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New Quarks for Physics

Thanks to Willy Ley for pointing out (Letters, 22 July) that "quark" is German for "a somewhat gluey cottage cheese" (or even trash or rubbish). Long ago Goethe foresaw the need for this word when he wrote the prologue to *Faust*. Mephistopheles, sojourning in heaven, cynically describes man's insatiable curiosity and concludes: "*In jeden Quark begräbt er seine Nase.*" (He sticks his nose in every quark.)

The German and Faustian origin of *quark* is obviously so much more appropriate, despite the slander, that McMillan and Murray Gell-Mann may wish to reconsider the origin of the physicists' quark!

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Support the Theoretical Thinkers!

Regarding Greenberg's article (News and Comment, 24 June, p. 1724) on "Basic research: the political tides are shifting" . . . the old category of "basic" ("fundamental," "pure") research is not good because it means different things to different persons. Really there are two kinds of so-called basic science that must be considered—inscribed (trivial, limited)—and theoretical. Inscribed science is simple fact-finding science without any direct thoughts about established theories or without any new set of postulates in mind that might ultimately become a theory. When I try to learn the nutrient conditions that cause the tips of fungus filaments to lyse, I am engaged in inscribed (trivial) science because my thinking has not related the facts to established theory or to a new set of postulates that might develop into a theory. This kind of basic (inscribed, trivial) science is often on the same intellectual level as applied science. It is fascinating work because it satisfies one kind of curiosity. But this kind of nonapplied research should not be confused with truly theoretical work like that which produced the 1:1:1 hypothesis, the operon hypothesis (both of which should now be called theories), or the like.

Of the different kinds of science, theoretical science is the kind that should receive unstinted financial sup-