

Federal Probation

Vol. 41

No. 4

Dec. 1 1977

Environmental Health Needs in Correctional Institutions

BY BAILUS WALKER, JR., PH.D., AND THEODORE J. GORDON*

ENVIRONMENTAL health¹ issues usually head the list of grievances of persons confined in correctional institutions. Such grievances have often reached the courts where their constitutional significance has been argued and where decisions rendered have been frequently in favor of the plaintiffs.

For example, in *Gates v. Collier* the United States District Court for the Northern District of Mississippi held that:

The lack of minimum standards for environmental health services and a uniform maintenance program contributes greatly to the breeding of unsanitary, indecent and intolerable conditions of unhealthiness which are of constitutional significance.²

With equal concern, the United States District Court for the Middle District of Alabama in *Pugh v. Locke* found that:

The dilapidation of the physical facilities contributes to extremely unsanitary living conditions. Testimony demonstrated that windows are broken and unscreened, creating a serious problem with mosquitoes and flies. Old and filthy cotton mattresses lead to the spread of contagious diseases and body lice. Nearly all inmates' living quarters are inadequately heated and ventilated.³

Several other court opinions and a veritable torrent of surveys and studies of environmental conditions in correctional institutions by governmental and quasi-governmental organizations have cascaded over various professions and the public. From this flood of activities, however, certain concepts of current and future import continue to rise to the surface: Unequivocally, the environmental dimensions of offenders' health are as equally significant as the mental and physical ones in terms of human well-being.

Accordingly, this article will sketch in fairly broad strokes some of the important components of environmental health in correctional institutions.

Institutional Environmental Health

At the onset it must be recognized that there is

* Dr. Walker is administrator of the Environmental Health Administration, Government of the District of Columbia, and Mr. Gordon is chief, Institutional Hygiene Division, EHA.

ample evidence of a vital relationship between the quality of the physical environment of any correctional institution and its administration. The design and condition of the physical plant, including temperature, humidity, lighting, noise levels, quality and quantity of food served, "housekeeping" and plant cleanliness, may influence the general behavior of inmates as well as the efficiency and convenience with which the correctional staff can carry out its assignments. The very existence of hot, humid, noisy, overcrowded and unclean residential areas inevitably produces mental attitudes and behavior patterns which set in motion cycles of unrest among offenders who must often spend inordinately long periods of time in such stressful environments.

The residential quarters are not the only areas in the institution where environmental control is critical. Prison industries are operated in many correctional facilities in the United States. Such industries grow, process, or manufacture products for use within the correctional system or for sale to other government agencies or on the open market. These industries generate a wide variety of occupational health hazards including toxic gases, vapors, fumes, dust, and biological contaminants such as bacteria and viruses. Not only are the "industrial workers" confronted with toxic exposures due to widespread use of lead and mercury and other metals, but they also encounter agricultural chemicals, excessive noise levels, and heat stress within the occupational setting. It is not difficult to single out specific industries where overt health hazards exist and continuously exert stress on the workers. The automobile repair shop, dry cleaning establishment, and industries where considerable dust is generated (i.e., cotton and textile processing plants) are examples.

In fact, the expanse of activities within correc-

¹ That aspect of public health concerned with forms of life, substances, forces, and conditions which may exert an influence on human health and well-being.

² *Gates v. Collier*, Civil Action No. GC71-6-K, U.S. District Court for the Northern District of Mississippi, November 10, 1976.

³ *Pugh v. Locke*, Civil Actions No. 74-67-N and No. 74-302-N, U.S. District Court for the Middle District of Alabama, Northern Division, January 13, 1976.

52462

tional institutions has widened the environmental health needs far beyond our earlier concerns for a safe water supply and adequate sewage disposal. Today's frontiers extend to occupational hygiene and safety in the prison industries, agricultural activities on the prison farm, bacteriological air quality in the institution's hospital, the control of ionizing and nonionizing radiation, toxic chemicals, maintenance of the building and the control of insects and rodents.

Resources and Methods

Current practice within correctional facilities, largely, is to assign environmental control responsibilities to correctional officers; many of them have done an adequate job of conducting monthly inventories of broken windows, plumbing failures and similar environmental defects. But in the busy pinch of specialization, there is seldom anyone on the staff whose specific responsibility is to know the ventilation rate (i.e., air changes per hour) levels of lighting, or the effectiveness of certain pesticides applied by the pest controller with whom the institution has a contract, or to periodically check food quality or the temperature and water pressure in the mechanical dishwasher.

Certainly in the experience of the authors these and many similar situations seldom attract the attention of the medical staff or the correctional administrator. In almost every instance the demand for more pressing duties preclude the regular examination of these critical environmental health concerns.

Even if time permitted, the complexity of institutional environmental hazards dictates against them being a part-time responsibility of personnel with no training in the problem areas. Particularly in the larger institutions, the development and maintenance of an effective environmental health program to cope with physical, chemical and biological hazards require personnel, well-trained in the basic health sciences and engineering, who possess a good understanding of the application of this knowledge to problems of institutional environmental health.

To the extent that a good environmental health program can be thought of as a synthesis of the contributions of a vast array of physical, chemical, biological and social disciplines, there is a need for personnel who can bring varied specialized knowledge to bear on specific environmental health problems. This can be achieved only

through the direct services of personnel with expertise in basic environmental health disciplines, supplemented by a broad understanding of the interrelationships of these disciplines in improving the environment in which many correctional and rehabilitative services must take place.

The environmental health specialist in a correctional institution should function administratively in a staff capacity and have direct access to the administrator or warden to ensure implementation of plans and programs for environmental improvements. However, responsibility of an institution to provide its own professional staff of environmental health personnel does not exempt state and local public health departments from their legally mandated responsibilities. The governmental health agency should provide consultative and advisory services to correctional administrators and more specifically to medical and environmental health staff who must be accountable for health problems of the correctional institution. Public health officials, working cooperatively with correctional officials, can make a major contribution toward minimizing hazards and stresses within the institution.

But control of the correctional environment cannot be confined solely to the person or organizational unit which has basic responsibilities for such services. It must be carried out with the enlightened and conscious effort of every member of the correctional staff. Some amount of training, then, is necessary.

Workers in the prison industries need to understand the health hazards associated with their jobs, the control measures for these hazards, and the necessity of working in a safe manner. In addition, food service personnel must be trained in the basic elements of sanitary food services because the contamination of food is related not so much to equipment as to the habits and practices of the food workers, many of whom are inmates with little or no experience in mass-feeding programs. Similarly, correctional staff should be alerted to the psychological and physiological stresses due to overcrowding, inadequate toilet facilities, the lack of appropriate ventilation and health risks resulting from insufficient linen changes.

Seminars, meetings and formal lectures are useful, but a continuing barrage of stimulating information should be used to keep the staff alert to adverse effects of substandard environmental conditions.

The first opportunity for the correctional organization to shape its future in a new environment is in the planning or remodeling stages. It is here that extreme care and foresight pay enormous dividends. Knowledge and experience applied to planning the correctional institution can prevent costly errors and can reduce operational and maintenance costs. Environmental planning must be done through a review of architectural and engineering plans, covering new construction or modifications of existing physical plants, while there is ample opportunity to correct actual or potential environmental deficiencies. As an example, the authors recently inspected two large modern penal institutions in which the ventilation system was so arranged that outdoor air entered and left the cell block area by such a short route that it contributed very little to the air circulation required to dilute cigarette smoke, body odors and other air impurities. More careful planning could have prevented this built-in deficiency. While development of a thorough and systematic review of building plans will minimize or preclude many environmental deficiencies, planning must be complemented by continuous surveillance to (a) recognize environmental hazards, (b) evaluate those hazards, and (c) develop corrective measures.

Environmental Standards

In the past, one of the greatest obstacles to improvements of the institutional environment has been the lack of standards in this field. However, within the past few years several organizations and regulatory agencies have developed standards and designed regulatory schemes for improving environmental quality in jails and prisons. Although these standards may vary in precise specification, their principal aim is to provide protection and to establish a safe environment. They therefore evolved from a recognition that the correctional environment must satisfy four basic human needs: (1) fundamental psychological needs, (2) fundamental physiological needs, (3) protection against accidental injuries, and (4) protection against infectious disease organisms.

In the application of these standards it has been impossible to ignore one central question: Upon what basis are the standards justified?

⁴ Epidemiology is the science of the occurrence of disease. It embraces considerations of all factors bearing on the development and prevalence of physical and mental disease.

Epidemiological⁴ data are, of course, of major value because such data have been successful in the study of communicable disease epidemics which were at one time a common experience; but many of the current environmental standards rest on an especially insecure epidemiological foundation. Sometimes, of course, certain proof that disease and disability will result from environmental insults can readily be found. But more often reasonable health and medical concerns and theory long precede certainty. Yet, prudence dictates that regulatory action is necessary to prevent physical and mental disturbances even if the administrator or regulator is less certain that adverse health effects will otherwise develop. Thus, the inability to secure epidemiological support for many of our environmental standards should not discourage us from attempting to improve environmental conditions or even do so by regulation.

In this setting we cannot disregard the esthetic dimensions of environmental health. To do so is not only illogical but even detrimental to health and social progress. Many of these esthetic components have contributed immeasurably to our standard of living and mental well-being. The cleanliness of the institution, including the floors, walls, windows, food service facilities, toilets and showers, is one of the true measures of its environmental quality. If we neglect these we omit measures of great importance. Thus, in attempting to find a disease-disability basis for environmental health we must not lose sight of the intangible esthetic aspects.

Perhaps the standards which have generated the most extensive and acrimonious debate are those specifying space requirements for residents of correctional institutions. Here the epidemiological support may not be as strong as some would like it to be. Yet few students of public health and the behavioral sciences question the health significance of congestion, crowding and isolation in space utilization.

The contribution of high density living conditions to the spread of infectious disease agents in human populations has been established. The crowding of people into small areas where they are forced to breathe, and too often, cough and sneeze in each other's face favors the spread of bacteria and viruses because it increases the likelihood of the organisms finding a new host and reduces the distance which they—the infectious agents—must travel between hosts.

King⁵ in a recent study of the rapid spread of tuberculosis in the Cook County (Illinois) Jail showed that crowded jail conditions promote close contact among large numbers of young men from urban areas where the incidence of tuberculosis remains high.

There is also respectable evidence that abnormalities in the quantity and organization of the space available to a population can contribute to emotional and intellectual incapacities; to increased aggression, withdrawal and sexual abnormalities. Crowding and isolation may also be a factor in increased mortality from heart disease.^{6, 7, 8}

Adequate "living" space for inmates needs no defense nor should it wait for more overwhelming epidemiological support. Indeed when a 5 ft. by 8 ft. cell must serve as home for two adult inmates; when individual privacy is severely lacking at all times within that cell; when food service and the elimination of urine and fecal waste take place in the same immediate setting (the cell) and when the rate of "fresh" air movement within the cell is less than adequate, it is hard to believe that the mind and the emotions or the physical health go unscathed.

Unfortunately almost every urban jail, as well as many State and Federal correctional institutions, currently have residential space allocations that by no stretch of the imagination can be defined as satisfactory for human habitation. An appreciable fraction of the correctional population lives under conditions that are undesirable socially, morally, and hygienically.

Conclusions

Regardless of how seriously biologists may debate the relative importance of heredity and environment in the development of mental and moral traits, it is quite plain that in regard to physical health and well-being there is no hereditary endowment so bad that it cannot be reclaimed, in part at least, by favorable treatment in an environment reasonably free of overt hazards, stresses, and insults.

Accordingly, a clear, affirmative health services responsibility is imposed on the correctional authority. It extends beyond treatment of injuries

and diseases to include preventive medicine of which environmental control is an essential component.

Like medical care and food, a clean, healthful environment is basic. It cuts across boundaries of race, class and politics and across definitions of offenders and nonoffenders. If it differs from community to community or institution to institution it differs not in fundamentals but only in complexity. Those who are committed to correctional institutions are just as susceptible to environmentally induced diseases and disabilities as are citizens who dwell in communities outside jails and prisons. But the first and foremost reason why our current and perspective performance on the environmental health front in correctional institutions has fallen short of our declarations and capabilities is that we who must act are unduly affected by the meretricious argument as to what we cannot afford in view of our rising community obligations. Conversely, the most important question is how can correctional agencies afford not to have an effective institutional environmental health program which will be less costly than the unrest and legal suits which have sought and will continue to seek relief from substandard environmental conditions.

In terms of public expenditures these arguments would not be too disturbing because environmental control must compete with other programs and services for its share of the tax dollars. However, we must not think in terms of expenditures but rather in terms of investments because money devoted to environmental health is an investment, not an expenditure. State, municipal and private industry budgets are replete with proof that dollars spent on environmental health and safety measures to prevent disease and disability yield returns that far exceed the wildest dream of commercial investment.

We can cite the savings that come from water treatment rather than from the long-term care of cases of water-transmitted diseases; from fluoridation of water rather than treatment of dental caries; the savings from the prevention of lead-based paint poisoning as opposed to the custodial care of persons whose brains have been damaged by the ingestion of lead and other metals. Additionally, it is much cheaper to control mosquitos than to provide extended medical care for the victim of malaria, and it is far less expensive to provide a safe and wholesome food supply than to employ physicians and

⁵ Lambert King and George Geis, "Tuberculosis Transmission in a Large Urban Jail," *J. L.M.A.*, 28:733-792, 1977.

⁶ H. William Gresham, "Socialization and the Human Physiologic Response to Crowding," *A.J.P.H.*, 67:155-159, 1977.

⁷ A. E. Martin, "Environment, Housing and Health," *Urban Studies*, 4:1-25, 1967.

⁸ *Man's Health and the Environment - Some Research Needs*, Report of the Task Force on Research Planning in Environmental Health Science, U.S. Department of Health, Education and Welfare, Washington, D.C. March 16, 1970.

other health care specialists to treat primary malnutrition and related diseases. These are but a few of the obvious savings that accrue from investment in environmental control measures.

Unfortunately communities and their correctional agencies too often deny themselves the rich

returns on environmental health investments because they do not sufficiently appreciate the potential returns to be derived from more generous support of environmental control services and do not distinguish between expenditures and investments.

Strategies for Organizational Change by Working With Administrators

BY J. ROBERT RUSSO, D.ED.

Professor of Psychology, Southern Illinois University, Edwardsville

MODERN SOCIETY has gotten so complex and messed up that the traditional neighbor helping neighbor is simply not enough anymore. Few traditional communities are left. For what are often good reasons, very few of us take care of our older relatives in our own homes when they get feeble. We have convalescent, nursing, and shelter care homes to take care of our old people. Some forms of helping have become a big profitmaking business. Serious abuses are common and many made public. The way our society has organized the delivery of help is easy to criticize. Bureaucratic organization has weaknesses. It is the subject of much ridicule. Your job may look like part of an American sham. You are confronted by one agency, under bureaucrats, with liberty and justice for some. You are too busy using bandaids instead of "miracle drugs" treating symptoms not causes. No one has come up with a good substitute for bureaucracy as a way to organize a group of people to do jobs and at the same time have a way to check on the workers to see that they are doing what they're supposed to do. Many of the weaknesses may not be caused by the structure but by the people who operate it. Who are these people? How can you deal with them to get more of what you and your clients need?

Every bureaucratic organization has adminis-

trators and administrators and administrators. Somehow we have come to relate administration with leadership. Many administrators have been to school and studied the best ways to get you to do your job and to make the organization run smoothly. Administrators have been studied.

Most authors begin by dividing administrators into two categories of some sort and then talk about the different ways these two types of administrators behave. Amitai Etzioni's two major administrative types are instrumental and expressive leaders.¹ The instrumental leader type needs overt respect, stands hostility well, worries a lot about the budget and how it is distributed. Etzioni contrasts this with the expressive leader who needs to be loved and to be friendly. The expressive leader is less able to stand hostility and has a need to maintain a close relationship with people in the various parts of the system. Etzioni's work has been followed by other refinements of the terms "instrumental" and "expressive." MacGregor in *The Human Side of Enterprise*² uses relatively analogous terms—Theory X (instrumental) and Theory Y (expressive). Blake and Morton's³ *Corporate Excellence Through Grid Organization Development* is based on two extremes of leadership styles, concern for production (instrumental) and concern for people (expressive). Drawing on earlier work by the sociologist Talcott Parsons,⁴ Guba and Bridwell,⁵ of the University of Chicago's Midwest Administration Center, defined a middle position of leadership style. The transactional leader is an intermediate type between nomothetic (instrumental) and idiographic (expressive). Additional

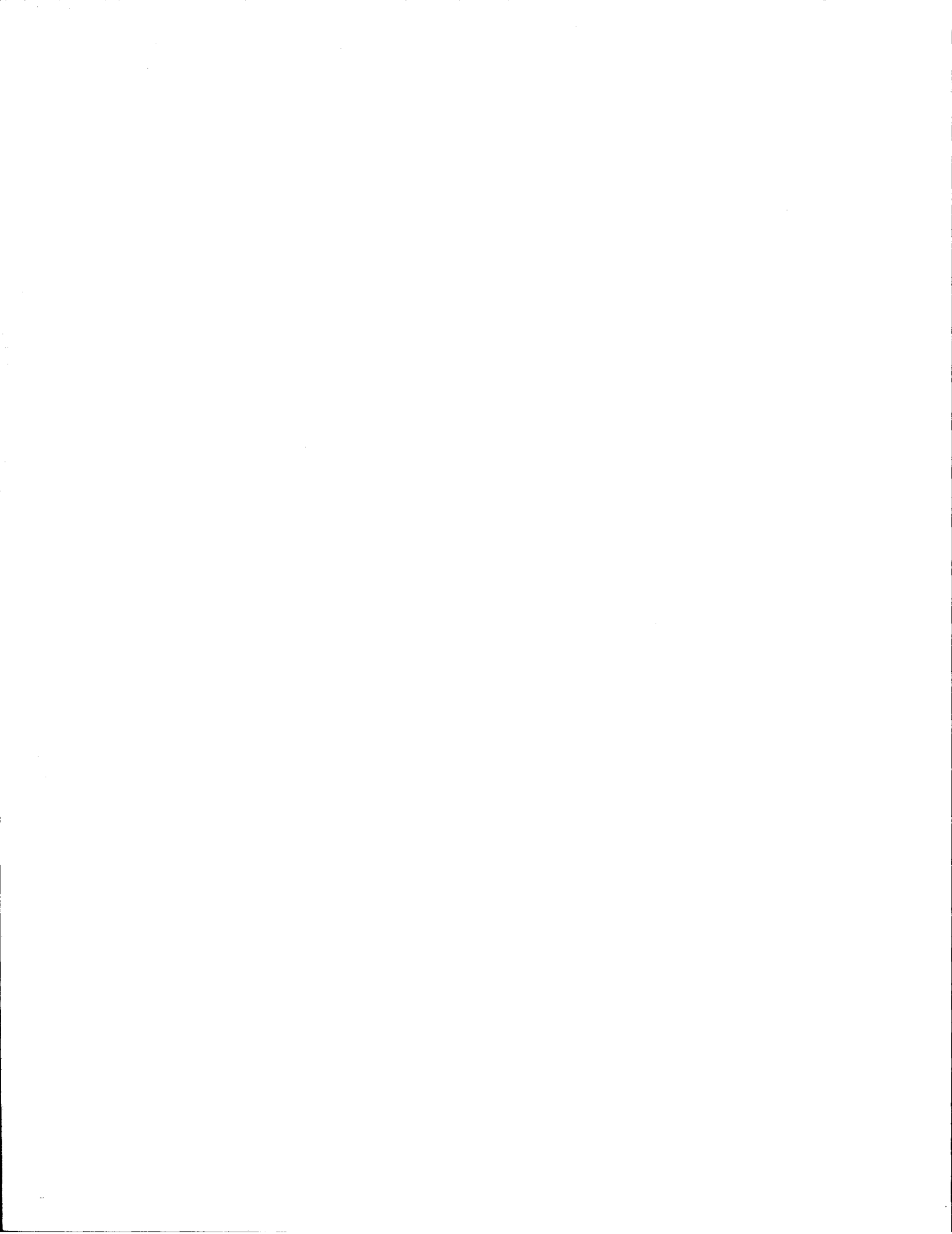
¹ Amitai Etzioni, "Dual Leadership in Complex Organizations," *American Sociological Review*, Vol. 30, No. 5, October 1965.

² Douglas MacGregor, *The Human Side of Enterprise*, McGraw Hill, N.Y., 1960.

³ Robert R. Blake and Jane S. Morton, *Corporate Excellence Through Grid Organization Development*, Gulf Publishing Co., Houston, 1968.

⁴ Talcott Parsons and Robert Bales, et al., *Family, Socialization and Interaction Process*, Free Press, Glencoe, Ill., 1955.

⁵ Eron G. Guba and G.E. Bridwell, *Administrative Relationships*, Midwest Administration Center, University of Chicago, 1957.



END