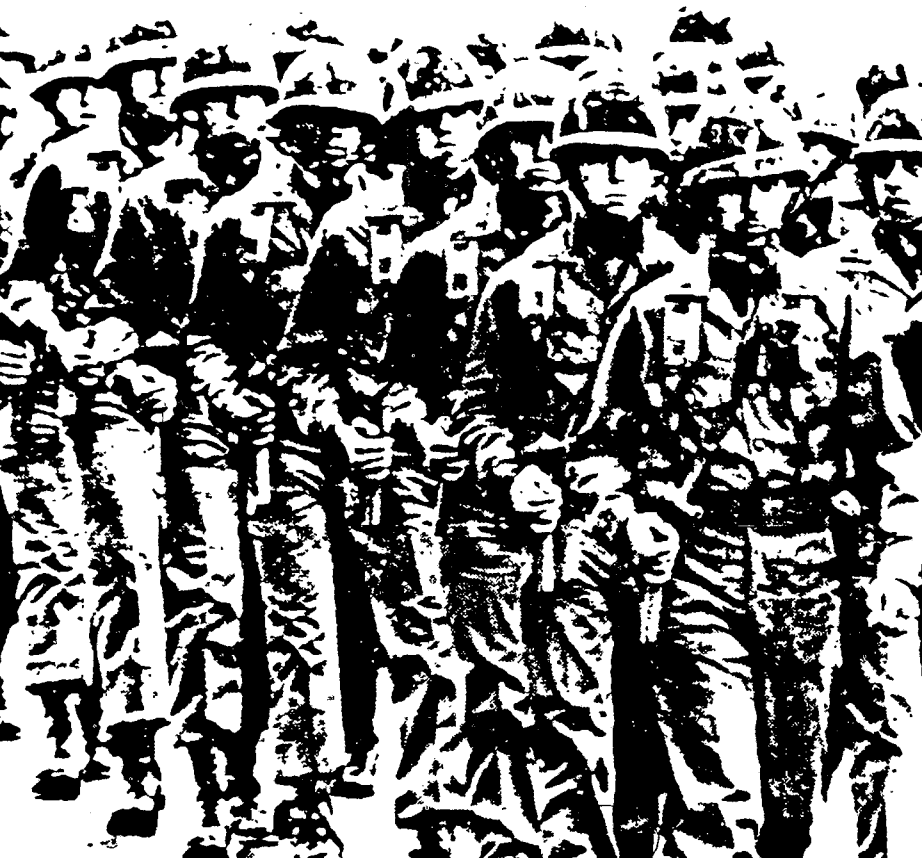


Cohesion:

Who Needs It, What Is It and
How Do We Get It to Them?

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Cohesion is important for the survival of military formations in combat, for garrison performance and for establishing and maintaining the long-term commitment of service members and their families. It can be thwarted by instability of group membership, but cannot be extinguished. It is best promoted at the level of tactical units by encouraging stability of assignments; ensuring common housing; realistically facing common dangers; promoting the common defense, both military and civil; and by infusing new meaning into traditional symbols of loyalty, trust and commitment to the service and the republic.

The views expressed in this article are those of the authors and do not purport to reflect the position of the Department of the Army, the Department of Defense or any other government office or agency — Editor

Who Needs It?

THERE is no need to recount the long and distinguished place that morale, esprit de corps, élan, and now cohesiveness—call it what you will—occupy in the annals of military thought. The barest sketch of authors and aphorisms is enough to remind us of their central role in the history of warfare.

Xenophon may have been the first military writer to give serious attention to soldier morale:

You know, I am sure, that no numbers or strength bring victory in war; but whichever army goes into battle stronger in soul, their enemies generally cannot withstand them.¹

This is echoed centuries later by Napoleon's dictums that "the moral is to the physical as three is to one," and, "in the end, the Spirit will always conquer the Sword."

Later in the century, Colonel Ardant du Picq concluded from his study of sustaining soldiers in combat:

Four brave men who do not know each other will not dare to attack a lion. Four

less brave men, but knowing each other well, sure of their reliability and consequences of mutual aid will attack resolutely. There is the science of the organization of armies in a nutshell.²

Thoughtful reflection on this topic continued to the present day in the works of such authors as John Baynes, *Morale*;³ Lord Moran, *The Anatomy of Courage*;⁴ S. L. A. Marshall, *Men Against Fire*;⁵ and John Keegan, *The Face of Battle*.⁶

In World War II, behavioral science caught up with conventional wisdom in the pioneering work of Samuel A. Stouffer and associates⁷ and Edward A. Shils and Morris Janowitz⁸ to be followed shortly *in situ* observations by scientists like Roger Little⁹ and Charles C. Moskos Jr.¹⁰ There is little doubt, then, that morale and esprit, grounded in small group ties, is crucial in enabling soldiers to persist in combat under conditions of extreme privation, fear and uncertainty.

A less often cited, but certainly not unknown, literature on psychiatric breakdown in combat also concludes that the primary group ties the individual soldier as well as enabling the group to sustain itself under stress. Psychiatric battle casualties are a phenomena new with 20th-century warfare.

First noted in significant numbers in World War I, they represented one-fourth of all medical evacuations during World War II.¹¹ For a brief time during the

North African Campaign, the Americans evacuated more casualties for psychiatric reasons than theater replacements.¹² And, following 10 days of fighting on Okinawa, an entire 1,000-bed field hospital was devoted exclusively to the treatment of psychiatric cases.¹³

Fortunately, these are worst cases. The world literature on these losses in World War I is summarized by M. W. Brown and F. E. Williams,¹⁴ and the American experience in World War II is documented in *Neuropsychiatry in World War II*.¹⁵ More useful insights appear in such works as R. F. Grinker and J. P. Spiegel¹⁶ and F. M. Richardson.¹⁷

No thoughtful person disagrees that soldiers in combat require cohesion to persist in their mission and to prevent individual breakdown. Its importance in the history of war is so obvious and well-documented it would seem military commanders would think of little else but maintenance, training and morale. Yet the US Army in 1981 is preoccupied with debates on cohesion. Why all the fuss?

First is the recognition that, in a short notice, come-as-you-are war, there may be insufficient time for either the external threat to congeal fighting units before they are committed to combat or to unite public opinion in the civilian sector necessary to sustain military operations.¹⁸

Second is the sheer terror of modern combat. The US experience with psychiatric breakdown in combat in two world wars and in Korea was replicated by the Israelis, but with a new twist.¹⁹ Until 1973, we believed a minimum of 25 to 30 days in the line was required to generate stress casualties, but, for the first time in their history, the Israelis encountered them within 24 hours!

The cause apparently lies in the lethality of the modern battlefield. Apparently,

there is a time/intensity trade-off whereby either prolonged exposure to mid-intensity warfare or brief exposure to high-intensity war is sufficient to produce breakdown. Du Picq was right; soldiers can stand only so much terror after which they must either flee or break down in place.

A third source of concern about cohesion in the US Army in 1981 is persistent fear that there is something seriously wrong with the social structure of the Army. There are debates in the press over the quality of recruits, junior officer and career noncommissioned officer (NCO) resignation rates, first-term attrition rates, widespread patterns of illicit drug use and alcohol abuse, racial and sexual incidents, and studies of job satisfaction. These debates lead many observers to query whether the present state of unit morale and cohesion in the Army prefigures a disastrous number of psychiatric and nonbattle casualties if the Army were committed to battle.

Our own research contributes to these apprehensions. Larry H. Ingraham²⁰ described the social structure of barracks living and concluded that commonalities fostered by drug and alcohol use may be social necessities in maintaining the small group structure. In a study of personnel attrition in Europe,²¹ we found soldiers leaving the command prematurely were not significantly different from the general population in terms of demographics. However, we were impressed with their lack of attachment to buddies, their lack of identification with units and their lack of involvement with their jobs. The consequences of such an ethos for sustaining continuous operations were explored in a study of artillery units.²²

In conducting psychological autopsies of drug overdose victims in US Army, Europe,²³ we have been impressed with

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the corrosive effects on unit trust as leaders watch helplessly as some of their best soldiers unexpectedly die from drug use. Also, we have pondered the significance of the absence of emotion in the peer group when one of the members dies—"It's too bad, but just one of those things."

Cohesion also appears to be important in garrison military performance although the research literature is not unequivocal on this point. The literature on cohesion and garrison military performance shows the same tangled relationships as the industrial literature relating job satisfaction to productivity—sometimes positive, sometimes negative and sometimes no relation at all.²⁴ Such findings lend credence to the belief among commanders that cohesion is a "nice-to-have" in garrison but hardly worth special attention when compared to the more pressing needs for maintenance and training.

Very recently, however, Frederick J. Manning and R. Trotter²⁵ reported strong positive correlations between a measure of cohesion and garrison performance in a wide variety of areas. Thus, there is some evidence that cohesion is more than a "nice-to-have" during garrison duty as well as being absolutely vital during combat.

While military members and tactical units understandably command the attention of military planners, there is yet another group for which cohesiveness is important. This is the military families. Recent figures indicate one-quarter of the lower enlisted Army population is mar-

ried, 80 percent of the NCOs and 95 percent of the officers.

It is short-sighted to believe that loyalty, trust and commitment lie only in the province of tactical leaders. Unless the military can create environments that enlist the loyalty, trust and commitment of service families as well as service members, service people will continue to resign midway in their careers to seek satisfying environments for their families. The services promise a way of life rather than just another job but, too often, deliver a lonely, faceless suburb rather than a community of individuals who share mutually reinforcing and satisfying beliefs, values and practices.

In our artillery study, we looked at military families. Again, we were struck with pervasive expressions of isolation and lack of belonging even more poignant than those observed in the barracks. Soldiers at least had a place in the formal structure—job co-workers, a chain of command—but families often had no one but their service member.

This led us to an analysis of military communities in Europe²⁶ and to the conclusion that the evacuation of noncombatants on short notice is impossible, even if our planes are early and the enemy rockets are late. This is because military families are not members of psychologically meaningful groups. To move them will require a door-to-door individual effort in too many cases. Efficient evacuation requires not only information and rehearsals, but an internal coherence that permits groups of people to sustain themselves under extreme stress—a situ-

ation not at all unlike the soldier on the battlefield.

In the event evacuation is impossible, military communities in Europe at least require high internal cohesion to remain in place and carry on with the business of living despite the inconvenience of a war raging in their neighborhood. Such an ability increases to the extent military families share military members' confidence in the force and devotion to the cause. Thus, in Europe at least, cohesiveness among military families is more than a "nice-to-have."

What Is It?

For these reasons, we would argue that soldiers in combat need cohesion, soldiers in garrison need cohesion and military families need cohesion. Before considering how to get it to them, however, we need to add some precision to the discourse. Failure to do so can result (and has resulted) in a semantic muddle whereby honorable people agree that "it" is important, but then recommend opposite courses of action. Or they agree on how to get there with later disagreement on why "it" was never achieved.

The family of concepts—cohesion, morale, esprit—springs from different intellectual traditions and refers to different levels of analysis. Cohesion, as a descriptor of primary groups, derives from social psychology, whereas morale and esprit trace their roots to sociology and military history. Each discipline has its own literature and attempts to be technically precise. However, communication within disciplines is not always exact, and communication between disciplines is inevitably confused.

In our own usage, we prefer "individual

morale" to refer to the individual level of analysis as a psychological state of mind characterized by a sense of well-being based on confidence in the self and in primary groups. "Cohesion," in contrast, we consider a property of primary groups and, therefore, belongs to the group level of analysis. Loosely defined, cohesion represents feelings of belonging, of solidarity with a specifiable set of others who constitute "we" as opposed to "them."

Sentiments characteristic of cohesive groups include mutual affection, interdependence, trust and loyalty to other group members. "Esprit" is generally reserved for large collectives above the level of face-to-face interaction, also characterized by pride in group membership, but especially by unity of purpose and devotion to the cause.

The important point is to recognize that our different disciplines are not necessarily talking about the same thing in different languages; the concepts overlap because the levels of analysis are coextensive. Individuals and dyads shade to the group which, in turn, shades to the larger collective. For present purposes, however, it is best to keep these levels of analysis conceptually distinct.

The problem for today is how the relationships at each level of analysis sum to an effective military force. We do not yet understand this summative operation very well. Two contrasting models are often advanced. Neither model is entirely adequate or very satisfying for understanding or prediction, but that is the state of our knowledge at present.

The first model assumes a chemistry analogy whereby, given some minimum level of individual bonding and primary group identity, a catalytic event (like Pearl Harbor) fuses the collective at all levels into a whole characterized by unity

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of purpose and esprit. Accepting *this* model saves much time and energy since there is nothing to do until the catalyst arrives, but it does make the assumption that the "catalyst" will not be something like the total destruction of our Armed Forces and the capture of Europe (or the Middle East) in one lightning blow. For this reason, we prefer a second model which, if incorrect, will at least have us no worse off than we are at the moment.

The second model assumes a building-block analogy whereby individuals bond to buddies which then assemble into primary groups which, in turn, get welded into companies, battalions, brigades and divisions with esprit. Morale, cohesion and esprit can be linked to one another if "group" is not restricted solely to the work unit and if recognition is accorded the fact individuals are members of several different groups simultaneously.

The link-pin concept of Rensis Likert²⁷ is helpful in this regard. For Likert, supervisors occupy positions in a hierarchy between levels; they are simultaneously members of the small face-to-face work groups and members of the next higher managerial process. Therefore, in an Army battalion, for example, it is appropriate to speak of cohesive work groups, cohesive squad and platoon leaders, cohesive company commanders and a cohesive battalion staff. Each of these are face-to-face primary groups, and, to the extent they share similar purposes, goals and enthusiasm for the larger collective, we can conclude esprit is present to some degree. A. L. George²⁸ refers to such arrangements as hierar-

chical and peer cohesion.

In similar fashion, battalion staff members regularly interact with brigade staff members who, in turn, are linked with division staff members. Thus, it is possible for esprit to be transmitted and distributed throughout a sizable collective made up of many primary groups that are not coextensive in their memberships, but are linked to one another by members who occupy link-pin positions in several groups.

While conceptually distinct, the three concepts, of course, interact in real life, sometimes negatively and sometimes positively. It is easy to imagine soldiers who are well-clothed, well-fed and with most security needs met (depot workers or clerks on large staffs, for example) who do not experience much identification with a primary group and who do not demonstrate esprit with respect to their superordinate command. Conversely, soldiers may be hungry, wet, cold, tired and in grave danger and persist in pursuit of the goals of their higher headquarters out of all-for-one-and-one-for-all sentiments in the primary group.

Still further, it is possible to have high individual morale and high cohesiveness which are antithetical to the goals of the larger organization, the result being subversion, sabotage and negligent, uncaring performance. It may even be possible to have high esprit without either highly cohesive primary groups or high individual morale, as in a crowd or mob, but such collectives lack the internal coherence and discipline to remain stable for any length of time.

Morale, cohesion and esprit thus refer to different levels of analysis, refer to different sets of variables and interact with one another to the benefit or detriment of the military organization as a whole. While the levels of analysis, the sets of variables and their interactions are not well-understood, it is important to keep these conceptual distinctions in mind when proposing policy changes or evaluating the effects of present policy.

In the case of stable collectives or large organizations, cohesive primary groups are crucial for maintenance and functioning. They provide the social referent in which individual morale is anchored and the medium through which esprit is transmitted. The final goal is esprit; we cannot get there from here, though, without passing through cohesion! Research suggests that cohesiveness is an emergent property of groups that results from sustained formal and informal interactions, that it rests on common experience, shared symbols and shared values.²⁹ Therefore, the problem for military leaders is one of creating common experiences and facilitating face-to-face interactions.

Getting It to Them

As a property of primary face-to-face groups, cohesion is inappropriate for describing larger collectives above the work team, section, crew or squad. It is an emergent quality of relationships built on shared experiences. There is little the Army can do directly to ensure cohesion, but there is much to be done indirectly by way of establishing favorable conditions from which cohesion can emerge.

To begin with the obvious, the first precondition for cohesion is opportunities

for interaction. Work groups are more cohesive than neighborhood groups because their members are more proximal to each other. In off-duty hours, it is the swapping of magazines, borrowing of clothing and sharing of television and music that bring soldiers in the barracks to an understanding of who can be counted on. Neighborhood interaction is dominated by propinquity as well; sugar borrowing, for example, is an act between next-door neighbors, not an act between acquaintances living in different blocks.

Cohesion in the military units could be facilitated by housing military families in proximity to one another such that a battalion, for example, becomes a village or extended family. Observations in the barracks³⁰ suggest that a soldier new to the unit, who works and lives with the same people during all waking hours, becomes an accepted member of informal barracks groups within three to four weeks of arrival.

Our experience in military housing suggests homemakers require three to four months to develop trusting relationships with neighbors since interactions are less frequent and intense than in the barracks setting. Military families may require up to a year before they develop a warm, trusting relationship with another family. Housing families by military units would reduce these introductory periods by capitalizing on existent tactical unit membership and shared requirements for mutual support.

Ideally, housing would be arranged so that officers, NCOs and lower enlisted men lived proximal to each other although not necessarily in the same building. The object again is to promote depth of acquaintance beyond the work setting and to facilitate the emergence of small-group norms as to "how things are done in our unit."

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Given opportunities to interact, the next precondition is the frequency and duration of interaction. The more time people are together, the greater the chance they will discover, invent and experience commonalities to include a shared understanding of group history. From such common experiences, group norms and standards emerge, accompanied by sentiments of loyalty, trust and commitment to the group and other group members.

High rates of personnel turbulence undermine sustained interactions in the US Army. A battalion commander in Europe, for example, asked the reason for poor gunnery procedures in tank crews that had high performance scores eight months earlier.³¹ The answer was straightforward: The crews were not the same, each having experienced a 75-percent turnover in personnel.

Such turbulence in the US Army is usually contrasted with the stability of service within the British regimental system whereby a service person might spend his entire career within the regiment. Twenty or 30 years is indeed a long time to work out informal group structures when contrasted with the three-year rotations common in the US system.

Proposals for increasing stability of assignments in the US Army include having the division provide much of the basic training of new recruits, adopting a modification of the regimental system, unit rotations and providing a home base in the Continental United States with a location forward in foreign service areas. There now seems to be agreement among

Army policymakers that some such scheme is necessary for promoting cohesion, but there is no agreement on which plan, if any, is most feasible and what is to be traded to achieve it.³²

While the big Army gropes for systemic answers, much can be accomplished by the little Army—companies, batteries and troops—once the importance of personnel stability is recognized. The battalion commander previously cited elected to organize tank crews by similarity in dates eligible for rotation overseas. His approval was required to move either of the two key crew members, the gunner or tank commander, to a different crew. Results show improved maintenance, interest in training, heightened discipline and pride (evidenced by crews buying carpeting for the floors of their crew compartments).

What kinds of interactions promote cohesion? Tactical commanders in our experience divide their worlds into "mission requirements" (training and maintenance) and "troop welfare programs" (everything else). They note that cohesion increases when the unit is training in the field, and they argue that more time in the field will take care of the cohesion problem. Aside from the fact that there will never be enough money for all the field training they might like, this argument ignores the tensions created in military families by service members' absences, and rests on a very narrow view of cohesion.

Evidence suggests that cohesion increases with the number of roles and settings in which members know each other

and feel comfortable interacting. For purposes of building cohesion, more time in the field is precisely what is *not* required. What is required is settings in which soldiers may interact in arenas apart from rank and superordinate/subordinate relationships that rank requires. In the Manning and Trotter³³ study of cohesion and garrison military performance, five questions, all directed at junior enlisted men, reliably differentiated the high-cohesion, high-performance battalions:

(1) How often, aside from meetings, does the CO [commanding officer] talk to you personally? (2) How often, aside from meetings, does your platoon leader talk to you personally? (3) Is your squad (section) leader ever included in after-duty activities? (4) Who would you go to first if you had a personal problem, like being in debt? (5) If we went to war tomorrow, would you feel confident going with this unit, or would you rather go with another?

We would argue from this that building cohesion requires interaction *beyond* the work setting. Unit athletic teams provide excellent examples of settings where a private might outperform superiors, might even teach them a thing or two, and, in the process, come to know them and be known by them as other than first rank and fourth file in the heavy-weapons platoon. Similarly, all-ranks unit dining or having the unit sponsor a dependent youth athletic team provide other settings by which to weave the net of interpersonal relationships more tightly.

Which activities are not so important as who participates in how many different settings. Company leaders usually acknowledge the necessity of "command presence" in the barracks after duty hours, but company leaders too often find they have nothing to say once they get there. They find their only shared ex-

periences are the formal interactions of the workday. Hence, their presence after work is often resented. The more people, the more varied the settings and the more time the group maintains stable membership, the more the members have in common and ~~the~~ higher the resultant cohesion.

Another critical aspect of cohesion is establishing a "them" by which to define "us." The purpose of the Army helps in this regard although it could be exploited further. Service families, as well as soldiers, ought to have threat briefings on the nature and capabilities of our enemies. On foreign tours, at least, family members need weapons familiarization and training as well. Offering such training by their own tactical unit encourages both soldier proficiency, family proficiency, mutual interdependence and shared common experience, all thought beneficial for building cohesion.

Ideally, stationing in Europe might require participation in civil defense planning and practice. Whether evacuation is possible or impossible, civil defense skills are required. These skills include medical care, crowd control, records processing, child care, provisioning, shelter construction and nuclear-chemical monitoring. Providing realistic assessment of the common dangers and teaching skills necessary for survival bind service families to service members in a common goal, the bedrock of a cohesive group. It also promotes independence, initiative and resourcefulness among military family members who increasingly chafe at the label of "dependent" because of the weakness and incompetence it seems to imply.

Common external threat is not the only mechanism by which to define a group. Airborne and cavalry units have a long tradition of working hard to be different

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from the rest of the Army. In foreign service areas, competition with the host nationals heightens feelings of in-group membership. Unit clubs, distinctive unit insignia and clothing serve similar functions.

Cohesion, to a greater or lesser degree, emerges in all face-to-face groups that exist for any length of time. It can be thwarted as with current personnel rotation policies, but, short of completely unstable group membership, it cannot be eliminated. Sometimes, however, the goals of the informal group are contrary to those of the larger organization. Examples include informal production norms with sanctions for rate busting or when members of a cohesive Army transportation unit graft a drug-smuggling business onto their normal duty runs. Ensuring cohesive groups support the goals of the larger organization requires commitment.

Commitment requires good vertical communication in addition to the horizontal bonds of strictly peer cohesion. This is why it is so important to have group memberships shared across ranks, age, gender and marital categories. The link-pins must be participating members of *all* groups they link. This raises the emotionally charged issue of fraternization. For the present, it is important to recognize that the broader the group memberships and the greater the diversity of individual opinion, beliefs and values, the more likely that emergent group norms will minimally satisfy everyone. In addition, the potential is greater for extruding members who

violate the standards of the group.

Another part of the commitment problem lies in the use of history and symbols. If military groups are to be devoted to military goals and ideals, they must experience their military heritage. This includes not only service people, but their families as well. The problem of the modern military, much like the modern church, is to infuse new meanings into traditional symbols that evoke loyalty, trust and commitment. Again, with respect to cohesion, this can only be achieved at the face-to-face level of interaction, in tactical units, where group members can share the experience of ceremony and symbol with each other.

In the Army, for example, this suggests infusing new meaning into national holidays which are losing significance in the civilian sector. Memorial Day might be a time set aside for tactical unit trips to military cemeteries, or Veterans Day might be devoted to public readings of Medal of Honor citations. Bugle calls, parades, ceremonial cavalry and pageants celebrating the roles of military families from Molly Pitcher through the Western frontier to the present offer other possibilities.

Again, exactly what is done is less important than who does it with whom, when, where and how. At best, such symbol sharing is achieved among groups whose members know each other face-to-face and who share the experience together at a place that has meaning for them and in a manner that expresses their devotion to the military and to the nation.

NOTES

- 1 F. M. Richardson *Fighting Spirit: Psychological Factors in War*. Leo Cooper Ltd. London, Eng. 1978. p. 3
- 2 Ardan du Picq *Battle Studies: The Military Service Publishing Co. Harrisburg, Pa. 1946 and 1958*. p. 110
- 3 Richardson *op cit*
- 4 *Ibid*
- 5 *Ibid*. p. 4
- 6 John Keegan *The Face of Battle*. The Viking Press, Inc. N. Y. 1976
- 7 A. L. George *Primary Groups, Organization and Military Performance: Handbook of Military Institutions* edited by R. W. Little. Sage Publications Inc. Beverly Hills, Calif. 1971. pp. 294-318
- 8 *Ibid*. p. 296
- 9 *Ibid*. p. 298
- 10 *Ibid*
- 11 Larry H. Ingraham and Frederick J. Manning *Psychiatric Battle Casualties: The Missing Column in a War Without Replacements*. *Military Review*, August 1980. p. 19
- 12 *Ibid*
- 13 *Ibid*
- 14 M. W. Brown and F. E. Williams *Neuropsychiatry and the War and Suppliment I: War Work Committee*. N. Y. 1918. Supplement pp. 7-111
- 15 *Neuropsychiatry in World War II*. US Army Medical Department Superintendent of Documents, US Government Printing Office, Washington, D. C. 1974. Volume II
- 16 R. F. Grinker and J. P. Spiegel *Men Under Stress*. McGraw Hill Book Co. N. Y. 1945
- 17 Richardson *op cit*
- 18 George *op cit*
- 19 Ingraham and Manning *op cit*. p. 20
- 20 Larry H. Ingraham *The Boys in the Barracks: Observations on American Common Soldiers in Garrison*. unpublished manuscript. Walter Reed Army Institute of Research, Washington, D. C.
- 21 Frederick J. Manning and Larry H. Ingraham *The Face of*
- Waste Personnel Attrition in the US Army. accepted for publication in *Armed Forces and Society*
- 22 Frederick J. Manning *"Continuous Operations in Europe: Feasibility and the Effects of Leadership and Training Parameters"*. September 1980. pp. 8-17
- 23 Larry H. Ingraham and Frederick J. Manning *Drug "Overdose" Among US Soldiers in Europe 1978-1979 II: Psychological Autopsies Following Deaths and Near Deaths*. under editorial review
- 24 V. F. Nueva, E. A. Fleishman and A. Rieck *Team Dimensions: Their Identity, Their Measurement and Their Relationships*. report done by the Advanced Research Resources Organization for the US Army Research Institute under Contract Number DAHC 19 78 C 0001. 20 November 1978
- 25 Frederick J. Manning and R. Trotter *Cohesion and Peacetime Performance by Selected Combat Units*. prepared for VII Corps Commanders Conference, Stuttgart, GE. April 1980
- 26 Larry H. Ingraham *Community Life Series Lectures*. prepared for V Corps Community Life Conference, Viersheim, GE. August 1980
- 27 Rensis Likert *New Patterns of Management*. McGraw Hill Book Co. N. Y. 1961
- 28 George *op cit*. p. 302
- 29 A. Paul Hare *Handbook of Small Group Research*. Free Press, N. Y. 1976. and A. Zander *The Psychology of Group Process: Annual Review of Psychology 1979*. Volume 30. pp. 417-51
- 30 Larry H. Ingraham *The Boys in the Barracks: Observations on American Common Soldiers in Garrison*. *op cit*
- 31 Lieutenant Colonel T. L. Beale *US Army letter communication: Subject: Effects of Tank Crew Stabilization*. AETFOC B/C. 28 July 1980
- 32 See *Unit Rotation: An Inviting Idea That Has Been Tried and Found Wanting*. *AUSA News*, 10 October 1979. p. 13 and W. L. Hauser *A Smaller Army? Adapting to the All Volunteer Situation*. *Parameters*, September 1979. pp. 27
- 33 Manning and Trotter *op cit*

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