

# Science and the Humanities: Bridging the Crosscultural Gap

## Some second thoughts about well-intentioned proposals for interdisciplinary studies between the two cultures

by Joan Baum

Question, asked of Laura Georgi, a 1974 New York State Regents winner: Aren't your interests, classics and biology, rather remote from each other? Answer, "The Greeks didn't think so."

Most Americans, however, do, and some professionals in the arts and sciences are again concerned about what C. P. Snow called "the gulf of incomprehension" between the two cultures. Snow made his statement 15 years ago; now, sadly, the gulf is deep as well as wide: Not only do the arts and sciences still have little to say to each other, but both, as disciplines or cultures, are remote from their own applied or practical effects. The situation is ironic: "Science" from *scientia*(L), meant broad systematic inquiry into knowledge; "art" from *ars*(L) meant crafts or skills.

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Twenty years ago, when J. Robert Oppenheimer wrote about these oppositions in "Prospects in the Arts and Sciences," his concern was primarily with the difficulty of addressing both survey and specialization in each study rather than with the larger conflict between the cultures. Snow's controversial essay, however, focused attention on the obvious rift between the sciences and the humanities, and only now are the implications of his view and its rationale beginning to be discussed. In 1959 Snow lamented that men of science could not deliver the plot of a Shakespeare play, and that literary critics could not describe the second law of thermodynamics. And today, most undergraduates would probably regard Wordsworth's consecration of Newton, "Voyaging through strange seas of thought, alone," as out of poetry's certain course, and Lewis

Thomas's fantasy of Bach streamed out in space as nothing but metaphor.

Both Oppenheimer and Snow responded to political atmospheres—Oppenheimer's 1954 address, an inevitable issue of the anguished McCarthy

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years; Snow's, a warning to overconfident scientists benefiting from the race for space, and to defensive literary critics deriding what they did not understand. In 1963, taking a "Second Look," he reaffirmed his somber judgment: ". . . we have lost even the pretense of a common culture. Persons educated with the greatest intensity we know can no longer communicate with each other on the plane of their major intellectual concern. This is serious for our creative, intellectual, and above all, our moral life." These are serious charges, but the problem is infinitely more complex than Snow's cocktail-party confrontations will allow or Oppenheimer's diaphonous idealism admit.

The problem of the two cultures now interests the grant agencies in Washington, but some of the proposals, to encourage interdisciplinary cooperation between the cultures on the undergraduate level, should be carefully reviewed. Good intentions do not necessarily control realistic or desirable results. Indeed, considering recent reports on the falling state of science proficiency in the nation ("Science Education [among 17-year olds] Slips in the U.S.," SN: 7/16/74, p. 7)—a finding that parallels published data for the humanities, there is reason for concern that interdisciplinary exchange in college between the arts, and science and technology, might accelerate the decline of competence within each discipline. There are also other reasons for apprehension.

Some research scientists have a wide distrust of specialists who optimistically embrace the hopes of fourth-revolution electronics and social science, or who forswear inquiry in the lab for a chance to pontificate on the Big Picture in Washington. On the other side, many artists and literary critics resent society's toleration of them as the handmaidens of history and reject the specious morality that often underlies proposals in science to "humanize" technology. It may be that the two cultures really have nothing to say to each other if interdisciplinary study is understood as measurable applied benefits or moral exigency. The artist does not need science to improve his vision; nor does the scientist need the humanities to correct his motives. Art is essentially immaterial and ideal;

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Frankenstein's monster kills even though he has read *Paradise Lost*.

Nonetheless, a sense of mission persists. Despite Snow's forced binary system and bias, the situation he describes obviously causes concern. The combined efforts since 1973 of the National Endowment for the Humanities and the National Science Foundation to foster research and curriculum change on the undergraduate level is symptomatic at least of a fear that scientists are removed from modes of thought other than their own, and humanists from different kinds of knowledge. What is curious, however, is the almost one-sided effect: Although the loss is greater for the humanities, which often sends its experts into public life, most joint proposals by the NEH and NSF are intended for the sciences, and they tend to recognize humanities only in traditional and obvious

roles: ethics, philosophy, law. Proposal 48, for example, addressed to presidents of colleges, universities and directors of nonprofit organizations, seeks to encourage investigation of "cultural and humanistic values as they are challenged, modified or influenced by advances in science and technology." But only one of the 26 subject areas listed has to do with the arts: "aesthetic values implicit in science" (No. 19).

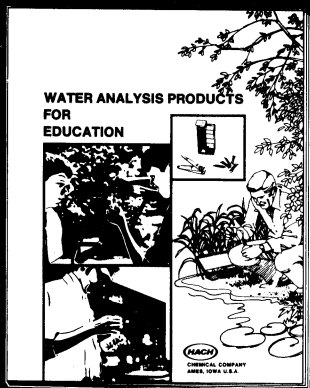
A recent review in *HUMANITIES*, the NEH newsletter (April-June 1974), of a 1973 grant to Lehigh University for a model interdisciplinary studies program in the arts and sciences shows the same partiality. The burden seems always to be on the arts to get themselves included as legitimate powers. One thinks of Lionel Trilling's recent query in *COMMENTARY* (December 1974): "What is the basis of our society's belief that art is so important?" The question goes unanswered.

The Lehigh Program of "Science, Technology, and Human Values" directed by classics professor Douglas D. Feaver, may also be incapable of nationwide imitation. Lehigh, a small private coeducational school, already had a program of postponement of specialization until the junior year, long before the interdisciplinary-studies grant arrived. Even so, the Lehigh program seems admirable: It seems to recognize that the essential benefit of exchange between the humanities and the sciences is not practical, nor moral, but cultural. If it is good for a biologist or engineer to know about Mozart and Shakespeare, then, for the same reason, it is good that a literary critic should know the fundamentals of microbiology. In this regard, the two cultures must remain separate but equal.

It is true, as Thomas says, that man, "most social of all social animals," does not often feel his "conjoined intelligence," but it is doubtful whether new proposals for undergraduate interdisciplinary studies between the humanities and the sciences will accomplish the purpose—not even if students acquire enough information to pass Snow's muster at parties-of-challenge. But there may be a reconciliation in another of Thomas's assertions. If, as he suggests, man is compelled genetically both to express himself in art and to respond to it, just as he is driven genetically to seek what he needs for survival, then there is room for a study of this so-called cultural determinism—a study that considers "the ascent of man" as an evolution controlled as much by creative as by physical drives. □

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