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SOCIOLOGY AND THE DISTRUST OF REASON *

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I

To use *"Historical Perspectives and Sociological Inquiry"* as the theme of an American Sociological convention would have been incongruous twenty years ago. It is not so to-day. We meet amidst upheaval directly affecting the academic community. The social sciences, and sociology in particular, are at the center of the storm. The freedom to do scholarly work has been questioned when it is not directed to problems considered "relevant" by the critics. In this setting we must demonstrate, to those willing to listen, that great issues of the day can be examined with that combination of passionate concern and scholarly detachment which is the hallmark of reasoned inquiry in our field.

But there are those unwilling to listen. Detachment and analysis as hitherto practiced, and almost regardless of content, appear to them fatally impaired because they feel that even in the midst of great wealth they must live by an ethic of social despair. Here is one expression of this sentiment, taken from the privately circulated manuscript of a sociologist who is a respected member of a university faculty:

> "Time is short; we cannot wait years for research to give us impregnable theses. America's academia fiddles while the fires are burning. Where are the studies of the new corporate power, of the Defense Department, of the military-industrial complex, of the new bureaucracies, of Vietnam? American academics are prisoners of liberal democratic ideology. Even as the chains rust, they do not move. A new current of reason and passion is arising in America—outside of its conventional institutions. The current of reason must flow faster to create an image of reality and hope for the future, for a ruling class in despair will soon reach for some other kind of ideology, and all that is left for the American establishment is 'patriotism,' that is fascism."

In this view the evils of the world loom so large that only those energies which attack these evils head on are legitimately employed. By that standard, much or most scholarship fails.

It is true that they are a minority. But the social despair motivating this minority also moves larger numbers, perhaps at a distance, but still significantly. Why is this so? The Vietnam war and the race problem are the obvious answer. Or more precisely, the declining credibility of governmental authority in both fields when official declarations are belied by official actions.[1] Yet the protest and the ideological challenges, which should be addressed to the government, have been deflected to such an extent that the universities appear to be the institutions most seriously affected. Some student leaders have said that the universities are their arena of public action. But this will not explain why large numbers of students, a significant number of faculty-members and many nonacademic bystanders have come to exploit the university as a stand-in for the politics to which they do not have an access commensurate with their convictions. Why do the few who feel moved by social despair, and reject ordinary politics altogether, evoke such resonance among the many when they

attack the universities and the values of scholarship?

In posing this question, I am mindful of several contributions. The sharp rise in student unrest during recent years has been analyzed in terms of generational conflict. Lewis Feuer has amassed evidence on this theme from far and wide and on this basis delineated the symptoms of student protest. Bruno Bettelheim has provided us with "a psychograph of adolescent rebellion." His emphasis, like that of Kenneth Keniston and Bennett Berger, is on an age-cohort of anxiety. In modern society there is a prolonged period of dependence between childhood and adult responsibility. In effect, youths are permitted very early sexual experience, but when on that or other bases they claim or except the independence of adults, education prolongs their dependence and an automated technology makes them feel obsolete. Edward Shils has analyzed the resulting protest in terms of a utopian phantasy of plenitude, a belief in the sacredness of immediate experience, and the consequent attack on all boundaries of discipline, institutions, and authority.[2]

I have learned much from these and related analyses, but I also note that they end rather regularly with an appeal to the people over thirty. We are called upon to "stand firmly by the traditions of teaching, training and research as the proper task of universities"; we should "not allow ourselves to be swept away by the desire to be 'with it', to relive our lost youth or to prolong our fading youth."[3] I agree, but I ask myself whether this is enough. The literature on student protest often gives the impression of having been written by kindly uncles whose air of concern or sympathy and whose analytical stance give one no intimation of mortality. But we are mortal. When the value of scholarship is in question, an analysis confined to the protest of youth will appear patronizing. It will miss the fact that the protest expresses not only the disquiet of the children, but also the growing uncertainty of their parents. In the midst of a crisis of legitimacy, we must try once again to interpret the values we cherish and understand why our adherence to them has become ambivalent.

In addressing myself to this task, I shall (1) characterize the belief in science which has become the central legitimation of universities; (2) examine the attack on the value of academic scholarship which the great critics of modern civilization launched during the 19th century; (3) show that in the 20th century Western culture has been marked by a changed sensibility in the arts which has increased the distrust of reason; (4) make reference to political aspects of this distrust in reason, especially by examining the rhetorical use of the term "fascism"; (5) note the greater institutional vulnerability of universities owing to the changed role of science since World War II. And, finally, I shall offer an assessment of the problems facing sociology in a period when the belief in progress through knowledge has been impaired and the legitimacy of scholarship is in question.

II

The belief in science has remained remarkably consistent from the time of its first articulation in the 17th century to our own day. Francis Bacon wanted to inspire men with confidence that knowledge enhances human power. "Nature to be commanded must be obeyed; where the cause is not known the effect cannot be produced." He attacked the zealots who opposed science because they feared for religious faith and state authority.

> ". . . surely there is a great distinction between matters of state and the arts (science). . . . In matters of state a change even for the better is distrusted, because it unsettles what is established; these things resting on authority, consent, fame and opinion, not on demonstration. But arts and sciences should be like mines, where the noise of new works and further advances is heard on every side. . . ."[4]

By the mid-19th century the "noise of new works" was on all sides and scientists could speak with the confidence of great success.

For a representative statement we may turn to the physiologist Helmholtz who considered the purposes of the university in terms of the relation between the natural sciences and all other disciplines. In 1862, he noted the specialization and frequent incomprehension among the several disciplines and asked whether it made sense to have them continue in the same institution of learning. Helmholtz compared the disciplines in terms of the way in which they achieved

their results and noted—as so many have since—the greater precision in the natural sciences and the greater richness and human interest in the *Geisteswissenschaften*. The latter have a higher and more difficult task, and contribute to order and moral discipline. But in respect of method they can learn much from the sciences proper.

> "Indeed I believe that our time has already learned a good many things from the natural sciences. The absolute, unconditional respect for facts and the fidelity with which they are collected, a certain distrust of appearances, the effort to detect in all cases relations of cause and effect, and the tendency to assume their existence,—[all this] distinguishes our time from earlier ones and seems to indicate such an [exemplary] influence [of the natural sciences]." [5]

The progress achieved through the advancement of science appeared to justify this position of the natural sciences as the model. Scientific knowledge is power and increases "the benefit and use of life." Helmholtz made two reservations only as an aside. The scientist must become increasingly narrow in his specialization and "each student must be content to find his reward in rejoicing over new discoveries." Implicitly, all other qualities of the human mind were diminished.[6]

For a contemporary statement, it is perhaps best to recall the thesis of C. P. Snow that "the intellectual life of the whole of Western society is increasingly being split into two polar groups." [7] World War II and the post-war years had been a period of unprecedented scientific advance and public support of science. As a former research scientist, Snow shared the resulting bouyancy of the scientific community. But, as a writer sensitive to the critiques of science, he put the case of science more sensitively than most. Everyone, he says, is aware of human tragedy at the individual level. Scientists certainly are. "But there is plenty in our condition which is not fate, and against which we are less than human unless we do struggle. . . . As a group, the scientists . . . are inclined to be impatient to see if something can be done: and inclined to think that it can be done, until it's proved otherwise. That is their real optimism, and it's an optimism that the rest of us badly need." [8] Snow contrasts this scientific creed with the cultural pessimism of literary intellectuals, whom he calls "natural Luddites." Ever since the industrial revolution, men of letters have stood uncomprehending at the tremendous advances of science and technology, unable or unwilling to see that the age-old scourges of hunger and poverty could be relieved only in this way.

The history of the belief in science still needs to be written, but the three examples I have cited are prominent enough. The commitment to scientific work makes sense if there is hope that in the long run the constructive uses of knowledge will prevail. Science presupposes a belief in the perfectability of man; it does not flourish amidst preoccupation with its own potential evil. These are among the reasons why the scholar is freed of purposes extraneous to his inquiry, and why the institutional immunities of the university were considered legitimate.

III

We accept these beliefs and institutional arrangements as long as we cherish the pursuit of knowledge. But during the last two centuries the legitimacy of this pursuit has been challenged repeatedly by appeals to the imagination and to authentic experience. Generational revolts have reflected this conflict of values between reason and the "poetry of life." Such revolts have erupted in movements of liberation during the 19th century, and in radical movements at the end of World War I, during the Depression, and in the 1960's. Conflicts over the belief in reason are a major characteristic of Western civilization.

Schopenhauer, Kierkegaard, Nietzsche, Marx, and Freud are among the greatest iconoclasts of the last century. All of them questioned the autonomy of knowledge and asserted that knowledge is inseparable from its preconditions, whether these are called will, commitment, will to power, class situation, or libidinal sublimation. On this basis all five deny the possibility of scholarly detachment, and some of them deny that scientific knowledge is desirable at all.

Two distinct premises are involved. To Schopenhauer, Kierkegaard, and Nietzsche, the search for knowledge appears as an arid suppression of life; they seek a true way to knowledge through Indian mysticism, or

religious experiences, or a cultural regeneration by men larger than life. For these writers the sickness of our time is a deadened feeling and a mediocrity of spirit of which the universities are an especially glaring manifestation. Their attack on scholarship is part of a more general critique of culture.

By contrast, Marx and Freud believe in the pursuit of knowledge and its promise of emancipation, at the same time that they reject academic scholarship. According to Marx, universities are involved in the contentions of society, and their vaunted posture above the battle is false. For him, true awareness of history requires a critique of the ideological foundation of scientific work. And this awareness is achieved through a unity of theory and practice only to be found in revolutionary movements, not in universities. By a similar reductionism, Freud considers every intellectual position in terms of its function in the "psychic economy" of the individual. The quest for knowledge cannot escape this psychological process, just as for Marx it cannot escape the historical process. Hence the path to knowledge in psychology lies in a heightened awareness of self, induced by the analysis and control-analysis of psychoanalytic training. This extramural recruitment and training of psychoanalysis is as incompatible with academic psychology as Marx's unity of theory and practice is with academic sociology.

Whereas Marx and Freud believed in the pursuit of knowledge and its promise of emancipation, Schopenhauer or Kierkegaard, who revolted against the Enlightenment, believed in neither. Shelley's *Defence of Poetry* (1821) puts the case with great lucidity: science and reason are distinguished from poetry and the imagination. The poets, says Shelley, "have been challenged to resign the civic crown to reasoners and mechanics," and Shelley acknowledges that these have their utility. The banishment of want, the security of life, the dispersal of superstition, and the conciliation of interests are utilities promoted by the calculating faculty. This is of value as long as it remains confined to "the inferior powers of our nature." But poetry and imagination represent another, higher utility. Shelley writes:

> "The great secret of morals is love; or a going out of our own nature, and an identification of ourselves with the beautiful which exists in thought, action, or person, not our own. A man, to be greatly good, must imagine intensely and comprehensively; he must put himself in the place of another and of many others; the pains and pleasures of his species must become his own." [9]

The great difficulty is that in scientific and economic systems of thought "the poetry . . . is concealed by the accumulation of facts and calculating processes." Certainly, the sciences have enlarged our "empire over the external world." But in proportion as the poetical faculty is wanting, the sciences have also circumscribed the empire of the internal world.[10] Shelley continues:

> "We want the creative faculty to imagine that which we know; . . . [but] our calculations have outrun conception; we have eaten more than we can digest . . . The cultivation of poetry is never more to be desired than at periods when . . . the accumulation of the materials of external life exceeds . . . the power of assimilating them to the internal laws of human nature." [11]

The romantic protest was not frequently as sober as this. The praise of art was linked with a promethean image of the poet as godlike, rising above mere humanity and achieving ends which nature is incapable of achieving by herself. These views from Shaftesbury and Goethe to Carlyle and Nietzsche meant, as Novalis put it, that "poets know nature better than scientists." [12] Such sentiments have a close kinship to attacks on the abstractions characteristic of all academic work. For Nietzsche all scientists were plebeian specialists and the worst enemies of art and artists. Kierkegaard made the primacy of living over reflecting the central theme of his work. Philosophy deals only with man in general and thus is a treason to life. What matters is man's personal situation and his vital relation to God.[13] In calling for more life and less thought, for more poetic imagination and less abstract reason, the romantics also attacked considerations of utility and the idea of material progress. Since the 18th century, scores of writers have elaborated the notion that the division of labor turns men into fragments, strangling their capacities and stultifying their emotions. This sentiment has implied an irrationalist, anti-scientific stance so frequently since the industrial revolution that C. P.

Snow is quite correct when he refers to literary intellectuals as "natural Luddites."

Yet the romantic protest of the 19th century was still bound up with the conventions of feeling and language that are the bases of discourse in ordinary life as well as in scholarship. By contrast, since before World War I, a new sensibility in the arts has increasingly rejected that universe of discourse. The form and content of artistic expression have questioned the values of Western industrial civilization to such an extent that today the "Luddism" of literary intellectuals jeopardizes the legitimacy of academic pursuits and of much else besides. I can do little more here than sketch some tendencies that provide a ready arsenal for attacks upon universities and scholarship.

IV

It is convenient to start with the generation of scholars and writers born in the 1850's and 1860's, who were on the average a bit over forty around 1900. The classic writers of modern sociology belong to this generation. Beyond all the differences dividing them, men like Freud, Durkheim, Weber, Pareto, Park, Thomas, Cooley, and Mead are discernible as a group by their common concern with the subjective presuppositions of thought. This increased self-consciousness could easily become self-defeating. With Dilthey, for example, self-consciousness led to a skeptical relativism, while in the work of Sorel it produced a radical commitment in thought and action to overcome that relativism. Yet men like Freud, Durkheim, and Weber, while making room for this new awareness, fought "every step of the way to salvage as much as possible of the rationist heritage." [14]

Max Weber's essay "Science As a Vocation," written just half a century ago, is a document of this generation. It represents a careful blend of rationalist convictions and romantic sensibility. Like the great rationalists before him, but with none of their optimism, Weber commits himself to the scientist's calling. For him science is the affair of an intellectual aristocracy. It demands concentration, hard work, inspiration, and the passionate devotion to a task that can only be accomplished if all extraneous considerations are excluded. Increasing knowledge can enhance the "technical mastery of life." It helps us to perfect methods of thought, and to achieve intellectual clarity about the relation of means and ends. Weber stated these goals with deliberate restraint. Like the great romantic iconoclasts before him, he viewed the ideal of progress through knowledge with profound skepticism. The very achievements of science have "chained [us] to the idea of progress." For every scientific achievement poses new questions and calls for investigations that will lead to the quick obsolescence of the scholar's contribution. Weber states: "It is not self-evident that something subordinate to such a law [of progress] is sensible and meaningful in itself. Why does one engage in doing something that in reality never comes, and never can come, to an end?" [15] Tolstoy had attacked science because for men on this endless frontier death has no meaning; the logical goal of progress would be man's immortality. But in fact the scientific world view leaves the meaning of life and death undefined, and scientists should not pretend otherwise. In stating his case Weber deliberately rejected the idea that youth could find leadership and authentic experience in the universities.

Leadership cannot be found in the academy, and those academicians who want to assume this role should engage in it where they can be challenged politically. Nor can the university teacher provide experience in the sense the churches offer it to the believer. Let those who search for authenticity learn that the individual who simply fulfills the exacting demands of the day, if he has found himself, expresses the creative spark that is within him. Weber addressed these remarks to a generation which rejected his skeptical commitment to the Enlightenment tradition. The young men of the 1920's, like their age-mates in the years before World War I and today, demanded experience and action rather than words. Their drive had culminated in the enthusiasm with which they greeted the outbreak of war in 1914, and with which they were joining extremist movements of the Right or Left in 1918 to 1920.

But meanwhile imaginative writers had begun to explore the possibilities of relativism in a world without values, further help-

ing to undermine the legacy of the Enlightenment still viable in men like Freud or Weber. The arts may have little direct bearing on science or scholarship, except where they destroy the notion of competence. However, their development in the 20th century jeopardized the standards of discourse on which all academic work is based. The nature of this jeopardy is conveyed by two interrelated tendencies of modern art: the retreat from intelligibility and the emergence of a radical subjectivism.

Some 19th century writers anticipated these developments. The German poet Novalis (1772–1801) wrote of poetry as a defense against ordinary life, a magical union of fantasy and thought, a productive language which, like mathematics, is a playful world of its own, intelligible only to a few.[16] Novalis was read in France. Many of these elements are elaborated by Baudelaire, whose poems are deliberately impersonal so that they can express every possible human emotion, preferably the most extreme. Baudelaire uses the term "modernity" to refer to the ugliness of large cities, their artificiality and sinfulness, their loneliness in large crowds, their technology and progress. He despised advertising, newspapers, the tide of a levelling democracy. But modernity also meant to him that these and other features of modern civilization result in a profusion of evil, decay, poverty and artifice which fascinate the poetic imagination. Baudelaire and the many who followed him have had a desperate urge to escape this reality. Most of them were unbelievers with a religious longing. For them poetry became a magical incantation, designed to cast a spell rather than reveal a meaning. To this end fantasy decomposes the whole created world, and by reordering the component parts out of the wellsprings of human experience fashions a new world of its own.[17]

A retreat from meaning and coherence is evident in this orientation. When the poet does not want to recognize the existing world, ordinary themes and objects lose their relevance. Instead, style and sound are the prevalent means of expression at the expense of meaning. The poet has no object, says one writer. Pure poetry must be devoid of content so that the creative movement of language can have free rein, says another. A third speaks of formal tricks maintaining the verve of style; nothing is interrelated either thematically or psychologically; everything is nailed up rather than developed. Writers like Rimbaud, Apollinaire, Saint-John Perse, Yeats, Benn and others search for a "new language" which is tantamount to the destruction of grammatical rules and rhetorical order.[18] The spirit of this endeavor is beautifully expressed in T. S. Eliot's *East Coker:* The poet is

> "Trying to learn to use words, and every attempt
> Is a wholly new start, and a different kind of failure . . .
> . . . And so each venture
> Is a new beginning, a raid on the inarticulate."

And in *Burnt Norton* Eliot writes that "words strain, crack and sometimes break, under the burden, under the tension."

Where language thus loses its comunicative power, a radical subjectivism comes into its own, much as in painting and sculpture a free experimentation with colors and forms followed the classical ideal of representation. In his study of poetry, Hugo Friedrich refers to this tendency as "dictatorial fantasy." Rimbaud had said that memory and the senses are only food for the creative impulse; the world which the poet leaves will no longer resemble its former appearance, because artistic fantasy has cruelly disfigured it.[19] Baudelaire, Mallarmé, Garcia Lorca, Proust and Benn expressed similar ideas. In *The Counterfeiters* by André Gide, Edouard intends to write a novel which will be a sum of destructions, or a "rivalry between the real world and the representation of it which we make to ourselves. The manner in which the world of appearances imposes itself upon us, and the manner in which we try to impose on the outside world our own interpretation—this is the drama of our lives."[20]

In the main this drama has been "resolved" by a radical subjectivism of the artist. Not only language has been destroyed, but also persons and objects as means and ends of creative activity. In the Futurist manifesto of 1909, the rejection of language and the rejection of the human subject are linked directly. The author, Marinetti, argues for the destruction of syntax, the elimination of adverbs and adjectives, and the serial listing of nouns, in order, among other things, to destroy the ego in

literature. "People are completely stupefied by libraries and museums, and they are subjected to a terrible logic and wisdom. Man is no longer interesting. Therefore, one has to eliminate people from literature." [21] A parallel destruction of the object is evident in a comment of Picasso's: "I noticed that painting has a value of its own, independent of the factual depiction of things. I asked myself, whether one should not paint things the way one knows them rather than the way one sees them. . . . In my pictures I use the things I like. I do not care, how things fare in this regard—they will have to get used to it. Formerly, pictures approached their completion in stages. . . . A picture used to be a sum of completions. With me a picture is a sum of destructions." [22]

Here then is the paradox of the development I have sketched. Since the later 19th century, modern art has been characterized increasingly by a retreat from meaning and coherence. That is to say, an ethics of social despair has led by circuitous routes to self-created, hermetic worlds of pure subjectivity in which neither the old romantic ideal of the human personality nor the objects and themes of ordinary experience have a recognized place or meaning. Thus, in the dominant culture of the West a type of sensibility has developed which reacts to the world as a provocation, and which is hostile to intellectual positions that retain a belief in the constructive possibilities of knowledge for all their questioning of fundamentals. In this way, the ground was prepared for protests which are based on

> "the view that every human being simply by virtue of his humanity is an essence of unquestionable, undiscriminatable value with the fullest right to the realization of what is essential in him. What is essential is his sensibility, his experienced sensation, the contents of his imagination, and the gratification of his desires. Not only has man become the measure of all things; his sentiments have become the measure of man." [23]

Here is a statement which exemplifies this interpretation:

> "We are fed reason in order to give an inferiority complex to the rest of our emotions and senses. . . .
> We are trapped in a philosophical system of cause and effect. Rationality binds the mind and restricts the soul. It might even destroy the brain cells. We need to be liberated. We should be constrained no longer by possible rational consequences. We should begin to allow other emotions to dictate our actions." [24]

It is consistent with this approach that in their proclamation at Chicago, in 1968, the Yippies stated that in the ideal society of the future every man would be an artist. There is an "elective affinity" between a changed sensibility in the arts and the sectarian modes of protest which are inspired by a mystique of plenitude and subjectivism.

There is as well a political dimension to which brief reference must be made.

V

I emphasize the transformation of artistic sensibility for two reasons. The retreat from intelligibility and its radical subjectivism have long since prepared the ground for a distrust of reason among the educated middle class, including members of university faculties as long as their own field is not in question. Also, I emphasize the affinity between this changed sensibility and current student protests because I see little evidence that these protests have arisen from Communist or Fascist doctrines. To be sure, Bolshevism after the Russian Revolution of 1917 and the Nazi movement before and after 1933 launched a concerted attack upon the universities as bastions of false claims to scholarly objectivity. For example, A. A. Bogdanov declared in 1918 that with the exception of the social sciences transformed by Marxism "all the present sciences are bourgeois [though] not in the sense that they defend the interests of the bourgeoisie directly. [They are bourgeois] in that they have been worked out and presented from the bourgeois standpoint, in that they are suffused by the bourgeois Weltanschauung and as such have a bourgeoisifying influence. . . ." Bogdanov also added that all teaching and research must be transformed from the proletarian standpoint and based henceforth on the "living, brotherly cooperation between teachers and students, rather than on authority and intellectual subjugation." [25] Overtones reminiscent of current protest themes will be noted, yet I believe that these are distinct.

The rhetorical use of the word "fascism" helps to characterize the situation in which we find ourselves. Students proclaim that

the Establishment is fascist, and critics over thirty reciprocate by calling the protesters fascists or, as Jürgen Habermas had it, "left fascists." There is no clearer indication of mutual incomprehension. What does this mean? Let me take each side in turn; though, of course, there is much diversity I must ignore.

Broadly speaking, "fascism" is for some students, and some faculty members and not a few writers, an expressive term of utter derogation. It has a proven shock-value for the older generation when applied to democratic institutions or indeed any aspect of industrial society. The term is also a potent weapon for a policy of escalation. Agitation may lead to police action, which proves that the regime is repressive like fascism. But if agitation does not lead to this result, then the question is raised: What did we do wrong? Since the regime is "objectively fascist" and the police was not called, the strategy of protest must have been at fault. There is no entry into this circle of a self-fulfilling prophecy.

Note the ethic of social despair that lies behind the provocation. Time has run out. No landing on the moon can assuage the prospect of a nuclear holocaust. The liberation movements around the world and the race problems at home have exposed the hypocrisy of the Western claim to liberty, justice, and equality. The invasion of Czechoslovakia and the manifest inequalities and repressions of Soviet society have exposed the hypocrisy of the Communist claim to represent the people and end the exploitation of man by man. Faced with ultimate horrors and proximate evils, protest draws once more on the arsenal of cultural pessimism with its total rejection of competition, efficiency, the division of labor, considerations of utility, and the whole world of technology. And finally, the old promise of the enlightenment has become tarnished—the promise that knowledge is power for the benefit and use of life.

In the face of the massive evils of the present, the first, and sometimes the only response, is to see everything connected with everything else, and to call this web of iniquity "fascism." Thus, universities, as a central institution in a technological society, are a prime target. Their values of dispassionate inquiry and free discussion and of tolerance for ambiguity and diversity presuppose an ethic of social hope, which means a freedom to choose and to wait, to discuss and to deliberate. To the protester this appears utterly incommensurate with the dire threats confronting us. An academia "which fiddles while the fires are burning" appears as actually engaged in an insidious "fascist repression," for discussion delays decision, and words are seen as a smoke screen for inaction. All the values of scholarship turn to dross: tolerance is repressive, objectivity or neutrality serve the "system," lectures become an abuse of authority. Indeed scholarship which uses abstract terms, as it must, "crumbles in the mouth like mouldy fungi,"[26] which phrase from Hugo von Hofmannsthal (1902) helped to initiate the change of sensibility I have traced. At one level or another a good many people respond positively to these sentiments, faced as they are with a world of local wars and international stalemates in which the threat of nuclear destruction hangs over every move.

On the other hand there are the liberals, young or old, who are outraged by these attacks upon the values of civilization. To be sure, conservatives, rather than liberals, call for law and order. But as the legal system is dragged into the vortex of political polarization, "fascism" comes to be used by liberals as a term of alarm at the deliberate abandon with which standards of academic and democratic civility are flouted. It is a term of abuse against those who reject tolerance, discussion, and the rule of law,—or, in an academic setting, against those who reject free inquiry, the quest for objectivity, and the civilities of academic deliberation. It refers as well to the all-or-nothing perspective which fails to distinguish between authority and oppression, normal national interest and violent aggression, political compromise and political corruption.

Liberals believe that the indiscriminate and immoderate attack upon all social and political conventions and upon traditional values is profoundly unpolitical. They see protesters frequently attacking not only political abuses and empty pretensions, but the very institutions that protect their right to protest. To the liberal critics, it is clear that protesters are blind to the ways in which their activities consolidate opinion on the far right and in which their ostensible quest

for freedom and individuality turns into mental and physical coercions of those who disagree. But this characterization is answered by the protesters by saying that nothing else can be done when ordinary politics have brought us to this impasse. Theirs is a sectarian mode of protest outside of time, of political calculation, and of technical efficiency.

Indeed, it is outside of ordinary communication when one considers how much declamation has crowded out discussion. With or without drugs "the mystic finds himself exploring every negative experience in order to make possible his return to the world of a 'total' human being." [27] Meanwhile, his more activist brother develops a cult of distant savior-leaders like Mao or Ché, identifies with populist causes everywhere, and unites with others in a desperate, if superficially euphoric, rejection of his own civilization.[28] In their indiscriminate attack upon social and political conventions, the protesters begin to resemble intellectuals of the Weimar Republic, who were equally sweeping in their condemnations. Walter Laqueur has dubbed this the "Tucholsky Complaint," after the German satirist of the 1920's:

> "Tucholsky and his friends thought that the German Judge of their day was the most evil person imaginable and that the German prisons were the most inhumane; later they got Freisler and Auschwitz. They imagined that Stresemann and the Social Democrats were the most reactionary politicians in the world; soon after they had to face Hitler, Goebbels, and Goering. They sincerely believed that fascism was already ruling Germany, until the horrors of the Third Reich overtook them." [29]

In a book entitled *Deutschland, Deutschland über alles,* Tucholsky said "no" to everything except the landscape and countryside of Germany. At least, he despaired of a society without a democratic tradition. Some recent critics like Herbert Marcuse simply despair of civilization altogether—without telling us how they would live without it.

Today, discussion within the academic community is gravely impaired by the distrust of reason of the present generation of dissenters. This rise of irrationalism in the cultural sphere is due in part to a failure of the national political community. In their relations with the young generation the universities cannot tackle issues like the Vietnam war, the race relations, or the uses of technology which the political leadership, too, has so far failed to resolve. The universities should not be asked to make the attempt. Nevertheless, protesters and politicians have misused the universities as a convenient battleground without immediate and obvious disadvantage to themselves. They have done so, in part, because we are faced with a crisis of legitimacy within the walls of academe.

VI

Agonizing questions are raised concerning the purposes to be served by a quest for knowledge wherever it may lead. When scientists help to create powers of destruction which threaten civilization, the authority of scholarship is placed in jeopardy because the belief in progress through knowledge is impaired.

Strictly speaking, the uses of knowledge and the conditions that facilitate its pursuit are extraneous concerns. As Don Price has stated: "Science has achieved its great power by insisting on defining for itself the problems it proposes to solve, and by refusing to take on problems merely because some outside authority considers them important. But that power, and the precision of thought on which it depends, is purchased by a refusal to deal with many aspects of such problems." [30] The power referred to is the capacity to advance knowledge. But the capacity to define problems autonomously depends upon authority. And this autonomous authority has become more difficult to maintain in recent decades.

The role of science has changed. Scientific research in World War II and its culmination in the military and peaceful employment of atomic energy produced a marked rise in the authority of the scientific community. In his report to the President in 1945, Vannevar Bush spoke for that community when he argued strongly that basic scientific research is indispensable for the nation's welfare in war and peace.[31] Remember: only a year later Bernard Baruch declared that we tremble with fear as we think of the power science has put at our disposal, but that science does *not* show us how we can control the dangers inherent in that power.[32] Nevertheless, for a time, the posi-

tive claims of science were accepted very generally—a consensus aided by the Cold War and facilitating a great increase in research related to war. Between 1953 and 1966, gross national product in the United States doubled, but total funds for basic research increased more than six times. During the same period the federal government increased its support of basic research from one half to two thirds of the national total.[33] In the five-year period, from 1959–60 to 1963–64, federal support of research in universities more than doubled.[34]

In the last 25 years science has become very prominent—even the social sciences have advanced, albeit at a great distance. Clark Kerr, in his Godkin lectures, has analyzed the resulting changes in academic decision-making. By offering projects, federal agencies exert a subtle but potent influence upon the directions which research at universities will take. They affect the allocation of funds and space and hence the establishment of priorities. As extramural research funds become a major portion of a university's research budget; many scholars are prompted to shift their identification and loyalty from their university to the grant-giving agency. Increased emphasis on research through extramural funds entails a shift of resources to graduate, at the expense of undergraduate, education, and to the employment of research personnel without faculty status. Projects, costly facilities and program planning introduce a new managerial dimension. Scientists who launch a series of projects can become caught up in the apparatus they have helped to create, and may be deflected permanently from what they would prefer to do if they still had a free hand.[35] Thus the earlier autonomy of science and of universities is in doubt just at the time when the destructiveness of weapons and the dangerous side effects of modern technology have become urgent concerns.

In addition, the demands on the educational system have increased greatly. In 1939–40, 50% of those aged 17 were high-school graduates. By 1967–68, that percentage had risen to 74. During the same period college enrollments and the total number of college degrees increased by a factor of four; the number of higher degrees, by a factor of seven. Nor is it a question of numbers alone. Increasingly, politicians, administrators, the general public, and not a few scientists who should know better, have called upon the universities to help solve the race problem, the urban crisis, generational conflict, pollution, and the arms race. Scientists are called upon to be responsible for the application of increased knowledge at the same time that questions are raised whether the consequences of science are still beneficial. These and other demands subject the universities to a barrage of expectations which they cannot possibly fulfill. From being a method of inquiry to answer carefully delimited questions, science has been turned into a fetish with which to interpret the world, advise politicians, examine the future, provide an education and entertain the public.

A crisis of legitimacy results whenever the very claims of authority are used to question its justification. The claim is that "basic research performed without thought of practical ends" is indispensable for the nation's welfare.[36] But this claim has led to a public support of science, which undermines the freedom of scientists from practical ends. The claim has also led to uses of knowledge which have a destructive potential that appears incompatible with welfare. In their eagerness to advance knowledge, scientists have made claims for the unequivocal beneficience of their results. Inadvertently, they have contributed to the distrust of reason which is upon us.

VII

Ordinarily we do not think of science and scholarship as bases of authority. But knowledge has an authority of its own, and I have tried to show why the legitimacy of that authority is now in question. Protest aimed at the foundations of academic institutions has found considerable resonance among people ostensibly committed to the life of the mind. What then of sociology?

Like all academic disciplines sociology depends on the existence of a scholarly community. A modern university comprises a congeries of such communities. Teachers and students in the different disciplines may communicate little or not at all. But while they live with their different interests and obligations, all of them can share an interest in the advance of knowledge—an advance

facilitated by independent inquiry, free discussion and academic self-government. When this shared interest is in doubt, more is at stake than the spurious talk about an academic community. For when the legitimacy of the pursuit of knowledge is questioned, discourse itself is threatened by a withdrawal of affect. Let me spell this out in relation to sociology.

As in other disciplines, scholarship in sociology depends on communication concerning the findings and methods of study. In this context every statement made invites consent and helps to define the circle of those who agree, while to some extent marking off those who do not. We are all familiar with the feeling of dismay and anxiety or with the displays of aggression when such agreement is not achieved. We are also familiar with the school- or clique-building tendencies that arise from this desire for consensual validation. Accordingly, the twin principles of toleration and free discussion are more difficult to achieve within disciplines than in the university at large. Indeed, there is more to discuss within disciplines than between them, and withdrawal of affect within disciplines threatens discourse quite directly.

Many sociologists aspire to bring their field of study to the status of a science of society. To an extent this is salutary. The aspiration to engage in empirical inquiry is an indispensable bulwark against speculations which are complacent towards idiosyncrasies and which take a lofty view of the merely factual. Yet today sociologists as scientists face a crisis of legitimacy. The destructive possibilities of knowledge and the diminished autonomy of science have prompted a questioning of premises which is bound to affect a discipline whose scientific aspirations are well ahead of its achievements. Moreover, sociologists of this persuasion should have noted the anti-humanistic impulse of their model all along. It appears that the qualities of the scientific mind have been extolled at the expense of philosophical breadth and historical perspective, of literary distinction and aesthetic sensibility, and of moral imagination and the cultivation of judgment. To be sure, much has been gained in the process. But a sociology that takes the natural sciences as its model also falls heir to a tradition in which these other qualities are at a discount.

At the same time we are all aware that in our discipline there have always been those who thought science not enough, who believed that the cultivation of judgment and moral sensibility was indispensable for sociology as a scholarly discipline. Such cultivation provides a bulwark against the dangers of scientism, against the preoccupation with techniques for their own sake, and against the unthinking denigration of contextual understanding. At the same time, sociologists of this persuasion are committed to empirical inquiry, broadly conceived. But today they, too, face a crisis of legitimacy. For the destructive possibilities of the distrust of reason, with its craving for authenticity and relevance, are evident once again. Hence, the plea for more cultivation of judgment and sensibility in sociology should be made with care. A humanistic sociology which takes the distrust of reason as its model undermines its own existence.

To me the tensions and debates between the scientific and the humanistic impulse appear as the foundation of modern sociology. Twenty years ago I wrote an essay on social science and the distrust of reason. My purpose then was to contrast an unreflective faith in science with the tradition of critical self-scrutiny reaching from Francis Bacon to Sigmund Freud. I wanted to warn that methodological preoccupations not be permitted to encroach on substantive concerns, lest we do harm to our discipline.[37] In the meantime there have been notable attempts to redirect our efforts to which I have tried to contribute. Hence today I would emphasize that the distrust of reason is not furthered by scientism alone. It consists also in a consciousness of crisis, an ethic of despair, and a call for action which do away with learning and deliberation altogether. I think sociology is as endangered by this retreat from meaning and coherence as it was by spurious analogies from the natural sciences.

Still, we are also enriched by the creative interplay of the traditions that have formed us. Their constructive use depends upon faith in the possibilities of human reason. As long as we do not go back to the caves in anticipation of the holocausts to come, learning has a creative role in the human community. It can do so only in universities which exist in society and for it, and which

provide institutional protection for learning in order to perform their mission. Those who would destroy that protection and the proximate detachment it affords would not long survive in a world in which the ideals of reasoned inquiry have been abandoned.

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* Presidential Address, 65th Annual Meeting of the American Sociological Association, Aug. 31, 1970, Washington, D. C. Some passages in this address are based on Reinhard Bendix, *Embattled Reason, Essay on Social Knowledge* (New York: Oxford University Press, 1970).

[1] Cf. the more comprehensive analysis by Daniel Bell, "Unstable America," *Encounter,* XXXIV (June, 1970) pp. 11–26.

[2] See Lewis Feuer, *The Conflict of Generations* (New York: Basic Books, 1969), esp. Chps. I and X; Bruno Bettelheim, "Obsolete Youth," *Encounter,* XXXIII (September 1969), pp. 29–42; Kenneth Keniston, *Young Radicals* (New York: Harcourt, Brace & World, Inc., 1968), pp. 257 ff. and *passim;* Bennett Berger, "The New Stage of American Man —Almost Endless Adolescence," *New York Times Magazine* (November 2, 1969); and Edward Shils, "Plenitude and Scarcity," *Encounter,* XXXII (May, 1969), pp. 37–57.

[3] Shils, *op. cit.,* p. 56.

[4] Francis Bacon, "Novum Organum," in E. A. Burtt, ed., *The English Philosophers from Bacon to Mill* (New York: Modern Library, 1939), p. 64.

[5] Hermann Helmholtz, "Über das Verhältniss der Naturwissenschaften zur Gesamtheit der Wissenschaft," *Populäre Wissenschaftliche Vorträge* (Braunschweig: Friedrich Vieweg, 1865), I, p. 23. The lecture was delivered in 1862.

[6] The second point is noted in *ibid.,* p. 27; the first point is found in "Über das Ziel und die Fortschritte der Naturwissenschaft," *Populäre Wissenschaftliche Vorträge* (Braunschweig: Friedrich Vieweg, 1876), II, p. 186. This lecture was delivered in 1869.

[7] C. P. Snow, *The Two Cultures and a Second Look* (Mentor Books. New York: New American Library, 1964), p. 11. Originally formulated in 1956, these lectures were given and published in 1959; the addendum dates from 1963.

[8] *Ibid.,* pp. 13–14.

[9] P. B. Shelley, "A Defence of Poetry," in R. J. White, ed., *Political Tracts of Wordsworth, Coleridge and Shelley* (Cambridge: Cambridge University Press, 1953), p. 202.

[10] *Ibid.,* p. 205.

[11] *Ibid.,* pp. 205–206.

[12] See Judith Shklar, *After Utopia* (Princeton: Princeton University Press, 1969), pp. 44–45, 54–57 and *passim* for documentation of this point.

[13] See the cultural critique based on these convictions in Sören Kierkegaard, *The Present Age* (Harper Torchbooks; New York: Harper & Row, 1962), *passim.* On this basis Kierkegaard directed a virulent polemic against scholars and universities.

[14] H. Stuart Hughes, *Consciousness and Society* (New York: Alfred A. Knopf, 1958), p. 17.

[15] Max Weber, *Essays in Sociology,* tr. and ed. by H. H. Gerth and C. Wright Mills, (New York: Oxford University Press, 1946), p. 138.

[16] These paraphrases are taken from the profound book by Hugo Friedrich, *Die Struktur der Modern Lyrik* (Hamburg: Rowohlt Verlag, 1967), pp. 28–29.

[17] *Ibid.,* pp. 35–58 for an analysis of Baudelaire on which this statement is based.

[18] *Ibid.,* pp. 149–152.

[19] *Ibid.,* pp. 81–83, 136–138, 202–203.

[20] Quoted in Wylie Sypher, *From Rococo to Cubism* (New York: Random House, 1960), pp. 300–301.

[21] Quoted from Walter Höllerer, ed., *Theorie der modernen Lyrik* (Hamburg: Rowohlt Taschenbuch Verlag, 1965), p. 138.

[22] Quoted from Walter Hess, ed., *Dokumente zum Verständnis der Modernen Malerei* (Hamburg: Rowohlt Taschenbuch Verlag, 1956), p. 53.

[23] Shils, *op. cit.,* p. 44. See the related comments by George Steiner, "The Language Animal," and by David Martin, "Visit to Inner Space," *Encounter,* XXXIII (August, 1969), pp. 23, 71–73. Robert Nisbet's argument in "Who Killed the Student Revolution?" *Encounter,* XXXIV (February, 1970), pp. 10–18, that the protest aimed at the society rather than the university misses the amorphous quality of these sentiments. The "web of iniquity" critique does not allow for institutional distinctions.

[24] Richard Hyland in *The Harvard Crimson* (Oct. 22, 1969) quoted in *Encounter,* XXXIV (April, 1970), p. 30.

[25] Quoted from Richard Lorenz, ed., *Proletarische Kulturrevolution in SowjetruBland (1917–1921)* (München: Deutscher Taschenbuch Verlag, 1969), pp. 218–219. Analogous declarations, but with the accent on blood and soil, race purity and the rest can be cited from the Nazi period. See Hans Peter Bleuel and Ernst Klinnert, *Deutsche Studenten auf dem Weg ins Dritte Reich* (Gütersloh: Sigbert Mohn, 1967), *passim.*

[26] The phrase is taken from Hugo von Hofmannsthal, "The Letter of Lord Chandos," in *Selected Prose* (Bollingden Series XXXII. New York: Pantheon Books, 1952), p. 134 originally published in 1902.

[27] David Martin, *op. cit.,* p. 73.

[28] The two versions are well described by Shils, *op. cit.,* pp. 43–46, and Richard Lowenthal, "Unreason and Revolution," *Encounter,* XXXIII (November, 1969), pp. 28–32.

[29] Walter Laqueur, "The Tucholsky Complaint," *Encounter,* XXXIII (October, 1969), p. 78.

[30] Don K. Price, *The Scientific Estate* (Cambridge: Harvard University Press, 1967), p. 105.

[31] Vannevar Bush, *Endless Horizons* (Washington: Public Affairs Press, 1946), pp. 39–81. Progress in the social sciences and humanities is "likewise important," Bush said then, but that appears to be the only reference of this kind in the report.

[32] See Bernard Baruch, The United States Proposals for the International Control of Atomic Energy, presented to the U.N. Atomic Energy Commission (June 14, 1946) in U.S. State Department, *The International Control of Atomic Energy,*

Growth of a Policy (Washington: U.S. Government Printing Office, 1946), p. 138.

[33] U.S. Department of Health, Education, and Welfare, *Digest of Education Statistics, 1968 Edition* (Washington: U.S. Government Printing Office, 1968) p. 128 (Table 160).

[34] *Ibid.*, p. 95. Table 115. It should perhaps be added that the total of $3.2 billion spent for basic research in 1966 compared with $18.9 billion spent for applied research and development.

[35] Clark Kerr, *The Uses of the University* (Harper Torchbooks. New York: Harper & Row, 1966), pp. 57–69. This summary selects the aspects most directly related to the autonomy of decision-making by scholars and universities. It should be noted that Kerr concentrates on the "federal grant university," but that analogous considerations apply to research funds from private foundations.

[36] Bush, *op. cit.*, p. 52.

[37] Reinhard Bendix, *Social Science and the Distrust of Reason* (Berkeley: University of California Press, 1951), *passim.*

CLUSTERING AND HIERARCHY IN INTERPERSONAL RELATIONS: TESTING TWO GRAPH THEORETICAL MODELS ON 742 SOCIOMATRICES *

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This paper reports the success of the Davis-Leinhardt graph theoretical model in predicting structural trends in a data bank of 742 sociograms from diverse small groups. The model has an over-all success rate of 70%, but two key predictions are not supported. An alternative model is then tested. Its prediction that the sums of pair relations tend toward clusterability is supported in 77% of the tests, and its prediction that differences of pair relations tend toward a transitive tournament is supported in 90% of the tests.

INTRODUCTION

DAVIS and Leinhardt (1970) propose a model or theory of social structure in small groups. Following Homans (1950), they allege that interpersonal sentiments have a persistent tendency to crystallize into structures that combine cliques (subgroups within which are only mutual positive sentiments and between which are only asymmetric or mutual nonpositive sentiments) and hierarchies (ordered levels of popularity formed by asymmetric choices). The model is defined mathematically through graph theory and operationally by comparing empirical sociomatrices with the results expected in a "random graph," a sociomatrix in which choices are assigned by chance. When their model was tested by the analysis of 60 empirical sociomatrices sampled from a larger data bank, the results appeared promising—at least to Davis and Leinhardt.

This paper reports a fuller test of that model using the complete data bank of 742 matrices from which Davis and Leinhardt drew their sample. The findings are generally favorable, as one might expect from the properties of probability sampling. A closer scrutiny, however, confirms the suspicions of the original paper that although the model works well as a whole, certain key parts do not.

In this paper we shall review the results of this test and then consider an alternative model which: (1) is similar to the Davis and Leinhardt model in substance, (2) is simpler, and (3) seems to fit the data a little better.

TESTING THE DAVIS-LEINHARDT MODEL

While the model is mathematically elementary, it is rather complicated, and we will not repeat the detailed explanation in the original essay. For present purposes we need state only the following five ideas.

(1) The model assumes three kinds of pair relations: mutual positive, mutual nonpositive, and asymmetric. In sociometry these correspond to mutual choices (i chooses j and j chooses i), mutual nonchoices (i does not choose j and j does not choose i),[1] and unreciprocated (i

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[1] The model treats negative choices and null choices as equivalent. Thus the complement of positive choice is nonpositive rather than "negative." We will occasionally use the word negative in this paper but only to mean "nonpositive."