Letters

Social Science: Support Now

While struggling to absorb some small portion of Jacobsen's article on microwave ultrasonics (11 Mar., p. 1179) my concentration was interrupted by the hourly radio news, which was reporting new violence in the Watts area of Los Angeles, Pittsburgh's third bank robbery in as many weeks, the destruction by arson of a Pittsburgh apartment building, and the senseless shooting of a pet deer in one of the city parks. The recounting of these events prompted me to reread Wolfle's editorial, in the same issue, on "Social problems and social science," in an attempt to determine the context in which he could possibly ask the question, "Are the social sciences ready for similar treatment?"—that is, for financial support similar to that accorded to molecular biology three decades ago by the Rockefeller Foundation and to biomedical research by Congress since World War II.

Wolfle observes that "Occasionally there comes a time when a research area seems ripe for special support." I submit that the need for better understanding of the social sciences has long existed and that the disproportionate attention devoted to the physical and life sciences during the past 30 years has served to increase the lag in our knowledge of human behavior. Surely what happened in Watts, Selma, and Bogalusa suggests, in retrospect, a syndrome as dangerous as polio or measles ever were. Civil rights should have been receiving in 1930 the social-scientific attention it is so clearly demanding now.

I don't see why, as Wolfle suggests, the social sciences must necessarily possess "the ideas, the tools, and the methods . . . [to] offer substantially increased help in meeting pressing social problems" before they are given financial support. Were the tools and methods available before the medical sciences obtained financial aid for research? I rather suspect that the scientists were trained and the tools and methods developed with the help of this financial assistance. Indeed, one cannot help wondering what proportion of the research reported in *Science* each week would have been possible without government or private-foundation funds or to speculate on how much of the advanced instrumentation advertised in *Science* would find buyers without this financial support. I am in complete agreement with Wolfle that "It is much more difficult to capture the essence of [social] problems in the laboratory or under controlled conditions than it is to capture the essence of a physical or biological problem." But this is only an additional reason to augment substantially the funds available for training social scientists and for research in the social sciences. . . .

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Art and Science? Yes!

Harold Stevens' letter ("Art in Science? No!," 11 Mar.) was apparently based only on a reading of my brief description (10 Dec., p. 1486) of the exhibit entitled "Art in Science." He gave no indication of having seen the exhibit or of having read the more detailed analysis of theme and purpose which I published in the catalog. I believe that any analysis of this exhibit and of its significance as an experiment in liberal education and communication remains incomplete until the theme and the materials have been examined and considered in the context of intellectual history and the expanding spectrum of human experience; call it the "two cultures" problem if you will. Gyorgy Kepes, professor of design at Massachusetts Institute of Technology, said of the exhibit (Albany *Times Union*, 20 July 1965), "This show can have tremendous influence in bringing better understanding between the culture of science and the arts and humanities. To my knowledge it's never been done before in so well-organized a manner or on such a large scale."

Robert Coates, art critic, said of the exhibit (*New Yorker*, 16 Nov. 1965), that "one of its charms (and one of its most distracting features) is that there is no *division* between scientific and artistic entries; indeed until one checks against the catalogue, it is frequently impossible to determine whether a given item, all intermingled as the whole lot is, is a painting or a sculpture by one of our modern masters or a more or less run-of-the-mill production (a laboratory photomicrograph, say of a fragment of fish roe) that just happens to look like an Abstract Expressionist painting." He goes on to say, correctly, that "All this confusingness is part of the purpose of the showing, whose avowed aim is to spur us to a realization of how interlocked and interwoven the paterns of art and science can be." In a larger sense, however, and in order to avoid the illusions that arise from dealing in inert ideas about "creativity in the arts and sciences," no attempt was made to identify openly the relations between art and science or the gradations that exist between the "state of being" as art object and as natural object. The underlying assumption was that the systems of ideas which move any period of history can be identified through the images and ideas expressed by their arts and sciences.

The views of the world expressed today by artist and scientist alike are those of instability and uncertainty. Bronowski, the scientist, has predicted that we must learn to live with a science which by limitations in its logical structure must remain an open system of knowledge subject to change and continuous correction. Duchamps, the artist, formulated a theory of "esthetic impermanence" to help us understand our art, which as Marshall Fishwick says, is now both "cultural fact and stylistic device." In any case, the static landscape of both the art and the science of the mid-19th century is gone. I believe that this exhibit has contributed to the understanding of this fundamental social evolution. Alfred Frankenstein, art critic, said in the San Francisco *Chronicle* (28 Dec. 1965) that an exhibit of this kind "would be inconceivable and incomprehensible in a society that had not accepted abstract art among the facts of daily existence."

The catalog statement of the theme and purpose of the exhibit was selected as the lead article for the January 1966 issue of *Museum News*, the journal of the American Association of Museums, and is available to most readers. The

exhibit itself is available for national showing during the next two years under the sponsorship of the Department of Circulating Exhibitions of the Smithsonian Institution. Persons and institutions interested in showing the exhibit should address Miss Frances Smyth of that department.

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. . . Stevens seems to harbor the notion that is only through the "artist's vision" that the beauty of nature can be revealed. Cannot ideas of beauty be communicated directly from nature with science as the intermediary? The artist may be trying to communicate certain ideas with his work, but the observer's interpretation of the work is not necessarily the same as the artist's. Does art lose its value if it stimulates ideas in the viewer different from those which the artist intended? I should think not. Why then may not a microscopic or telescopic image convey a stimulus of equal esthetic value? Is the imagination not aroused in contemplation of the meaning and boundless natural beauty in a photograph of an exploding galaxy? Indeed, these "eye-catching configurations" and "accidents of nature" are probably all the more exciting because they show the natural beauty around us without having to wait for some artist to make the revelation.

In his comments on "esthetic honor" and "the artist's traditional preeminence in his own field," Stevens sounds like other critics of science and automation who are afraid that they or their specialty will be supplanted in this Age of Machines. "Art in science" is merely a by-product of research. The scientist is not concerned with turning out works of art per se. But if something worthy of being shared with others is kept hidden in order not to displease the hypersensitive artist, then who is the loser?

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. . . Artists at present seem to have very little concern for beauty, no doubt because they are so busy "communicating ideas." Perhaps the enthusiasm of non-artists for beautiful, science-produced objects arises because artists are so wrapped up in producing the "meaningful symbols" of which Stevens speaks by welding pieces of junk together or copying comic strips. It is a rare work of art these days which produces that good gutty sensation one gets from looking at something beautiful.

Stevens evidently wishes us to take into consideration the intention of the artist, for he admits that some works of art suffer in comparisons with the unintended by-products of scientific endeavor. This is like saying the runner-up should get the gold medal because he tried harder. The artist whose products are feeble in comparison with the computer patterns should probably try painting something else, or maybe stop trying to be an artist. He might even try learning how to run a computer, in order to produce the patterns he desires with the artistic intent he considers so necessary. Meanwhile, he would do well to remember that his intention counts for nothing with his audience. His work must stand alone. If it elicits the response in the viewer that he intended, fine; but he cannot cry foul if the same response is elicited by a photomicrograph, nor can he even say that his work is art and the other is not. The labels on the pictures telling which is which do not count as part of the pictures. . . .

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That Biblical Spider Again

Disputing F. Allen's interpretation of a line in Psalm 90 (Letters, 29, Oct., p. 554), E. E. Pilchik (Letters, 28 Jan., p. 404) lists translations of the Bible and remarks, "Not one hints of a spider in Psalm 90."

In the Latin (Vulgate), which Pilchik lists, the end of verse 9 of Psalm 90 (Vulgate 89) reads: "Anni nostri sicut aranea meditabuntur." The English (Douay, 1609), which Pilchik does not list, translates this: "Our years shall be considered as a spider."

In the *Liber Psalmorum* (Rome, 1945), the end of verse 9 of this same Psalm appears as: "finivimus annos nostros ut suspirium," which *The Psalms* (Benziger, New York, 1946) translates: "we have ended our years, like a sigh."

I end with a sigh of relief. The spider is gone.

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