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REPORT OF THE
AD HOC WORKING GROUP ON
THE MODERN VOLUNTEER ARMY

Army Scientific Advisory Panel
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PART A. INTRODUCTION

Main Concerns of the Report

The Working Group has addressed its efforts to three main concerns:

1. criteria and goals for an adequate Army program of research and development in the behavioral and social sciences in the 1970's, and beyond;
2. improved organization and procedures for implementing the needed research programs;
3. main directions of research and development that are especially likely to have high value and usefulness for developing an effective and responsible volunteer Army.

II. Organization of the Report

The following Report is divided into five parts.

First, we state our guiding assumptions (in "I. First Considerations")

Next, we outline main recommendations (II.)

The reader who does not require detailed discussion or supporting materials may wish to read only selected portions of the remaining sections:

- III. Criteria and Goals for Behavioral Science Research and Development.
- IV. Main Directions for Effective Research and Development. (Examples of especially promising types of research may be found on pages 23-30 .)
- V. An Appendix is provided for reference.

PART B. THE REPORT

First Considerations: the nature of the mission

1. It is a first premise of this Report that an effective and reliable American Army today and in the foreseeable future depends essentially on the qualities of its people and the sophistication of its organization and its methods of dealing with its own personnel and with the environing society that guides and supports it.

A second premise is that a major intellectual challenge to leadership is posed by the situation of the Army in American society in the 1970's. To meet the challenge will require not only specific and precise research but also the development of new models of thinking about the Army and its basic mission and roles in a democratic, ~~modern~~ industrial society. ←

2. To reach the required effectiveness in dealing with these make-or-break social and psychological factors, the Army must maintain a focused and continuous research and development program, based on the behavioral and social sciences. The program must be sustained, not episodic, and it must emphasize fundamental issues. For the time being, we recommend approximately equal effort on the technological base and on more immediate applications.

to accomplish these ends, it is necessary to have stable commitments to behavioral and social science research from the offices of the Secretary of the Department of Defense and of the Secretary of the Army. Such commitment necessarily involves explicit policies embodied in meaningful directives and instructions. ←

Unless the needed stability of commitments can be manifested in the form of funds and personnel, it will be useless for the Army to seek in the future any further reports along the lines of the present document.* Legitimacy and encouragement must flow "from the top down."

II. Recommendations Suitable for Immediate or Early Implementation

Our primary recommendations are directed to matters that require only a few major decisions.

Recommendations #1 and #8 represent changes in organization. Recommendations #3-7 deal with matters of policy or of emphasis in total program. The remaining recommendations concern the content of the future program; implementation of these items will rest primarily with personnel responsible for carrying out behavioral and social science research and development.

*We have noted that the "Ginzberg Report" of 1971 commented:

"While ... the Army has recently initiated a major effort under the title, 'The American Soldier of the Seventies,' the Task Force saw no evidence that any Service has yet developed an effective research design that would yield the systematic information they need to monitor and assess the major changes that are occurring, nor has any developed mechanisms for translating the findings into new policies and programs." (Appendix B: Item #1, p. 31.)

We trust that it will not be necessary in the future for any similar Task Force to repeat such a dismal diagnosis. ←

We recommend that there be immediately established a highly qualified, continuing, Behavioral Sciences Advisory Council made up primarily of behavioral and social scientists, including persons drawn from universities, from business, and from the Army itself. This group should meet as a body at regular and fairly frequent occasions (at least twice a year). Great care is needed to include military personnel who are both fully professional officers and technically qualified to understand specific research proposals. Also, special attention must be given to including highly promising younger professionals and those well-qualified scientists who bring special insights from minority-group cultures. Members of the Council should serve fixed terms, subject to re-appointment but providing for adequate rotation of personnel.

Further, we recommend that, under the general monitorship and advice of the Council, there be established a Research Review Board charged with responsibility for recommending support or non-support of proposals for contracts and grants.

Upon the establishment of an Institute of Advanced Study and Research, as outlined in Recommendation #8 below, arrangements should be developed for articulating the work of the Council and the Board with that of the Institute.

It is vital that the Council and the Research Review Board be Army-wide in responsibility, and not limited to Research and Development alone.

We recognize that plans already are being formulated for changes in review and analysis of the Human Resources Research Program. We urge most serious attention to the specific recommendations above.

The Working Group recommends as urgent priority the establishment of a continuing Army requirement that recurring sample surveys of Army personnel be carried out at regular intervals. Each survey shall contain a standard core of identical items or scales, including the background information necessary for disaggregating data by rank or grade, race, sex, and education. Standard information and attitude items will be repeated to permit indexing trends and, where feasible, cohort analysis.

To implement this recommendation requires an increase in the Army's professional and technically qualified survey staffs.

Recurrent surveys not only will supply a running inventory of changes and stability in standard items but also will facilitate quick and reliable appraisals of important newly emerging or anticipated changes. Such "hot" data can readily be provided simply by adding-on the necessary probes to the regular surveys.

*3. We recommend support as a definitely recognized and continuing part of behavioral R & D/a moderately small but vigorous and continuous sub-program of on-the-spot research reconnaissance by means of direct observation and interviews.

Such efforts have demonstrated time-tested value for the Army. Examples range from the Research Branch's participant-observation of the functioning of the combat replacement system in the ETO in World War II, to the early detection (1965) in Viet Nam of the impending urgency of problems of rotation, and to current observations of effects of barracks life on military performance (e.g., "ghosting").

Implementation of Recommendations #2 and #3 will help to insure that Army command will be apprised of emerging human problems before they become unmanageable by reason of prevalence or other intractability.

We recommend that provisions be made for continuing cohort-analysis of demographic characteristics of all types of Department of the Army personnel.

Cohort-analysis uses a longitudinal design in which data are gathered on the same individuals at different points in time. Highly effective technical methods are available for analyzing intake, exits, changes in status, mobility, movement of vacancies through sub-systems. Although primarily developed in demography, the powerful mathematical and statistical models and procedures have been tested in analysis of organizations and can make useful contributions to Army operations--especially in relation to recruitment, assignment, promotion, and retirement.

*5. A substantial portion of the current Army programs of behavioral R & D are well-established and useful, requiring only continued critical review and support for imaginative and valid programs. Fitting within this characteristic are the bulk of research activities in the fields of selection, classification, utilization, and testing of performance. Much of the work of the Behavior and Systems Research Laboratory well illustrates research of this type.

We therefore recommend continuing support, and urge efforts to further improve (a) research planning and, especially, (b) communication and liaison between the research personnel and the operational commands.

The effectiveness of research operations required in this area of concern will be greatly increased by administrative provisions for field units or teams to work closely on a continuing day-to-day basis with the operational commands.

*6. More broadly, definite and specific arrangements must be authorized and implemented to establish and maintain continuous two-way linkage between behavioral research and the policy-determining or operational "customers" of its findings.

A major part of the linkage must consist of continuing person-to-person communication through regularized channels.

Similarly, definite arrangements must be developed to establish and maintain continuous two-way linkage between the Army's research program and the universities and other external agencies that carry out training and research in the behavioral disciplines. (See p. 18 below for further specification.)

8. We recommend the establishment of an Institute of Advanced Study and Research, with an initial five-year commitment of support, to act as a focus for the Army's research and development programs in the social and behavioral sciences.

In the Army there is a very small but growing number of officers with competence in social research. These persons' ability to undertake research is limited by the continual rotation of assignments and the absence of a stable organizational base. In essence, in the analysis of the organizational and professional aspects of the military it is essential that the equivalent of a graduate department and faculty be created which would be doing both teaching and research.

The Institute would begin with a "critical mass" of some ten top-level professionals, of whom 7-8 would be Army personnel (either military or civilian) on long-term assignments of at least five years and 2-3 would be persons brought in on a temporary basis from universities or other external research organizations. (The initial annual budget, accordingly, would be approximately \$500,000.)

The Director of the Institute should be a high-ranking officer who has training and experience in one or more of the social and behavioral sciences.

Further study is required concerning an optimal location for the Institute. No existing centers or laboratories are suitable for the envisioned missions. The Working Group recommends that it not be located in the Washington area,

as serious reservations about the suitability of placing it either the United States Army Command and General Staff College or the United States Army War College. Consideration should be given to the possibility of locating the Institute in the Research Triangle area of North Carolina in association with the Army Research Office and nearby universities. Similarly, consideration should be given to having the Institute associated with, although not a subordinate part of, the U.S. Military Academy at West Point.

Whatever the details of operational policy that emerge from more specific study, the Institute must have the clear mission of functioning as a primary center of advanced research and study for the entire Army system. Its main functions will be:

1. to maintain complete and current archives of the Army's behavioral science R & D;
2. to maintain complete and current archives of data concerning Army personnel and organization;
3. to carry out research on Social Indicators, including analysis of trends;
4. to promote and to conduct comparative studies of modern armies;
5. to carry out critical reviews and syntheses of existing research;
6. to develop models of and proposals for organization and procedures, and to promote or conduct organizational analysis and studies of motivation and recruitment;
7. to review proposals and make recommendations concerning proposed research.

III. Criteria and Goals for Behavioral and Social Science Research and Development

The deliberations of the Working Group emphasized as necessary characteristics of an optimal program of research and development the following criteria and goals.

1. Continuity: sustained and cumulative programs
2. Relevance to operational problems; anticipatory capability
3. Coherence

4. Sophisticated in-house capability for planning and monitoring, as well as for conducting classified research
5. "Full-spectrum" coverage, from Basic Research or Technological Base through Exploratory Development to Applied Studies
6. Linkage with universities and other external research organizations

Comments on each of these points follow.

Continuity

The Working Group has been sharply reminded at every turn in its investigations and deliberations of the vital importance of continuity in the Army's behavioral science research programs. We have seen much evidence of the harmful consequences of on-again/off-again situations, and of a lack of stability sufficient to allow planning of cumulative research attacks on major problem-areas. Two remedies are available.

*There must be a stable in-house research capability, adequate in size and quality, to make sure of a cumulative technological base with balanced effort simultaneously directed to immediate problem-solving.

*Both immediate and continuing actions are required to develop and maintain an effective interface with academic and community research organizations.

The above conclusions are strongly interrelated. Without continuous and close interaction with external research organizations, recruitment and retention of suitably qualified Army research personnel are severely hampered. Without continuity of staffing and program, a "vicious cycle" is set up which defeats production of the research that would make possible those further contributions to the Army and to scientific knowledge that would enhance the attraction of the program to highly-qualified professional workers.

In the behavioral and social science activities of the Army, the programs must link inward to the potential users of their products. Such programs equally must link outward to the research communities from which they must draw personnel, data, ideas, and consultations..

Examples of crucial research areas in which continuity is essential include: changes in motivations and aspirations, barracks life, supports of discipline and work incentives, demographic changes in the Army, and personnel career-patterns. Further, in any problem for which strong causal diagnosis is needed, a minimal requirement is the collection of comparable information at two or more points in time.

A continuing need exists in the Army for baseline and trend data on social and psychological factors. (To appraise its tasks and to plan for the future, the business community has the market as an ever-present index of reality; elected officials, similarly, have the reactions of their constituencies. The Army in the past often has had no equivalent way of "taking the pulse" of its own personnel.) The idea of an Institute for the Individual Soldier was a first step in developing a viable program. Continuing, regular surveys and spot studies must be maintained in order to have comparable data, over time, concerning orientation and aspirations of soldiers and potential soldiers.

Many important problems can not be sensibly analyzed without provision for longitudinal studies. Arrangements must be made for studies of cohorts carried through a span of years (persons enlisting at the same time, by age; those promoted to a particular rank; those exposed to new training programs, and so on.)

rend-studies, using panels of respondents or repeated surveys,
necessary to

- (a) establish base-lines for measuring changes,
- (b) detecting changes that pin-point needs for focused studies.

Relevance and Anticipatory Capability

The Army constitutes, in many respects, an ideal setting for carefully controlled program testing (e.g., alternative methods of dealing with drug-use) as well as for the more powerful type of causal inference that results from actual experimental research

Through appropriately phased utilization of such a program, the Army will be in a much stronger position than in the past for anticipating relevant changes in the social environment, such as the role of women, race and ethnic relations, or unionization.

Obviously central to the development of a modern Army largely made up of volunteers is a system of incentives and recruiting procedures that will optimize quantity and quality of voluntary entrants. Development of more effective recruitment is more crucial for enlisted than for officer personnel; for various reasons it will be easier to recruit an adequate number of qualified officers than to insure adequate intake and retention of enlisted soldiers.

Research is required to ascertain the effective special appeals that prospective Army service will be able to offer to the 17-20 year old youths. In the past, military service often was perceived by young men in the United States as a legitimate way to "get away from home and grow up." Is there any effective present-day approach that will re-establish initial enlistment

Step to "Maturity"? Recruiting appeals and incentives must dependable and realistic if they are to have continuing efficacy: "The word gets back" to the pool of potential enlistees. Study, research, and monitoring will be essential to maintain an in-service system that insures that the Army "keeps its promises" in the eyes of its volunteer personnel.

Present studies indicate that an Army career is not usually seen by potential enlistees as containing opportunities for leisure, security and personal growth equal to those available in the civilian sector. A high priority for behavioral research is a series of analyses of the aspects of Army experience that discourage enlistees and reduce retention rates. Data now available are sufficient to suggest that special attention should be directed to analyzing what short-term rewards are now experienced and what additional ongoing "payoffs", tangible and intangible, can be built into everyday Army life. It is likely that a central factor in this connection is the extent to which various kinds of work are experienced as meaningful or personally significant.

The effectiveness of research operations required in this area of concern will be increased by administrative provisions for field units or teams to work closely on a continuing day-to-day basis with the operational commands. At present it does not appear that adequate use is being made of such relevant research findings as the data showing that educational opportunities would be an incentive to enlistment more powerful than higher levels of pay.

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In the past the Army has not extracted maximum utility from its behavioral R & D, by reason of: (a) fractionalization of effort, (b) over-emphasis on anecdotal information at the expense of systemic research data. (A third difficulty has been poor retrieval of information. A system that does not remember will not learn well.)

A coherent research and development program in the behavioral sciences can be developed by concentrating upon the flow of personnel through the Army.* Relatively sophisticated research-based organizational theory exists to give a framework for designing a cumulative program. An acceptable program will include at all times several different types of research designs; intensive observational investigations in natural settings; repeated cross-sectional sample surveys; longitudinal projects, especially those generating data on population cohorts followed over time; analyses of selected comparison groups; assessment and evaluation research; controlled experiments.

It is possible to devise field experiments that avoid implications of interference or "threat" to individuals or organizations within the Army. For example, with the cooperation of appropriate levels of command two or more promising programs may be tested and assessed to discover the consequences of each. In this way, no one is deprived of a 'good' program--rather the

* Example: In recent years only about 40 per cent of age-eligible young men actually have served in the military. In peacetime, only about one-half of entering servicemen have been true volunteers. About 20-25 per cent of volunteers have reenlisted for a second term in usual peacetime conditions. But in later years of the Vietnam war, volunteer reenlistments dropped to 15-20 per cent, and draftee reenlistments were less than 5 per cent.

tive is to find the best".

A central and unavoidable question in appraising the contribution of behavioral research to the Modern Volunteer Army is whether the Army's commitment to the research program is firm and stable enough to insure the asking of the most important research questions.

The reason for the question is clear. Many of the most important questions about human factors in the Army are "sensitive" or "controversial" -- racial relations, discipline, drugs, promotion policies, protest and dissent. Unless responsible research can go forward on a consistent and cumulative basis, useful research inputs can not be made to policy-makers and administrators.

Further, research may need to consider in addition to recruitment in the present period, possible future developments that may happen to be in the realm of the politically "unthinkable" at a given time, for instance, some kind of National Service system. Creative research thinking may require anticipation of possible future eventualities that may never develop, but consideration of which is vital to defining the scope and directions of thrust of many specific studies. For example, what are the necessary conditions for maintaining the Army as a viable corporate component of a democratic society. What is the Army's role in the maintenance of national unity? How does the composition of the Army affect its role in national life? These are large questions, but thoughtful research can produce information highly relevant to careful consideration of them.

Capability

For effective implementation of an optimal R & D program on behavioral and social factors, the Army must develop rapidly and vigorously its in-house capabilities.

The system of contracted research works well only when two conditions are fully present: (1) reliable and sophisticated research organizations that have high sensitivity to the Army's needs, and (2) in-house staff of high technical competence and with strength in depth to monitor research and to maintain effective relationships with the academic community and with the not-for-profit and commercial research organizations.

Much of the Army's research on human resources and human factors in the immediate past has been primarily psychological in nature. Most of the psychological work is valuable and warrants strong support in the future. However, the Army has lacked a strong complementary capability in sociological research and in other social sciences. Contract relationships with universities and research institutes can not provide the needed work without an in-house component adequate to plan and monitor and to itself carry out certain portions of the program.

Special note:

Very recently there has been a proliferation of new research organizations seeking contracts. Some of the personnel of these organizations represent themselves as social scientists, although having, at best, only minimal qualifications; some have followed the fashions of the day and seek to work on studies of "social problems", as engineering and physical sciences have experienced cut-backs.

He must be blunt: there are indeed quacks, smart operators, and faddists who present themselves as able to deliver panaceas under the label of behavioral and social sciences. They must not be allowed to denigrate the genuine and serious scientific work being done by better qualified persons and organizations.

The Army has a substantial budget for research in behavioral sciences, and is carrying out work of commendable quality. Unfortunately, however, it still has an excessively small in-house professional and technical capability. Present staff are spread thin in a heroic effort to plan, monitor, and disseminate results.

Full-Spectrum coverage

The Army's needs for behavioral research will be served most effectively by a program that does not neglect any part of the range from technological base to operational applications. Some work must be exploratory in nature, involving reconnaissance of new areas, whereas other research will be highly systematic and controlled. Each has its appropriate place in the total effort.

Behavioral and social science research uses all main forms of

ific methods--including direct observation, surveys, interviews, field experiments, laboratory experiments, computer simulations, mathematical modeling.

The methods that are most appropriate and effective vary with the state of the art and with the specific nature of the immediate research problem.

Accordingly, no one research method or technique is superior in objectivity and power for all problems.

It is of the highest importance that policy-decisions concerning behavioral research be based on the crucial facts just stated. In particular, support is required for the use of first-hand observation and participation and of interviewing, using technical procedures appropriate to particular studies and conditions.

In viewing the total range of research efforts, it is important to observe that the technological base in the behavioral sciences has two essential aspects: (1) development of specific research technologies adequate to generate the required types of valid and reliable data; (2) technologies of behavior modification and of organizational structure and functioning. Actually, whether in physical sciences and engineering or in behavioral and social sciences, the essential component of technology is not the physical gadgets but the knowledge, without which the artifacts are meaningless junk. In the behavioral sciences, technologies usually consist of such things as procedures for a particular program of operant conditioning or of complex training, specification of methods for improving inter-unit communication under combat conditions, plans for a recruitment program, or invention of a

system of organization. These procedures, methods, plans, and organizational specifications are "software". Already, however, and increasingly in the future behavioral and social science R & D will involve computer-aided procedures, new means of communication, and close integration with biomedical technology.

External professional and intellectual linkages

The Army has suffered, especially during the 1960's, *has from* ← inadequate linkage with the external research community in the social and behavioral fields. The reasons are several, some unavoidable, some avoidable. In the past the main linkages between Army- and university-based research has been through the use of contract relations. Often these researches were developed under inappropriate assumptions about the potential role of social science. The result is a well documented history of tension and joint misunderstanding.

Among the avoidable difficulties, two are outstanding:

1. problems of access, under reasonable restrictions, for academic scientists to carry on unclassified research with Army data and in Army settings, and to publish their studies.
2. reliance upon research contracts without provision for some support, closer to the pattern of grants and fellowships, in which immediate predetermined operational outcomes are not required.

A vast amount of needed work can be elicited from talented people by opening the doors now closed. Although the detailed practical problems require effort and ingenuity, workable solutions are feasible.

With the advent of the all volunteer force, it may be possible to develop new approaches to these issues. In the last decade there have grown up a group of younger sociologists, social psychologists, and political scientists who are independently concerned with the study of military institutions and their impact on civilian society. Their research is unclassified and they receive assistance from the military in the form of access to materials and data.

The development of ongoing independent university based research on military institutions is vital. It is vital for the intellectual life of the universities. It is vital for elected officials and the military to have alternative perspectives on the basic problems. Modest grants-in-aid, especially for young scholars and graduate studies, would appear in order. The research would have to guarantee the rights of the subject and proceed with professional responsibility. In turn, the research would be unclassified and available for scholarly publication.

Adequate articulation with the external research communities thus requires continuing adjustments and innovations (Some of the needed research can be best accomplished from carefully monitored grants rather than contracts; arrangements are needed to promote two-way flows of personnel on a temporary basis between the Army and the academic establishments.) fellowship programs and grants-in-aid are possible alternative routes to highly productive arrangements for stimulating relevant research.

Directions for Effective Research and Development

The Report has urged that the Army give special attention in the programs of behavioral science research to:

- (a) means of assuring continuity and cumulative retrieval of data, requiring improved planning, funding, and staffing of research activities, including management and monitoring
- (b) the urgency of adequate encouragement and dependable support by appropriate officials for basic, anticipatory, and exploratory research--studies that are not tied to immediate and specific operational requirements but that deal with problems or contingencies likely to be highly important in times ahead;
- (c) identifying and illustrating lines of research with definite potentials of producing results applicable to practical problems of policy-development and of operational procedures, practices and systems in the Army;
- (d) diagnosis of needs for and means of developing improved two-way flows of information between the research personnel in behavioral sciences and the decision-making centers that can utilize research-based inputs.

2. Main categories of promising research are suggested below.

- (a) Basic social processes and psychological factors in developing and maintaining a Modern Volunteer Army. Members of the Group agreed that research is urgently needed on the following topics.

Intensive reconnaissance is required to develop a focused program of research on the emerging problems of maintaining elan and esprit d'corps in a highly technological, organizationally complex, and "civilianized" military structure. Clearly the whole Army can no longer be thought of in terms of combat careers--but equally it must not move too far in the direction of "Scars Roebuck in uniform".

- (1) A high-priority program of coherent and cumulative basic research and applied studies must be carried forward to analyze the interfaces or linkages between military and civilian careers. This program will have a two-fold emphasis:

motivation for military service, and (b) the actual social organization of objective opportunities and of career-patterns.

(2) Analysis, including model-building, should be directed toward possible innovations in personnel policies, such as

- (a) One-year enlistments
- (b) "experimental" systems of leaves at differing stages in Army service (short, paid leave at 5 years or 10 years; a "sabbatical" leave-in-place--after 18-23 years).
- (c) lump-sum allocations of discretionary funds to be used by company commanders to improve performance in their units.
- (d) Consolidation of Service publications such as "house organs", with continuing feedback study as to readership, interest, and other criteria.

(3) Worthy of careful analysis are alternative modes of unit-of-choice recruiting and training, and the development of the concept of a permanent "home unit".

(4) Analysis is needed of ways of harnessing to the common goals the competitive striving of components of a highly differentiated, pluralistic military force. Each interest-grouping strives to establish itself in prestige and advantage. How can these inevitable strivings be controlled and directed for the good of the Army?

(b) The Army in American society of the 1970's. What changes occur in knowledge, evaluation, and attitudes toward the Army among different components and sectors of the population? To what extent are the various publics aware of and responsive to the Army's contributions to civil society, e.g., research on equine encephalitis, innovations in education, day-care centers, and the like? Can we identify areas in which the Army's internal interests coincide with an important public need, e.g., work on

le-cell anemia? What information (including "images" and evaluations) about the Army is being disseminated by the mass media? What impacts ensue in different parts of the population?

The Army of the 1970's will continue to practice many time-honored and effective procedures. But the experience of the 1960's have revealed new problems--to which the behavioral and social sciences can bring new knowledge and improved research designs and techniques. Studies in this area should include research on the uses and effects of different levels of military norms, e.g., U.S. military law, international law, U.S. civil law, Army Regulations, field Manuals, military education, customs, and informal group codes.

How can the Army's essential missions be linked to the personal goals and interests of persons who are suitable potential volunteers? Is "personal growth" a more powerful incentive than "self-interest"? What is regarded as a worthwhile mission for the Army and for the individual man or woman in the Army?

In the immediate future, it may be necessary for the United States to maintain a combat-ready force during relatively long periods of relative inactivity. How can motivation and self-esteem best be maintained among combat-oriented troops? (Ways must be found to provide roles of genuine usefulness and public honor and to keep alive a sense of commitment to the necessarily heroic ultimate mission of the Nation's soldiers. It is vital to emphasize that no "public relations image" is a solution. Rather there must be continuous, daily realistic experiences that provide the necessary incentives and self-definitions.)

A special area of importance is analysis of these matters

ference to the future organization and place of the Reserve and National Guard.

The questions raised above can be clarified by highly focused and selective comparative research on patterns of recruitment, training, organization, and career-lines in armies of other Western nations of similar levels of industrial and urban development. Such research is recommended as of substantial long-range utility.

Within the United States and its Army, systematic research attention must be directed to the following major topics.

(1) The character of a potential "plural Army". The concept is of an Army that is unitary yet provides for several different main kinds of careers. Not everyone would be expected to be trained and motivated to be the same kind of "soldier" or "officer". Some would be oriented to combat, others to skilled occupations, others to technical and professional careers, and so on. What needs to be known for responsible evaluation of this concept? What research is feasible?

(2) Characteristics of different sectors of American society from which the M.V.A. will be drawn. What are the implications of varying admixtures of elements of the population? What are the skills, disciplines, values, beliefs, and expectations that affect volunteering, performance, desire to remain in a military career? Are there some especially effective ways in which the Army can "talk to" different ethnic, regional, or other segments of the people? What are the sources of "counter-cultures" and of rejection and ambivalence toward the military services or the national society?

(3) Sources of changes in commitment or alienation and disaffection within the Army. (These problems can not be swept under the rug; better early research than later publicly explosive events.) What are the origins of "hassling" and "harrassment"? What conditions, on the other hand, encourage strong identification with and pride in one's unit and the Army as a whole? What stimulates and encourages the individual to identify himself with his military role or position? What patterns are there of unrecognized responses to various training procedures, schedules, techniques, styles of communication?

It is necessary to devote serious research effort to study of the "generation problem" in the 1970s, e.g., orientations of youths to economic security, acceptance of legitimate authority, suspicion or confidence in leadership, sense of "having a stake" in the continuity of American society. What external events or personal experiences lead to difference in those orientations that strongly affect responses to the Modern Volunteer Army?

(4) Research is very much needed on the effects of differing systems of practices relating to rewards and penalties. Studies in civilian contexts have shown some remarkable instances of success in programs of selective reinforcement of desired behavior; also, there is evidence that mild or small penalties that are certain and prompt may be more effective than severe penalties that are rare and unreliable in application. Systems of discipline in military settings may be open to improvement through studies specific to the special conditions of various parts of the Army. Continuing carefully controlled research should be devoted to practices and outcomes of military justice, including both the problematic and the positive aspects at different levels of organization.

ental long-range work should be initiated to ascertain and analyze
g degrees and kinds of comprehension, understanding and appreciation
remonies, customs, rituals, and awards within the Army. Is it feasible
ascertain effects of specific practices? How is a sense of pride or
military honor developed? Are some practices over-used or depreciated in
value by the manner of their use?

(c) It is essential to provide for continuing collection and analysis of basic data on demographic and family characteristics of present and potential Army personnel. Rates of volunteering and retention probably are powerfully affected by these characteristics. The Army has a clear need to know whether, and to what extent, this is true.

Needed data would include: marriage age in those sectors of the population that are especially likely to be sources of volunteers; birth-rates, spacing of births, and total size of families; rates of marital break-up; relation of family-stages to retention rates; development of indicators of family solidarity.

Special interest would attach to studies (relatively simple and feasible) of family histories of participation in military life.

A small-scale but useful study would deal with marriages of WAC and male Army personnel, it could serve as one pilot effort for policy-oriented research along the military-civil society interface.

(d) Special relevance to the American Army will be found in systemic research that will analyze the effects of both large changes and episodic fluctuations in the size of the Army (and of its constituent components) and the sources of personnel upon such crucial conditions as:

- (1) the occupational distribution of Army jobs in relation to qualifications of available personnel,

- (2) the distribution of personnel by rank or grade,

b) the special relationships that may be created in Army settings among personnel of differing civilian backgrounds and Army experience.

computerized system-analyses and field studies are necessary.

e) Utilization of personnel. Special areas that warrant intensive research attention include the utilization of physical and technological skills, women in the Service, the National Guard, and the Reserve. It appears that research on classification is good and that the lines of useful future work are reasonably clear, and that research and development on teaching of skills also is going well. However, there is much evidence that malassignment is a serious, and perhaps a growing problem. A review of approaches to solving the problem suggests that study should be directed immediately to the feasibility and specific character of needed research in the following areas:

- An early-warning system whereby impending changes in policies and procedures can be communicated to those portions of the Army that must do forward operational planning--for example, with regard to enlistment inducements, assignments, allocations.
- An informational system to insure that well-qualified and positively motivated persons who want to stay in the Army will find it possible to do so, if need be, by means of a new system of reassignment.
- Analysis of the effects of manpower policies and organizational structure under rapidly changing conditions. For example, what are the effects of a sudden drop in draft calls upon the structure of ranks and grades, and how does this affect the Army's capacity to retain valuable personnel?
- Studies of possible systems of "lateral movement" into, within, and out of the Army. Are there efficient and reliable systems that will increase the attraction of the Army to potential volunteers, will retain those who should remain in an Army career, and will produce constructive solutions to problems of separations?
- Continuing analyses of effects of length of assignments, including both total terms of enlistment and types of within-Army assignments.
- Research assessment of responses to and potential implications of possible alternative systems of officer assignment, e.g., effects of a system which included a command corps and a staff corps.
- Analysis of effects of retirement policies upon retention of career officers and senior noncommissioned officers, including appraisals of effects on costs, morale, effectiveness, relationships among officers, relationships with enlisted personnel.

Working Group recommends continued vigorous execution of coordinated plans of problem-solving research on such problems as drug misuse, factors affecting work performance, and ethnic and racial relations. For example, what distinguishes highly successful from less highly successful experiences in coping with such problems as drug-use (prevention and control and rehabilitation) and racial or ethnic tensions? What combinations of sociocultural backgrounds, training, location, unit missions, leadership, organizational practices, and so on are typically found in the most successful instances?

Such research should not serve merely as a bucket-brigade for putting out fires, but should specifically derive its assessment and problem-solving aspects from the ongoing basic work on Army organization and motivation.

(1) Ever since the Army's studies of attitudes and behavior of black and white soldiers in World War II (The American Soldier studies), nearly all main manpower and organizational problems have been recognized to have actual or potential racial or ethnic aspects. These aspects have become increasingly central to military effectiveness and to the place of the Army in American society.

- . Some of the problems (and opportunities) of the Army are simply "spill-overs" from the civil society. Other problems may be, and are, generated within the military setting--often by the effects of factors not obvious to common-sense observation.
- . Already in progress are efforts to develop a suitable set of plans for research on race relations.
- . It is crucial that the Army maintain a continuing research effort in this area, and that it develop an additional capability for rapid research assessment of new developments.
- . Research in this area has a special requirement for adequate participation of black research personnel. It also has requirements (a) for highly sophisticated and sensitive research designs and techniques, (b) for objective and systematic data, and (c) for specification of findings for different types of white and black personnel, for varying situations, and for different group processes.

During the late 1950s and 1960s, the United States experienced the rapid introduction and diffusion of psychoactive chemicals. Many psychoactive drugs developed for medical, psychotherapeutic, purposes found their way into widespread non-prescription and illicit use.

Responses to the real dangers have resulted in some public actions that may be helpful and others that appear to be counterproductive in coping with the problems represented by drug dependency and drug abuse.

Research in the Army on social and psychological factors in drug use should be carried out in close articulation with whatever physiological, medical, and legal studies may be undertaken. Four types of research hold substantial promise:

- . "epidemiological" research that will locate and characterize group or contextual effects--as when units of the same general type show sharply contrasting patterns of "no use" and "widespread abuse"--and that will identify and describe modes of transmission of group-supported norms and practices;
- . studies of phases and sequences in drug use and abstinence by individuals and groups and for different drugs (including alcohol);
- . analysis of peer-group pressures within military groupings as factors affecting drug abuse, resistance to drug use, and "spontaneous remission" when users cease the practice, either without or with some professional therapeutic intervention;
- . research on outcomes of different types of treatment programs and procedures.

3. Research with Potential for Early Application

No attempt has been made in the above listing of examples of promising research areas or topics to indicate a time-frame for movement from fundamental analysis to operational application. The lead-time, obviously, will vary greatly from one problem to another.

Nevertheless, it may be of illustrative interest to note a number of research projects with relatively high potentials for early utilization.

(a) It would be feasible within a relatively short time to carry out a critical review and synthesis of existing data from available studies on demographic characteristics of Army volunteers and draftees, manpower requirements under varying conditions, and studies of relevant opinions and attitudes both within the Armed Forces and outside.

(b) Pilot field trials could be undertaken in such manner that much of value could be learned by research assessment of experiences in recruiting efforts among categories of personnel that are needed in the Army but are difficult to attract.

(c) Pending more long-range and basic analysis it would be extremely useful to have specific observational and survey data concerning immediate environmental factors in soldiers' adjustment in the Army. An important example is analysis of housing for enlisted personnel: availability, cost, quality, satisfaction or dissatisfaction, etc. Housing appears as an urgent and important area for practical, creative action. There are special aspects in the case of black soldiers and their families. Imaginative solutions could be a decisive factor in increasing the attractiveness of a no-draft Army. Pilot research, now, could give valuable data. Specific efforts could be:

- (1) compilations (with critical commentary) of data already analyzed on social and psychological aspects of housing;
- (2) relatively quick surveys of responses of enlisted men and women and their families to current housing situations for Army personnel;
- (3) preliminary assessment of psychological and social implications of proposals for planned military villages;
- (4) preliminary assessment of economic and social aspects of new approaches.

to construction and maintenance, e.g.: mobile modular systems; construction carried out by military personnel;

(d) studies of the education, military training, and compatible or incompatible demands and obligations experienced by NCO's because of their position and duties in the present organization of Army units;

(e) surveys and observational field studies of the PX system.

(f) Effective use of time in Army units. It may well be that 180 days a year is adequate for most training purposes in non-war periods. What are meaningful and productive ways to utilize the remaining days? (Boredom and make-work assignments do not commend themselves as viable possibilities for a M.V.A.)

IV of main recommendations

This Report has presented eight recommendations, as follows:

1. Immediate establishment of a Behavioral Sciences Advisory Council for policy-guidance, and establishment under monitorship of the Council, of a Research Review Board for reviews and recommendations concerning specific research proposals.
2. Regularly recurring sample surveys of Army personnel, carried out through existing internal organizations.
3. Active support of exploratory and fact-finding research using a full spectrum of research ranging from field interviews and first-hand observation, on the one hand, to highly controlled quantitative experiments, on the other.
4. Provision for regular and continuing cohort-analysis of demographic and social characteristics of all types of Department of the Army personnel.
5. Continued critical review and adequate support for behavioral and social science R & D in the fields of personnel selection, classification, utilization, and testing of performance.
6. Establishment of a more effective system of two-way liaison between the behavioral research and development program and the policy-determining and operational agencies for which its products are relevant.

Development of more effective set of two-way linkages between the Army's research program and universities and other external educational and research organizations, including grants-in-aid arrangements and exchanges of personnel.

8. Establishment of an Army-wide Institute of Advanced Study and Research, with an initial five-year commitment, to act as a focus of advanced research synthesis and planning.

The Report outlines a set of criteria for the R & D program in the field of social and behavioral sciences. It then sets forth a number of examples of feasible and promising particular lines of research for the future.

The Working Group is convinced that implementation of the specified recommendations will have substantial positive results for the Army of the 1970's.

Appendix A.

Terms of Reference

The Working Group has been guided by the following Terms of Reference, as revised at its meetings of 14-15 January 1972.

I. Introduction and General Comments

It is anticipated that within a few years, the Army's reliance on the draft will be substantially reduced and the Army will become much more dependent on volunteers to fill its ranks. This can be expected to bring the Army face to face with a host of problems, many of which will be of fundamental importance for the capability of the Army and thus for the security of the United States. In extremely gross summary, the problems can be stated as:

1. How to induce a sufficient number of men (and women) to enlist in the Army, at a tolerable cost, in the face of competitive forces in civilian life.
2. How to attract into the Army, persons having intellectual prowess, including scientific and technical abilities, sufficient to fill the Army's needs for leadership and for the exploitation of modern technology.

The primary purpose of the ASAP Ad Hoc Working Group on the Modern Volunteer Army is

- (1) to survey pertinent research in the social sciences (and as appropriate, in other disciplines) and
- (2) to suggest how the results of such research might be used to contribute to the solution of the previously mentioned problems of the future Army.

Specific Terms of Reference

The ASAP Working Group is requested to:

1. Determine the usefulness of research for analyzing and forecasting the composition of the U.S. population, particularly with reference to distribution by socio-economic status, race, intellectual capacity, and job skills.
2. Determine the usefulness of research for forecasting the probable future personnel needs of the Army, particularly with reference to intellectual capacity, personality traits and job skills; and how do these personnel needs relate to the population data described above.
3. Determine the usefulness of research to measure "attitudes" and values and other attributes of the U.S. population, particularly with respect to those factors that affect recruitment significantly, in numbers and quality.
4. Determine the usefulness of research to develop programs for alleviation of racial tensions and other substantial social problems of the Army.
5. Determine the usefulness of research in modern techniques for military education and training.
6. Determine the feasibility and usefulness of research on factors affecting recruitment and retention and performance of Army personnel.
7. Determine the usefulness of research for analyzing systems of assignment and promotion.
8. Outline a practical program through which the Army can exploit past, present and future research in the areas previously described to assist in meeting its future numerical and qualitative personnel requirements at lowest possible cost.

Appendix B. Biographical Information:

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(The detailed materials specifying a recommended program
are on file in the Behavioral Sciences Division.)