

# The Value of "Cranks"

*Invention—Psychiatry*

RUPERT T. GOULD in *Oddities: A Book of Unexplained Facts* (Stokes):

Of the many millions of fools who cumber the earth, I suppose that the fanatics, taking them all around, are the greatest nuisance—and, tested by old-fashioned notions of personal independence and "the liberty of the subject," the one most actively mischievous. Possessing, far too often, that misleading form of energy which it is fatally easy to mistake for capacity; restrained by no false modesty from minding everybody else's business; and simultaneously unbalanced and supported by a chronic inability to conceive that there can be two sides to any question, they are the bacteria of the civilized world—a fertile source of past, present and future disorders.

But if the fanatic, generally speaking, is an unpleasant figure, the harmless "crank" can be very amusing—provided that you merely chuckle over his lucubrations and sternly refuse to be drawn into correspondence with him. The latter caution is a *sine qua non*. He can never be converted from his mistaken notions, for the serene ignorance which gave them birth, forms also a mental armor proof against the clearest demonstration. In addition, he is generally of irritable temperament; he has much spare time; he is blind to the decencies of ordinary controversy, and he wields a vitriolic, if halting, pen.

Such is the flat-earther, the circle-squarer, the Ten Tribes man, the Jacobite, and the man who, measuring the Pyramids with a foot-rule (or, more commonly, relying on similarly accurate measurements made by other people) establishes to his own satisfaction that the early Egyptians were only a little lower than the angels and, possessed of an amazing and unsuspected amount of scientific and other knowledge, took the eminently reasonable step of declining to commit any of it to writing, leaving it to be deduced from the dimensions and orientation of various royal tombs (used in the monarch's lifetime as observatories).

Among this happy band (one can hardly add "of brothers," for in general one crank hates another most whole-heartedly) an honored place will, I think, always be found for the man who is convinced that he has discovered the secret of "perpetual

motion" (which, I ought perhaps to explain, happens to form the subject of this essay). That place is his of right, because, like the king, he never dies. He is always with us—and there are always a good many of him.

The reason is not far to seek. The necessary qualifications for a perpetual-motion seeker are few and simple. He must have a little mechanical skill—enough, say, for simple jobs about the house. He must have a little spare time and a certain amount of perseverance and self-confidence. And he must be ignorant, or all but ignorant, of two subjects in particular: the fundamental principles of mechanics and the works of his predecessors.

Of men of this type (the subject does not seem to have ever had much attraction for the other sex) there is always an ample supply—one might almost say a superfluity. And it is a curious feature of their unhappy obsession that it takes a variety of forms and directs their attention to several different objects.

Some, for example, consider that what is required is a clock that will never need to be wound; that such a clock will, in particular, be of the utmost value for finding longitude at sea; and that there is an enormous government reward on offer to its successful inventor. All three of these notions are baseless.

In the first place, many clocks have been made which do not require winding; their construction presents no great mechanical difficulty, and they can be fitted with any of several well-known systems of self-winding. They are mechanical freaks, and generally poor timekeepers. Secondly, to find longitude we merely need a timepiece which keeps accurate time—it does not in the least matter how often it has or has not been wound, except that in general the more often it is wound the better time it keeps. Thirdly, there is no government reward on offer for such a timepiece—or for any other form of "perpetual motion" machine.

Others of the fraternity propose to obtain "perpetual motion" by means of mills worked by tidal water or by fans placed in tall chimneys and exposed to a continual upward draught, or by various other applications of natural sources of power. Like the first class, such "perpetual motions"

are, if not common, at least far from unknown.

But the inventor who is at the same time nearest of all his tribe to the real idea of "perpetual motion" and farthest of all from realizing it in practice, is the man who attempts to make a machine which will give out more work than is put into it; one which actually creates energy and does not depend on external supplies of that useful commodity. Apart from occasional dabbings in hydrostatics and pneumatics, he generally looks to some application of gravity or magnetism for the mainspring of his machine, and he goes his way serenely unconscious of the fact that he is really doing his best to produce a working model of a contradiction in terms. He might not less usefully devote his time to drawing four-sided triangles.

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## Star's Heat—Continued

their temperature, he said, in telling of results.

"Mercury is certainly very hot and has little if any atmosphere. The maximum temperature is about 1300 degrees Fahrenheit. The distribution of radiation over its surface is much like that of the moon. Venus is covered with clouds and the radiation measured is from the high cloud surfaces and tells very little except by inference about the actual surface temperatures. The night temperature on Venus is much higher than that on Mercury or the moon, being about 9 degrees below zero Fahrenheit. The temperature on Mars varies greatly with the season and the time of day, but the temperatures there are somewhat like those on the earth, at least like those at very high elevations where the atmosphere is rare. The outer planets are very cold, as might be suspected from their great distances from the sun, unless they give off heat from their interiors. Not many years ago it was commonly supposed that Jupiter was warm, probably warm enough to give out some light of its own. The thermocouple measures show that this is not the case, and that the temperature of Jupiter is about 216 degrees below zero Fahrenheit."

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The River Nile got its name from the Sanskrit word "nila" meaning "blue".