agator which, however, was not written up for publication[3] until 1966, when he and his family visited us for the summer just after I had moved to [SUNY] Stony Brook.

Bob was an old-fashioned man. Among all the physicists that I know, he was certainly one of the most honest and the most sincere.

Bob had a brilliant mind. He was very quick at grasping new ideas. I shall treasure the memory of our intensive collaboration and of our many discussions on diverse topics ranging from accelerator theory to the theory of computability.

—C. N. Yang

Bob Mills and I, with Andy Sessler, wrote a paper[4] discussing possible superfluidity of helium-3. In it, we suggested that the electron pairing due to a phonon mediated electron–electron interaction could be duplicated among ^{3}He atoms due to the atom–atom potential. Although the solution in ^{3}He turned out to be somewhat more complicated, the basic idea was vindicated with the discovery, about ten years later, of the superfluidity of ^{3}He.

Bob Mills was a talented, creative physicist. We miss him.

—Leon Cooper

I would be remiss in compiling this tribute to Mills if I didn't mention the direct or indirect influence of Yang–Mills on some of the advances establishing the standard model. These advances, tours de force all, illustrate the wonderful synergy of theoretical and experimental physics and include the Glashow-Weinberg-Salam (GWS) theory, the Glashow-Iliopoulos-Maiani (GIM) model, the successful searches for neutral currents and for the gauge particles $W^{\pm}$ and Z^0, the proof of the renormalization of Yang–Mills theories, and quantum chromodynamics encompassing asymptotic freedom and quark confinement. This is a splendid legacy indeed.

Many thanks to Lee Mills for so generously giving of her time to provide me with information on her husband's career.

References

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'Physics of Whatever': A Study in Irrelevance

The succession of articles, books, courses, and lectures on the "physics of ———," where the blank is filled by a popular, nonphysics topic—music, archery, basketball, or dance, for instance, with the intent to show that physics is somehow relevant, has now reached epidemic proportions. I only recently, by accident, became

aware of the extent of the problem during a search of the World Wide Web. The findings were disturbing.

Essentially every sport and "near sport" has been covered. In the physics of sports category, I found more than 30 sports, including knife-throwing, water polo, dogsledding, fly-casting, bowling, swimming, judo, kayaking, wrestling, paintball, bungee jumping, and rock climbing. The only missing sports I could think of were badminton and the caber toss.

In the physics of arts category, I found the expected music, dance, and visual arts well covered: Topics included yodeling, tap dancing, break dancing, and harpsichord playing.

Some interesting finds in the "other" category were the physics of beer, falling down, muck-spreading (fertilizer dispersal), toothpaste, Santa Claus, love, death, dirt, Hell, and immortality.

I admit that I, too, was briefly seduced by this genre when I found an article on the physics of skateboarding—my teenage son being an avid skateboarder. I was encouraged that the article would give us something to talk about for a change and that he would be impressed with the valuable insight I could provide. That he exhibited no interest whatsoever brings me to my main point. I don't believe anybody really cares about this kind of "physics of" stuff, including most practicing physicists. Moreover, it may even be harmful to the practicing athlete or artist. I am particularly worried about the knife-throwers. And suppose Michael Jordan had gotten the idea that he had to obey the laws of physics after

Buyers' Guide, August 2003, page 16—Font problems caused some symbols to misprint in Tables 3 and 4. The corrected tables are reprinted in their entirety at right.

Table 3. SI prefixes

Factor	Prefix	Symbol	Factor	Prefix	Symbol
10^{24}	yotta	Y	10^{-1}	deci	d
10^{21}	zetta	Z	10^{-2}	centi	c
10^{18}	exa	E	10^{-3}	milli	m
10^{15}	peta	P	10^{-6}	micro	μ
10^{12}	tera	T	10^{-9}	nano	n
10^{9}	giga	G	10^{-12}	pico	p
10^{6}	mega	M	10^{-15}	femto	f
10^{3}	kilo	k	10^{-18}	atto	a
10^{2}	hecto	h	10^{-21}	zepto	z
10^{1}	deka	da	10^{-24}	yocto	y

Table 4. Units accepted for use with the SI

Quantity	Unit		
	Name	Symbol	Definition
time	minute	min	1 min=60 s
	hour	h	1 h=60 min=3600 s
	day	d	1 d=24 h=86 400 s
plane angle	degree	°	$1°=(\pi/180)$ rad
	minute	′	$1′=(1/60)°=(\pi/10\,800)$ rad
	second	″	$1″=(1/60)′=(\pi/648\,000)$ rad
volume	liter	L	1 L=1 $dm^3=10^{-3}$ m^3
mass	metric ton	t	1 t=1000 kg
attenuation, level	neper	Np	1 Np=1
	bel	B	1 B=½ ln 10 Np

reading the physics of basketball.

It is fortunate for physics that Erwin Schrödinger chose to develop wave mechanics on his ski holiday, rather than write about the physics of skiing. (He would later write about the physics of cats, but only in a very limited sense.)

The "physics of whatever" madness began in the late 1960s, when students demanded "relevance" and professors practically fell over backward to show that they and their courses were relevant. Physics was, and is, poorly suited to that challenge. Other sciences—chemistry, for example—have fared somewhat better in the relevance market, but sometimes those professors just don't get it either. My university offers a course entitled "Chemistry in Everyday Life," but if they really wanted a popular and relevant course, they would offer "The Chemistry of Controlled Substances."

I believe it's time to stop the madness and get back to doing useful physics. If you want a hobby, try golf, badminton, caber tossing, or some other activity. But please—don't write about it.

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Authors Clarify Degeneracy Issue

On the first page of our article "The Search for a Permanent Electric Dipole Moment" (PHYSICS TODAY, June 2003, page 33), we wrote that polar molecules can and do have degenerate pairs of states in which the electric dipole is aligned either parallel or antiparallel to the spin. The unintentional implication is that the degeneracy is exact. In fact, although there are often nearly degenerate pairs of such states, the spin–rotation interaction within the molecule does break that degeneracy. See W. Klemperer, K. K. Lehmann, J. K. G. Watson, and S. C. Wofsy in *J. Phys. Chem.* **97**, 2413 (1993), for a clear discussion of this point. We thank those authors for pointing out our article's lack of clarity.

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Corrections

July 2003, page 41—Frederick Sanger also received two Nobel prizes. Both were in chemistry: one in 1958 and the other, with Walter Gilbert, in 1980.

July 2003, page 74—Robert Hugh Tanner was especially proud of his work on the Philharmonic Hall in Naples, Florida, not Naples, Italy.

August 2003, page 40—It was Pierre Bonnet who was codiscoverer of the Gauss–Bonnet theorem in topology.

August 2003, page 62—Paul Falkowski was also named a new fellow of the American Academy of Arts and Sciences.

September 2003, page 31—Gravitational waves have been inferred from observations of a binary pulsar whose orbital period is decreasing at a rate consistent with losing energy through gravitational wave radiation. ■