

Recollections of Samuel Goudsmit's humor

Daniel Kleppner's Reference Frame about Samuel Goudsmit (PHYSICS TODAY, February 2009, page 8) brought back memories. Almost 40 years ago in the winter of 1969, one of us (Snyder), a postdoc at the National Radio Astronomy Observatory, along with three coauthors, submitted a three-page article to *Physical Review Letters* announcing that interstellar formaldehyde had been detected with the NRAO's 140-ft telescope.¹ As a scientist and assistant to the director of the NRAO, the other of us (Howard) was in close communication with assistant editor George Trigg as the paper progressed smoothly through the PRL review process. Everything blew up around 5:30 one evening, when editor Goudsmit, en route home from the West Coast, read in the *New York Times* that the formaldehyde results had been leaked and picked up on the news wires.

We two spent about 30 minutes on the receiving end of a Goudsmit telephone barrage in which he said over and over that because of the newspaper leak there was no way that PRL could publish the article. Part of Goudsmit's problem was that the NRAO and Brookhaven National Laboratory were jointly managed by the same organization, the Associated Universities Inc (AUI). Goudsmit, whose PRL office was at Brookhaven, wanted to avoid the appearance of playing favorites in putting an NRAO discovery paper on a fast track.

At one point during the barrage, we made the mistake of noting that Trigg, who was much more understanding,

had already locked the article in the PRL press. Goudsmit roared, "In that case, I'll jerk the article out and send through blank pages!" His anger eventually subsided after he realized that we had nothing to do with the *Times* leak, and he went ahead with publication.

A few weeks after the irate phone call, we learned that a professor from a prominent eastern university had heard about the discovery and had leaked the news to a newspaper reporter. In addition, Howard learned from someone who was listening to Goudsmit's end of the conversation that when Goudsmit slammed down the phone, he looked up, grinned, and said something like, "That'll hold 'em. Let's go get coffee!"

The article appeared in PRL,¹ with no further mention of Goudsmit's displeasure.

Reference

1. L. E. Snyder, D. Buhl, B. Zuckerman, P. Palmer, *Phys. Rev. Lett.* **22**, 679 (1969).

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The Reference Frame about Samuel Goudsmit (PHYSICS TODAY, February 2009, page 8) was poignant and of particular interest to me because, among other things, it touched lightly on Goudsmit's elfish nature.

I was introduced to Goudsmit during the early days of the journal *Physical Review Letters*. Even then, PRL was known for being a difficult publication in which to get an article accepted and published. I told Goudsmit that despite the journal's reputation, I had never had an article rejected by PRL. He reached for his pen, took out an envelope as if to write on the back of it, and asked, "What did you say your name was?"

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A life shaped by John Wheeler

Seeing my name on a list of physicists influenced by John Wheeler, which appeared in the article by Terry Christensen (PHYSICS TODAY, April 2009, page 55), triggered a flood of stories no doubt colored by my imperfect memory.

One reason I went to Princeton University as an undergraduate was that I had read about a Professor John Wheeler suggesting that the atomic nucleus might take on the form of a doughnut. When I got there, I learned that Wheeler was going to give a novel type of course for freshmen. A group of us were asked a few physics questions by Wheeler, and those who answered correctly were allowed into the course. The first homework assignment consisted of standing for 15 minutes in front of the house that Albert Einstein had lived in. It turned out that we were to learn physics from the top down: For example, we were taught " $F = ma$ " as a limiting case of special relativity. If I remember correctly, the department did not allow Wheeler to teach the course again. But I learned a lot; in particular, I learned to "never calculate without first knowing the answer."

One day Wheeler gave me a dollar and told me to go buy a kitchen sponge at Woolworth's. I am proud to say that a photo of that sponge would eventually show the physics community what spacetime foam looked like.

At the end of my sophomore year, I went home to Brazil. Two months earlier the country's military had seized power in a dramatic coup. One day, to my parents' alarm, I received an urgent telegram from Wheeler asking me to liberate his collaborator, the eminent Brazilian physicist Jayme Tiomno, from military arrest! How he expected a stateless Chinese teenager to accomplish that is unclear to me still.

Wheeler's inspirational mentoring of students is legendary. During my junior year, I had the privilege of doing research with Wheeler on the emission

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of gravitational waves from a vibrating and rotating neutron star. I had the disquieting sense that I was doing nothing more than plugging in the appropriate textbook formulas, but when I showed Wheeler my notebook, he would be wild with enthusiasm, giving me the illusion that I had actually done something. In elegant penmanship, occasionally adorned with a drawing of a dish of ice cream, he would write down what he wanted me to do next. Later I was astonished to see, in a long article he wrote for the *Annual Review of Astronomy and Astrophysics*, references to a paper to be published, written by Zee and Wheeler. That paper, which would have been my first, was never actually published. I regret it somewhat, as it would be just about the only one with me as the first author.

For my senior thesis I abandoned general relativity for particle physics and switched my allegiance to Arthur Wightman. When it came time for graduate school, I should have asked my thesis adviser for advice. Instead, I vividly remember sitting in front of Wheeler, who told me his opinion of the leading particle theorists at various major universities and ended with the pronouncement that Steve Weinberg was the best of the upcoming generation. It turned out that Weinberg was about to leave Berkeley for Harvard, and thus I went north rather than west for grad school.

Due to some convoluted circumstances, I did my thesis with Sidney Coleman, who was not even on Wheeler's list. Nevertheless, Weinberg did influence me greatly, directly through his papers and indirectly in arranging for me to write my first popular physics book many years later. Thus Wheeler shaped my life in more ways than one.

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Troubling changes in scientific publishing

Since my first book was published 40 years ago, I have noticed with dismay that major changes for the worse have taken place in the publishing of scientific books.

My first concern is with the changes in payment. In the past, contributors to multiauthor books received a pro-rata

royalty or a page fee from the publisher. Nowadays, it is common for publishers to offer no fee at all; one free copy per chapter is usually given, even for multi-author chapters. The publisher generally gets away with this demand for unpaid work because invited authors do not like to be absent from a compilation in their specialty or would not refuse an invitation from a colleague who is also a friend.

A second major change is this: Who does the work? In the distant past, authors supplied a manuscript, which the publisher carefully copyedited and typeset; figures were usually redrawn to ensure uniformity in style and typeface throughout the book. Today, the author prepares a text file with illustrations, all to be printed directly as submitted. Copyediting is very uneven: I have recent experience both of conscientious, meticulous editing and of careless, ignorant, incompetent work from hitherto highly respected publishers.

Authors are now expected to perform much of the work that used to be undertaken by publishers and printers. All other considerations aside, the new arrangement is inefficient: Certainly proofreading should be easier when the author's own file is mapped directly onto the printed page—though my experience has taught me that everything except, perhaps, plain symbol-free text still must be checked with extreme care—but the niceties of typefaces, formatting, spacing, and printing are the business of printers, not scientists.

In short, scientific authors increasingly find that they are doing more and more of the work that used to be done by publishers and printers and are being paid less and less for it. Publishers, please explain!

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Putting a name to a face

The “unidentified” person in the back row of the group picture of the Project Matterhorn B team (*PHYSICS TODAY*, April 2009, page 32) is the late A. Carl Haussmann, then a captain in the US Army (and former all-American lacrosse player from West Point) and later a long-time associate director and, briefly, acting director of Lawrence Livermore National Laboratory. Carl was a leader in the development of weapons

and laser programs at Livermore and a key reason for their success. He always remembered John Wheeler with affection and respect, and he looked on his time working on Project Matterhorn as a major formative experience.

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Einstein and socialism

In his review of the book *Einstein and Oppenheimer: The Meaning of Genius* (*PHYSICS TODAY*, April 2009, page 60), Robert Schulmann accuses the book's author, Silvan Schweber, of the “jarring misinterpretation” of referring to Albert Einstein as a socialist in later life. If Schulmann meant to deny that Einstein was a socialist or was so in later life, then he is surprisingly misinformed.

In 1949 Einstein published an article that leaves no doubt about his political stance at the time. Its title was “Why Socialism?” and it appeared in the inaugural issue of the American journal *Monthly Review*; it is available online at <http://www.monthlyreview.org/598einstein.php>.

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Schulmann replies: Differentiation is as critical in the social sciences as in their exact cousins. A blanket statement that Einstein was a socialist will not do. His article “Why Socialism?” is replete with ambivalence toward the ideology. Unlike many of his contemporaries, Einstein carefully weighed the benefits of a planned economy against the danger that an all-powerful and overweening bureaucracy might encroach on the rights of the individual and overwhelm the classical liberal ideal of intellectual freedom. Though he demonstrated philosophical sympathy for socialism with a human face, including many of its economic principles, he did not identify with the intellectual tradition of the European labor movement or the Marxist legacy. The central issue for him always remained the free play afforded every individual to develop creative potential. In that he was the true intellectual heir of Gustav Maier and Jost Winteler, the liberal political mentors of his early Swiss years.

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