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Two Heads Better Than One?

A characteristic feature of the perennial call to action in behavioral science is the project for producing a unified theory of man and society by bringing together experts from various special fields. If the experts are given an extended opportunity for close communication, so the proposal runs, then they will successfully pool their separate bits of knowledge. Much hope is placed these days on team efforts, and there are occasions both in science and in other enterprises when a team effort has many advantages. However, there are also occasions when knowledge is not additive, when a team is no better than its best member.

The motivation for seeking a unified theory of behavior arises in part from a comparison with physics. The study of man and his institutions has been conducted for about as long as has the study of inanimate matter, but with somewhat less success. One peculiarity of physics is the way it develops around separate centers which are then combined to form comprehensive theories. But in behavioral science, despite the development of impressive techniques for measuring intelligence, attitudes, and other quantities, and despite extensive qualitative studies, efforts to effect the same kind of unification as is found in physics have not met with the same kind of general acceptance of results.

Although a comprehensive theory of behavior may be most desirable, we question whether a team project offers any special promise of success. And, by continuing the comparison with physics, we may be able to suggest why not. Consider, first, a rather different sense in which two sciences may be pooled—namely, the use of one science as a base of operations from which to assist the advance of another. An example from current research is the use of rockets to advance the study of the upper atmosphere. Here the team approach is clearly useful, but unfortunately there is no real unification. In fact, expert A can make use of expert B's knowledge only because A does not need to know what B knows. Thus, the man who launches the rocket need not know anything about its payload, and the man who studies the upper atmosphere need not know anything about how his instruments got up there.

Now consider the problem of uniting the parts of science to form a comprehensive whole. The temptation again is to identify the men who know the parts and to unite *them*. But now this operation makes less sense, for to make the separate pieces of science stick together requires the cement of new scientific knowledge. Expert A can no longer make use of expert B's knowledge, because A and B both ask the same question and neither knows the answer. Thus, suppose that in the middle of the 19th century a group of experts had been formed to tackle the problem of unifying the sciences of electricity and light. If the group had included James Clerk Maxwell, then surely it would have been successful—but then how necessary would the other members of the group have been? If the group had not included Maxwell, then to produce the electromagnetic theory of light, the group would have had first to come up with the equivalent of Maxwell's revolutionary hypothesis of displacement currents.

No doubt, at every level, from the family to international relations, there is a great need for the applications of a successful behavioral science. But without being branded as hopelessly old-fashioned, may we suggest that there are other ways to spend money in this science—ways which, if less dramatic than team projects of unification, are also more likely to succeed? Two heads may be as good as one, but they are not always better.—J.T.