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INTERNATIONAL CONFERENCE (11TH) ON APPLIED MILITARY
PSYCHOLOGY

James T. Lester

Office of Naval Research
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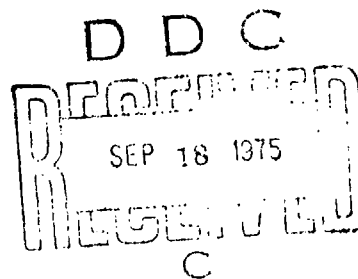
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11TH INTERNATIONAL CONFERENCE ON APPLIED MILITARY
PSYCHOLOGY

MAY, 1975

J. T. LESTER*

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Military psychology	Personnel Training							
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The 11th International Conference on Applied Military Psychology convened invited psychologists from Belgium, Canada, Denmark, Finland, France, Great Britain, Israel, Italy, Netherlands, Sweden, USA and the Federal Republic of Germany. The meeting was unstructured inasmuch as few formal papers were presented; however, discussions covered five areas of appearance of possible problems stemming from diversity. These were (1) intake and retention, (2) tasks and assignments, (3) the leadership								

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20. Abstract (Cont)

problem, (4) training, and (5) life beyond the task. An appendix lists names and addresses of attendees.

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11TH INTERNATIONAL CONFERENCE ON APPLIED MILITARY PSYCHOLOGY

by

J. T. LESTER

INTRODUCTION

The eleventh in a series of annual conferences designed to bring together psychologists working in the military context took place in May of 1975 and was hosted by the London Branch Office of the US Office of Naval Research (CAPT Earle W. Sapp, Commanding Officer). There were 23 participants (only six of whom had also been at last year's Symposium), coming from 12 countries. Norway, normally represented, was unable to send a delegate this year; on the other hand Italy, unable to send participants last year, was represented by three delegates. Invitations had been sent (for the first time, as far as I know) to both Austria and Switzerland; unfortunately, neither was able to participate this year.

Space was generously provided for this year's Symposium by ONR London, in the form of a conference room just off the library. Participants stayed in hotels of their own choosing.

PARTICIPANTS

Names and addresses of participants are found in Appendix 1.

PLAN OF THE SYMPOSIUM

Sessions began at roughly 9:00 each morning and ran until 4:30 (except Wednesday, when the afternoon was left free for participants' own use). The general tenor of last year's closing discussion had favored a format for this year with as little structure as possible--a theme broad enough to include almost anything anyone wanted to talk about, little emphasis on prepared papers, and maximum reliance on spontaneous discussion. However, in planning this year's meeting the ONR group, as hosts, felt that somewhat more structure was needed, and revised the suggested theme somewhat, in the direction of a subject which is of considerable interest to US Military research planners, i.e., dealing with human diversity in the military. Five areas of appearance of possible problems stemming from diversity were identified, and each was assigned a particular day for being the focus of discussion. These were: (1) intake and retention, (2) tasks and assignments, (3) the leadership problem, (4) training, and (5) life beyond the task. Participants were urged, but not required, to prepare written papers beforehand; in the event, very few did so. In spite of (and in the case of some of the participants because of) the absence of papers, the discussion and interchange was quite lively, even if not directly tied to the proposed theme of the Symposium. In fact, what happened was that the five areas above served as a loose organization for discussion, but few contributions had much to do with diversity per se. As can be seen in the next section, what took place was a general sharing of information and opinions concerning problems and programs in the five areas. It appears that the experience of

most of the participants did not lend itself readily to a focus on "dealing with diversity," other than the general diversity of individual differences.

SUMMARY OF THE DISCUSSION*

Monday (proposed theme: intake and retention):

Following an introductory talk by Dr. James Schulman (Chief Scientist, ONR London), the discussions were initiated by Dr. J. E. Mayhood (Canada), who talked selectively from a paper dealing with (1) a number of factors which affect the ability of the military psychologist to achieve results useful to the military organization, and (2) the Canadian experience of rising levels of education in the young population from which conscripts come. The subsequent discussion touched on such matters as motivational differences in today's recruits, the role of family relationships in recruitment, the way that the conditions of service differ for different ranks and in different countries, incentive problems in military education, the relation between education and performance in Israel, and the possible use of the Strong Vocational Interest Blank for selection and assignment.

Mayhood's remarks were largely elaborations of the theme that traditional solutions to many military problems may no longer be adequate to deal with modern social currents. There is the traditional conception of the military as essentially a team to which one gives loyalty and dedication, as against the modern reality of the military as simply one more employer competing with the rest of industry for labor. There is the tradition of treating the whole military organization as if it were a combat arms unit, against the modern reality of a diversity of trades and skills with differing motivations, expectations, norms and the like. These and other contrasts, along with changes in the educational background of recruits, may suggest a need to re-think the whole rank structure and reward system within the military.

In the discussion that followed it was emphasized that youth today (in almost all the countries represented) is no longer willing to commit itself in the late teens to a 30-year career, but prefers time in which to explore and experiment with alternatives; traditional military thinking is not readily accommodative to this. Mayhood did point out that in spite of the difficulties he

*It should be noted that this summary is entirely based on notes taken during the Symposium by the General Chairman, that it represents only one observer's impression and understanding of the proceedings, and that the summary has not been proofread by any of the participants (in the interest of making it available as quickly as possible). In case anyone should feel his or her remarks are inadequately reported in these pages, I apologize in advance.

mentioned and youth's desire to experiment, the turnover rate in the Canadian military still compares favorably with the rest of Canadian industry. LTCOL G. J. Carpenter (Canada) raised the question how far the military can accommodate to "modern social currents" and still remain a military force, but the discussion then took another direction.

LTCOL R. Levy (Israel) described the opposite of the Canadian experience, a situation where increasing numbers of recruits with much lower than average educational level must be oriented, trained, and assigned; many of these are school dropouts, with the social and psychological implications of this that must be dealt with. Israel is experimenting with a school for this special population, to provide not only educational content but also a new socialization milieu; in this experiment an effort will be made to deal not only with educational handicaps but also with some juvenile delinquent and psychiatric cases. If even 30% of those attending can become acceptable for military service, both the service and the society as a whole will have gained considerably, not to mention the individuals. There was some discussion, too, of the opening of new jobs for women in the Israeli military (radar operations, communications, even Military Police).

Dr. D. J. James (UK) noted that the issue of rank redesign touches on the interesting question of how the concept of "officer" is defined (James is particularly interested in military sociology from a historical point of view, and is soon to publish a book tentatively titled The Military Mind), but this was not elaborated here. He went on to talk about the rising number of university degrees among officers, risen from a traditional 5% to about 30% at the moment, and comprised not of liberal arts degrees from Oxford and Cambridge but mainly of engineering degrees from newer universities and polytechnic institutes. Dr. J. Bremond (France) noted that even if educational level is not declining among French recruits, educational achievement seems to be. He also pointed out that in France (as opposed to some other countries) only 10 to 15% of Air Force officers come from the Academy. This means that a large proportion of officers enter the service to be pilots or mechanics, and only later are faced with the prospect of becoming part of management; this has implications for motivation, decision-making style, career planning, and the like.

Discussion then turned toward the role of family tradition in military recruitment (primarily officers). There was general agreement that this factor was at or near the top of the list of factors that influence the decision to associate with the military, though Dr. K. J. Puzicha (West Germany) noted that family tradition is apparently a much less potent factor in his country than in the others. Returning to the earlier topic of education, he also referred to the German experiment with a University of the Armed Forces (two campuses). This has attracted large numbers of applicants, and the University has been quite selective; nevertheless (perhaps as a reflection of modern social currents), motivational and incentive problems are fairly prominent. The University has no graduates as yet, hence little evaluation of the experiment is possible.

Levy (Israel) described experience with a Military High School arrangement (ages 14-18) and gave reasons why he feels that the civilian education system is better preparation than a closed military system; Israel's best officers, he feels, have come not through the latter but through the former. Puzicha (West Germany) described a third route into Army officer ranks (with a ceiling at captain) via some occupational specialty, and commented that this route seemed to provide a useful avenue for the advancement of men with lower educational levels. Bremond (France) said France has a similar arrangement, producing "technical officers," but that due to some aspects of its application it has not worked so well in France. Dr. B. Rimland (US) told about improvement in retention of Naval Reserve Officers by use of the Strong Vocational Interest Blank and suggested it might be useful in identifying adolescents likely to be interested in the service, including those who might never have considered the military option.

In response to a question from Dr. M. A. Tolcott (US), Levy (Israel) explained why he preferred open civilian education experience for military officers. He echoed Mayhood's point about traditional military systems being poorly suited to many modern realities; too often aptitude and interest tests are used to put a person on a particular track in the military organization, the whole procedure and apparatus tending to produce "one-track-minded people," rather than people who think innovatively and creatively. He noted that in Israel it is possible for someone to serve some years, then work or study in civilian life for a period, then choose to re-enter the service, and that some of their best officers followed this (somewhat unplanned) route.

A comment by Levy that leadership training courses do not seem to contribute much to the quality of leadership, led to a brief but interesting exchange about such training. Levy felt they might have some usefulness for administrators in a peacetime setting, but concerning the leadership of men in a crisis setting, he doubted much could be taught (and indicated that he had data to support his view). Carpenter (Canada) mentioned that in Canada all officers in the integrated forces go through a leadership course, though he was not sure how highly they would rate it if asked. Ottesen (Denmark) reflected on Denmark's experience and suggested that in the Danish forces a period of strong emphasis on "human relations training" is now over. Mr. C. Ottesen (Denmark) added that too much of the human relations training simply taught people gimmicks without actually changing them; in any case it has been difficult to measure the effects of such training. Military psychologists in Denmark are now trying to meet the real needs of officers by designing new kinds of courses, beginning with a survey of the forces to establish needs more clearly. The new approach to leadership training will start from the assumption that leadership cannot now be based primarily on formal authority and rank; most likely it will have to be based on expertise in military disciplines, on demonstrated proficiency in functional roles.

The post-luncheon session was begun by Puzicha (West Germany) who read a prepared paper titled "Secondary socialization and deviant behavior in the

armed forces of the Federal Republic of Germany; New results of social-psychological investigations." This paper discussed four separate studies, three of which are still in progress: (1) an analysis of political education in the armed forces; (2) the problem of desertion; (3) the abuse of modern and traditional drugs in the armed forces; and (4) the effects of military service on attitudinal systems of conscripted soldiers. The subsequent discussion revolved around the nature of civilian attitudes toward the military services, the question of whether present attitudes reflect a trend in a consistent direction or merely a phase from which direction of change cannot be predicted, the role of education and propaganda in affecting such attitudes, and some of the consequences of the current attitudes of recruits.

Puzicha noted that civilian attitudes toward the military are becoming more favorable in some respects, but felt that this was a result of economic factors. Others (e.g., Sweden, France, Italy) reported a correlation between educational level and negative attitudes toward the military. Bremond (France) expressed himself as pessimistic about the basic trend in French attitudes toward military service, while Puzicha felt that, in Germany at least, these attitudes reflected changes in political and economic events rather than any basic trend. Mr. K. G. G. Corkindale (UK) wondered to what extent military planners and trainers ought to try to produce a cognitive or attitudinal change in the civilian population, e.g., among people of school age. Tolcott (US) described a recent national program operated by the Department of Health, Education and Welfare to improve career education in the US; the armed forces are participating in this program and presumably hope to increase at least minimally the favorability of attitudes toward a military career in the age group 14-18. Emphasis was placed on the importance of providing information, both in schools and to new recruits, that is both complete and realistic (i.e., avoiding the temptation to dramatize and glamorize). Levy reported that Israel has large amounts of data on the effects of education and propaganda on the attitudes and decisions of future conscripts and conscripts. The choice of unit by the conscript was said to be influenced mainly by primary (face-to-face) relationships, especially influences coming from the family and from teachers. In an effort to make use of the latter influence, people finishing their military service are now often returned to the schools from which they came (where they are often still known personally) to serve as sources of information and shapers of attitudes toward military service. With regard to retention, Levy noted the problem which stems from the fact that very often the potential reenlistee wants to know in advance exactly what will happen to him during the coming three years, while the authorities, knowing that they cannot make promises and guarantees, are forced to be vague; in such a way probably some proportion of potential reenlistees are lost.

Bremond (France) put a general question to the group, concerning whether all found it to be true today that career planning tends to be short-term only, that youth wants frequent opportunity to change courses and continual freedom of choice. Tolcott (US) responded by noting that in the US there is considerable current emphasis on the concept of Fate Control, which is certainly

related to the situation Bremond was questioning. Maj. P. E. Sucksdorff (Denmark) noted that in his country enlistees want long contracts, but that in actual fact these contracts are very easy to negate. Corkindale (UK) commented that it seems to be true that the military man has adopted the attitude and behavior that has been characteristic of the middle class, which he epitomized as the desire for freedom to respond to the attraction of opportunities of gain or upward mobility of some kind. Military tradition, as Mayhood said earlier, does not accommodate this desire easily, but may be required to do so. Corkindale contrasted the willingness of the Civil Service to release personnel and then to accept them back with a minimum of fuss at some later time with the military tradition that one is either in or out, which makes movement in and out difficult.

Tuesday (proposed theme: tasks and assignment):

The meeting on Tuesday was opened by Militarypsychologist P. Dahlén (Sweden) who handed out annotated bibliographies of reports written by Swedish military psychologists in 1974 and then went into some detail concerning one of these reports, on "Drug abuse among conscripts 1970-1973." The subsequent discussion touched on the correlation between education and drug abuse, the questionable extent to which engineers have made new equipment adaptable to human diversity, capacities of women for military tasks, the possibility of genetic in addition to cultural differences between males and females, and possible individual differences in physiology that might be related to performance and thus to assignment.

Dahlén reported that over the time period 1970-1973 the proportion of 18-year-old conscripts that has tried narcotics at least once has steadily increased to a level of about 20%, and that the age of first contact with drugs has gone down. There is a trend toward hashish being the principal medium for initiation into drug experiences. The increased abuse of drugs is most marked in metropolitan areas, especially Stockholm.

Germany noted that they too have found the trend toward initiation at an early age, but that this has had an unexpected benefit for the military, in that more recruits have been through and terminated their phase of drug experimentation by the time they come to the military. Carpenter (Canada) commented that drug abuse within the military organization is a very small problem in Canada, since volunteers are not accepted if they admit to any use of drugs at all. Levy (Israel) wryly said that the very idea of questioning conscripts about their previous use of drugs would be seen as undemocratic in Israel, and went on to indicate that the problem seems very minor there, that 90% of the few users who are caught are from the lower social classes, and that their usage is mainly limited to weekends and to home rather than military settings. Germany commented on class as an important variable influencing drug usage there, and noted an apparent trend toward alcohol as the drug of choice. Both the UK and Italy asserted that drug abuse appears to be a nearly negligible problem in their services.

Tolcott (US) raised for discussion the problem of designing adaptability to human diversity into new equipment, suggesting that in the US, on the whole, the range of individual differences in the users of such equipment has been ignored. There are signs of additional effort to increase the tailoring of equipment to the requirements of different users, much of it dependent on recently developed computer technology (e.g., the work on computer-aided decision-making in which information is not displayed or provided in a fixed way but in which the decision-maker is free to query the data base in the manner he chooses). Dr. M. Kaplan (US) wondered whether any country had experienced pressures stemming from human diversity requiring job and task re-design, and the ensuing discussion dealt mainly with the greater integration of women into military service. Various comments supported the notion that women can effectively handle many jobs closely related to the combat effort, such as radar operation, air traffic control, anti-aircraft operations, and the like.* Potential problems seem to lie not in assignment and performance, but in the domain of social stress between women and their male counterparts and colleagues. Carpenter (Canada), for example, noted that the integration of women has led to some fear among the male troops that women would take over all the "soft" jobs. Sucksdorff (Denmark) reported that surveys done in his country have suggested that where a unit is well run (by general military criteria) women appear to be well accepted and easily integrated into the unit; but that in units where morale is poor and leadership inadequate women are more often seen as a threat.

The commentary then turned to the possibility of genetic differences between men and women, which, if real, could be a factor in job assignment. Dr. B. Rimland (US) suggested that girls may be better equipped genetically for many perceptual tasks, e.g., vigilance tasks, and for tasks involving verbal skills. To find such real differences shouldn't surprise us, since evolution has probably selected men and women for different task performances. Levy (Israel), however, stated that experience in Israel has highlighted the role of what he takes to be cultural factors in the raising of boys and girls; one end result of all the years of socialization by cultural agents is that boys identify much more readily with "the war game"; girls are more inclined to become panicky and to collapse under combat stress than are boys. Girls do seem to be more patient, but when it is a matter of using complex equipment and when a high level of information must be squeezed out of raw data by interpretation, males seem to accept the task and the challenge better. Supervisors' assessments have shown that officers prefer males in potential combat situations; the interpretation is that their self-concepts fit better into the needs of combat than do those of women.

*It is relevant to note here that just a week after this discussion a woman--the first--reached the summit of Mt. Everest. It is perhaps irreverent to note further that in a subsequent news conference the woman, a Japanese, said that she would never have reached the summit without the help of the male Sherpa guides; this, however, is merely an example of Oriental tac (and perhaps female generosity) since Sir Edmund Hillary himself, and his all-male expedition couldn't have done without the Sherpas.

Rimland then broadened the discussion to include non-sex-linked genetic differences, referring to some ONR-funded research on correlations between blood chemistry and performance on a vigilance task (showing performance to be correlated with adrenalin output). In a related comment he underlined the importance of understanding and predicting the likelihood of performance decrement under stress, or what might be called stress resistance. This variable (in contrast with skills and aptitudes) has been neglected in selection research. As Kaplan (US) pointed out, this is not an easy variable to study, not least because of ethical considerations. Levy (Israel) expressed a general cynicism about the value of laboratory studies as opposed to field studies, based on his feeling that motivation for performance in the two situations is so different as frequently to invalidate laboratory results as a basis for prediction to real situations. But Bremond (France) reported on some laboratory-measured variables which effectively predicted performance in a group of French combat divers, and which was replicated to some extent on a group (N = 44) of French Army helicopter pilot candidates. The predictors of better performance included higher frequency of alpha rhythm (EEG) with low variation of amplitude during a resting test, and more rapid pulse both at rest and after a step-test. Bremond interprets these results to show performance in certain tasks to be correlated, not with the usual selection criteria for high-risk tasks such as pilot and diver (i.e., "equilibrium," steady nerves, and the like), but with a higher level of CNS activation or arousal. Sucksdorff (Denmark) noted that there is reason to think a higher level of arousal is related to better coping with G-forces, another reason to consider arousal level is selection.

After lunch, Carpenter (Canada) presented some remarks concerning the problem of acknowledging and fully utilizing human differences. Psychologists are accustomed to developing discriminate functions using scores on various tests; what is now needed is an "indiscriminate" function, an answer to the charge that the tests themselves are often discriminatory (in the social sense). If a test has been developed on and norms provided by white English-speaking males, should one use the test in the selection of blacks, or women, or those for whom English is not the first language? Carpenter suggested that the hard way of solving this problem is to attempt to develop "culture-fair" tests, an effort unlikely to be very successful; the easy way is to norm and validate separately for each population with whom it may be used. Canada has tried the latter route with its General Classification test, using both a French and an English version of the test, as appropriate, with separate norms and validation data for the two language groups. This is not a final answer, either, however; it is possible to consider that this procedure is still discriminatory since military business is conducted entirely in English. Extensive training has begun to increase the amount of bi-lingualism in the service, and also some units have been designated as Francophone, with bi-lingualism required in certain jobs interfacing with other units. (Belgium and Finland both later reported similar solutions to the problem of bi-lingual national sub-groups.)

Looking at language differences from an international rather than an intra-national perspective, Bremond (France) described a curious problem with bilingual training for French pilots who must deal with control towers in English; while the pilots learn a very precise English vocabulary for flight-control, air traffic controllers for whom English is their natural language often give their instructions in colloquial or slang vocabulary, too often with consequent pilot confusion.

Carpenter (Canada) pointed up another problem, this one arising from informal norms such as those which seem to emerge at training establishments, where it becomes accepted as an unspoken norm that a certain percentage (say 40%) of candidates will fail, regardless of changes in equipment, training procedures, or the student population. Clearly, this too can lead to unfair discrimination against individuals, if an arbitrary proportion of students must fail. He told some interesting stories about the flight training of several foreign national groups in Canadian schools; in these groups the informal norming process was successfully by-passed since the tolerable failure rate was set at 0% by the foreign government. Rimland (US) noted that this experience would provide an excellent natural experiment, if only follow-up data on pilot performance could be obtained. Rimland went on to comment that a lot of evidence suggests, at least for pilots, that even with rigorous selection and stern criteria for graduation the range of flying skill among graduates is still extremely wide; in Vietnam, for example, apparently 80% of US kills were made by 15% of the pilots--one could argue that most pilots serve only as distractions to enemy gunners. Mr. D. J. James (UK) reminded the group of a similar figure from World War I: only 25% of combat infantrymen ever fired their rifles. Carpenter (Canada) wondered whether one should accept this kind of outcome, or should he redouble efforts to make everyone who completes training more effective in his job. Corkindale (UK) remembered that a computer simulation of combat was once done which showed that by the operation of quite random factors alone a number of "aces" emerged as time went by; the implication (somewhat demoralizing to psychologists) is that possibly random factors (as distinct from selection and training) play a significant role in producing performance records, at least in some tasks.

This thread led back to discussion of other factors that might be used in selection for training, such as aptitude and motivation. Bremond (France) affirmed his belief that success in pilot training could be adequately predicted from a cognitive variable--"technical culture," or experience with and interest in technological kinds of things--better than from psychomotor aptitude tests; this variable, he feels, is the real explanation for the differences between successes and failures in pilot training. Levy (Israel) underscored the importance of motivation as opposed to aptitude, and illustrated his point with a description of the consistent differences in performance favoring those who had grown up in kibbutzim over those who had not. The difference seems to lie in the social pressures acting on those socialized in kibbutzim, which operate to create very high motivation for excellent performance; Levy's comments suggested he feels that under the right motivational

conditions most people can do surprisingly well at a very wide variety of tasks. Bremond countered that in France, for pilots at least, motivational factors tend to work against performance, in the sense that most men come to pilot training motivated by literary and romanticized images of the military pilot and of flying, with the result that the motivation for fighting decreases under the impact of their first real flying and military experiences, never to regain its original pre-training level. "Technical culture" is necessary to moderate such fantasies about flying.

Rimland, apparently feeling that the group was taking indices of performance too much for granted, recalled the old Thorndike finding that the correlation between "likeability" and success in training was often greater than the correlation between measured aptitude and success, and also reminded us of studies showing that the trait, "loyalty to supervisor," has been shown to be one of the most important determiners of supervisory evaluations. The point was that in performance evaluation there is still a very subjective element.

The discussion turned to ethnic sub-groups. LTCOL L. Longo (Italy) indicated that the family in Italy is in a period of evolution and transition and that many problems experienced in the military academies seem to have their roots in this aspect of modern Italian life; this is one of the main problems for military psychiatry and psychology. CDR M. Stracca (Italy) noted that social background is an important factor in recruitment, with more candidates coming from southern Italy than from the north; in general, this means lower socio-economic backgrounds and educational levels, as well as differences in family structure, child-raising practices, and the like. James (UK) said that he had done an informal survey among flight instructors, concluding that instructors have more trouble with candidates coming from Welsh and Scottish families than with urbanized Asian candidates; he interprets this to show that individuals coming from matriarchal family structures have more trouble adapting to the military than those from patriarchal families.

Kaplan (US) notes that so far we had discussed diversity from the angle of performance norms, and wondered whether anyone could say anything about human differences that can be capitalized on; his further comments suggested he was asking the question, how can we take maximum advantage of individual qualities, perhaps unique to the person, as opposed to fitting people to pre-defined molds? Corkindale (UK) noted again that one way to do this might be to consider possibilities for service other than the full-time, professional career; certainly other relationships with the military organization are conceivable. He also remarked that perhaps in our selection procedures we overlook important individual qualities by taking only present scores into account and not the point where the person started, i.e., the distance he has traveled with his achievement rather than the landmark reached. This might reflect an important motivational characteristic. Rimland (US) referred to the US experience with an effort to compensate (presumably disadvantaged) blacks for (spuriously) lower test scores by adding points to their scores--this is a way of taking into account a presumed lower starting point for blacks compared with the whites on whom most tests are normed. He pointed out that even without the

correction, black scores are as predictive of performance as are white scores, and thus the correction would seem not to have much point. There was some discussion about selection problems where several language groups existed (Finland, Sweden, Belgium), and finally Mayhood (Canada) noted that the other side of the coin regarding "full utilization of human diversity" is that there are always a number of unpleasant jobs that have to be done, which no one wants to do and which may feel are beneath them; the ethic of full utilization seems to offer no solution to this problem and may aggravate it.

Wednesday (proposed theme: leadership and authority):

The morning session opened with a paper by LTCOL Longo (neuropsychiatrist, Italian Air Force), on "The role of mental hygiene in the military Air Force operational unit." He emphasized the importance of cohesion and comradeship within the operational unit, and outlined ways in which the flight surgeon and the unit commander can (and must) contribute to the effectiveness and survival of the unit by enhancing the human bonds within it. Subsequent discussion centered on leadership training and the techniques of officer evaluation, and the half-day session ended with remarks by Levy (Israel) on the concept of the field psychologist in Israel.

Longo argued persuasively for the survival value of group solidarity, especially in an air unit where risks are high and unavoidable stresses must be met by stable personalities embedded in a cohesive group. He discussed in some detail a number of ways in which the flight surgeon and the commander can maximize stress-reducing factors, with emphasis on recommendations for the flight surgeon. Major points included (1) induction of a valid interpersonal relation with the individual and with the group as a whole; (2) basic study of the personality of the individual and knowledge of his life outside of the unit (family, social, recreational, cultural, etc.); and (3) constant check of the "psychic pulse" within the group. LTCOL J. W. Van Neden (Netherlands) inquired whether or not sensitivity training was offered to unit commanders or officers; the answer was negative. Carpenter (Canada) inquired whether or not Italian flight surgeons have difficulty selling their services to unit commanders; again the answer was negative.

Dr. J. W. Miller (US) shifted the focus somewhat, toward informal leadership, by bringing up the subject of the introduction of new equipment into operational units. There seemed to be agreement that there is often a lot of waste in this process, due to inadequate preparation of the unit for use of the new equipment. Knowledge of who are the informal leaders, the opinion molders, in a group could pave the way for effective preparation of the unit for the introduction of new equipment, but it was also agreed that it is not easy to identify such persons. Tolcott (US) pointed out another problem with using key people in a unit to maximize equipment acceptance: because the time lag between design and delivery is often quite long, unit members who contributed ideas toward the design or introduction process are often gone from the unit by the time of delivery, which is then managed by people with different ideas. Miller underlined the importance of the issue of equipment waste due

to poor acceptance by units and called it a challenge for leadership, to identify real (i.e., informal) leaders and to find ways to solve the "user problem."

Sucksdorff (Denmark) reviewed leadership training in Denmark (three levels of training: introduction to the human relations orientation, group dynamics, and experiential learning along the lines of T-group work but with added structure). Ottesen (Denmark) had commented earlier that probably the era of intensive human relations training is over in Denmark, and Sucksdorff now noted that part of the reason was that the training seemed to be effective mainly with younger people who already had a human relations orientation and who were not the most influential people in the military. Bremond (France) defined the main task for leadership training as one of changing the traditional conception of leadership (basically autocratic) in the direction of a more democratic approach, and the main obstacle is the fact that the more efficient techniques for changing attitudes (such as T-groups) are most effective with younger and less influential people, who even after successful T-grouping still have to work in a traditional system. Different strategies for producing change (such as starting with the highest levels and working down, starting at the bottom and waiting patiently for people to rise to the top, and starting at all levels at once) were discussed.

Levy (Israel) expressed some doubts again about the value of training for attitude change at any level, reaffirming the Danish observation that the attitude-change techniques tend to work best with those who already show the desired attitudes and behaviors and don't really change anyone. What do 10 or even 50 hours of "leadership training" weigh against years of field experience with its multitude of natural contingencies? What Levy seemed interested in was a way of finding and diagnosing leadership potential (selection) and then building different curricula for various types of potential leaders (training); he would like to see training for leaders no longer a unitary thing, but differentiated according to the trainee's age, sub-group membership, natural leadership style, job, etc. One of the main weaknesses of the T-group method, he felt, was in its application of a single method to a wide variety of individuals, for some of whom it may be appropriate and for others not.

The discussion shifted toward problems of performance evaluation. Bremond (France) said that his office had recently accepted the charge to change the format of the annual officer evaluation, substituting behavioral scales for more subjective ratings. He noted that French administrative officers share Levy's belief in "natural leadership ability" and insisted on inclusion of such a rating in the officer evaluation form; it will be interesting to see which, if any, among the behavioral ratings correlate with this global evaluation in the future. Military staff often have a different conception from psychologists of how officers ought to be evaluated, which can make for communication problems. Sucksdorff (Denmark) said that the emphasis in this area in his country is now more on officer development than on strict evaluation

("pigeon-holing"); also insofar as evaluative rating scales are used an effort is being made to involve officers in the design of the scales to be applied to them. Emphasis is put on dialogue and feedback between the supervisor and person being evaluated, which imposes a special kind of stress on supervisors and may require special training efforts. Levy (Israel) was pessimistic about the usefulness of insisting on feedback of evaluations, noting that his experience showed that it had the effect mainly of reducing variability in the ratings. He went on to describe briefly the present Israeli system for officer evaluation, based on a 40-item behavioral rating scale, from which the same four factors emerge no matter at what rank level it is used: (1) style of decision-making, (2) setting of a personal example, (3) professional knowledge and ability to apply it to new situations, and (4) stability and coolness. There was discussion of the somewhat contradictory uses of evaluation (counseling and individual development vs. assignment and promotion) and how these might be integrated or handled separately, as well as discussion of the cautious use of peer ratings in some countries, and the apparent absence of any utilization of subordinate ratings of superiors for evaluative purposes. There was also some debate about whether or not all or most officers could be trained in the techniques of adequate feedback. Somewhere in this part of the discussion Mayhood (Canada), impressed with the similarity of the stories he was hearing to the events he had experienced at home, commented on the surprise he felt that countries with such differences should appear to be going through the same developments, on different fronts, at about the same time.*

Levy (Israel) then presented information on the Israeli concept of the field psychologist; his remarks were based largely on a paper on the subject by his predecessor (Ben Shalit) and two reserve psychologists. He noted that field psychologists, working at the unit level, based their operations on five assumptions: (1) the role is preventive and not therapeutic; (2) the role is advisory and facilitative and not that of an expert or authority; (3) the aim is to facilitate development of the commander's own problem-solving ability and thus to work the field psychologist out of a job, in a sense; (4) research is not a goal in itself but is to be used as an aid to the goals above, and (5) the approach is group-oriented rather than individual-oriented. Thirteen more or less successive steps in the field psychologist's mode of operating were described, and the morning session was over.

Thursday (proposed theme: training):

There was no prepared paper for this theme, and Dr. J. T. Lester (US) opened the session by noting that training is an extremely important activity within the military and that in the US about one-sixth of all military personnel (students and trainees, instructors and support personnel) are engaged in the

*I too was struck with the powerful interconnectedness that seems to characterize the Western world when I heard one of the Scandinavians say that the enlistment rate had gone up in his country when the US pulled out of Vietnam.

training mission--in fiscal year 1975 this activity is estimated to involve some 341,000 persons, at a cost in excess of six billion dollars.* Tolcott (US) noted that while several countries have the problem that several languages are spoken within their borders, in the US the problem is more one of literacy level and the restrictions this factor places on training materials, writing of technical manuals, etc. Rimland (US) remarked that in this connection the specific problem of dyslexia is not a minor one, and that some promising work is being done on its diagnosis by EEG recordings. In response to a question from Lester, other participants seemed generally to agree that literacy level did not seem to be a problem in their countries, and Kaplan (US) then raised a question as to the extent of utilization of programmed learning in Europe and Israel. Mayhood responded first, noting that Canada is in the first stages of implementing the use of computer-assisted instruction (CAI). She has watched the US efforts in this direction with interest, and has noted that CAI appears to be expensive with favorable results difficult to obtain. Canada's first applications have been in several areas of school deficiency: especially mathematics. So far it has been possible to reduce the number of instructors required, and students and instructors have shown an enthusiastic response to the "new toy"; a formal evaluation has been requested next year. Bremond (France) described some research on utilization of CAI in four different areas: statistics for psychology students, detection of hydraulic failures in flight, mathematics and electronics, and English for air-to-ground communications. CAI was successful in application to the teaching of air-to-ground English, but an apparent failure in at least the first two areas. Bremond suggested that the failure was due to lack of acceptance of the method by teachers, a theme that was repeated throughout this discussion. Mayhood commented that the problem has not arisen yet in Canada, perhaps because instructors themselves are involved in the design of courses, which seems to increase their identification with the method and enthusiasm for it.

Kaplan (US) emphasized the importance of feedback to the learning process and commented that CAI might be extremely useful in guaranteeing this kind of feedback over a wide variety of ability levels. Miller (US) sounded a note of caution, recalling how audio-visual aids had become a fad in the US at one time, with subsequent disillusion. Van Neden (Netherlands) described a small experiment with CAI and a training course for mechanics which had very positive results (the previous course length was two months, but with CAI 50% of trainees completed it in one month) but in which problems with instructors again surfaced. Kaplan noted that these problems often stem from the fact that with CAI instructors are often reduced from performers to managers. Levy also illustrated problems with instructors in relation to introduction of new teaching methods, but problems of a different kind: he related how some years ago he had tried to incorporate the latest methods for teaching languages into the military program, but found that objective measures showed

*These figures are from an unpublished paper (1975) by Howard McFann, titled "Training for the Military."

that traditional instructors were better; even though simple and unsophisticated (or partly because?), they were able to adapt their teaching to differences in students faster than the new methods. Tolcott (US) argued that really good instructors can probably provide adaptive instruction more effectively than any system such as CAI, but that really good instructors are very rare. Rimland (US) felt that the Israeli example was not a good one for drawing conclusions about CAI, which is much more suited to logically structured subjects than to language. Levy accepted the point but insisted that in some kinds of teaching eye-to-eye contact and the teacher's intuition is very important. Kaplan agreed, and reasserted that the underlying point is the importance of immediate feedback to the student, and the problem is simply how to get it into the instructional system; it is important to concentrate not on the method itself (such as CAI vs. unsophisticated instructors) but on the process(es) reflected in the technique. Mayhood (Canada) echoed the point, stressing that technological developments do not mean automatic progress in training; careful attention should be paid to the question of which training functions are best handled by which techniques.

Rimland (US) turned to questions of selection for training and for promotion to advanced training. He affirmed the value of using students' response to the initial stage of training as a valuable selection aid; progress up the early stages of the learning curve may be more valuable than paper-and-pencil "aptitude" tests. Discussion (which began to focus on flight training as the illustrative case) centered on the idea that, while the very high and very low performers may be identifiable early on, the fact is that the bulk of any training group is going to be mediocre in performance, and selection or promotion cut-off points are still going to be difficult to place. James (US) implicitly suggested some of the subtle forces that may influence placement of cut-off points, or even choice of dimensions to use in judging admission to training or promotion. He described an investigation into the cues UK flight instructors use considering someone a training failure; he was struck with the tendency of instructors to judge candidates not so much by performance criteria but by the degree to which they showed a professional or craftsman-like attitude toward piloting, an attitude that could be as well observed in the officers' bar as in the airplane (perhaps better). In apparent contrast James noted that in Officers' Candidate School, where there was a heavy emphasis on leadership exercises and the training staff was oriented to look at trainee attitudes and traits (e.g., "leadership character"), in fact the instructors seemed to be judging candidates more on actual behavior and performance than on traits and attitudes revealed. He also pointed out that different training units tend to have unique and identifiable social characters, with unspoken consensus about the sort of man they want to graduate and with stable (and differing) wastage rates. Tradition and not empirical data plays a large role, as evidenced by the story about one flight school where tradition had it that a certain proportion of trainees should be failed after 15 hours of training; this policy was changed from above and no one was failed before 30 hours of training, and the result was a final failure rate lower

than before. The importance of exchanging tradition for valid data was highlighted; this may not always be easy to accomplish.

After lunch the session picked up again with a presentation by Sucksdorff (Denmark) on a mechanism instituted within the military for transmitting proposals for change upward through the hierarchy (and feedback about results downward). The method is called "systematic hearing," and was first sold to the small number of top military commanders, who then saw that it was implemented down to the lowest levels. It is based on the belief that the best method for initiating changes in a system involves the participation of all involved. Thus the procedure of systematic hearing begins at the bottom echelons, and results are fed ever upward as higher levels go through the same procedure. At any one level the hearing takes a full day and goes through two phases: clarification of possibilities for improvement in the organization (expression of gripes might be a more concrete way of putting this), and specification of an action plan. In the first phase the group elects a discussion leader and then aims at building a list of problems and solutions and not necessarily any consensus about them. In the second phase discussion aims at an action plan, including specification of which solutions can be engineered without going farther in the hierarchy and which ones require consideration at higher levels. Sucksdorff emphasized that this procedure is not a substitute for the more usual forms of organizational problem solving (individual decision-making, cooperation, etc.) but is only supplemental to them. The system has so far obtained good informal acceptance, but there is as yet no evidence about its effect on individual or organizational performance. He affirmed that, like the Israeli field psychologists, the aim is to develop methods that operational people can use themselves without requiring the participation of psychologists.

Kaplan (US) referred to an American study using something like the Danish procedure which claimed documentation of a large improvement in performance. Tolcott (US) wondered how conflicts within one of these discussion groups might be resolved (The question did not receive a direct reply). He also wondered what kinds of suggestions for improvements were tending to emerge from the procedure; the reply indicated that they clustered around requests for changes in the structure of authority as well as for clarification of existing structure, and that some expressed complaints about the practice vs. the preaching on the part of top management. Kaplan wondered if the procedure was seen as threatening by people in command positions, and Sucksdorff replied that if so, it was especially at the middle level of command. There was some discussion about whether or not the results of the procedure, or of related attitude surveys, were used in officer evaluation; Puzicha (West Germany) indicated that such a procedure was deemed valuable in his country but not instituted because of the belief that it would be so used.

Rimland (US) wanted to know more about why the Danes had moved away from T-groups as a technique of organizational development; the succinct reply was that they had proven to be hard and exhausting for the group leaders, as well

as costly, and that psychologists felt that they were now able to develop better techniques at a lower cost. He alluded again to the disappointing lack of actual change achieved through T-groups, but said one can help people to see themselves more clearly in task-related ways, and that is certainly a step toward improved functioning.

Taking a somewhat different approach to changing behavior, Carpenter (Canada) talked about the role-playing approach under trial in his country, based on the idea that one can learn to behave in an "as if" manner even in the absence of any basic personality change; the idea is to give the officer a repertoire of behavioral skills, among which he can shift flexibly depending on the needs of the situation. Scenarios have been designed to cover recurring types of situations (counseling, persuading, dealing with resentment, controlling anger, handling stressful situations, autocratic and democratic styles of leadership, etc.) and role-playing is used to enhance officers' ability to deal with such situations in real-life. It was Carpenter's feeling that perhaps this approach is closer to real leadership training than any discussed so far. Sucksdorff (Denmark) indicated that similar techniques play a part in more advanced leadership training courses in Denmark, but expressed some philosophical reservations about this approach to behavior change ("Who would follow a role-playing leader?"). Elvy Johanson (Sweden) reported on a format being planned for providing officers with techniques for solving their own problems, which will be tried out in one or two regiments over at least a one year period. The plan involves assigning one psychologist, one psychiatrist, and one social consultant to a regiment; their task will be to find out what the needs of the commanders and the units are, and to develop techniques by which commanders can do their own diagnosis, notice impending problems, etc. Rimland noted the similarity of this format to the Human Resources counselors in the US Navy.

Bremont went into some detail to describe changes in the French military away from the traditional hierarchial structure. In particular he described a system by which representatives from units, from corps, and from ranks, can pool their thoughts and feelings and get messages to the attention of appropriate people higher in the chain of command. This led to the subject of unionization in military organizations and organizational responses to the likelihood of unionization (e.g., Canada has set up a Director of Conditions of Service; Israel a civilian Commissioner for Complaints), and complications arising from ambiguities in this whole area. For example, how can a military organization maintain discipline at a high level if at the same time it is formalizing channels for complaints and maximizing democratic participation; aren't the attitudes stimulated by the latter efforts in direct contradiction to traditional values of duty to superiors? Levy gave an ambivalent description of Israeli experiences along these lines; clearly from the point of view

*In this connection one of my favorite remarks is the one attributed to General DeGaulle, who said that when he is unsure as to what to do he simply asks himself, What would General DeGaulle do in this situation?

of humanizing the military, the increase in liberalization is a good thing, but it is also true that there is literally no end to the improvements that might be suggested (many of which are in conflict with each other). The encouragement of criticism of the system may simply set people up for bitterness when suggestions are not implemented (for a variety of reasons). Corporals and those higher in Israel have lately been expressing feelings of impotence, brought on by the number of governmental inquiries begun by complaints from troops. Bremond (France) asserted that the military is not like the rest of industry and may not require the same solutions as industry (e.g., unions). Corkindale (UK) noted, however, that we had already agreed that the military organization is in competition with industry for recruits, and asked further who is looking ahead to predict the industrial conditions (e.g., the four-day work week) to which the military may have to adapt in the future.

Friday (proposed theme: life outside the task):

Bremond (France) opened the last day's session with a paper titled "The collective measure of morale in the French Air Force." The presentation went into considerable detail about the method used in developing a measure of morale, which turned out to be a multi-dimensional concept not entirely consistent with Herzberg's theory. The five dimensions arrived at by a careful process were (for personnel in regular service): (1) job satisfaction; (2) feeling of effectiveness; (3) feeling of integration; (4) attitude toward the military career; and (5) adherence to objectives; for conscripts the dimensions were the same, except that (4) and (5) became attitude toward national service as an institution, and satisfaction in actual service. The dimensions reduced to three factors: (1) an environmental conditions factor (20-25% of the variance); (2) attachment to the military as an institution (about 40% of the variation); and (3) a job satisfaction factor (slightly more than 1/3 of the variance). Although Bremond felt that a very useful source of information for the Command had been developed, as it happens use of the instrument was discontinued in 1972. Tolcott (US) inquired whether steps were taken to improve environmental conditions pinpointed by this survey technique (the reply was affirmative), and went on to comment that in the US Navy it is not easy to get engineers to take the morale factor into account in designing living quarters; engineers are often not impressed by attitude questionnaire results and want hard data on the effects of different designs, e.g., on performance and on retention. Engineers exist who want to improve shipboard habitability, increasing living and leisure spaces and adapting them to diverse leisure preferences, but this group is small.

Levy (Israel) raised the question of the relations among morale questionnaire results, the response to them, and actual military performance. Again, endless "improvement" is possible, but it is also possible that encouraging the search for it could be the end of an army.* He raised some doubts about

*Some eminent historian somewhere commented that civilizations ascend in wooden shoes and descend in velvet slippers, another way of expressing Levy's point.

how much useful information psychologists have really provided to decision-makers in the military with their various techniques for assessing attitudes. Bremond (France) argued that improvements in environmental or material (extrinsic) factors can only sustain morale but cannot increase it; increase can come only through an increase in intrinsic satisfiers, and control of those can approach dangerously close to ideological control. Levy pursued the question of the use of questionnaires and implementation of recommendations based on them, identifying some of the basic issues and insisting that the written report of survey results should be not the end of the process but the beginning of communication and implementation. Corkindale (UK) said that surveys have not gained much respect in the UK, and are undertaken only when the need for information is clear and the results can be applied to a problem solution. They appear to represent a technique of low validity (a point also made by Rimland, US) and high cost, not to mention the fact that the implications of results are often distorted by outside forces working on those who have to interpret them. Sucksdorff commented that in Denmark, too, questionnaires are not automatically resorted to, but that alternatives are not always easy to find. A modified Delphi technique has been tried, with results that were interesting but very time-consuming to obtain. Several people responded to the point about interpretation and implementation. James (UK) asserted that he would do no more surveys simply for the sake of doing a study; rather he would insist on pinning down the requesting agency or person to a pre-survey statement of the range of actions considered viable as solutions to the problem, and would prefer to get user predictions as to the results of the study (to head off the "I told you so" criticism). Levy (Israel) commented that he would discourage the use of methodologically sophisticated instruments unless the psychologists involved are also part of the policy-making team interested in the results.

PROCEDURAL MATTERS

Invitations to host the Twelfth International Symposium on Applied Military Psychology were solicited, and an invitation was offered by France. There was some discussion about what part of France would serve best as a site (north vs. south, rural vs. urban, hotel vs. military installation). COL Bremond will investigate various possibilities, but the conclusion seemed to be that some military base near Paris looks most promising.

Dr. James Miller, who will be assigned to ONR London during the coming year, will provide administrative support for COL Bremond and will be available as a message center for information pertaining to the 1976 meeting.

With a minimum of discussion it was decided that the theme for 1976 would be the contribution of psychologists to military effectiveness. Sub-topics might include the role of psychologists in military academies and in officer training, the measurement of effectiveness, the implementation and utilization of psychological findings, and case studies of successful and unsuccessful contributions.

G-15-75

As usual, the Office of Naval Research Branch Office, London, will with pleasure print and distribute this Conference Report. Each participant will receive ten copies to use as he pleases, and ONR London will distribute copies among US psychologists.

C-15-75

APPENDIX 1

11TH INTERNATIONAL CONFERENCE ON APPLIED MILITARY PSYCHOLOGY

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