future). The author uses this choice of tone to demystify some of the weirder bits inherent to quantum physics, stating things straight up instead of skirting the issue.

“Every particle or group of particles in the universe is also a wave...waves occupy multiple places in space at once,” the author wrote. “So any chunk of matter can also occupy two places at once.” The dual nature of matter (and light) is a complicated concept, but the author uses a quick bit of reasoning—and the plain and simple declaration of facts—to explain it in a concise manner. The final sentence in the quote refers to the phenomenon of quantum superposition, and provides context for the findings Letzter's article discusses.