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Import of Vertical Cohesion and the Linking Pin Function in the Military

The leader has potential positive effects on the primary group life and performance. For example, leader *competence* elevates the followers' morale¹, group performance² and cohesion³. With *emotional support* and by recognizing and resolving interpersonal problems and conflicts in the group, the small group leader influences the psychological atmosphere of the group⁴, the personal adjustment, self-esteem, and performance motivation of soldiers⁵, and insulation of the negative outcomes of stress⁶. On the other hand with *task support*, the leader helps the group members to perform in a manner that makes the group's goals achievable⁷ and builds a general frame where the particular performance is implemented, such as stressing roles, norms, task-oriented activities, and specific goals of the group⁸. Thus, a leader potentially has wide-spread influence on the individual level of attributes (e.g., attitudes, behavior, and performance) as well as the group functioning in terms of consensus, efficient norms, well-organized tasks, and pleasing relationships between group members.

As indicated above, the leader's effect on the small group has received broad attention in leadership research, and the outcomes of the successful leadership are well-known at the group level. Therefore, this article expands the focus beyond the primary group and looks the role of the leader between the primary and secondary groups (i.e., between a group and the organization where the group is embedded). The premise of the article is that leaders occupy a position between different organizational levels, being a member of at least two hierarchical groups at the same time (i.e., Likert's linking-pin function of leaders⁹). For example in the military, squad and platoon leaders stand as a mediator or a linking-pin of several groups such as the social group of the platoon, the leadership team consisting of all leaders in the platoon, and the unit transmitting orders of the company commander and carrying out the

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- 1 Gal 1985, 560
 - 2 Vogelaar & Kuipers 1997, 209
 - 3 Bartone & Kirkland 1991, 400; Kirkland 1987, 4
 - 4 Mikalachki 1969, 78
 - 5 Weiner 1990, 23–24
 - 6 Griffith 2002, 234
 - 7 Knouse 1998, 19; Siebold & Kelly 1988, 24
 - 8 Grize & Katz 2005b, 11
 - 9 Likert 1961

organizational activities related to a particular mission¹⁰. Another premise is that the quality of relationships between the leader and other group members determine the influence of the leader. Especially, the subordinates' bonding with the group leader (i.e., vertical cohesion) is valued as a key component for effectively integrating the followers with organization and its purpose in the military.

Military Unit Cohesion

Military unit cohesion refers to an ongoing process of social integration (a) among the members of a group, (b) with group leaders, and (c) with the larger secondary organizations of which the primary group is part of, including the military institution (e.g., the Army)¹¹. Such a view places cohesion within a larger perspective and allows for important connections (e.g., for an examination of leadership, performance, and commitment at the different hierarchical levels) and processes to be more easily identified and clarified. In other words, military unit cohesion denotes a strong attachment, identification, and pride in the unit, as well as commitment and trust in peers and immediate leaders, and shortly to "One for all – all for one" spirit in a unit¹².

It is generally accepted that military unit cohesion consists of at least three types of bonding: (a) horizontal (i.e., bonding among peers at the same organizational level, such as squad members or classmates), (b) vertical (i.e., bonding between leaders and the followers), and (c) organizational (i.e., bonds between individuals and their next highest meaningful unit such as a company or battalion). Each type of bonding consists of two dimensions: social (affective / emotional / reactive side) and task (instrumental / proactive side)¹³.

During past two years, it was developed a four component conceptualization of cohesion¹⁴. This standard model of cohesion includes, at the primary group level, peer/horizontal and leader/vertical cohesion and, at the secondary group level, organizational and institutional bonding. Thus, the model differentiates the main foci of group membership: primary and secondary group and four foci of bonding or commitment: peers, leader, organization, and institution. Consequently, future research can make distinctions between dimensions (e.g., social vs. task group

10 Mael & Alderks 1993, 154

11 Salo & Siebold 2005

12 Milgram, Orenstein & Zafir 1989, 191, 195–196

13 Griffith 1988; Siebold & Kelly 1988

14 Salo & Siebold 2005

cohesion) or between components (e.g., primary group cohesion vs. secondary group cohesion) and their relative importance in predicting criteria at the individual and group level of analysis¹⁵.

Specifically, *vertical cohesion* refers to the affective and instrumental bonds between the leader and the other group members¹⁶. It is the degree to which group members identify and positively relate to their leaders¹⁷. Thus in the strong leader cohesive group, the subordinates identify with and even like their leaders¹⁸ and, correspondingly, the leaders take care of their personal needs and interests and respect and have confidence on their followers (cf. the descriptions of leader behavior¹⁹). Vertical cohesion mostly grows in the same kind of field that peer cohesion does: in positive experiences with the leaders in regards to personal interaction, group performance, and other group experiences and associations on- and off-duty²⁰. In circumstances such as the military, where the group members live and work together in a closely connected social environment under the guidance and surveillance of their own leader, vertical cohesion is even more salient than in other milieus²¹. In this research, vertical cohesion refers to the followers' trust in, bond with, and commitment to their immediate leader(s) at the individual level of analysis, whereas vertical cohesion means the cohesiveness of the group in terms of average strength of bonds between the leader and his or her followers at the group-level of analysis.

Leaders influence social integration in both primary (small group) and secondary groups (the unit and the military), and consequently, the positive bonds and relationships between the leader and the group members benefit all levels of the hierarchy (individuals, the group, and the organization). At the individual, squad, and platoon level, the quality of the group members' relationships with their leader influences the development of group cohesion²², and many other criteria, such as well-being, identification, lack of disintegration²³, and personal and group performance²⁴. In strong leader cohesive group, the leader's intentions and directions are more effectively implemented in terms of reinforcement of goals and norms and influence

15 Salo 2006; Salo & Siebold 2005

16 Etzioni 1975, 281

17 Holz 1986, 3

18 Bartone & Kirkland 1991, 396; Furukawa et al. 1987, 10

19 Bass & Avolio 2000; Shils & Janowitz 1948

20 McBreen 2002, 13; Westbrook 1980, 265

21 Mael & Alderks 1993, 155

22 Manning & Ingraham 1983, 9

23 Griffith 2002, 233

24 Alderks 1992, 14; Evans & Dion 1991; Gully, Devine & Whitney 1995; Mael & Alderks 1993, 147, 149; Mullen & Copper 1994; Oliver, Harman, Hoover, Hayes & Pandhi 1999

on the main activities of the group²⁵ because the leader gets the followers to exceed their formal job requirements²⁶. Basically, the effect of vertical cohesion is due to the fact that it brings the leader more abilities to influence the behaviors of the group members²⁷.

In addition to eminent attitudes and behavior in the primary group, vertical cohesion also has its impact at the unit level on secondary group bonds by creating commitment to the organization and its “higher purpose”. For example, Manning and Ingraham²⁸ distinguish the five most cohesive units from the five least cohesive ones based on the questions about the informal leader-follower relationships in the unit, such as whether the commanding officer and the platoon leader talk with people personally aside from meetings and whether the squad leader was included in after-duty activities. Also, Bartone and Kirkland²⁹ argue that identification with leaders (i.e., vertical cohesion) promotes the acceptance of organizational goals and standards and further advances the organizational socialization. Overall, the followers’ identification with their leaders supports cohesion in the unit³⁰ and identification with the Army³¹.

The Linking-Pin Function of Leaders

In terms of strong and durable secondary group cohesion, the leader’s main function is to create and maintain an unbroken chain of group members’ bonding to different organizational elements or, in other words, “continuity in the network by positive linking relationships”³² between the social group, task-performing group, group leaders, unit or department that the group is part of, the larger organization, and the institution that gives the purpose for the existence of lower level of groups and units. Likert outlined this “linking-pin” function of leaders³³ that denotes the idea of how leader should first create cohesive effective groups and then unite them with the organizational purpose. As suggested by the aforementioned findings, this link of primary and secondary groups is easier in a group with strong vertical cohesion. Thus, as a result of the group members’ personal positive association and identification with their leader, they more willingly comply with organizational demands³⁴ and possess

25 Grice & Katz 2005a, vii

26 Deluga 1995, 12

27 Griffith 1986, 9

28 Manning & Ingraham 1983, 9–10

29 Bartone & Kirkland 1991, 396

30 Bartone & Kirkland 1991, 395; Johns 1984, 41

31 Mael & Alderks 1993, 147–149

32 Siebold 1988, 5

33 Likert 1961

34 Wesbrook 1980, 265

personal goals that are increasingly integrated to organizational ones³⁵.

From the Likert's perspective, leaders are liaisons and representatives of the larger organization in their group³⁶. Leaders transform the *organizational values* to specific individual and group behavior³⁷. They make the followers *proud* of their work, the unit, and the institution³⁸. Since the leaders are the envoys of the organization to group and vice versa, it is essential that they maintain high level of values by themselves³⁹ without mistreating or betraying another part for the benefit of the other or for the personal gains in popularity. Therefore it is required that the leaders are morally committed to the organization and institution (i.e., the military), and if there are exceptions from this rule they are reinforced with strict social sanctions⁴⁰.

The linking-pin leader organizes interaction beyond the subgroup boundaries or the work setting and in that way, integrates their group into larger organization⁴¹. The group leader conveys the needs and requests of individuals to the organizational level, and in turn, he or she communicates, translates, and justifies the rules, standards, and performance expectations to the followers⁴², confirms what is appropriate and important at the group level both in social and task contexts⁴³, and consequently, internalizes the *norms* and values of the organization and institution⁴⁴. By doing all this, they establish the context and meaningfulness for the particular individual behavior and group activities.

The leader may use *goal-setting* for tuning the group activities to make them compatible with organizationally beneficial performance and, as a by-product, uniting group members with the organization⁴⁵. For example, inspirational motivation allows the transformational leader to envision an attractive future that inspires the followers to exceed their expected contribution⁴⁶. In more practical terms, the followers are integrated with the organization and its goals by articulating a clear and inspiring vision, clarifying it with a concrete goal and subgoals or steps towards it, defining the role of the group and unit in the mission, specifying tasks, personal roles, and individual and group rewards related to desired behavior, allocating responsibility for

35 Butler, Blair, Phillips & Schmitt 1987, 14

36 Weiner 1990, 24

37 Ashforth & Johnson 2001, 34

38 Phipps 1982, 2; Siebold & Kelly 1987, 7

39 Siebold & Kelly 1987, 8

40 Johns 1984, 43

41 Frank 1995, 28; Ingraham & Manning 1981, 8

42 Deluga 1995, 13; Furukawa et al. 1987, 12; Henderson 1985, 12

43 Siebold & Kelly 1987, 3, 8

44 Johns 1984, 6, 31

45 Griffith 2002, 236; Henderson 1985, 11

46 Avolio, Zhu, Koh & Bhatia 2004, 953–954

every person, and coordinating the accomplishment of the group tasks⁴⁷. Shared vision, clear goals, and joint actions towards them sustain the follower's sense of self-worth, collective efficacy, and meaningfulness of the group and organizational membership – factors that build identification with the goals of the leader (producing task cohesion), and shared ownership of the mission⁴⁸, and commitment to the organization (leading to organizational cohesion)⁴⁹ at the same time while they serve the self-improvement needs of the follower⁵⁰. Overall, the more the person binds with the leader, the more he or she is committed to the leader's goals⁵¹, and when the leader's mores and goals are compatible with the organization, the link between the group members (and their attitudes and performance) and the organization (and its goals and standards) is established⁵².

Role modeling offers another effective method for passing on organizationally valued behavior and attitudes. By making modeling salient for their followers, they follow the behavioral example set by the leader. On other hand, for the followers upward social comparisons provide concrete information about the superior behavior and performance, regulate the standards, and show the goal where the followers are expected to strive for⁵³. Such comparisons enable the follower to “identify with, become like, and bond with the upward comparison target” producing positive affect and satisfying personal affiliative needs of an individual⁵⁴.

Being the role model is even more relevant in the military than for the civilian leaders since military leaders are assumed to be all-powerful experts and problem-solvers that are “the first to advance” even in the most difficult situation⁵⁵. The military leader models behavior including aspects from all the essential parts of the social integration and from the different cohesion levels: cares for the welfare of individuals (producing affective and social cohesion), shows competence (which suggests capacities for task performance and forms a basis for task cohesion), and displays commitment to the goals (for linking the group members with the secondary group)⁵⁶.

Not always do the leader-follower relationships work in the unit. This may be due to the particular leader who receives mistrust of the group members, defective

47 Avolio, Zhu, Koh & Bhatia 2004, 963; Knouse 1998, 19; Labuc 1991, 487

48 Bartone & Kirkland 1991, 401

49 Bass & Avolio 2000, 5

50 Taylor, Wayment & Carrillo 1996, 20

51 Etzioni 1975, 291–292; Gal 1986, 562; Manning & Ingraham 1983, 4

52 Manning 1991, 465

53 Taylor, Wayment & Carrillo 1996, 4–5, 14–15

54 Taylor, Wayment & Carrillo 1996, 18

55 Henderson 1985, 143

56 cf. Bartone & Kirkland 1991, 400, 407

relationships between the leaders in the unit, or poor leadership climate in general. Even one poor leader may have a damaging effect on the followers' well-being and performance. The inept, incompetent and indifferent leader can easily drag the subordinates' motivation down⁵⁷, unite soldiers against the leader⁵⁸, and separate the group from the larger collective⁵⁹. If the leader fails to link and incorporate the group and its members with the organizational values and standards, the effectiveness of the unit falls apart⁶⁰ and the small groups start to militate against organizational norms and goals⁶¹. Therefore, poor bonding with one or several leaders is apt to result negative group behavior. Alderks⁶² examined the breaks in the vertical cohesion referring to a point where confidence in and bonding with the leader was lost or markedly diminished and found that breaks at the lower level of vertical cohesion (i.e., inside the platoon) were associated with poorer platoon performance supporting the abovementioned findings and suggestions. One special kind of problem arises when the leader is competent and gained trust of the followers but his or her values and attitudes are opposite to the organizational ones. Then effort of such leader is not supportive to the attainment of the organizational goals. On the contrary, he or she unites the group against the organization and inspires the followers to behave "in an organizationally dysfunctional manner"⁶³. Drawing from the aforementioned findings in the literature, *the main hypothesis* is that vertical cohesion relates positively to group members' (a) attitudes toward the military, (b) behavior in terms of malingering and deviance, and (c) performance as estimated by the collective efficacy and performance ratings.

Method

Sample

All respondents were inducted in 2001 as the first (starting in January) or second (starting in July) contingent to an armored brigade in south-central Finland to serve their compulsory six to 12 months conscript service. The full sample of 2,004 conscripts was just under 8% of the total 2001 initial military training population in Finland. The focus sample consisted of 1,083 rank and file conscripts who served at least 6 months in the military and received no leadership training. Eighty-six percent of conscripts

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- 57 Siebold 1996, 266–267
 58 Bartone & Kirkland 1991, 400
 59 Siebold 1988, 5
 60 Siebold 1996, 271
 61 Henderson 1986, 6
 62 Alderks 1992, 8
 63 Butler, Blair, Phillips & Schmitt 1987, 16

were 19–20 years old (four percent were 18 year olds, and ten percent were 21–28 year olds). The majority (43.2 %) had between 9 and 11 years of education. One third (33.2%) of recruits had 12 years of education and had the high school diploma, while 22.2 % had only comprehensive school background and 1.4 % were college graduates. In this sample, all recruits were White and only 20 were female soldiers performing their volunteer based service. Since their responses were very similar to the males, no separate breakout by gender is provided in the results.

Questionnaire Administration and Measures

Finnish language questionnaires were administered near the end of the six- or twelve-month conscript training period. The official military questionnaire covered perceptions of confidence in the squad leader, platoon leader and instructors, training quality and experiences, career intentions, and attitudes toward national defense, whereas an additional questionnaire assessed conscripts' mental and physical health, adjustment to military, commitment, peer and organizational cohesion, and background factors. There were 988 conscripts who answered to the both questionnaires. Based on the research literature and factor analyses, scales measuring the main constructs of interest were developed. Specifically, in the factor analysis, items whose responses loaded strongly (e.g., $>.40$) on the same factor were utilized as measures of over-arching constructs. Confirmation of the relative independence of the scales and separate items and their relative dominance within the variable set was carried out by Bayesian dependency modeling and analysis (see <http://b-course.cs.helsinki.fi>). For the major questionnaire scales and the individual items within them, the author computed item means, item standard deviations, Cronbach's *alpha* (a measure of reliability), item-scale total correlations, scale means, and scale standard deviations.

The research presented in this article was designed to reach across many sectors of experiences in the military and connect them with the personal attributes of the respondents. The current research was also designed to measure an array of *criterion* measures such as group and personal performance, deviance, and attitudes about the importance of the military and making the military a career. Thus the design allowed for a wider scope of constructs to be considered to assess their place in the domain of small group vertical cohesion.

The primary measures of cohesion, attitudes, behavior, and performance are presented at Appendix 1. Cohesion was measured using scales of the main bonding dimensions: peer, leader, and organizational. The main attitudinal measures were

about *Career Intentions*, *National Defense Attitudes*, and Refresher training intentions. The key behavioral measure was the *Good Conduct* index comprising deviant behavior during the service such as the number of penalties, reprimands, and days out of daily service. Conscripts' perceptions of their performance were formed into two criteria scales: *Group Performance* and *Personal Performance*. Instructor's two ratings of conscript capability for wartime duties were summed to form a scale: *Individual Performance Rating*, which was used as the third criteria of performance.

Results

The first initial examination of vertical cohesion and its relations to attitudinal, behavioral, and performance criteria in small groups was made by looking into correlations. The conscript squad leader, conscript platoon leader, and permanent staff instructor were the most relevant foci of leader bonding during the conscript service, and at first, they were analyzed separately. Table 1 shows low or moderate correlations between vertical cohesion and other measures. Generally, conscripts with stronger bonding with their leaders had better training experiences, mental and physical health, and collective and self-efficacy in terms of group and personal performance perceptions. They also had higher performance ratings, more favorable attitudes toward the military refresher training and national defense and less deviant behavior during their service. These initial findings support the first hypothesis of how vertical cohesion is positively related to the followers' attitudes, behavior, and performance.

However, there were some differences between leaders and how bonding with them related to different criteria. First of all, bonding with the squad leader was slightly more connected to peer and organizational cohesion than was bonding with the platoon leader or instructor. On the other hand, particularly bonding with the squad leaders did not cause any influence on the number of doctor's appointment, actual exemptions, and malingering (i.e., seeking exemptions from daily service without being ill essentially due to lack of motivation to training and service). Although unclear why squad leaders had no favorable effect on their subordinates' attitudes against malingering, one answer may be that they also occasionally exploited the medical system and similarly that their followers tried to avoid the presence of military training. For example in other analyses, squad leaders and rank and file soldiers did not differ in number of doctor's appointments (10.2 vs. 10.9, respectively) whereas conscript platoon leaders had significantly less appointments (7.6; $p = .05$).

Table 1
Individual Level Correlations Between Main Measures

Main Measures		Squad Leader	Platoon Leader	Instructor
Cohesion	Peer Cohesion	.36***	.27***	.22***
	Organizational Cohesion	.38***	.34***	.30***
Military Training	Training Quality	.33***	.32***	.35***
	Training Information & Feedback	.34***	.35***	.42***
	Allowed to Think	.24***	.13***	.30***
Physical and Mental Well-Being	Physical Health	.14***	.15***	.14***
	Mental State	.15***	.14***	.11***
	Doctor's Appointments	-.05 ns.	-.10**	-.05 ns.
	Seeking Exemptions	-.06 ns.	-.15***	-.16***
	Actual Exemptions	-.04 ns.	-.11***	-.05 ns.
Performance Criteria	Group Performance	.34***	.27***	.30***
	Personal Performance	.35***	.34***	.35***
	Performance Ratings	.18***	.21***	.18***
Attitudinal Criteria	Career Intentions	.11***	.05 ns.	.09**
	Refresher Training	.14***	.14***	.09**
	National Defense Attitudes	.22***	.17***	.26***
Deviant Behavior	Good Conduct	.10**	.17***	.10**

Note. $n = 974$. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Consequently, the same difference was revealed in numbers of actual exemptions (SL: 14.4; r&f soldiers: 15.9 vs. PL: 10.4) with significant difference between platoon leaders and others ($p = .05$). The consequent assumption is that squad leaders were more part of the norm system of their informal peer group than platoon leaders and therefore, squad leaders adopted (in this case) more norms of their followers about behaving against the organization than what they were able to transfer into their squads in terms of favorable orientation to the military. In this regard, it can be concluded that compared to platoon leaders and instructors, the squad leaders did not try to link their squads with the organization.

Among performance perceptions and ratings, vertical cohesion had relatively equal but positive and significant relations to followers' performance across the different leader

foci. On the other hand, attitudinal criteria had only low relations to the vertical cohesion factors, indicating that some aspects other than leadership created more consistent attitudes toward or against the military. Another reason for the low correlation coefficients may be that leaders' own mixed commitment to the military confused their followers and therefore there was not a tidy link between leadership and orientation to the military.

For the next step of analyses, the measures about bonding with the squad and platoon leader were combined to a larger scale about vertical cohesion in the group. Although these measures formed separate factors (in principal axis factoring with varimax rotation), they still were conceptually close to each other forming a close relation in the Bayesian dependence analysis that provided the main support for the incorporation of the scales. At the next step, values of primary group vertical cohesion were divided to the thirds of weak, medium, and strong vertical cohesion. Finally, those experiencing either weak or strong vertical cohesion were examined and their differences of means were compared with relevant criteria (see Table 2).

Table 2
Differences of Means Based on Vertical Cohesion

Main Measures	Vertical Cohesion		
	Weak	Strong	Sig.
Peer Cohesion	3.26	3.87	.001
Organizational Cohesion	2.95	3.73	.001
Training Motivation	3.02	3.71	.001
Training Quality*	2.91	3.64	.001
Training Information and Feedback*	3.07	3.78	.001
Allowed to Think*	2.55	3.17	.001
Physical Health	3.74	4.17	.001
Emotional Stability	3.82	4.26	.001
Doctor's Appointments	11.60	9.70	.01
Seeking Exemptions	2.33	1.91	.001
Actual Exemptions	16.95	13.82	.01
Group Performance*	2.99	3.93	.001
Personal Performance*	3.08	3.84	.001
Performance Ratings	3.26	3.65	.001
Intent to Stay	3.70	4.36	.001
Career Intentions*	1.85	2.04	ns.
Refresher Training	2.07	2.50	.001
National Defense Attitudes*	3.96	4.45	.001
Good Conduct	1.91	1.95	.001
Effective Days (%)	88.9	91.9	.001

Note. Weak vertical cohesion group $n = 360$ (≤ 3.2 in Likert scale), and strong vertical cohesion group $n = 379$ (≥ 4.0 in Likert scale). * = from the last questionnaire.

All those measures and individual items (except *Career Intentions*) that had significant correlations with specific foci of vertical cohesion had also significant differences between the weak and strong vertical cohesion groups. Thus, comparing soldiers experiencing strong vertical cohesion and conscripts with weak vertical

cohesion in the platoon, the later conscripts perceived their peer group cohesion and organizational cohesion as lower, did not value their training, were physically and mentally less fit, and tried more often to avoid their service by seeking exemptions from the medical doctor. Consequently, they also had more doctor's appointments and less effective service days than those having strong vertical cohesion. Soldiers with weak vertical cohesion were rated lower by instructors, and had notably lower collective and self-efficacy in terms of wartime performance. They had considered dropping out their service (i.e., *Intent to Stay*), they did not want to come back even for a short refresher training exercise, and they saw the importance of national defense as well as their own experiences as part of it less favorably. The main impression was that weak vertical cohesion left the soldier apart from the group, unit, and the military, and the person showed it with bad attitude, mediocre performance, and by showing avoidant or deviant behavior during his or her service. Overall, the findings among mean differences supported the research hypothesis.

Next we tested which of these significantly related items and factors explained most the vertical cohesion scale. Basically, there were four separate concepts which were predictors of primary group vertical cohesion: organizational cohesion, training experiences, peer cohesion, and experiences about regimentation in the military (Table 3). First of all, vertical cohesion was related to identification with the closest secondary group in the military organization (i.e., the unit) and its features such as unit atmosphere, unit pride of the conscripts, and positive experiences in the unit in general. This was indicated by how organizational cohesion explained vertical cohesion perceptions (20 % of variance by itself). Secondly, providing information before training and feedback afterwards linked conscripts emotionally and instrumentally with their leaders, and more than, for example, the quality of training. The third component that explained vertical cohesion among conscripts was peer cohesion in the group. This suggests that the closest group leaders were either an integrated part of the primary group and therefore close to peer experiences or they affected it outside the informal group. Nonetheless, the vertical cohesion and peer cohesion concepts were in moderate significant relation explaining one another. The last theoretically independent component was *Regimentation*. Thus, conscripts valued their vertical cohesion also based on their own adjustment to stand restrictions of freedom, rigorous discipline, and rush and strict timetable in the military (as were the items in the scale). This suggests that the closest leader performed as a moderator between organizational demands and personal capacities to fulfill them. In other words, conscripts created trust and confidence in leaders who helped them to bear

the military rush and discipline.

Similarly, the influence of predictors on the confidence in the instructor was

Table 3
Predictors of Vertical Cohesion

Predictor Scales	<i>r</i>	<i>Beta</i>	<i>p</i> of β	Cumulative Values	
				R	Adj. R^2
1. Organizational Cohesion	.44	.18	.001	.44	.20
2. Training Information and Feedback	.37	.15	.001	.49	.24
3. Peer Cohesion	.42	.19	.001	.51	.26
4. Regimentation	.30	.14	.001	.53	.28
5. Training Quality	.35	.10	.01	.54	.29

Note. $n = 674$. For *r*, the individual correlations of scales with *Vertical Cohesion*, all correlations were significant at $p < .001$.

examined. In this situation, there were only two components (i.e., training experiences and institutional bonding) of predictors that rose up in the stepwise regression analysis. However, also in this case the amount of explained variance was quite modest (Adj. $R^2 = .22$). Altogether, conscripts formed their attitudes toward their instructor based on the quality of training in general and the quality and quantity of provided training information and feedback. In particular, if soldiers were allowed to bring new ideas and think by themselves for the best solutions in training, they had also more confidence in their instructors. Interestingly, bonding with instructors was related to institutional bonding with the military. This scale was composed of the affective, normative, and continuance commitment to the larger institution (i.e., Army) and the military service in general. Thus, the instructors were the representatives of the larger institution and ideological leaders who were in some extent creating institutional bonding of conscripts⁶⁴. However, they were not successful in creating career intentions or motivation for later refresher training as was indicated by the mean values implying that they were not able to overcome the strong primary group norm which was against such orientations.

Table 4
Predictors of Confidence in Instructors

Predictor Scales	<i>r</i>	<i>Beta</i>	<i>p</i> of β	Cumulative Values	
				R	Adj. R^2
1. Training Information and Feedback	.41	.29	.001	.41	.17
2. Training Quality	.35	.15	.001	.45	.20
3. Allowed to Think	.27	.12	.01	.47	.21
4. Institutional Cohesion	.26	.09	.05	.47	.22

Note. $n = 674$. For *r*, the individual correlations of scales with *Confidence in a Instructors*, all correlations were significant at $p < .001$.

After the analyses of general trends in vertical cohesion and other measures, the next

64 cf. Shamir, Zakay, Breinin & Popper 1998

phase focused on the investigation of breaks in vertical cohesion and especially cases where the confidence to either conscript leaders or instructors was lost while another counterpart stayed high. Table 5 shows how people with weak immediate vertical cohesion with the squad and platoon leaders but with high confidence in their instructor accepted military authority including items about ability to obey given orders and their attitude towards obedience in general. They perceived organizational cohesion better in their unit. In addition, they had stronger continuance commitment (i.e., *Intent to Stay*), which meant that they did not consider dropping out from the service. Thus, generally they were in better connection to their authority, unit, and the military service in general. On the contrary, soldiers, with strong vertical cohesion while exposing negative attitudes toward their instructor were less obedient, valued more negative unit cohesion and being part of the military. The main conclusion from this table is that while conscript leaders and instructors were contrasted with each other, instructors behaved more as a linking-pin with the military and the conscript compared to the primary group leaders. This is again another indication of organizationally unfavorable norms and attitudes among conscripts (including their conscript leaders) if they were not connected to the larger organization for example as a result of good relationships with their instructors.

Table 5
Main Differences Between Measures Based on the Level of Vertical Cohesion (VC) and Confidence in Instructors

Main Differences	Weak VC vs. High Confidence in	Strong VC vs. Low Confidence in	Sig.
	Instructor	Instructor	
	1 – 3	3 – 1	
Acceptance of Authority	3.86	3.47	.05
Organizational Cohesion	3.50	3.12	.05
Intent to Stay	4.28	3.68	.05

Note. $n = 61$ (1 – 3 group) and $n = 67$ (3 – 1 group). 1 – 3 refer to a group of people who had weak *Vertical Cohesion* but high *Confidence in Instructors* whereas 3 – 1 people experienced strong *Vertical Cohesion* but low *Confidence in Instructors*. The used significance level was .05. Tukey's Post Hoc test was utilized for pair comparisons.

The examination of breaks in vertical cohesion chain continued by looking the whole diversity of possible combinations of weak, medium, and strong bonding with conscript leaders versus instructors. As Table 6 shows, the strong bonding with both groups of leaders always coexisted with good qualities in criteria. For example, if bonding with conscript leaders and instructors were strong (i.e., "strong-strong" at the last column), conscripts' attitudes and perceptions about their experiences were the most positive as indicated by the highest means values in rows. In addition to that, conscripts bonded

with both leaders received better performance ratings from instructors.

From another point of view, the relations between vertical cohesion and other measures were not linear. In other words, although one or even both foci of vertical cohesion (i.e., conscript leaders or instructors) improved it did not necessary mean that conscripts perceptions or performance were better. Therefore, it is interesting to explore the steps where increase in vertical cohesion was also seen in better mean value in the criterion. For example, for the conscripts' *Mental Health*, it was important that they did not have weak bonding either with conscript leaders or instructors, or if their other component was weak, another should have been strong. This was indicated by the significant difference between the second and third column in the mental health measure. The same kind of a minimal state for an adequate mean value is observed in *Rated Performance* where there was the main difference between values between the same abovementioned columns.

There were also some linear connections between increased vertical cohesion and raised mean values in criteria. For example, conscripts perceived training having more quality, received more information and feedback, and had better self-efficacy about their wartime personal performance in every increase in bonding with leaders. In other words, training and performance perceptions were in linear relations to the combined strength of vertical cohesion with conscript leaders and instructors.

Generally, these findings support the findings in the literature⁶⁵. Particularly, the hierarchical breaks in vertical cohesion involved lowered attitudinal and performance. However, the affect of vertical cohesion on behavioral outcomes had ambiguous evidence. Although, in every case with "weak-weak" vertical cohesion, conscripts had more troubles with their service than others in terms of more exemptions from daily duty and reprimands, it was not found any significant consistent differences between other combinations of vertical cohesion and the behavioral criteria (exemptions, reprimands, and penalties).

The final phase of the analyses focused on the first hypothesis of whether there is a positive impact of vertical cohesion on attitudes, behavior, and performance in platoons. For verifying the relative importance of the main variables, discriminant analyses were conducted. Specifically, platoons having weak and strong vertical cohesion were compared on the specific criteria. The data consisted of soldiers from 30 platoons. For the discrimination of weak and strong vertical cohesion platoon, ten platoons with the lowest mean values in the vertical cohesion scale ($M \leq 3.6$) were selected for representing "weak" vertical cohesion and similarly ten platoons with

65 Alderks 1992

Table 6
 Mean Differences among Main Measures based on Bonding with Conscript Leaders and Instructors

Main Measures	Pairs	weak + weak (<i>n</i> = 184)	weak + m, m + weak (<i>n</i> = 194)	w+s, s+w, m+m (<i>n</i> = 227)	m + strong, strong + m (<i>n</i> = 194)	strong + strong (<i>n</i> = 175)
Peer Cohesion (<i>M</i> = 3.56; <i>SD</i> = .77)	1	3.2	3.3	-	-	-
	2	-	3.3	3.5	-	-
	3	-	-	-	3.8	-
	4	-	-	-	-	4.0
Organizational Cohesion (<i>M</i> = 3.35; <i>SD</i> = .83)	1	2.9	-	-	-	-
	2	-	3.1	3.3	-	-
	3	-	-	-	3.6	-
	4	-	-	-	-	4.0
Training Quality (<i>M</i> = 3.29; <i>SD</i> = .80)	1	2.8	-	-	-	-
	2	-	3.1	3.2	-	-
	3	-	-	-	3.5	-
	4	-	-	-	-	3.9
Training Information & Feedback (<i>M</i> = 3.42; <i>SD</i> = .76)	1	2.9	-	-	-	-
	2	-	3.1	-	-	-
	3	-	-	3.4	-	-
	4	-	-	-	3.7	-
	5	-	-	-	-	4.0
Mental Health (<i>M</i> = 4.05; <i>SD</i> = .87)	1	3.8	3.8	-	-	-
	2	-	-	4.1	4.2	4.3
Group Performance (<i>M</i> = 3.42; <i>SD</i> = 1.09)	1	2.8	3.1	-	-	-
	2	-	-	3.4	-	-
	3	-	-	-	3.7	-
	4	-	-	-	-	4.1
Personal Performance (<i>M</i> = 3.43; <i>SD</i> = .79)	1	2.9	-	-	-	-
	2	-	3.2	-	-	-
	3	-	-	3.5	3.6	-
	4	-	-	-	-	4.0
Rated Performance (<i>M</i> = 3.44; <i>SD</i> = .77)	1	3.1	3.3	-	-	-
	2	-	-	3.5	3.5	3.7
Attitude towards National Defense (<i>M</i> = 4.21; <i>SD</i> = .87)	1	3.9	4.0	-	-	-
	2	-	4.0	4.2	-	-
	3	-	-	-	4.4	4.6

Note. *n* = 974. Weak + weak means that a person had weak bonding with *squad and platoon leaders* + weak confidence in *Instructors* whereas strong + weak refers to that another person had strong bonding with *squad and platoon leaders* but weak confidence in *Instructors*. w = weak bonding, m = moderate bonding, and s = strong bonding. Always, *squad/platoon leader* component is the first and *instructors* are the second. The used significance level was .05 in the Tukey's Post Hoc -tests for pair comparisons.

the best scores ($M \geq 3.8$) were perceived as having "strong" vertical cohesion. The discrimination was made at the individual level. In other words, service members' attitudinal, behavioral, and performance criteria were contrasted between these two different groups of platoons.

Table 7 presents the discriminant function and the correlations of the scales with that function. Weak and strong vertical cohesion platoons were best distinguished based on their members' performance ratings and organizational cohesion. These two scales correctly classified 65.3 percent of respondents ($n = 540$). Overall, vertical cohesion in

Table 7
Criteria Predicting Platoons with Weak or Strong Vertical Cohesion

Platoons Differed Most in These Criteria	Standardized Coefficients	Correlation with Discriminant Function
1. Performance Ratings*	.79	.90
2. Organizational Cohesion*	.45	.65
3. Good Conduct	–	.52
4. Perceived Personal Performance	–	.41
5. Effective Service Days	–	.41
6. Affective Commitment	–	.38
7. Perceived Group Performance	–	.38
8. Refresher Training Intentions	–	.34
9. Malingering (i.e., Seeking Exemptions)	–	.30

Note. Variables were ordered by absolute size of correlation within discriminant function. * = This variable was selected for the best discriminant function. Wilk's Lambda = .88; Eigenvalue = .14; Canonical Correlation = .35; Ten weak *Vertical Cohesion* platoons ($n = 239$) and ten strong *Vertical Cohesion* platoons ($n = 301$). 65.3 % of original grouped cases were correctly classified.

platoons related to rated and perceived performance, attitudes toward the unit (cohesion) and the military (e.g., affective commitment), and behavioral criterion of *Good Conduct*.

However, vertical cohesion did not determine all the conscripts' attitudes. For example, career intentions and national defense attitudes were not included in the final phase of discriminant analysis, because they were not able to distinguish these platoons. In other words, conscript leaders did not have a consistent influence on their followers' career intentions or their attitudes towards defending country in platoons. These perceptions may be already created during the basic training period or even before. On the other hand, there may be other factors that were more influential than the closest leaders such as instructors' behavior and performance, unit policy and quality of practices, or the amount and quality of briefings about military career options or the meaning of national defense in general.

Discussion

The group leader is the central person for uniting his or her followers with the unit and the military, and respectively, creating identification to the immediate organization (e.g., company) and the distant one (e.g., Army). If the linking pin leader smoothes the clash between the informal primary group and the formal secondary group structures, the primary group (e.g., the platoon) no longer limits the performance of secondary group (e.g., the unit) and both these elements move toward the same organizational goals. For example, few internal conflicts between hierarchical levels, constant flow of new ideas and information, efficient decision implementation, and mutual help and support between the groups for achieving the overall goals of the organization are signs of good links between different organizational levels. At the individual level, the linking pin function of the leader promotes organizationally favorable attitudes, behavior,

and performance, and consequently the skills and motivations of the organizational members are better utilized, and the individual deems organizational goals as his or her own. Perhaps, the clearest evidence of successful leadership is when “peer group norms that reflect an incorporation of unit and Army values”⁶⁶.

In this research, the hypothesis stated that the stronger the vertical cohesion, the more favorable attitudes, behavior, and performance among group members in the military. Generally, this was supported in number of analyses. In particular, soldiers who identified with their leaders received quality training, had self-efficacy in terms of their good mental and physical health as well as personal performance in wartime, and perceived better collective efficacy in wartime group performance. Thus, they valued their experiences, abilities, and future performance superior to the soldiers who were not bonded with their leaders. Not only were perceptions more favorable, but also the soldiers’ performance was rated higher and they had less deviant behavior (e.g., reprimands and penalties) during the service. As a group phenomenon, vertical cohesion linked the group members with their peers and the organization in terms of strong unit cohesion. Overall, vertical cohesion existed with personal mental and physical abilities, attitudes, behavior, and performance that favored the military.

The research also emphasized that the stronger *the chain of bonding* with the different levels of leaders the more there were (a) peer and organizational cohesion in the group, (b) stronger beliefs of self and collective efficacy, (c) better rated performance, and (d) military related attitudes. However, it was noted that the bonding with different levels of leaders is more complicated issue than what the general trends in vertical cohesion suggest. Specifically, if there is a clear break between the close primary group leader and the leader at the organizational level (e.g., with the officer) in a way that leader-subordinate cohesion is strong inside the group but not beyond the small group boundaries and the soldiers do not identify with any higher level of leaders, then there is a risk of having organizationally unfavorable consequences. For example in this research, this kind of combination of vertical cohesion was seen with low acceptance of official military authority, weak organizational cohesiveness, and more considerations of separation the military service (Table 5). These findings only underscore the importance of strong vertical cohesion to all relevant levels of leaders supporting the suggestions of Likert about linking pin function of leaders⁶⁷ and the findings in the previous literature⁶⁸.

66 Bartone & Kirkland 1991, 402

67 Likert 1961

68 Alderks 1992

There were some limitations to the research that must be noted. The data did not allow for an examination of how vertical cohesion, attitudes, behavior, and performance relations change over the course of time or for determining the most important causalities between measures. Also, this study did not use group measures for group performance but used only individual perceptions and ratings. In addition, some important group level moderators were not controlled for (e.g. group size, type, mission, history, and structure). This study was not related to a concrete training program, but focused on general relations between vertical cohesion and criteria. Therefore in the future, it might be useful to study the impact of vertical cohesion in particular organizations measuring the characteristics both the leaders in different hierarchical levels as well as their group properties (e.g., group performance, turnover, satisfaction, deviant behavior, organizational citizenship behavior, and commitment) connected to the certain period of time in group development (e.g., one to six months period), goal-orientations, and training. This kind of research design would benefit most by utilizing multilevel of analysis (e.g., hierarchical linear modeling) which could more convincingly prove the impact of unit and platoon leadership on cohesion and criteria and help to identify the moderating (i.e., linking) character of leadership.

What should be remembered from this article? Hopefully, the next fictitious examples clarify the importance of cohesion in the units. In the first case, the leader is promoted to serve as a supervisor of the military prison somewhere on the globe. For some reason he has decided to treat his prisoners badly. He has a hierarchical organization with subordinate leaders and their followers. Since he may violate the international law and many moral principles, all of his subordinates are perhaps not willing to implement his orders. The main question is: What is the most effective way to get the subordinates to follow his idea about the treatment of prisoners? In another example, the leader runs a charitable organization, and her organization is working in the area which is recovering from a war. Still, the situation is hostile and not all locals are accepting help provided by the organization. Some of her subordinate leaders would like to use more stringent policy for example not providing help in villages where there have been attacks to their workers and convoys. Thus, what is the most effective way to get the subordinates to follow her idea about all-embracing help and support in the area?

Based on the literature and this research, the answer is unit cohesion. Therefore, this research recommend those leaders to create (a) well-knit teams and groups where people have clear consensus about the goals and ways of achieving them, (b) intact chain of bonding from the top to the last group member, where the followers trust in

and identify with their leaders at every level and consequently, are eager to follow their orders and desires, and (c) lucid meaning of action in the groups and organization when the followers have an understanding what is the larger purpose and what is so meaningful that would run over personal doubts and harm. Shortly, for a leader in an organization with strong cohesion, that unites group members, leaders with their subordinates, and all of them with the organization, everything is possible – but unfortunately both in good or bad. The character of you (as a leader) and your subordinate leaders determines whether the cohesive organization is outstanding also in terms of values and ethics.

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Appendix

Cohesion Measures

Peer Cohesion

- | | |
|--|------------------------------------|
| 1. In my squad I get help when I need it | <i>M</i> = 3.9; <i>SD</i> = 1.00 |
| 2. I can influence to decisions made in my squad | <i>M</i> = 3.9; <i>SD</i> = 1.03 |
| 3. I feel appreciated in my squad / barrack room | <i>M</i> = 3.6; <i>SD</i> = 1.01 |
| 5. My squad underlines common goals | <i>M</i> = 3.2; <i>SD</i> = 1.19 |
| 6. My platoon has a good esprit de corps | <i>M</i> = 3.8; <i>SD</i> = 1.14 |
| 7. My current squad has a really good esprit de corps | <i>M</i> = 3.8; <i>SD</i> = 1.09 |
| 8. In war my squad members would help me even if it would set them in danger | <i>M</i> = 3.7; <i>SD</i> = 1.069. |
| In case of war, I would like to be in my current squad | <i>M</i> = 3.7; <i>SD</i> = 1.17 |
| t3: $\alpha = .85$; item-total <i>r</i> range = .52 – .64; <i>M</i> = 3.67; <i>SD</i> = .76 (8 items; <i>n</i> = 1,660) | |

Vertical Cohesion

- | | |
|--|----------------------------------|
| 1. I have been getting along well with my closest conscript superior | <i>M</i> = 4.0; <i>SD</i> = 1.10 |
| 2. My squad leader has dealt fairly and straightforwardly with me | <i>M</i> = 3.7; <i>SD</i> = 1.11 |
| 3. During field practice my squad leader has set an example and tried often his or her hardest | <i>M</i> = 3.3; <i>SD</i> = 1.19 |
| 4. On the whole my squad leader is a good person | <i>M</i> = 3.7; <i>SD</i> = 1.15 |
| 5. My squad leader masters his or her duties | <i>M</i> = 3.7; <i>SD</i> = 1.05 |
| 6. During a crisis I would like to work under my current squad leader | <i>M</i> = 3.5; <i>SD</i> = 1.20 |
| 7. My platoon leader has dealt fairly and straightforwardly with me | <i>M</i> = 3.8; <i>SD</i> = 1.08 |
| 8. During the field practice my platoon leader has set an example and tried often his or her hardest | <i>M</i> = 3.6; <i>SD</i> = 1.10 |
| 9. On the whole my platoon leader is a good person | <i>M</i> = 3.8; <i>SD</i> = 1.11 |
| 10. My platoon leader masters his or her duties | <i>M</i> = 3.8; <i>SD</i> = 1.01 |
| 11. During a crisis I would like to work under my current platoon leader | <i>M</i> = 3.7; <i>SD</i> = 1.07 |
| t3: $\alpha = .88$; item-total <i>r</i> range = .40 – .67; <i>M</i> = 3.69; <i>SD</i> = .80 (<i>n</i> = 1,660) | |

Organizational Cohesion Index

- | | |
|--|----------------------------------|
| 1. The atmosphere in my company / battery is good | <i>M</i> = 3.6; <i>SD</i> = 1.12 |
| 2. I am proud of my unit (company / battery) | <i>M</i> = 3.4; <i>SD</i> = 1.33 |
| 3. I have experienced some really interesting and exciting events / moments during conscript service | <i>M</i> = 3.6; <i>SD</i> = 1.24 |
| 4. I have some very positive memories from my conscript service | <i>M</i> = 3.6; <i>SD</i> = 1.24 |
| 5. How efficiently have you been trained for war | <i>M</i> = 3.0, <i>SD</i> = .92 |
| t3: $\alpha = .75$; item-total <i>r</i> range = .47 – .55; <i>M</i> = 3.48; <i>SD</i> = .84 (<i>n</i> = 1,660) | |

Some Other Key Measures**Training Information and Feedback**

- | | |
|--|----------------------------------|
| 1. At the beginning of training I was clearly told of the training goals | <i>M</i> = 3.5; <i>SD</i> = 1.07 |
| 2. I have been aware of whether I have achieved the goals of training | <i>M</i> = 3.5; <i>SD</i> = 1.05 |
| 3. After training, an instructor has told my squad how well we performed | <i>M</i> = 3.7; <i>SD</i> = 1.09 |
| 4. I have been informed how well I have done in training | <i>M</i> = 3.4; <i>SD</i> = 1.11 |
| 5. After training, we were told what went well and what did not | <i>M</i> = 3.7; <i>SD</i> = 1.06 |
| 6. Instructor's feedback has helped me understand how to perform | <i>M</i> = 3.4; <i>SD</i> = 1.10 |
| 7. I have been aware how I have done in training compared to others | <i>M</i> = 3.3; <i>SD</i> = 1.11 |
- t3: $\alpha = .83$; item-total *r* range = .50 – .64; *M* = 3.49; *SD* = .76 (*n* = 1,534)

Confidence in Instructors

- | | |
|---|----------------------------------|
| 1. My closest instructor masters his or her duties | <i>M</i> = 3.9; <i>SD</i> = 1.14 |
| 2. My closest instructor has dealt fairly and straightforwardly with me | <i>M</i> = 3.8; <i>SD</i> = 1.14 |
| 3. During a crisis I would like to work under my current instructor | <i>M</i> = 3.6; <i>SD</i> = 1.24 |
- t3: $\alpha = .84$; item-total *r* range = .67 – .73; *M* = 3.78; *SD* = 1.02 (*n* = 1,534)

Performance Criteria**Group Performance**

- | | |
|--|----------------------------------|
| 1. The squad which I belong to would do well in real combat | <i>M</i> = 3.5; <i>SD</i> = 1.16 |
| 2. The platoon that I belong to would do well in real combat | <i>M</i> = 3.5; <i>SD</i> = 1.11 |
- t3: $\alpha = .85$; item-total *r* = .75; *M* = 3.49; *SD* = 1.06 (*n* = 1,534)

Personal Performance

- | | |
|---|----------------------------------|
| 1. I have a clear picture of my duty during a war | <i>M</i> = 3.7; <i>SD</i> = 1.18 |
| 2. On the basis of my training I could do my duty during a war | <i>M</i> = 3.7; <i>SD</i> = 1.09 |
| 3. Training has given me the mental skills for battle situations | <i>M</i> = 3.2; <i>SD</i> = 1.12 |
| 4. In every circumstance, I master the weapons and equipment needed for my duty | <i>M</i> = 3.9; <i>SD</i> = 1.01 |
| 5. On the basis of my physical condition I could get through two weeks of battles and three to four days and nights of decisive battles | <i>M</i> = 3.3; <i>SD</i> = 1.22 |
| 6. On the basis of my mental health I could get through two weeks of battles and three to four days and nights of decisive battles | <i>M</i> = 3.5; <i>SD</i> = 1.15 |
- t3: $\alpha = .77$; item-total *r* range = .47 – .58; *M* = 3.54; *SD* = .77 (*n* = 1,534)

Performance Ratings by Instructors

- | | |
|--|---------------------------------|
| 1. Wartime field proficiency | <i>M</i> = 3.6; <i>SD</i> = .80 |
| 2. Military performance overall estimation | <i>M</i> = 3.7; <i>SD</i> = .84 |
- t3: $\alpha = .79$; item-total *r* = .65; *M* = 3.64; *SD* = .74 (*n* = 1,642)