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Even if illusion susceptibility in chicks had been demonstrated, our interpretation of illusion-responses as incidental manifestations of usually valid visual inference habits would not be undermined. One could extend our general argument to other animals who could conceivably learn habits that are ecologically valid for them in a manner analogous to that we hypothesize for humans. Our thesis is simply that various features of the visual environment affect the probability that certain inference habits rather than others will be learned and that these habits will, under certain unusual conditions, lead to nonveridical perceptions. Stimulus configurations like those we have come to call geometric illusions are examples of such unusual conditions.

It is of course still conceivable that physiological processes, perhaps due to hereditary or dietary factors, may explain our data. However, even genetic explanations these days require analysis of the environmental factors which through differential selection contribute to genetic variation over time. We nonetheless accept as fair Spitz's comment that we did not state alternative nonenvironmental explanations. We would welcome attempts to spell out differences in "natural electrochemical brain processes" or other such factors which could account for the complex, bi-directional differences we reported.

MARSHALL H. SEGALL

*Department of Psychology,
University of Iowa, Iowa City*

DONALD T. CAMPBELL

*Department of Psychology,
Northwestern University,
Evanston, Illinois*

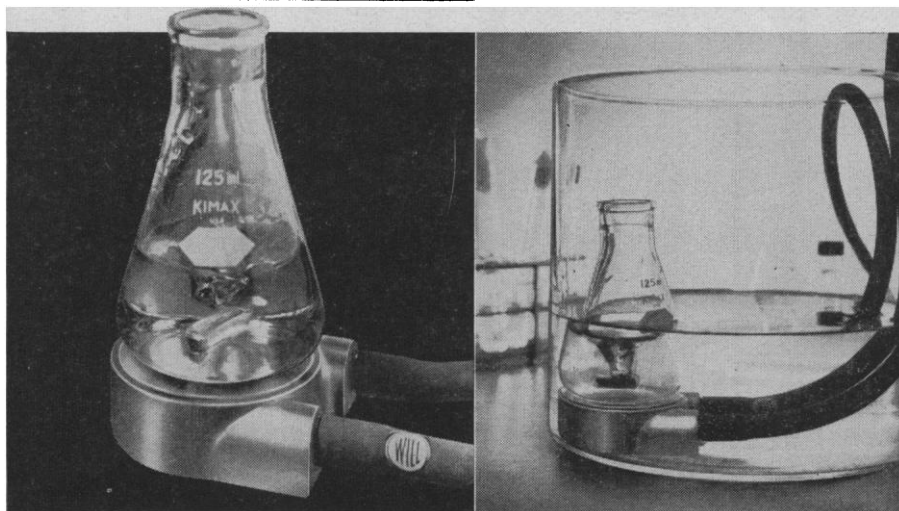
Independent Research Institutes

I am writing to express my concern over your recent editorial "Unnecessary research institutes" [*Science* 139, 563 (15 Feb. 1963)]. Although I respect your right to "editorialize" as you see fit, I do feel that you used a "shotgun" approach. In an attempt to point out real abuses, you have (unwittingly I am sure) stigmatized a number of respectable institutions. Specifically, your editorial in effect equates small size and financial problems with inability to conduct good research or with motives for establishment based on "pleasure, profit or aggrandizement."

I take issue with this interpretation, which I feel could all too easily be de-

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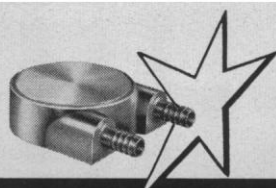
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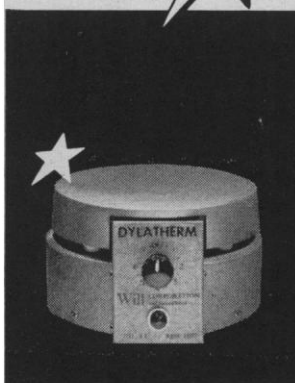
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rived from your editorial, for the following reasons:

1) Many research institutes which are now financially stable and very large in size do excellent work and yet rely on government contracts for their existence. At one time all of these organizations were small and no doubt had financial problems.

2) Universities are relying more and more on government grants for support of graduate research and facilities. Without such funding, graduate research in all but a handful of schools would be crippled.

3) There are research institutes, such as the one of which I am a member, that definitely were not founded for unworthy motives, that have good research facilities and are attracting and holding good scientists, but are still young and small. We rely heavily on government contracts. Most of our contracts are renewed, primarily because our work performance has been good.

4) Many of the abuses to which you refer are probably found in small *privately owned* companies which exist on government contracts.

I believe your editorial was written in an effort to point out some bad situations which undoubtedly do exist, but feel your attack will unfortunately damage legitimate and "necessary institutes" along with the targets of your editorial. I hope that my letter may persuade you to take another look at this subject and possibly you may see fit to write not a retraction, but an extension or redefinition of your first editorial.

MONROE E. WALL

*Research Triangle Institute,
Durham, North Carolina*

[Your editorial] . . . is extremely important and very timely, and I sincerely hope that it will be acted upon by those "gate keepers" who are crucial in controlling the flow of funds to such research institutes. There have already been embarrassing episodes involving such institutes, and I believe there will be more unless the kind of action you call for is taken.

RENSIS LIKERT

*Institute for Social Research,
University of Michigan, Ann Arbor*

. . . I strongly contend that, in our particular society, it is essential that the small independent research institute continue to exist, even though it must subsist entirely on government grants. Anything that will help to break the

stranglehold which the large and well-established research and development organizations have on the individual scientist can't be all bad. In my somewhat considerable experience with these 'sound' establishments, I have found your vaunted freedom to be almost nonexistent and the atmosphere to be oppressive. . . .

JOSEPH FUGGER

P.O. Box 1405, Pittsburgh, Pennsylvania

. . . I would like to add a word about a different class of small research establishment, namely those which are formed to explore a field or an idea which has not yet broken through to the point needed for major support. . . . The very large governmental and academic organizations require much time for moving and a small, independent foundation may be fully justified and very useful as an intermediate step for pump-priming and pioneering work because of freedom from the inertia which makes larger organizations slow to react.

JOHAN BJORKSTEN

Bjorksten Research Foundation,
Madison 1, Wisconsin

Responses to the editorial entitled "Unnecessary research institutes" ranged from, "Since when is it permissible to use the American Association for the Advancement of Science and its official publication as a means of propaganda in opposition to the free enterprise system upon which our country is founded?" (from a three-page letter from the president and founder of an institution bearing his name) to, "Toward the end of each month some administrator . . . sits down to juggle the time sheets. . . . As a former project leader, I was frequently amazed when I received a list of the charges made against some of my projects at the end of each month. At times I was supporting people who hadn't spent one hour working on the project" (from one of the letters that came from present or former staff members who asked that their names not be used).

The 15 February editorial dealt with a specific type of research institute: "the small, inadequately financed one that is formed to secure government grants and contracts and to live on the proceeds of such support." The variety of comment provoked by the editorial indicates that there is both concern and controversy over the place of such institutes in the scientific enterprise.—D.W.



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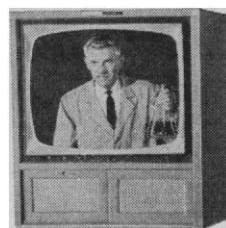
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