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## Letters

### Weird science

D.E. Thomsen's most interesting "Notes of an Ex-Physics Student," together with "Changing your mind in a hurry" and "Gauging the Aharonov-Bohm effect" (SN: 3/1/86, pp. 141, 137, 135), provoke the following wonder. Instead of it being the case that all these striking new processes of quantum measurement turn on the intention of the observer, the state of mind of the experimenter, isn't it rather the case, for each, that the result comes from the instrumentation and instrumental setup at the instant of the experiment? If so, then the weird Berkeleyan philosophy of humans creating the world by human ideation is avoided.

"Changing your mind in a hurry" ends with "So far, all three of these experiments support the conventional quantum wisdom that whether you make the choice before or after the event occurs, the effect of the choice is the same." But the experimental result is really not a consequence of a mental event (choice) of the "you" (experimenter)—in the sense being here discriminated, the key operational sense. It is an operational result of alterations of the experimental equipment. At least, this seems

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Cover: New York City's Empire State Building, shown here, was the world's tallest building from 1931 until the World Trade Center was completed in 1972. Now the race for height seems to be accelerating. With new materials and the increasing use of computers for design, architects and engineers are proposing the construction of structures that reach as high as a mile. (Photo: I. Peterson)



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clear from the accounts in the articles. If so, the philosophical implications are important, and really make more sense, I believe.

C.L. Hubbell  
Chicago, Ill.

*Some physicists, notably Eugene Wigner of Louisiana State University in Baton Rouge, want to bring consciousness into it in something like a Berkeleyan fashion. A less radical, and probably more widespread, view is that the kind of measuring equipment that is set up selects among two (sometimes more) potential existents and somehow actualizes one of them. This is mind-blowing enough, but at least it confines the choice to things that are somehow already there. The observer's consciousness does not have the freedom to will just anything.*

— D.E. Thomsen

### Terrestrial limitations

In "Man in the Moon" (SN: 3/8/86, p. 156) you incorrectly describe the advantage of lunar radio interferometry. Tropospheric effects do not limit the resolution of earth-based radio

interferometry. However, they do limit astrometric accuracy — the precision with which the position of a radio source can be measured. The moon offers us an improvement of one to two orders of magnitude in the accuracy of radio astrometry.

Roger Linfield  
Jet Propulsion Laboratory  
Pasadena, Calif.

### Nothing new under the lamp?

In light of your recent update on winter depression and the use of light to treat the symptoms (SN: 3/8/86, p. 152), I've run across an interesting photograph in a book of LIFE magazine photos from World War II. In it, we see nude French soldiers lying prone on the floor of a bunker on the Maginot Line. The caption reads, "French soldiers bathe in ultraviolet rays . . . in a room 150 feet underground . . . [T]he rays increased hemoglobin and combated what the Germans called *Bunkerkrankheit* (blockhouse fever) — boredom-induced blues."

David R. Mooney  
Pittsburgh, Pa.

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