The Academic World of C. P. Snow

Author(s): Albert W. Vogel

Source: *Twentieth Century Literature*, Oct., 1963, Vol. 9, No. 3 (Oct., 1963), pp. 143-152

Published by: Duke University Press

Stable URL: http://www.jstor.com/stable/441032

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at https://about.jstor.org/terms

Duke University Press is collaborating with JSTOR to digitize, preserve and extend access to *Twentieth Century Literature*

149.10.125.20 on Thu, 24 Feb 2022 05:20:25 UTC

THE ACADEMIC WORLD OF C. P. SNOW

ALBERT W. VOGEL

It is no secret that the academic novel is one of the least distinguished literary forms. Why this is so, it is difficult to assess, but at least one reason stands out above the others: The first rank of writing talent does not look to the academic world for strong drama. Many academic novels are written by teachers or educational administrators who are concerned chiefly with expressing an educational theory (Carlos Baker, *A Friend to Power*) or by professional writers who are interested in criticizing some aspect of education (John Hersey, *The Child Buyer*). From this viewpoint, the novels of C. P. Snow represent a remarkable literary achievement. Snow is perhaps the first author since Dickens (*Nicholas Nickleby*) to write an academic novel which transcends the limitations of the form and subject. Dickens and Snow have this in common: the meaning of their works lies outside of the academic world. Dickens was concerned with illustrating the social abuses of his day, and Snow is concerned with illustrating the uses of power—political, scientific, as well as academic power—in contemporary society. Both authors chose academic settings as environments in which to work out aspects of their larger theme. This should make it clear that I do not think the academic world is the most important theme in Snow's novels. Only three of the eight novels of the Strangers and Brothers series are classifiable as academic novels (*The Masters, The Light and the Dark, The Affair*), although the theme of education cuts all across the series. But if education is not the most important theme of the series, it is a pervasive one, and one that deserves to be examined if the novels are to be fully understood.

By way of adding another dimension to our discussion I should like to mention two other contemporary writers of fiction who have used the theme of education in their works—J. D. Salinger and Hermann Hesse. These two writers differ from Snow in at least one important way. And here we need to draw the distinction between educational theory, which is a division of philosophy, and education used as a setting or "world" for a larger theme. In *Siddhartha,* Hermann Hesse deals with education at the theoretical level almost entirely. In the stories and the novel of Salinger there are glimpses into the academic world, but Salinger is more concerned with his educational theories than with the realistic presentation of an academic setting. Snow, on the other hand, gives us very little theory. It is possible to distill educational theories from Snow's work, but for the most part Snow is concerned with developing his ideas through the presentation of setting and plot, and not, as is the case with Hesse and Salinger, with abstractions which inform educational ideas. Whether these differences result from differences in literary tradition (Romantic as against Realistic writing) or result from profound differences in the men's philosophies, it is not our place to examine here. But it is important to note that the educational theories of Salinger and Hesse fall into the general category we call Oriental or "irrational" while Snow seems to be working squarely in the rational Western tradition.[1]

Snow's academic world is described in the eight novels of the Strangers and Brothers series,[2] and in an early novel, *The Search*.[3] Snow's Rede and Godkin lectures published as "The Two Cultures and the Scientific Revolution," and "Science and Government,"[4] must, of course, remain in the background of our thinking. Perhaps it is unfortunate that these lectures have received so much attention in the press at the expense of the novels. Granted, these lectures clarify issues basic to Snow's thinking, but the presentation of the issues in the lectures lacks the subtlety of the novels, and the lectures do not do justice to the complexities of the issues or to the complexity of Snow's appreciation of them.

The lectures speak of two problems in contemporary Western society. The first of these argues that the scientific and humanistic cultures are out of touch with one another. A hasty reading of the lectures would suggest that a little humanistic education added to the education of the scientists and a little scientific education added to the education of the humanists would put them back in touch. The novels make it clear that the differences between the two classes of men go well beyond education to problems arising from the differences in temperaments and to the forms of power employed by scientists and humanists in order to make their way in the academic world.

The second problem argues that there is a kind of scientific thinking which is essential to the maintenance of good, modern government. This problem Snow illustrates in the lectures by tracing the careers of two British scientists, one of whom employed the right kind of scientific thinking and one of whom did not. A more subtle and penetrating presentation of this theme can be found in the careers of Francis Getliffe and Walter Luke in *The New Men* and elsewhere in the novels.

The first novel of the series, *Strangers and Brothers* (1925-33), introduces the reader to Lewis Eliot, narrator of the series, and George Passant, a teacher and early influence on Eliot. For our purposes, this novel is about the difficulties Eliot and his friends encounter when they try to rise above their lower middle-class positions in society. Eliot is working as a clerk in a local education office. Ironically, in spite of his intelligence, he is destined to remain a clerk all of his life unless he can educate himself for something better. He does educate himself, and he goes on to become a Cambridge Don and a government official. Education is one key to his economic success and social amelioration. The other key is ambition. Unfortunately, Passant lacks Eliot's ambition and he languishes in a minor position in a law firm until he is rescued, temporarily, by Eliot.

The Conscience of the Rich (1927-36), introduces Eliot to wealthy British society. We also learn something about the education of British lawyers and physicians. Charles March, son of a wealthy English family, is preparing for the bar with Lewis Eliot. Prospective lawyers in Britain "read" for their bar examination more or less on their own. After passing the examination, those who wish to become barristers and practice before the bar "go into chambers" with an established barrister, where they supposedly acquire practical experience. Whether or not the system works depends upon the ambition of the pupil and the honesty of the senior barrister. March decides to give up the law and become a physician. Studying medicine, of course, requires that he study in the more formal sense of attending lectures, but the change in profession seems to be more a social than an intellectual change. Barristers rank higher on the prestige scale than do "practitioneers" as Charles' father calls physicians.

Time of Hope (1933-44), re-tells much of the story from the previous novels, except that it is now told from the viewpoint of Lewis Eliot's education for the bar, and of his establishing himself in his profession.

The Masters takes place in 1937, and may be called an academic novel. The plot centers around the politics involved in electing a new Master to a Cambridge college, and it is an excellent treatment of the internal workings of an English college.

The Light and the Dark (1935-43) is also largely centered in Cambridge. This novel is about Roy Calvert, a young and gifted scholar of the college.

The New Men (1939-46), concerns some of the Cambridge scientists who are now working at Barford on the atomic bomb. Although the setting shifts from a college to a scientific institution, the men and many of the issues are similar.

Homecoming (1938-51), sees Lewis Eliot in the College at Cambridge as a teacher of law. This novel also covers the period of Eliot's unhappy marriage, and the death of his first wife, Shiela. During this time Eliot is also a consultant to an English industrialist, and later a government official.

The Affair (1953-54) is an academic novel set in post-war Cambridge. Dr. Howard has been discharged by the college for having published a scientific fraud. A part of the college thinks that the case should be reopened because there is some evidence that the fraud was not perpetrated by Howard but by his research professor. The evidence is re-examined, and Howard is re-instated as a Fellow. This novel also illustrates many of the changes that have taken place in the college as a result of the war.

The Search is not a part of the above series, but it does deal with many facets of our subject, and it also fills in areas of interest to us not dealt with in the other novels. The story concerns Arthur Miles, his education, and his career as a scientist from the time of his first awakening to the wonders of science, to the time of his disillusionment with scientific research. Although this novel lacks some of the artistry of the later works, it is nevertheless a good brief statement of Snow's thinking on both education and science, and their relation to each other.

Against the background of these brief descriptions, we can now begin to discuss the academic world of C. P. Snow.

"Down in the body of the hall the undergraduates were making a hubbub," (*The Affair*, p. 141) is one of the few references to students to appear in the series. Elsewhere students are heard to pass in the courtyard, or to return from a dance; we read a bit about Arthur Miles as a student and about Eliot's preparations for the bar. But for the most part, the students do not seem to be important to the drama of academic life. In a sense, one misses them, and it is curious that their interests cross the interests of the faculty so infrequently. It is not enough to say that the faculty ignores the students because the faculty is interested only in research, although there is something in that, too. But even the faculty members who are not doing research are indifferent to the student body—with exceptions. An interest in the students is usually interpreted as a symptom of a decline in research ability. Unfortunately, we don't see enough of the students to be able to judge where their interests lie. But from what we see of the faculty we may conclude that they are more interested in the political and administrative rather than the academic side of the college.

Snow's treatment of the faculty is more complete. It is impossible to generalize about Snow's faculty men, except to say that they go from dull incompetence to brilliance. Roy Calvert is before his death a brilliant student of Oriental languages engaged in productive research. Despart-Smith ceased contributing to his subject almost from the time he was elected a Fellow. Gay had been a great Icelandic scholar in his day in spite of the fact that he was vain, shallow, and, perhaps, not overburdened with intelligence. Francis Getliffe was a brilliant and far-sighted scientist who had a successful career in teaching, research, and the government. His scientific colleague, Nightingale, contributed almost no research at all to his subject and only found himself as an Army officer and as a college administrator. George Passant had some ability to bring out the best in other men, but he lacked ambition for himself, and he lacked understanding of the way one gets ahead in British society. Crawford, presently to become Master of the College, is a gifted scientist, but he lacks insight into human nature. Winslow is a "savage, disappointed man" (*The Affair*, p. 59) who lacks the philosophical insight his learning should have given him.

The conclusion we must reach is that for each man of ability on the faculty there is at least one other who is below average. This would come as no surprise, but the setting is a college at Cambridge, one of the great universities of the world. Moreover, the faculty only numbers fifteen or so men. We might expect that where the numbers are small, the prestige and salary high, and where there is no shortage of qualified men, that the faculty would be composed only of first rate scholars and teachers. Why this is not so is hinted at in the deliberations which surround the election of a new Master in *The Masters*, and in the deliberations (less fully worked out in the series) surrounding the appointments of Calvert to the faculty and a Rev. Udall to a living controlled by the College. Ordinary men like Despart-Smith and Winslow tend to look for ordinary traits in other men, and to fear men more competent or of different convictions than themselves. There are also a whole spectrum of political and administrative considerations that require that faculties be balanced by subject, that seniority and the opinion of seniority be respected, and that compromises be made in the face of political and administrative as well as personality pressures. And these considerations sometimes stand in the way of good men.

Closely akin to the question of the abilities of the faculty men is the question of academic research, and something we must call academic luck.

Roy Calvert happens to have been born with a facility for languages. He becomes a great scholar only partially because he is talented, but also because he is driven to hard work as a release from his inner fears and conflicts, and very importantly because he is working in an area of research so untouched and esoteric that each day brings a fresh discovery. Gay, the Icelandic scholar, had essentially the same "luck" when he began his career. Arthur Miles had similar "luck" in science. Miles' career forged ahead not only because he was talented and intelligent, but also because he was working in a branch of crystalography that had not been worked over by other men. In actual fact, the work Miles was doing was not very demanding and did not employ his talents and imagination fully, a shortcoming that Miles recognized but put out of his mind in the interests of his career. Francis Getliffe seems to have been a self-motivated man who engaged in large scale scientific research. Nevertheless, it was only the advent of World War II that made his work in Radar important, provided him with the resources of the government to support his research, and also drove him into areas of research he might not have entered otherwise. The same might be said for Walter Luke and Martin Eliot, whose researches in nuclear physics were sustained as much by political as scientific considerations.

It seems clear from observing the careers of Snow's faculty men that contributions to scholarship are almost never motivated by "pure" or intrinsic considerations. Getliffe, as we have seen, did his work in the interests of his country. Luke continued in nuclear research because of the power situation involving the Western powers and the Soviet Union. Nightingale charges that Gay was a successful scholar only because he was tenacious enough to ". . . sit down to his sagas for four hours a day for sixty years . . ." (*The Masters*, p. 40). And there is little doubt that Calvert was driven to his research by his emotional problems. In spite of this, one must conclude that the failure of some of the faculty men to contribute to their subjects was as much an emotional failure as a failure of luck or inspiration. Nightingales's lament that "It must be very nice not to need an original idea," (*The Masters*, p. 40) rings hollow.

The next question is what happens to a scholar when he ceases being productive. Arthur Miles loses his interest in science altogether and turns to literature. Nightingale turns to administration, and Gay basks in his past glories. Most typical is Martin Eliot, who begins collecting botanical specimens. Speaking to this point, Lewis says of him:

> As a small boy he had been more of a collector than any of us. Now the addiction was coming back. Was it because he was reconciling himself to not making a go of academic physics? Was that why he concentrated so much on his pupils, and then in his spare time went off in search of botanical species. (*The Affair*, p. 48.)

In Snow's academic world, success means success in scholarship and research. The man who never contributes or ceases halfway through his life to contribute, ceases being a success.

The issue raised in the Rede lectures, the gap between the world of science and the world of humanities, finds its fullest focus in *The Masters*, although it echoes elsewhere in the series. The college is electing a new Master, and the choice has come down to two men: Jago, whose subject is

English, and who has only a small reputation as a scholar, but who is the more "human man"; and Crawford, who is ". . . conceited . . . shallow . . . third rate" (*The Masters*, p. 71) in matters involving human relationships, but who has a growing reputation as a scientist. One would expect a community of scholars to go about the business of electing one of their number Master of their college without recourse to the shabby politics one might find in a small town. These are men of reason, trained in scholarship to arrive dispassionately at the truth. This, however, is not the case. Whatever abilities these men might have to weigh and sift evidence is forgotten by them when they turn their attention from their subjects to the election. The novel is virtually a textbook on small time politics, complete with a political manager in Arthur Brown, double dealing, backbiting and character assassination. The only thing missing is graft. In the end Crawford is elected, chiefly on the basis of his reputation as a scientist, not because he has demonstrated abilities as an administrator in a job essentially administrative, and in the face of his shortcomings as a "human man" in a job demanding the ability to preserve peace among men of diverse personalities.

The point, however, is that the strengths and weaknesses of each of the men seem to be extensions of their subjects and their educations. Crawford does not trample men's feelings because he is cruel, but simply because he handles human problems in the same way that he handles problems involving the physical world—without the sympathy and sensitivity stemming from emotional involvement. Jago, the humanist, is the more "human man," but he is also the more vulnerable man. His relations with his wife and his friends are based on emotional and illogical values which lay him open to attack through them. Moreover, as a humanist he lacks the cold-blooded detachment that Crawford's scientific training has given him. In *Homecoming*, Lewis Eliot makes a mistake involving human and scientific qualities. As a government official he is instrumental in denying a contract to his former employer, Lufkin, because he believes that Lufkin's technical facilities are inadequate for the work. Eliot chooses in favor of scientific plant rather than man. Eliot's mistake is brought home to him when the company with the better facilities fails to fulfill the contract. Eliot would have done better to have banked on Lufkin's purely human qualities of pride, ambition, imagination, and love of country.

Suspended scholarship is a situation where a scholar demands highest standards of scholarship when dealing with his own subject and completely abandons those standards when he turns his attention elsewhere. An ironic example of this involves Old Gay, the Icelandic scholar. As a scholar, Gay has established an international reputation which is above criticism. As the senior faculty member in *The Masters*, Gay has charge of the honorific duties to be performed during the period of the election. The college statutes define the method of electing a new Master but the ritual and pomp surrounding the election are not only not defined, but are based on very shaky tradition. In spite of this, Gay demands a degree of pomp and ritual which, ironically, as an historian he should have known was not justified in the light of the historical evidence.

Gay's vanity, in this case, suspends his standards of scholarship. Another curious example of suspended scholarship is Arthur Brown's refusal to believe Roy Calvert's eye-witness report that the night bombing of Germany was ineffective. Brown, a trained scholar, chooses to believe the BBC and *The Times* over Calvert's experience. He is seduced into abandoning his scholarship by the comfort offered by the official view.

We might turn our attention now to some of the changes which have taken place in the College as a result of the war. Scientists and engineers have swollen the faculty in spite of a pre-war reluctance to add them, thus fulfilling sir Horace Timberlake's prophecy that:

> "You will have to change the character of your society in twenty years," said Sir Horace, with a sudden dart of energy and fire. "History will make you. Life will make you. You will not be able to stop it. . . ." (*The Masters,* p. 125).

Sir Horace was a business man who left a sum of money to the College to increase the size of the staff, preferably in the sciences. Francis Getliffe is back doing research after a successful career in the government. Nightingale, whom we remember as an unpleasant and unsuccessful scientist before the war, has returned a new man, having found himself in the Army. He is now happily employed as Bursur. On the other hand, the undergraduates still make a hubbub down in the hall and the wine still goes around after dinner. Whether it is the basics or the superficialities which have changed depends upon one's point of view.

Although Gay may have written his books to satisfy his vanity, and although Calvert may have been driven to his work by his emotional problems, it still shocks the reader to hear the postwar scientists talk of their work in the following way:

> I'm not interested in any damn discoveries. All I'm interested in is cooking up a thesis. Then I can publish a paper or two by hook or by crook. That's the way everyone's playing the game. (*The Affair,* p. 325).

The postwar men are frankly cynical and frankly more concerned with playing the game than in making important discoveries. The cynicism, of course, is the new element here, and in a sense it represents a kind of honesty. Old Despart-Smith put on all the airs of a scholar, but produced no scholarship.

Allied to this are the several frauds which crop up here and there in the novels. Howard was discharged by the College for publishing a fraud. It turns out that he was innocent, and that the fraud (wittingly or unwittingly) was the work of his research professor. In *The Light and the Dark* Calvert suggests in public that another Orientalist has published under his own name the work of a colleague. And in *The Search,* Arthur Miles discovers that a friend of his has published scientific conclusions that are false.

Snow gives us only a few glimpses into the other side of the academic world, the secondary schools. All of them are unpleasant. Howard, the scientist in *The Affair* who was dropped by the college, is temporarily teaching in a secondary school. He is unhappy with his work, and so careless at it that he does not even bother to spell correctly the scientific terms he writes on the blackboard. In *The Search* there is a teacher named Luard, who alternately inspires and discourages Arthur Miles's interest in science. Luard is a sick man, which somewhat accounts for his behavior, but he is also an unhappy man who has turned to secondary school teaching after a failure at research. Our first sight of Lewis Eliot shows him doing dreary work among third rate men in a local education office, a scene which does nothing to suggest that the administrative branches of education are any better than the teachers they employ. In *Homecoming* there is a brief discussion of schools and education near the end of the book which illustrates the traditional class structures of British education, or, rather, it illustrates middle class aspirations toward upper class values in education. "They can well afford it," says Gilbert Cooke of a friend who is sending his son to an expensive school. ". . . it's the best education in the country. All the world says so." *World* in this context means the established or snobbish, social climbing world. It is also interesting to note that one of the women present, Margaret, who was born into the aristocratic class and so can afford to take her status lightly, opposes Cooke's view.

Speaking on the subject of teaching, Arthur Miles (and one suspects Snow) has this to say:

> It was a long time before I understood Luard. I had to go to two universities, to listen to educational theorists, to examine in University scholarships myself, before I fully realized why he had lost heart and made the lessons so conventionally arid. Indignantly I discovered the mixture of vested interests, muddled thinking and memory of their own past that had made men adhere to the "logical" method of teaching science. "If you want to interest your pupils," I remember someone telling me as I was pleading for a gleam of something to catch boys' imaginations, "you can put them in the position of the original discoverer." Put them in the position of the Original discoverer! The pedagogic nonsense of it all! When you think of the changes and stumbling, the flashes of insight and the sheer mistakes, that have gone to every discovery since science began! And then to expect to teach in that way. "The real method of teaching science apart from the frills," the man went on, "is to go from observations to the conclusions. Start with simple experiments, note your deductions from them, and don't worry them with the new fangled stuff. It's the way of experience, Miles, it's the logical way, and you can't do better than that." The logical way. They might as well teach French by starting with an agglutinative language like Eskimo and follow the logical changes in language through the Basque down to the European tongues. They might as well teach biblical history by making the boys spend years in Sinai.
>
> And the pedagogy goes on when there is every chance of rousing a child's enjoyment, from stars to meter-cars, from atoms to the lives of birds. When I think of the conspiracy of dullness in which these exciting years are wrapped, I no longer wonder at the drab routine the middle ages made of Aristotle: I wonder instead that they kept him so fresh and clear. (*The Search*, p. 13).

The implications of the above stand out clearly. The chief task of the teacher, according to Snow, is to inspire and excite. And if the teacher is successful in engaging the imaginations of his students the facts and methods will follow by themselves. That this is not the way children are taught in Snow's academic world, is equally clear.

Another aspect of the academic life is the close relation between the academic world and the rest of British society. To an extent the scholars are isolated from the main flow of British history, but one wonders whether this indicates a gap between scholar and society. I think not. The level of society—on and off-campus—portrayed by Snow is rather more of a piece; the basic values and ideals of the scholar are not distinctly different from those of the government official or the successful business man. Specifics and vocabulary differ, but the essentials are the same for all. Thus, the scholar experiences little difficulty when it comes to dealing with business men or government officials. And when the time comes, the scholars do not find it difficult to slip from the college into a government post. Francis Getliffe made the transition very easily. Martin Eliot and Walter Luke were successful administrative scientists. Lewis Eliot slid in and out of the college, the business world, and the official world. In *The Masters* there is a scene where several members of the faculty negotiate with Sir Horace Timberlake for funds to create additional chairs at the college. There are minor differences separating the thinking of Timberlake and the faculty men, but the differences are less great than the differences which separate the scientists and the humanists. And while Timberlake talks of creating chairs in the sciences and engineering, his imagination is captured by the researches of Roy Calvert in Oriental languages. One suspects that it is the process of research; rather, the progressive and successful aspects of research that Timberlake admires. In this, he does not differ from the faculty men who admire a successful scholar whether or not they understand his subject. Moreover, Timberlake's insistence on more chairs in science and engineering is based on a reading of history which the faculty men do not at that time agree to, but all agree that the college itself is an important part of the fabric of British society, and that it must be preserved and expanded for the good of British society.

A factor here is the small size of the British intellectual community. Men know one another, and intellectual equals in one part of the community can reach—even if they do not understand—counterparts in another. Arthur Miles is invited without application to come to Cambridge and do research. Eliot is invited into the government almost as casually. Luke and Martin are invited to create a scientific establishment. And it comes as a surprise to an American reader to learn that Howard, a Ph.D. in physics, cannot find any form of employment in science except school teaching because he has been dismissed from the faculty of a Cambridge college. But the scientific world in Snow's novels is so small that everyone knows everyone else, and the scandal associated with Howard's name apparently makes him unemployable within the world.

But set against the shortcomings of Snow's academic world is the whole grand panorama of British intellectual life. And in a very important way, this panorama makes the small personalities, the frauds, and the mistakes in judgment seem unimportant. Science is a living force which continues to grow, and because it is a living force it is greater than the frauds perpetrated upon it, and Cambridge can survive the shortcomings of some of its weaker faculty. One cannot escape the conclusion that science and education are secure and will retain their value through time, regardless of what man fails to do for them. I say this to make it clear that I do not consider Snow's novels to be a sweeping indictment of British education. And I wonder whether his intention is to criticize, at all. We have grown so used to educational criticism that we just assume that all realistic writing on the subject is a derogatory social commentary, when it may only be intended to portray social truth. One might be justified in concluding that the schism in the body intellectual described in the Rede and Godkin lectures is not the important lesson Snow is trying to teach. Rather, he is calling our attention to the imperfectness of human nature, which when set against an equally imperfect society can still manage to come out as a net gain for man if man is willing to put human values first:

> And so after the years of struggle the personal things had won, I thought. Perhaps they were always bound to win. With one of memory's materializations, I recalled the time my father and I had finished making our telescope; and how, to allay his disappointment, I had pretended to see wonders which were not there. Perhaps that was my first denial of science, right at the birth of my enthusism. . . .
>
> I ceased to look at the stars shining over the sea. With a deep content, I walked towards the house, whose lights were streaming through the tranquil twilight.
>
> (*The Search*, pp. 342-43)

Hood College

---

[1] See my "J. D. Salinger on Education," *School and Society*, Summer, 1963, pp. 270ff.; and "Eastern Light on Western Education," *College University Quarterly*, May, 1963, pp. 19ff.

[2] All of the novels of the Strangers and Brothers series are published under the imprint of Charles Scribner's Sons, N.Y. Page citations are from these editions.

[3] C. P. Snow, *The Search*, N.Y.; Charles Scribner's Sons, 1958. Page citations refer to this edition.

[4] C. P. Snow, *The Two Cultures and the Scientific Revolution*, Cambridge, England: Cambridge University Press, 1959; *Science and Government*, Cambridge, Mass.: Harvard University Press, 1961. For another view of these lectures see F. R. Leavis, *Two Cultures?* New York: Pantheon, 1963.