HIERARCHICAL REPRESENTATION OF MOTIVES IN GOAL-SETTING

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Abstract

We develop a framework for thinking about motives in goal-setting. The reasons for choosing a particular goal are represented in a hierarchical network of motives. To uncover context-specific motives and their interconnections, we propose a procedure based on the elicitation of explanations and justifications for one's goal-choice that is derived from ideas in the philosophy of argumentation and discursive psychology. We then apply the procedure to the motivation for volunteering to join the Italian Army by officers and enlisted soldiers. The resulting idiographic motives and linkages between motives are validated by regressing attitudes, intentions to re-enlist, and commitment toward the army on motives and the linkages between motives. A heuristic nomothetic summary of goals, arranged in an interconnected hierarchy, is derived on the basis of the common content found in content analyses of goals and their interrelationships.

> "...to understand people one needs to understand what leads them to act as they do, and to understand what leads them to act as they do one needs to know their goals, and to understand their goals one must understand their overall interpretive system, part of which constitutes and interrelates these goals, and to understand their interpretive system—their schemas—one must understand something about the hierarchical relations among these schemas."
> (D'Andrade, 1992: 31).

Goals are "internal representations of desired states, where states are broadly construed as outcomes, events, or processes" (Austin & Vancouver, 1996: 338). One of the earliest and most comprehensive theories of motivation based on goal setting processes was proposed by Locke (1968) who specified the following sequence of five stages: Environmental stimuli → Cognition → Evaluation → Intentions/Goal-setting → Performance. This theory has undergone considerable refinement and testing over the years to include identification of various mediators and moderators of cognitive and evaluation processes on performance, as well as feedback mechanisms through satisfaction and other consequences of performance such as organizational commitment (see, for example, the "High Performance Cycle" in Locke & Latham, 1990, ch. 11).

An issue only given preliminary scrutiny is how the cognitive and evaluative states in goal-setting are represented and organized (e.g., Beach & Mitchell, 1990; Erez & Earley, 1993; Locke, 1991; Kanfer, 1990, 1992). The purpose of the present paper is to suggest that one's motives in goal-setting can be represented in cognitive schemas. A second objective of the paper is to develop a methodology for eliciting motives and their hierarchical arrangement. Finally, our aim is to test the impact of cognitive schemas on employee's affective reactions, commitment, and intentions to join or remain in an organization.

THE REPRESENTATION AND ORGANIZATION OF MOTIVES

Overview of Literature

One of the original ways for specifying motives was to identify which goals are important to people as ends for their own sake. Murray (1938) identified 22 major human motives that people strive for as goals (e.g., achievement, affiliation, autonomy, dominance, order). Maslow (1954) proposed five fundamental needs and arranged them in a hierarchy from basic to higher-order needs (physiological, safety, belonging, esteem, and self-actualization). Herzberg, Mausner, & Snyderman (1959) proposed

that one set of "hygiene" factors governs dissatisfaction (e.g., salary, job security, status, relationships with piers and supervisors) and another set of "motivators" contributes to satisfaction (e.g., responsibility, advancement, achievement, recognition, personal growth). More recently, researchers have searched for general goal categories by asking people to first rate goals provided to them on long lists and then rate the goals on various dimensions (e.g., value, instrumentality, commitment). The outcome has been the identification of a small number of factors such as found by Ford and Nichols (1987; affective, task, cognitive, social relationship, and subjective organization factors) and Novacek and Lazarus (1990; sensation-seeking, achievement/power, personal growth, affiliation, and stress avoidance factors).

Despite differences among these "content theories" of motivation, they are all similar in the sense of specifying general motives that are presumed to apply universally across contexts. Their main drawback lies in their inability to account for specific actions and to point to particular management strategies for influencing behavior. General needs or categories of goals may provide a baseline for action, but they are distal determinants at best, perhaps working through values, which, in turn, shape goals and then volitions to act (Locke & Henne, 1986). What may be required for better prediction of particular actions are context-specific motives rather than general needs or goals (Mowday & Sutton, 1993).

Two models that are somewhat more process-oriented and call attention to specific motives are the job characteristics model (e.g., Hackman & Lawler, 1971; Hackman & Oldham, 1980) and expectancy-value models (e.g., Mitchell, 1982; Vroom, 1964). Under the job characteristics model, personal outcomes (e.g., internal work motivation) are hypotherized to be a function of critical psychological states (e.g., experienced meaningfulness of work, responsibility for outcomes of work, and knowledge of the actual results of work activities), and these, in turn, are thought to be determined by core job dimensions (e.g., skill variety, task identity, task significance, autonomy, and feedback one obtains about results of the job). The job characteristics model does not address situation-specific motives and their organization in memory, nor does it specifically explain how internal work

motivation is determined. It is desirable to identify specific motives for workers and how they account for intentions and choices in their particular work setting (cf. Kanfer & Ackerman, 1989).

Perhaps the most flexible and parsimonious approach for modeling motivation is expectancy-value theory. To take one variation as an example, we might model a person's decision to allocate one's effort as a multiplicative function of expectancy, instrumentality, and valence (Vroom, 1964). That is, a person is believed to be motivated to allocate his or her effort to that alternative that scores highest on the perceived likelihood that effort will lead to performance (instrumentality), the likelihood that performance will lead to a reward (expectancy), and the value of that reward (valence).

Expectancy-value theory has had, and continues to have, an important impact on motivation theory and the specification of management strategies. However, from the point of view of modeling motives and their role in volition formation and action, expectancy-value theory has four limitations.

The first two are conceptual and stem from the simplicity of the approach, which is in one sense its Achille's heel. The first problem with expectancy-value theory is that it does not specify an underlying structure for the cognitive elements in its formulation (i.e., for the target behavior and outcomes and their expectancies). Instead, expectancy-value models assume that the cognitive elements (weighted by valences) are aggregated into a summary representation: a single number equal to the sum of products of expectancies and valences. To the extent that knowledge is represented in hierarchies or complex patterns, the classic expectancy-value model may overlook how specific components of knowledge affect motivation or choice in terms of the processes decision makers go through. For example, particular expectancies or different combinations of expectancies and valences at a particular level in a knowledge hierarchy may contribute differentially to preference formation. But the regression of preference, say, on the classic summation of expectancies and valences does not permit one to disentangle the relative effects, if any. The aggregate, summary representation provided by expectancy-value theory may be adequate in many cases for global predictions but does not provide a fine-grained explanation of motivation or choice.

A secord conceptual limitation of the classic expectancy-value model is that it does not take into account or represent relationships among the cognitive elements entering the model. For instance,

beliefs about the likelihood that performance will lead to a pay increase may be related to beliefs about the likelihood that performance also leads to feelings of envy on the part of co-workers. To the degree that knowledge units (e.g., expectancies, outcomes, behavior options) are related in casual, inferential, or functional ways, and these relationships or their effects influence preference formation, expectancy-value models may fall short of providing valid explanations and managerial guidelines.

Another problem with expectancy-value models concerns the properties of measures used to indicate expectancies and valences and the implications of these properties for hypothesis testing. Because measures of expectancies and valences often fail to achieve ratio-scale properties, which is required for direct tests of multiplicative models, a fundamental scaling indeterminancy may exit and limit the interpretation of hypothesis tests (e.g., Evans, 1991). Multiple regression solutions to this problem (i.e., simultaneous modeling of additive and multiplicative effects, see Cohen, 1978) do not take into account measurement error, and structural equation models with latent variables, which do model measurement error, (a) place strong demands on data (e.g., very large samples and use of asymptotic distribution free theory are required, see Jöreskog & Fang, 1996) and (b) also can only handle simplified models of limited explanatory and practical utility (i.e., only one or two pairs of interactions can be accommodated without incurring estimation problems). An approach is needed for representing motives that is not as restricted with respect to scaling issues.

A final limitation with expectancy-value models concerns the behavior and outcomes to be included in empirical analyses. These are typically chosen either a priori, based on the interests of the researcher, or else are selected on the basis of a pretest elicitation procedure given to a representative sample of organization members. For example, Ajzen and Fishbein (1980) recommend an open-ended elicitation procedure where people are asked to list perceived advantages and disadvantages of consequences of performing an act, and a coding procedure is then used to select a subset of salient beliefs. Both the researcher-generated and the pretest-based approaches can lead to a set of criteria for inclusion in an expectancy-value model that, after presentation to a focal sample under study, fails to capture outcomes or expectancies that actually affect preferences. A more idiographic approach that directly builds upon each person's own decision criteria would be desirable for tests of hypotheses.

Cognitive Schemas in Goal-Setting

Our aim is to develop a framework for viewing motivation that (1) overcomes the limitations with a priori, universal lists of motives, but rather recognizes the situational variability of behavior, (2) captures the structure of motives and their functional dependencies among each other, and (3) provides a basis for explaining volition formation, affect, and commitment towards organizations. To do this, we begin with the notion of cognitive schemas. Cognitive schemas are "learned, internalized patterns of thought-feeling that mediate both the interpretation of on-going experience and the reconstruction of memories" (Strauss, 1992: 3). As such, cognitive schemas capture a person's knowledge structure (e.g., Fiske & Taylor, 1991).

Cognitive schemas serve a number of functions. When stimuli to which one is exposed match or overlap sufficiently with existing categories in memory, a schema will be activated. Fiske and Pavelchak (1985) term this "schema-based" processing. When stimuli do not match or overlap sufficiently with existing categories, no schema will be activated. Further processing of the stimuli requires additional effort and may proceed in an atomistic way whereby individual elements of information are evaluated and perhaps integrated without reference to a schema. Fiske and Pavelchak (1985) label this "piecemeal" processing. Expectancy-value models presume piecemeal processing of consequences (Fiske & Pavelchak, 1986) and the integration of information by use of an additive rule (e.g., Anderson, 1981). The processing is assumed to be bottom-up or data-driven (Hastie & Park, 1986).

By contrast, the processing of new information in relation to a cognitive schema is interpreted holistically rather than atomistically. Under schema-based processing, new information is first categorized, and then a schema is activated, if it exists (Fiske & Neuberg, 1990). The process is largely top-down or theory-driven (Hastie & Park, 1986). The perception and remembrance of information and subsequent inferences based on new information tend to be schema-consistent, although a number of factors moderate the relationships, such as schema strength, expertise, time for processing, and situational complexity (Fiske & Taylor, 1991).

An important function of cognitive schemas for our purposes is their ability to provide motivational force:

> "[schemas] have the potential of instigating action—that is, they can function as goals. Consider the example of the schema for achievement. For many Americans such a schema is more than just a recognition process by which an achievement can be identified when it occurs; it has the potential of instigating action; that is, for some people it is a goal. Of course, the strength of instigation depends at any one point on the important particulars involved in each interpretive instance—what can be achieved, the difficulties and rewards involved, how that kind of achievement is related to one's own situation and abilities, etc." (D'Andrade, 1992: 29).

The basis for the motivational potential of schemas lies in the self-concept (Quinn, 1992; Strauss, 1992b); cultural reinforcement of middle level goals (Shweder, 1992)—a topic we will consider further below; active involvement and identification with specific roles (Holland, 1992); and internalization of cultural models whereby "individuals learn to want to do things that are normal cultural goals by the ordinary experience of seeing admired others do these things, receiving approval for doing them oneself, and experiencing a variety of intrinsic gratifications by doing them and as a result of doing them" (D'Andrade, 1995: 239).

Researchers in anthropology (e.g., D'Andrade & Strauss, 1992) and psychology (e.g., Fiske & Taylor, 1991) have found that cognitive schemas can be represented in hierarchical structures. A common form for such structures can be summarized as follows: "A schema is a hierarchical organization of knowledge in a particular domain, which includes a category label, generic descriptions of the stimulus domain, particular instances of it, and interconnections among these" (Lau & Sears, 1986: 349). Typically, the hierarchies found to date have been relatively flat with each category at the top connected to multiple attributes at the bottom and some limited number of interconnections among categories and among attributes. Two general approaches have been used to elicit cognitive schemas. Anthropologists have relied primarily on discourse analysis where interviews with small numbers of people are analyzed in depth (e.g., D'Andrade & Strauss, 1992). Discourse analysis yields a rich descriptive picture of schemas but is difficult to adapt to hypothesis testing of law-like relationships. Psychologists have used such elicitation procedures as similarity tasks or free association and have applied such methods of analysis to the data so generated as cluster analysis, multidimensional scaling,

or factor analysis. However, these approaches yield schemas based more on overlapping categories or patterns of correlations than on sequences of relationships implied by hierarchies, per se (e.g., Walsh, 1988). The cognitive schemas and hierarchies that we desire to study require a different approach for discovering their content and functional relationships. We turn now to our suggested method and its rationale.

DISCLOSING COGNITIVE SCHEMAS

Desired ends serve as goals or motives and are represented in the mind as cognitive units. Barsalou (1991) argues that knowledge in the cognitive system originates either through exemplar learning of facts or conceptual combination. Exemplar learning is central to acquiring taxonomic knowledge about the world as it is and is a relatively passive, bottom-up, and automatic process. Such knowledge is stored as categories in memory. By contrast, the thought process of conceptual combination produces goal-derived categories by manipulating existing knowledge in memory. Barsalou (1991: 4) summarizes aspects of categorization in this sense as follows: "...conceptual combination appears to be relatively active, top-down, and effortful. By deliberately manipulating knowledge through reasoning, people produce new categories that serve as goals...conceptual combination produces idealized knowledge about how the world should be...rather than...about how it is". Barsalou (1991: 4) further proposes that goals and their attributes are represented in frames, which he defines as "flexible, loosely organized bodies of knowledge".

Building on Barsalou's (1991) ideas and the research on cognitive schemas presented above, we propose that any focal goal can be related to reasons for acting and depicted through a three-tiered hierarchy. One's focal goal can be considered at the center of the hierarchy and answers the question, "What is it for which I strive?". Subordinate goals constitute the means for achieving the focal goal and answer the question, "How can I achieve that for which I strive?". At the top of the hierarchy are superordinate goals, which answer the question, "Why do I want to achieve that for which I strive?". This conceptualization is similar to frameworks proposed by researchers investigating self-regulation (Author; Carver & Scheier, 1990; Pieters, 1993).

To take a simple example, consider the focal goal of losing body weight. Subordinate goals answer the question, "How can I lose weight?", and might entail various dieting and exercising activities. Superordinate goals explain why one wants to lose weight and might include such reasons as "increases self-esteem", "enhances health and longevity", and "contributes to happiness". Superordinate goals are abstract reasons for acting in such a way as to achieve one's focal goal. D'Andrade (1995: 232) terms these superordinate goals "master motives". The focal goal is at an intermediate level of abstraction between abstract superordinate goals and concrete subordinate goals, where the latter are goal-directed behaviors or instrumental acts.

The goals or motives in a hierarchical schema are connected through means-ends linkages. For example, "losing weight", one's focal goal, may be related to superordinate goals in the following manner: "losing weight → look good", "look good → feel good", "feel good → boost self-esteem", "boost self-esteem → working harder", "working harder → achievement", and "achievement → happiness". This sequence was in fact one of a small number found in a recent study of body weight regulation as part of a larger network of superordinate motives (author). Such means-ends relationships are analogous to what cognitive psychologists term, "procedural knowledge", and express "if-then" propositions held in memory (Anderson, 1983): e.g., "If I look good as a result of losing weight, I shall be accepted socially". However, for an alternative view on the interpretation of cognitive schemas that does not rest on the assumption that they represent internal mental processes, see Discussion below.

Our objective is to uncover the hierarchical structure of the superordinate motives that provide reasons for pursuing a particular focal goal. To do this, we developed the following procedure, which was inspired by the philosopher Toulmin's (1958) ideas on argumentation and rhetoric (see also Antaki, 1994; Billig, 1987). Toulmin conceived of arguments as a series of claims that an arguer provides in defense of an argument. Any argument can be supported directly by multiple claims as evidence. Each claim, in turn, can be challenged on the basis of its justification. The justifications offered in support, in turn, rest on evidence and can also be challenged. A particular argument will rely on some finite sequence of claims, depending on the reasoning of the arguer. This sequence of reasoning yields a network of support for an argument going from the specific to the general.

We adapted this thinking to disclose superordinate motives for striving for a personal goal. The procedure can be outlined as follows (see Method for the specific application to motives for joining the Italian Army by officers and enlisted men). First, respondents are asked to list their personal reasons for choosing the particular goal they have chosen. After listing their reasons, respondents are asked to return to their first reason given and to justify or indicate why that reason is important to them. Next, respondents are asked to explain their justification by stating why it is important to them. This can continue to one or more additional levels of self-interpretation, but typically third-level explanations are sufficient (Author). Finally, the above procedure for providing justifications and explanations is repeated for each of the original reasons given in support of one's goal choice. A somewhat similar procedure has been used to generate hierarchies of causal attributions (e.g., Antaki, 1989) and goals (e.g., Antaki, 1988; Pieters, Baumgartner, & Allen, 1995).

The information generated by the above mentioned procedure gives a set of unique superordinate motives and linkages between motives for each respondent and is thus an idiographic approach. Some commonality in motives and linkages typically exists across respondents, and this can be detected by performing content analyses of the protocols produced by respondents. The resulting categories and linkages between categories can then be modeled as cognitive schemas for respondents and employed as independent variables to predict appropriate criteria by use of regression analysis.

It is possible also to prepare heuristic summaries of cognitive schemas for a sample of respondents. Principles from network analysis can be used in this regard (e.g., Faust & Wasserman, 1992). By arranging motives in an implication matrix and using suitable cut-off levels for meaningful incidences of means-ends relationships, one can construct cognitive maps or "ladders" of motives and their interconnections. Various indices can be computed that summarize the degree of complexity, organization, and centralization of the cognitive maps and the relative importance of motives in the maps. It should be noted that these maps are summary representations and are useful in descriptive senses. We illustrate cognitive maps below in the main study, along with more formal hypothesis testing of the effects of both motives and linkages between motives on volitions, affect, and commitment toward the organization.

THE PRESENT STUDY

To test the hierarchical conception of motives developed herein and operationalize the method for uncovering cognitive schemas described above, we investigated motives for joining the Italian Army by officers and enlisted men. The Italian Army is an ideal setting for studying motivation in the workplace because it is possible to study people who volunteer and who come from diverse socioeconomic backgrounds. The army is seen by many Italians, not only as a career path in its own right, but also as a long run strategy for pursuing a career in police work (i.e., the Caribinieri can be entered only after military service and is overseen by the army). Moreover, the army is a cultural icon of sorts and engenders strong images and feelings because of its long unique history.

Three dependent variables were regressed on the cognitive schemas provided by soldiers (i.e., on motives and linkages between motives): intentions, attitudes, and commitment. All soldiers were volunteers serving at various stages in their first tour of duty, which lasts for three years for enlisted men and five years for those attending officer candidate school. Intentions in the present study were designed to measure volitions towards continuing in the army. In particular, soldiers expressed their intentions to re-enlist, once their current tour of duty was to expire. We expect that, to the extent that the soldiers' reasons for joining the army and inferences based on these reasons are fulfilled, their intentions to re-enlist should be strong. Intentions can be considered one link in the goal-setting and goal-striving process and to be dependent on the degree to which one anticipates that his or her motives will be fulfilled (e.g., Gollwitzer, 1993; Locke, 1968).

Attitudes were measured to capture the affective feelings soldiers have towards the army. Increasing emphasis is being placed in organization research on the relationship between motivation and feelings in the workplace (e.g., George & Brief, 1996). We hypothesize that attitudes will be a function of the degree to which motives and inferences implied by linkages between motives will be fulfilled as a consequence of joining the army.

Finally, we examine the influence of cognitive schemas on organizational commitment. Commitment to the organization is one of the key consequences of goal achievement and satisfaction with goal achievement in Locke and Latham's (1990) high performance cycle. We anticipate that

organizational commitment will be enhanced to the extent that specific motives and inferences implied by linkages between motives will be fulfilled as a result of joining the army.

METHOD

Subjects and procedure

A total sample of 601 volunteers in the Italian Army were asked to participate in the study. After eliminating incomplete questionnaires, the final sample was 586 (mean age = 21.13). Respondents provided motives for joining the Army, attitudes toward the army, organizational commitment, and intention to stay in the Army. All responses were anonymous. Subjects were surveyed in the late Fall 1996 and belonged to the following four sub-samples.

Army Academy. One hundred and fifty-one respondents were in the second year of the Italian Army Academy (mean age=20.51). The Army Academy accepts only high school graduates who have passed rigorous attitudinal and physical criteria, and only a small proportion of applicants is accepted each year. The program takes five years, during which the cadets undergo extensive military training and attend college courses. They graduate as lieutenants.

Garibaldi Brigade. One hundred and forty-one respondents (mean age = 21.41) were in their third year of service in the Garibaldi Brigade. Normal tour of duty for volunteers in the Italian Army is for a three year period. To be accepted as volunteers in any of the non-officer programs, men must have at least an elementary school education and pass various physical and attitudinal standards. All of them serve as either non-commissioned officers or ordinary soldiers. The respondents were interviewed after they participated in the IFOR peace-keeping mission in Bosnia, under NATO command.

Folgore Brigade. One hundred and forty-four respondents (mean age = 20.97) were in the Folgore Brigade near the end of their second year of service. The Folgore Brigade is an elite para-trooper corps. The respondents were surveyed while on duty in Bosnia as part of the IFOR peace-keeping mission.

Volunteers in training. One hundred and fifty respondents (mean age = 19.25) were volunteers in their first month of boot-camp. Italian Army volunteers undergo 5 months training before assignment to their final destination in the various operative corps.

Attitudes toward the Army were measured with 10 5-point semantic differential items : 'punishing-rewarding', 'useless-useful', 'foolish-wise', 'unchallenging-challenging', 'bad-good', 'unhappy-happy', 'unpleasant-pleasant', 'unattractive-attractive', 'boring-exiting', and 'I don't like it-I like it'. These items are common ones used by attitude researchers (e.g., Eagly & Chaiken, 1993). Beneath each response alternative were the following descriptors: 'very much', 'slightly', 'moderately', 'slightly' and 'very much'. The items were introduced with the statement, "For me belonging to the Army is:". A factor analysis and inspection of the scree test showed that one factor resulted (eigenvalue = 5.99, accounting for 59.9 percent of the total variance, range of loadings = .41 to .86).

Intentions to re-enlist in the Army after each soldier's tour of duty expires were measured with two items. The first was a 5-point true-false item in response to the assertion, "I intend to re-enlist in the Army when my current tour of duty expires". The second was a 5-point unlikely-likely item in response to the statement asking respondents to "Please indicate the likelihood you will re-enlist in the Army when your current tour of duty ends".

Organizational commitment. The 24 item organizational commitment scale developed by Allen and Meyer (1990) was administered (see Appendix). The items measure affective, continuance, and normative commitment. Responses were recorded on 5-point, "strongly disagree" to "strongly agree", measures. A factor analysis revealed that three factors existed (eigenvalues ranged from 1.52 to 4.40 with 56.2 percent of total variance accounted for). The factor pattern fully conformed with the structure proposed by Allen and Meyer (1990). The first factor reflected affective commitment (items # 1, 3, 5, 6, 7 & 8; range of loadings = .59 to .86). The second factor was labeled continuance commitment, reflecting the losses one would experience by leaving the Army and the availability of other employment (items # 10, 11, 12, 14 & 15, range of loadings = .58 to .83). The third factor was normative commitment (items # 17, 20, 21, 22 & 23; range of loadings = .44 to .74).

Elicitation of motives. The elicitation of motives for volunteering in the Army was conducted as follows. Respondents were first asked to list five personal reasons explaining why they voluntarily joined the Italian Army and to enter these separately in the left most columns of boxes on the appropriate page in the questionnaire (see Appendix). Next, respondents were instructed to consider the first reason they provided, think about why it was important to them, and place their answers in the first box of column 2, which corresponded with the box for reason 1 in column 1. Respondents were then asked to address this second level of justification and explain why it was, in turn, important to them. The response was recorded as a third level explanation in box 1 of column 3. The process was repeated for the second initial reason expressed in row 2, column 1, and so on, until all first-level reasons were explained up to three levels. The net result was a table of 5 rows and 3 columns of ordered motives. The 15 motives consist of 5 strings of explanations provided in support of why one joined the army.

RESULTS

Descriptive analyses

The 586 respondents mentioned a total of 5741 motives as explanations for joining the army and 3062 linkages among motives, for an average of 9.8 motives and 5.2 linkages, respectively, per respondent.

The idiosyncratic responses were then content analyzed so as to categorize the motives into a smaller number of meaningful groupings. Two independent judges coded the 586 protocols by use of terms summarizing similar meanings. Coders were instructed to place named motives into classifications maintaining maximal within group similarity and between group dissimilarity. For example, 'I like it', 'The army is great', 'It's cool', and 'It is my passion' were all coded under the label, 'passion'. The coders showed about 80 percent agreement, and disagreements were subsequently resolved by discussion so that all responses were classified. A total of 43 categories resulted (e.g., 'self-esteem', 'maturation', 'financial security', 'patriotism', 'lack of alternatives'; see Table 1 for the full list). It should be noted that the number of motive categories identified in the present study is greater than that reported in recent studies using a similar procedure (Author; Pieters, Baumgartner, &

Allen, 1995). Previous studies focused on simpler issues (e.g., loosing weight, recycling), whereas joining the Army is a more a complex and involving issue and relates centrally to one's well-being.

[Table 1 about here]

The first step in the analysis of the structure of motives was to construct an implication matrix for each of the groups under scrutiny. The implication matrix displays the number of times each motive leads to each other motive for respondents. It is a square matrix $\underline{Z}$ whose elements ($\underline{z}ij$) reflect how often motive $\underline{i}$ leads to motive $\underline{j}$, where this is based on an aggregation across respondents. Tables A1 to A4 in the Appendix show the implication matrices for the 43 motives identified by the content analysis, for the four groups (i.e., the Army Academy, Garibaldi Brigade, Folgore Brigade, and Volunteers in training). Notice that each motive is mentioned twice, once in the rows and once in the columns, and entries in the tables reflect the incidence of ordered sequences. For example, in Table A1, motive 19 ('social acceptance') leads to motive 7 ('self-esteem') in 20 instances for soldiers in the Army Academy.

The motives are arranged in the tables by the degree of abstractness (see column 1). Abstractness is computed as the ratio of in-degrees to the sum of in-degrees plus out-degrees. In-degrees show how often a motive is the object or the end of a relation, whereas out-degrees indicate how often a motive is a source or origin. The abstractness ratio is a number from 0 to 1, inclusive, and measures the proportion of times a motive serves as a destination in a linkage, as opposed to a source. The assumption is that the more abstract the motive, the more likely it will be an end.

The implication matrix can be used to produce a visual representation or map of the hierarchical arrangement among motives, but before this can be done it is necessary to choose a cut-off level as low as possible so as to achieve as comprehensive a representation as possible, yet not yield a map so large and cluttered as to be incomprehensible. A rule of thumb used in the network analysis literature is to choose a cut-off producing a map accounting for a large proportion of the total number of connections among motives with a relatively small number of cells in the implication matrix. A cut-off of 7 gave this result. Figures 1 to 4 present the hierarchical motive structures for the Army Academy, Garibaldi Brigade, Folgore Brigade, and Volunteers in training, respectively, when applying the cut-off level

chosen. The placement of motives in the vertical direction follows the relative ordering implied by the abstractness ratio. For example, in Figure 1 where the map for the Army Academy subjects is depicted, 'work' is the lowest order motive and 'right thing to do' and 'maturation' are the highest order motives. Arrows go from motives that function as sources of motivation to motives that serve as intermediary or end-state objectives. The number attached to each arrow signifies the frequency that the designated linkage was mentioned, given the cut-off level chosen.

[Figures 1 to 4 about here]

To compare the motive maps across groups it is useful to impose a meta-categorization on the original categories. The 43 categories could be organized into three groups of master motives: (1) altruistic values (e.g., 'right thing to do', 'useful for the government', 'social aims', 'patriotism'); (2) experiential concerns (e.g., 'maturation', 'fulfillment', 'self-esteem', 'passion'); and (3) instrumental or utilitarian goals (e.g., 'work', 'financial security', 'future').

Notice in the figures, the motives are arranged such that altruistic values, experiential concerns, and instrumental or utilitarian goals, respectively, are ordered by category from left to right. Some differences among groups are apparent: altruistic values are stronger in the Army Academy and, to a lesser extent, for Volunteers in training, whereas they are absent for the Folgore Brigade and weak for the Garibaldi Brigade. The latter two groups, in turn, show relatively strong instrumental or utilitarian motives compared with the Army Academy, while these two groups are similar to the Volunteers in training in this respect. Experiential concerns are important to all four groups. In particular, the networks for experiential motives are especially complex for the Folgore Brigade and the Army Academy. These two groups are the most elite categories in the Italian Army. The basis for the reputation of the Folgore Brigade lies in its long tradition in operative situations (World War II, peace-keeping missions in Lebanon, Somalia, Bosnia, and most recently, Albania); the basis for the reputation of the Army Academy, of course, resides in its role in the training of Italian Army officers, where a long tradition of service and esprit de corps has been emphasized. In sum, respondents belonging to the Army Academy and Folgore Brigade show much concern about self-esteem, social acceptance, fulfillment, and maturation; by the same token, these factors are highly interrelated, revealing strong

connections among these motivations. To explain the preeminence of instrumental or utilitarian motives in the Garibaldi Brigade, and to a lesser extent for the Volunteers in training, it should be noted that these latter groups are somewhat similar in terms of their geographical and socio-cultural characteristics: both groups are composed mostly of recruits from Southern Italy (84% and 74.4% respectively), which is a relatively impoverished region of Italy and characterized by high unemployment rates (above 20% versus less than 10% in the North). Hence, instrumental or utilitarian motives shown by the respondents (e.g., 'work', 'financial security', 'lack of alternatives') are very important for the Garibaldi Brigade and Volunteers in training.

In all four groups, such motives as 'passion', 'work', and 'patriotism' represent lower-order motives that lead to higher-order ones (e.g., 'maturation', 'right thing to do', 'future') and work through such intermediate motives as 'self-esteem', 'useful for the government' (in the Army Academy), and 'financial security' and 'education-training' (for the other groups). An indication of the importance of motives can be obtained by examining the extent that a motive serves as a source and/or object in the motive hierarchy. Such a measure of importance has been termed 'prominence' in the network literature (Knoke & Burt, 1982) and strives to depict the relative salience of a motive to all other motives. Table 2 summarizes two indices of importance for the motives included in the maps. The first, prestige, is computed as the ratio of in-degrees of a specific motive to the total number of connections shown in the map. It represents the extent to which a particular motive is the target of other motives. As shown in Table 2, 'satisfaction', 'self-esteem', and 'fulfillment', for the Army Academy, 'financial security' and 'maturation' for the Garibaldi Brigade, 'maturation' and 'self-esteem' for the Folgore Brigade, and 'self-esteem' and 'fulfillment' for the Volunteers in training are the most prestigious (i.e., important) motives. As can be seen in the figures, 'self-esteem' is consistently important across all groups, except for the Garibaldi Brigade; 'maturation' and 'fulfillment' are generally considered important, while 'financial security' is peculiarly prestigious for the Garibaldi Brigade, confirming the preeminence of instrumental motivations for the soldiers in this group.

The second measure of importance, centrality, is computed as the ratio of the sum of in-degrees plus out-degrees for a particular motive to the total number of cell entries in the implication matrix. It reflects how frequently a particular motive is involved in linkages with other motives. It can be seen in Table 2 that 'satisfaction' and 'self-esteem' for the Army Academy, 'financial security' and 'experience' for the Garibaldi Brigade, 'experience' and 'self-esteem' for the Folgore Brigade, and 'financial security' and 'future' for the Volunteers in training are the most central motives. The centrality of 'self-esteem' within the Army Academy and Folgore Brigade confirms the perceived culture and social climate common to these two groups in the eyes of the public, where excellence and esprit de corps are stressed. By contrast, the instrumental motivation, 'financial security', is preeminent for soldiers in the Garibaldi Brigade and Volunteers in training, where Army life is viewed stereotypically as less glamorous and even filled with drudgery by the public.

[Table 2 about here]

An indication of the degree of the overall organization of motives in the cognitive maps can be obtained by examination of what has come to be known as centralization in the network literature (e.g., Faust & Wasserman, 1992; Freeman, 1979). The general formula for computing centralization can be written as

$$\underline{C} = \frac{\sum_{i=1}^{n} \left| \underline{C}(\underline{m}^*) - \underline{C}(\underline{m}_i) \right|}{\max \sum_{i=1}^{n} \left| \underline{C}(\underline{m}^*) - \underline{C}(\underline{m}_i) \right|}$$

where $\underline{C}(\underline{m}^*)$ = largest centrality for any motive in a map, $\underline{C}(\underline{m}^i)$ = centrality of motive i, and $\underline{n}$=number of motives. This index will equal 1 when one motive is connected to all other motives but none of the other motives is connected to any other. In other words, one motive overshadows or dominates the others. The index will equal 0 when all motives have exactly the same centrality index; that is, each motive is linked to the other motives to the same degree and no motive dominates. Overall, the centralization index measures the extent to which one motive in a map is central and the remaining motives are peripheral. Although centralization can be computed separately for in-degrees

and out-degrees, we focus on centralization for in-degrees plus out-degrees for simplicity and further examine linkages unweighted by frequency. As recommended by Faust and Wasserman (1992), the denominator of the centralization index in this case is simply (n-1)(n-2).

In Figure 1 for the Army Academy, there are actually four motives that are tied in terms of being the most central motives: 'useful for the government', 'fulfillment', 'self-esteem', and 'satisfaction'. The centralization index for each of these is 0.14. In Figure 2 for the Garibaldi Brigade, 'experience' is the most central motive and has a centralization index of 0.25. In Figure 3 for the Folgore Brigade, 'self-esteem' is the most central motive and has a centralization index of 0.17. In Figure 4 for Volunteers in training, 'financial security' is the most central motive and has a centralization index of 0.27. In sum, no motive is highly central for any of the cognitive maps, and each is characterized by a complex structure of many motives, organized for the most part into three clusters of meta-motives: altruistic values (e.g., 'patriotism', 'right thing to do'), experiential concerns (e.g., 'self-esteem', 'passion', 'fulfillment'), and instrumental or utilitarian goals (e.g., 'financial security', 'economic independence').

Test of hypotheses

Up to this point, we have relied on descriptive information to analyze the kinds of motives and organization of motives that underly the reasons for joining the army. To gain further insight into the role that motivation plays in managing the relationships between the individual and the organization, we regressed attitudes toward the Army, intentions to re-enlist in the Army, and the three commitment factors onto the frequency with which respondents mentioned each motive and the frequency with which respondents mentioned each of the linkages among motives. Because information contained in the motives overlaps with information included in linkages between motives, we followed the procedure developed by Appelbaum and Cramer (1974) for the evaluation of non-orthogonal designs.

The sample sizes for analyses differed slightly from the ones used for constructing the motive maps. This was due to small numbers of missing values in attitude, intentions, and commitment measures across the samples. As a consequence the samples for the regression analyses were 140 for the Army Academy, 115 for the Garibaldi Brigade, 124 for the Folgore Brigade, and 131 for Volunteers in training.

Tables 3 to 7 present the findings. The first two rows in each table show the explained variance in the criterion variables for each group as a function of motives and linkages, respectively. The third row shows the explained variances as a function of both motives and linkages. The results summarized in the first three rows can be used to test for the significance of linkages and motives, since Models 1 & 2 are nested in Model 3. The test for linkages involves the comparison of Models 1 & 3: if adding linkages to Model 1 improves fit significantly, we can conclude that the specific linkages found to be significant are valid determinants of the dependent variable in question. Likewise, the test for motives entails a comparison of Models 2 & 3. The appropriate F-test for these comparisons is

$$F = \frac{\left(R\frac{2}{2} - R\frac{2}{1}\right)/h}{\left(1 - R\frac{2}{2}\right)/n - k - 1}$$

where R^2_2 an R^2_1 are the explained variances for the full model (Model 3) and the nested model (either Models 1 or 2), h is the difference in degrees of freedom between Model 3 and the nested model, n is the sample size, and k is the number of independent variables in Model 3.

Models 1 & 2 are based on stepwise regressions wherein independent variables that express the frequency with which a motive or linkage between motives was mentioned, respectively, were entered in a stepwise manner, until the addition of the final variable failed to improve the model fit significantly. Model 3 was run directly with the variables found to be significant for Models 1 & 2, by use of standard multiple regression procedures.

Prediction of attitudes toward the Army. As can be seen in row 5 in Table 3, motives predicted attitudes toward the Army significantly in all four groups, while linkages were significant only for the Garibaldi Brigade. The Army Academy members showed the highest R^2 (.20), with 'useful to the government', 'patriotism', 'active life', 'economic independence', and 'aesthetic and fun motivations' predicting attitudes, all with positive coefficients except 'economic independence' which was linked negatively with attitudes toward the Army. Two motives, 'independence' and 'passion', the former with a negative coefficient and the latter with a positive coefficient, and the linkage, 'work→lack of alternatives', predicted attitudes for the Garibaldi Brigade (R^2=.13). We will address

the above mentioned negative coefficients and other negative coefficients described hereafter in the Discussion. For the Folgore Brigade, the motives 'aesthetic and fun motivations' and 'financial security', the former positively and the latter negatively, predicted attitudes ($\underline{R}^2$=.12). Finally, for the Volunteers in training only two goals predicted attitudes, 'passion' (positively) and 'future' (negatively) with $\underline{R}^2$ =.08.

Prediction of intention to re-enlist in the Army. Motives significantly predicted intentions to re-enlist in the Army in all groups, while linkages significantly predicted intentions for the Folgore Brigade and for the Volunteers in training (see Table 4). For the Army Academy, the motives 'financial security', 'experience', and 'future' negatively predicted intentions (positively, ($\underline{R}^2$=.19). For the Garibaldi Brigade, only 'self-esteem' predicted intentions ($\underline{R}^2$=.08). For the Folgore Brigade, 'active life', predicted intentions positively and 'challenge', 'economic well-being', and 'social aims', predicted intentions negatively; the linkage 'work→financial security' also negatively predicted intentions ($\underline{R}^2$=.23). For the Volunteers in training, three motives predicted intentions positively: ('right thing to do', 'satisfaction', and 'passion') and one linkage predicted intentions negatively ('financial security→future'); $\underline{R}^2$=.21 for Volunteers in training.

[Tables 3 and 4 about here]

Prediction of affective commitment. Affective commitment was predicted significantly by motives for all groups and also by linkages for the Folgore Brigade and Volunteers in training (Table 5). The highest $\underline{R}^2$ was achieved in the Army Academy ($\underline{R}^2$=.29), where only motives predicted affective commitment ('aesthetic and fun motivations' and 'educate and command men' were positive predictors, whereas 'economic independence', 'financial security', 'experience', and 'future' showed negative coefficients). For the Garibaldi Brigade, three motives predicted affective commitment positively: 'passion', 'right thing to do', and 'fulfillment' ($\underline{R}^2$=.13). For the Folgore Brigade, 'passion' and 'patriotism' positively predicted affective commitment, as did the linkage 'social acceptance→self-esteem', whereas 'financial security' negatively predicted affective commitment (R^2=.15). For Volunteers in training, 'right thing to do', 'social aims', 'passion', 'satisfaction', and

'work' positively predicted affective commitment, and the linkage 'financial security→future' showed a negative prediction (R^2=.25).

Prediction of continuance commitment. For the Folgore Brigade, neither motives nor linkages were significant predictors of continuance commitment (Table 6). For the Army Academy, 'work' positively predicted and 'altruism' negatively predicted continuance commitment ($\underline{R}^2$=.24). For the Garibaldi Brigade, two significant motives were found ('experience' and 'usefulness'), both with negative coefficients ($\underline{R}^2$=.06). One motive ('experience') and one linkage ('work→financial security') predicted continuance commitment negatively for Volunteers in training ($\underline{R}^2$=.09).

[Tables 5 and 6 about here]

Prediction of normative commitment. For the Army Academy, 'useful for the government', 'aesthetic and fun motivations', and 'patriotism' positively predicted normative commitment, and the linkage 'work→future' negatively predicted normative commitment ($\underline{R}^2$=.23, see Table 7). One motive and one linkage predicted the criterion for the Garibaldi Brigade ($\underline{R}^2$=.08), both negatively: 'independence' and 'experience→education-training'. Two linkages predicted normative commitment for the Folgore Brigade ($\underline{R}^2$=.07): 'work→lack of alternatives' and 'financial security→economic independence', both with negative coefficients. For the Volunteers in training, three motives predicted the dependent variable: 'patriotism' and 'satisfaction' with positive coefficients, and 'financial security' with a negative coefficient ($\underline{R}^2$=.22).

[Table 7 about here]

DISCUSSION

We found that it is possible to uncover people's motives for choosing their goals. A total of 43 distinct motives for joining the army were expressed by respondents (see Table 1). However, across the diverse groups (i.e., the Army Academy, Folgore Brigade, Garibaldi Brigade, and Volunteers in training) the motives tended to form three clusters or master motives. One cluster of master motives reflected altruistic values soldiers have toward their country, the army, or social referents (e.g., 'patriotism', 'right thing to do', 'useful for government', 'social aims'). The second cluster of master motives expressed experiential concerns (e.g., 'self-esteem', 'passion', 'fulfillment', 'maturation'). The

third cluster of master motives addressed instrumental or utilitarian goals (e.g., 'work', 'financial security', 'future').

In addition to identifying individual motives and their categorization into meaningful clusters, we were able to discover linkages between motives, which, in turn, suggested that the reasons people do what they do can be arranged in hierarchical structures consisting of sequences of interdependent motives. For example, soldiers who recognized that the army was a job or career ('work') concluded, in turn, that this would yield 'financial security' (this linkage occurred in all four groups, see Figures 1-4); 'financial security' then supported the affirmation that the 'future' would be secured (a deduction made by the soldiers from the Garibaldi Brigade and Volunteers in training, who were the most economically deprived of the four groups, see Figures 2 & 4); and a secure 'future' was seen as assurance that 'family' responsibilities, perhaps the most central value in Italian society, would be looked after (this conclusion held in all but the Army Academy group, see Figures 2-4). Another example of interdependent motives can be seen with the experiential motives. 'Passion' was a concrete goal found in all four army groups and functioned as an originator of higher-order motives. In all four groups (see Figures 1-4), 'passion' was a direct contributor to feelings of 'fulfillment'; 'passion' was also an indirect contributor to 'fulfillment' (through 'satisfaction') for soldiers in the Army Academy. 'Self-esteem' was also a key motive in all four groups and exhibited interesting relationships (discussed below) with 'fulfillment' and 'social acceptance' for members of the Army Academy, Folgore Brigade, and Volunteers in training (see Figures 1, 3, & 4).

Most relationships between motives were either direct or included two steps, where one motive mediated the effects of another. However, a number of more complex relationships should be mentioned. Some cognitive maps revealed sequences of relationships involving four or more motives. In the Army Academy, for instance, the following string of relationships occurred: 'education/training' → 'satisfaction' → 'self-esteem' → 'fulfillment' (Figure 1). The Garibaldi Brigade showed two sequences, with four motives included each: 'passion' → 'experience' → 'education/training' → 'maturation'; and 'work' → 'financial security' → 'future' → 'family' (Figure 2). Finally, the Volunteers in training demonstrated two unusually long chains: one involving seven motives ('experience' →

'education/training' → 'career' → 'passion' → 'fulfillment' → 'self-esteem' → 'social acceptance'), the other encompassing eight motives ('experience' → 'education/training' → 'career' → 'future' → 'lack of alternatives' → 'work' → 'financial security' → 'family'). The latter chain even had three parallel outcomes: 'family', 'economic independence', or 'economic well-being' (see Figure 4).

Another type of complexity to point-out in the cognitive maps is the occurrence of non-recursive relationships (i.e., reciprocal and feedback relationships). For example, 'self-esteem' was mutually interconnected with both 'social acceptance' and 'fulfillment' in the Army Academy and Volunteers in training samples. Feedback three-steps removed can be seen in the Army Academy ('self-esteem' → 'fulfillment' → 'satisfaction' → 'self-esteem'), and in the Volunteers in training sample ('future' → 'lack of alternatives' → 'financial security' → 'future'). One feedback cycle even demonstrated a four-step sequence, again for the Volunteers in training: 'future' → 'lack of alternatives' → 'work' → 'financial security' → 'future'.

The above observations with respect to sequences of four or more motives, simultaneity, and feedback should only be regarded in a suggestive sense, and more research is needed to verify their validity. This caution is made because the aforementioned complexities are based upon summary renditions of cognitive schemas for the respective samples as a whole. That is, the cognitive maps involved an aggregation of sorts based on selection of a minimum cut-off for translation of the implication matrices into heuristic diagrams.

More direct conclusions for respondents can be drawn with respect to the multiple regressions of attitudes, intentions, and commitment on motives and connections between motives. Here the idiographic responses of the soldiers were investigated for both the independent and dependent variables. That is, each person's stated motives and connections between motives were used to predict their attitudes, intentions, and commitment.

The findings for the regression analyses disclose that unique motives and linkages between motives explain attitudes, intentions, and commitment and do so for the four groups. In general, individual motives were the most frequent predictors, while linkages between motives only occasionally contributed to explanation. Up to five motives predicted individual dependent variables,

but generally only two or three were significant in most groups. The significant motives come from each of the three master motive clusters (i.e., altruistic values, experiential concerns, and instrumental/utilitarian goals). Altruistic values and experiential concerns generally had positive effects on the dependent variables. By contrast, the instrumental/utilitarian goals had negative effects.

To explain the counter intuitive negative effects for the instrumental/utilitarian motives on the dependent variables, we interviewed officers, enlisted soldiers, and researchers in the army. One explanation that was suggested by many interviewees and that was consistent with our observations of soldiers in the qualitative phase of the research was that some soldiers in the army feel a greater disappointment in benefits received than other soldiers, after they enlist. This was predicted to occur most for soldiers who had, going into the army, high instrumental/utilitarian needs and low altruistic and experiential needs. For these soldiers, disappointing instrumental/utilitarian outcomes coupled with low expressed needs for altruistic and experiential outcomes should result in relatively low attitudes and commitment toward the army and low intentions to re-enlist. By contrast, those soldiers with other combinations of needs (i.e., high instrumental/utilitarian and high altruistic/experiential needs; low instrumental/utilitarian and high altruistic/experiential needs; and those with low needs in all dimensions) are less likely to be disappointed by instrumental/utilitarian outcomes because they either find compensatory solace in altruistic and experiential outcomes or have lower expectations for all outcomes. Thus, the latter soldiers should express more positive attitudes, intentions, and commitment than soldiers who had high instrumental/utilitarian and low altruistic/experiential needs.

We tested the above predictions by use of contrast analyses, as recommended by Rosenthal and Rosnow (1985) and Koutstaal and Rosenthal (1994). Specifically, analyses of variance were run with contrast weights consisting of +1, +1, -3, and +1 and corresponding, respectively, to (1) low instrumental/utilitarian and low altruistic/experiential, (2) low instrumental/utilitarian and high altruistic/experiential, (3) high instrumental/utilitarian and low altruistic/experiential (i.e., the group expected to experience the greatest disappointment and hence express the least favorable attitudes, intentions, and commitment), and (4) high instrumental/utilitarian and high altruistic experiential. The instrumental/utilitarian composite in the ANOVAS was formed as the sum of motive items #1, 2, 3, 10,

11, 12, 13, and 29; the altruistic/experiential composite was formed as the sum of items #4, 5, 6, 8, 14, 18, 19, 20, 22, 24, 28, 36, 42, and 47 (see Table 1). These motives were selected based on the rule that each motive to be included in a composite should have been a significant predictor in at least one of the disaggregated regression equations presented in Tables 3-7.

Table 8 summarizes the findings. For the Army Academy and Volunteers in training, four of five contrasts were significant: attitudes, intentions, and affective and continuous commitment were lowest for those both high in instrumental/utilitarian goals and low in altruistic/experiential motives in the Army Academy; attitudes, intentions, and affective and normative commitment yielded similar patterns of results for Volunteers in training. The findings were more mixed for soldiers in the Garibaldi and Folgore Brigades. In the former, only attitudes were predicted at acceptable levels of significance ($p<.01$), while intentions and affective commitment were predicted at levels approaching significiance ($p<.10$). Likewise, in the latter, only continuance commitment was predicted well ($p<.05$), while attitudes were predicted at a level approaching significance ($p<.10$).

[Table 8 about here]

The distinction between instrumental/utilitarian and altruistic/experiential motives resembles Herzberg's (Herzberg et al., 1959) contrast between 'hygiene' and 'motivator' factors. Such motives as 'financial security', 'work', and 'financial well being' are clearly consistent with the idea of hygiene goals, where the objective is to avoid dissatisfaction, whereas such motives as 'passion', 'fulfillment' and 'self-esteem' belong to the set of motivators operating to facilitate satisfaction. Hence, it is possible that instrumental/utilitarian motives function not so much to guarantee satisfaction, but to avoid dissatisfaction, whereas altruistic/experiential motives function to enhance the achievement of satisfaction. This would seem to imply that soldiers concerned mainly with instrumental/utilitarian needs would be especially sensitive to shortfalls in expected monetary and related benefits from the Army and would be highly dissatisfied by these outcomes. The contrast analyses are from the Army consistent with this interpretation.

We can think of attitudes, intentions, and commitment as personal, subjective summaries of soldiers' feelings, volitions, and devotion toward the army. The motives and self-explicated relationships between motives, which represent reasons for joining the army, can be thought of as the soldier's bases for feeling positively or negatively toward the army and being willing to re-enlist in it or not. Analogous to expectations and evaluations that are used to explain preferences in attitude models (e.g., Ajzen & Fishbein, 1980), cognitive schemas for motives can be interpreted as explanations for, and predictors of, overall attitudes, volitions, and commitment toward an organization.

The approach developed and illustrated herein is very much a situational or context-specific model of motives and their effects. Rather than specifying a set of motives a priori and testing their predictive ability (as commonly done in tests of classic models of motivation), we relied on a procedure for generating respondent's own motives for behaving in their specific situation. Further, rather than assuming a particular summary functional form for motives (e.g., the sum of products of expectancies and evaluations), we uncovered a structure of motives directly suggested by respondents. The structure consisted of a set of idiographic reasons for acting and ordered connections between them. The proposed approach was found to achieve a certain degree of face and predictive validity.

A final issue we wish to comment upon is the interpretation of the ontology of cognitive schemas. Cognitive psychologists (e.g., Anderson, 1983; Barsolou, 1991) maintain that the states and processes they study are internal representations of things that go on in memory. But cognitive schemas based on mental maps of the sort generated herein, as well as most others based on network representations of cognition and inferences (e.g., Carley and Palmquist, 1994), may be difficult to defend from the point of view of classic cognitive psychology. That is, some philosophers (e.g., Dennett, 1987) and psychologists (e.g., Nisbett & Wilson, 1977) maintain that mental processes (e.g., the personal inferences underlying means-ends connections) are not open to self-explication but instead constitute subjective, post-hoc interpretations of previously explicated responses. An alternative viewpoint not premised on the assumption that cognitive maps represent internal processes can be developed from ideas expounded by philosophers (e.g., Wittgenstein, 1953) and psychologists (Harré, 1998) focusing upon discourse and language. Wittgenstein conceived of cognition as a discursive process rooted in the

use of grammar, either in actual or imagined conversations, and contingent upon standards of usage and correctness peculiar to a particular social context. From this point of view, mental processes are not intrapsychic, per se, but rather are manifest in the use or practice of one's language and in relation to justifying one's actions or evaluations. Although it may be premature or misleading to claim that the linkages shown in Figures 1-4 represent thought processes, the motive structures are compatible with the discursive paradigm to the extent that the argumentation and rhetoric offered by respondents express their self-concept and the public self to which they wish to conform or with which they wish to influence others. We can think of the hierarchical motive structure as a joint product of a person's cognitions (in Wittgenstein's sense of cognition) and his/her intent to manage one's presentation of self.

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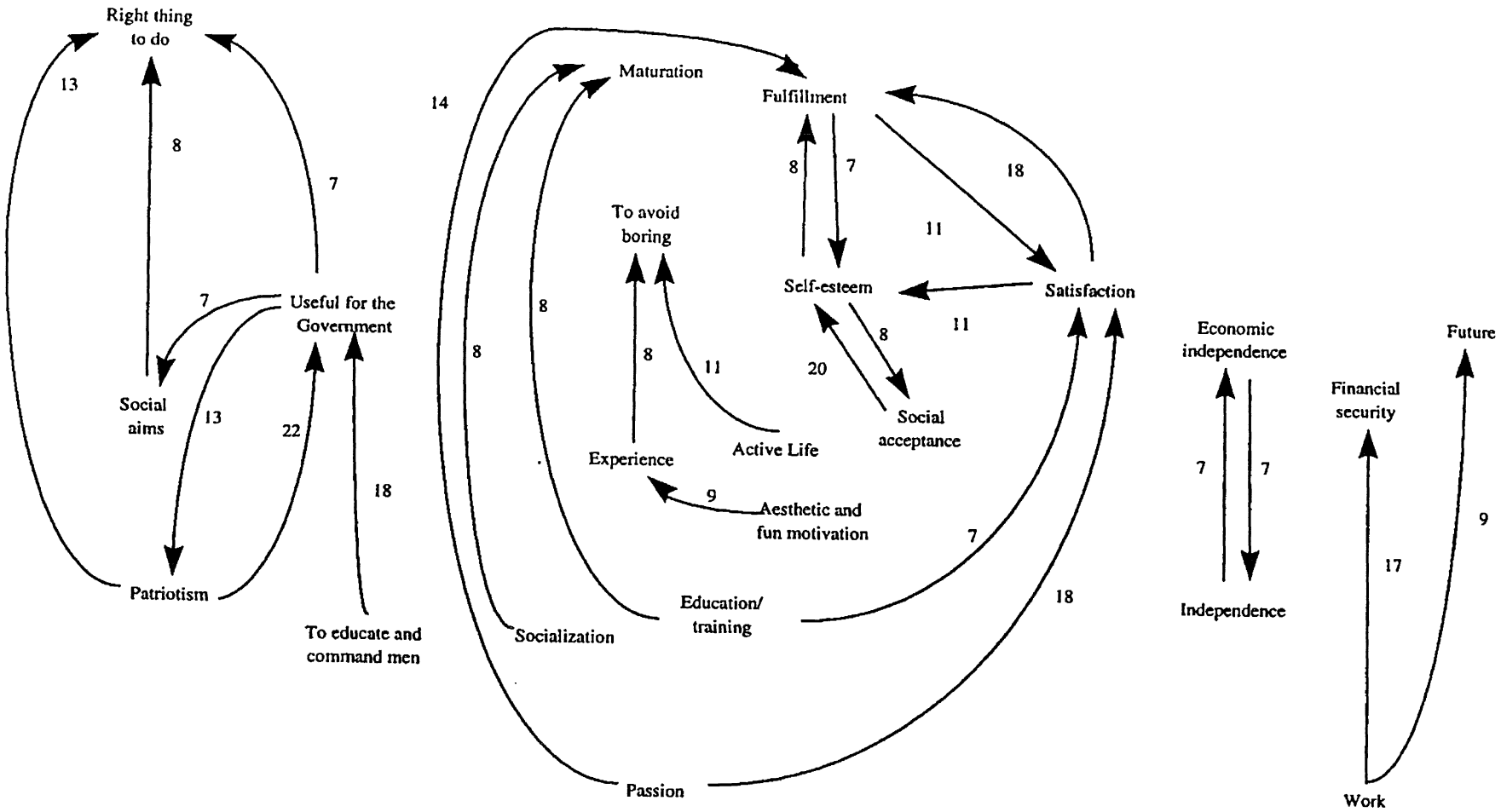


Figure 1. Cognitive map of reasons for joining the Army (Army Academy, N=151)

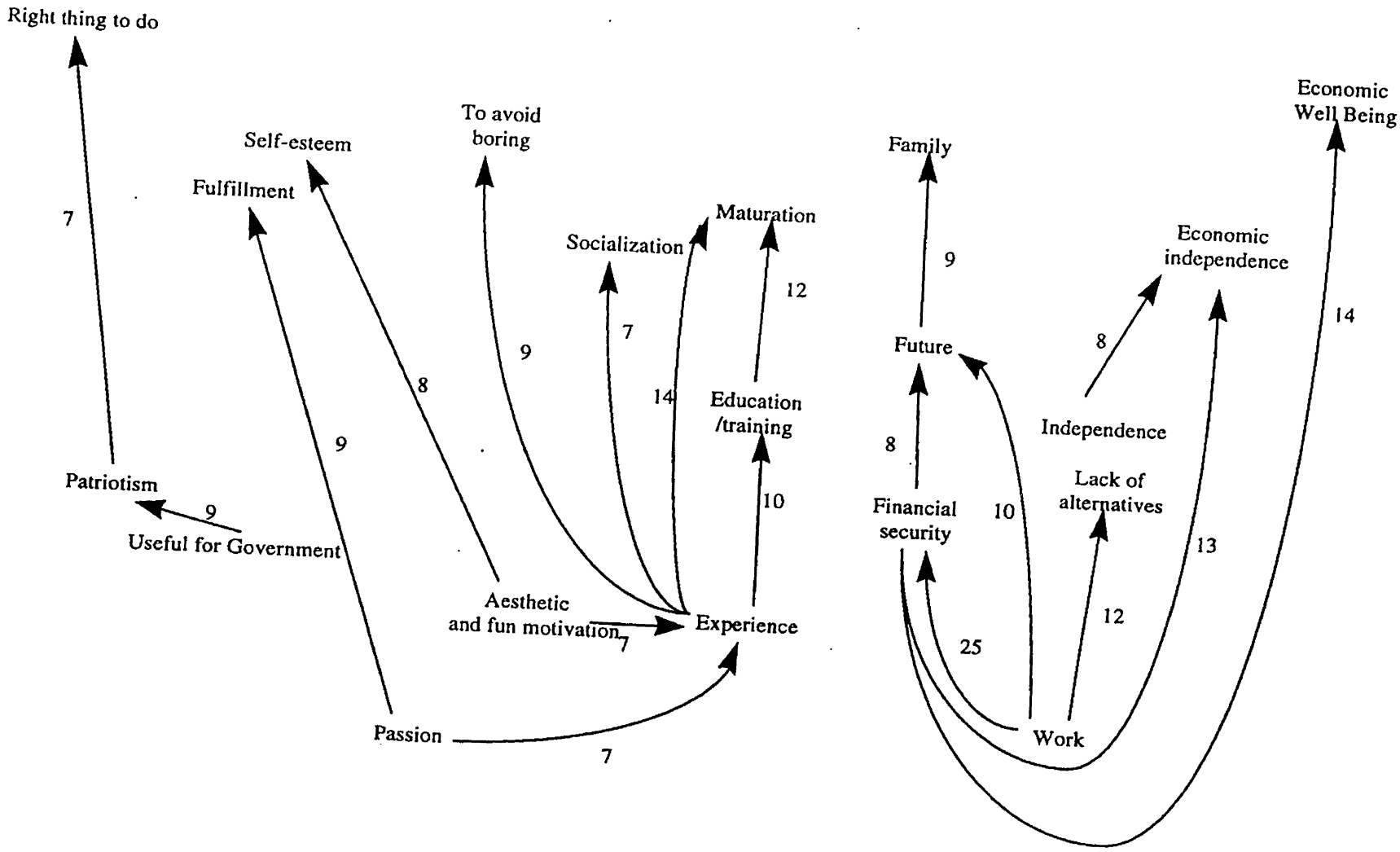


Figure 2. Cognitive map of reasons for joining the Army (Garibaldi Brigade, N=141)

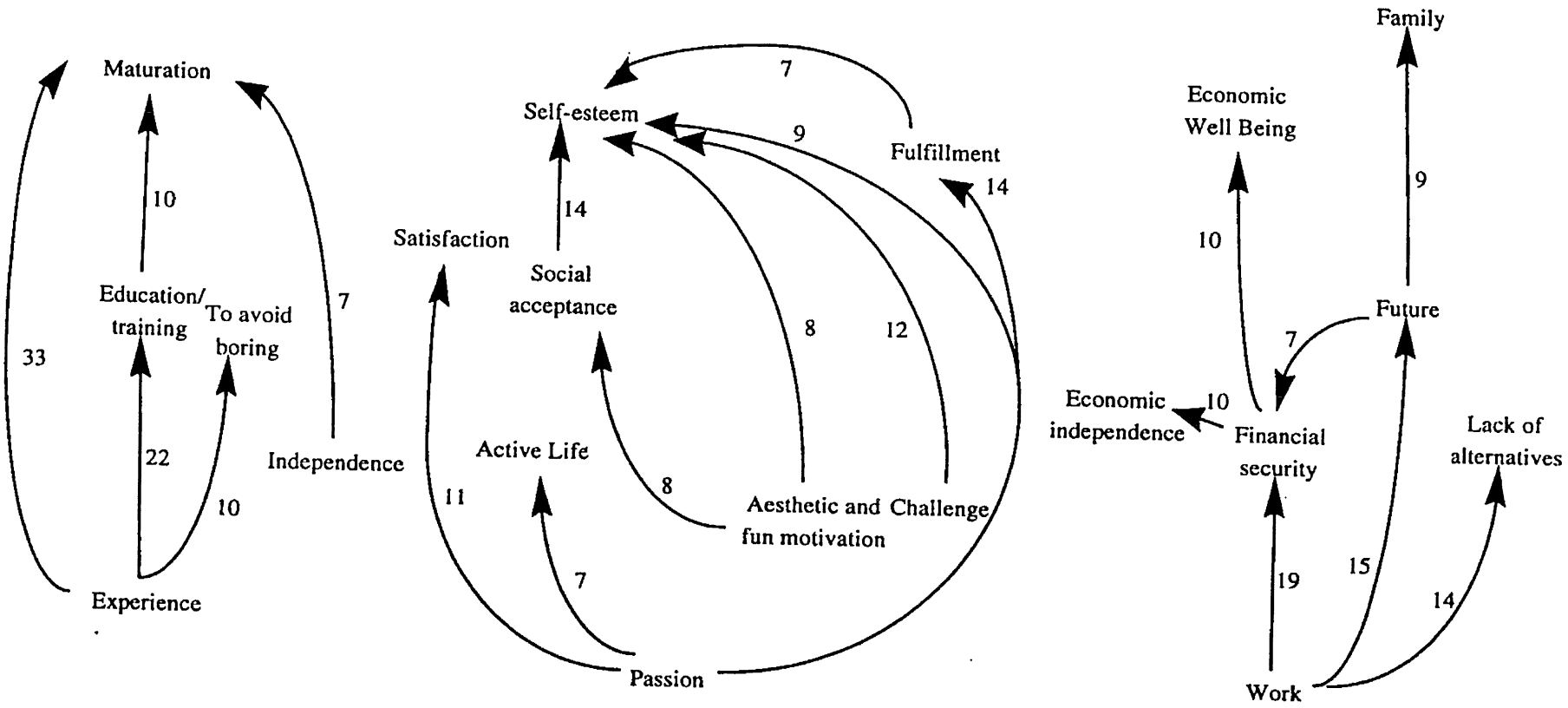


Figure 3. Cognitive map of reasons for joining the Army (Folgore Brigade, N=144)

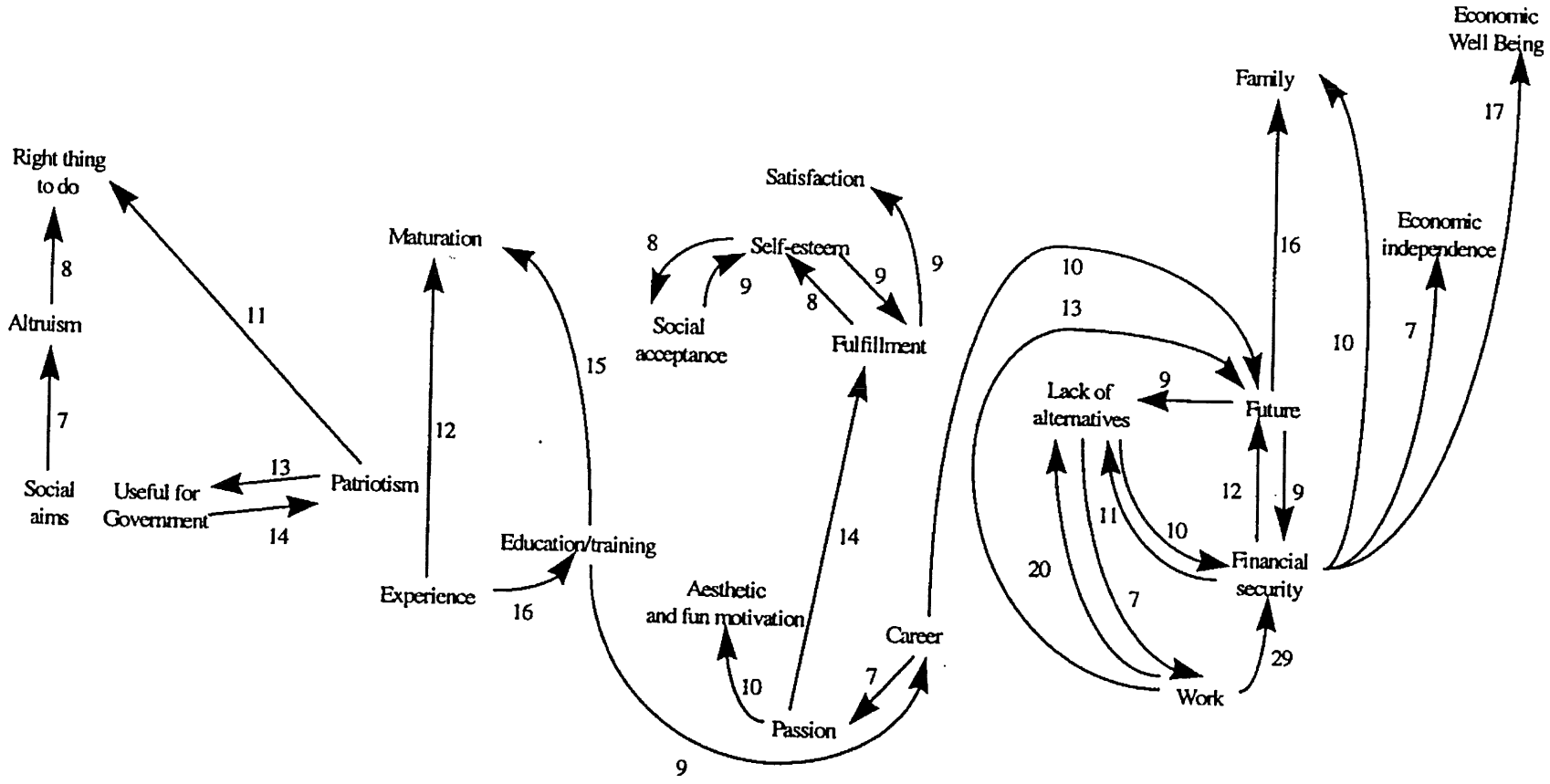


Figure 4. Cognitive map of reasons for joining the Army (Volunteers in training, N=150)

Table 1. Motives Generated by Content Analyses of Protocols

1. Financial security
2. Future
3. Family
4. Passion
5. Self-esteem
6. Fulfillment
7. Experience
8. Education/training
9. Maturation
10. Work
11. Career
12. Independence
13. Economic independence
14. Satisfaction
15. Socialization
16. Friendship
17. Useful for the government
18. Patriotism
19. Right thing to do
20. Usefulness (in general)
21. Humanitarian purposes
22. Altruism
23. Social acceptance
24. Aesthetic and fun motivation
25. Challenge
26. Missions
27. Discipline
28. Social aims
29. Economic well being
30. To be a volunteer
31. To avoid boring
32. Lack of alternatives
33. To be in the army but not drafted
34. Family tradition
35. Justice
36. To Educate and command men
37. Army values
38. Responsibility
39. Stimulating
40. Sense of sacrifice
41. Professional
42. Active life
43. Legion etrangere

Table 2. Prestige and Centrality Indexes

Motives	Groups							
	Army Academy		Garibaldi Brigade		Folgore Brigade		Volunteers in training	
	P.	C.	P.	C.	P.	C.	P.	C.
1. Financial security	.022	.046	**.075**	**.184**	.039	.088	.065	**.143**
2. Future	.027	.046	.066	.101	.051	.081	.065	**.130**
3. Family	.013	.016	.035	.044	.027	.030	.045	.053
4. Passion	.007	.091	.009	.097	.013	.126	.017	.109
5. Self-esteem	**.103**	**.153**	.064	.092	**.114**	**.151**	**.072**	.112
6. Fulfillment	.100	.127	.066	.099	.065	.089	**.069**	.120
7. Experience	.019	.054	.042	**.146**	.039	**.188**	.038	.099
8. Education/training	.016	.063	.040	.079	.054	.089	.046	.102
9. Maturation	.061	.076	**.073**	.110	**.118**	.143	.062	.089
10. Work	.002	.051	.020	.136	.014	.104	.026	.127
11. Career	.006	.036	.007	.018	.011	.038	.028	.093
12. Independence	.010	.031	.027	.059	.025	.060	.011	.021
13. Economic independence	.019	.033	.051	.077	.030	.052	.017	.025
14. Satisfaction	**.114**	**.168**	.051	.070	.057	.086	.037	.052
15. Socialization	.004	.021	.031	.049	.017	.035	.005	.010
16. Friendship	.001	.002	.009	.018	.011	.017	.001	.004
17. Useful for the Government	.083	.135	.014	.042	.018	.031	.036	.075
18. Patriotism	.021	.066	.018	.048	.015	.040	.030	.065
19. Right thing to do	.054	.061	.068	.077	.017	.019	.056	.065
20. Usefulness (in general)	.021	.042	.016	.036	.007	.014	.014	.022
21. Humanitarian Purposes	.006	.012	.012	.027	.003	.011	.014	.035
22. Altruism	.011	.024	.018	.025	.005	.006	.030	.052
23. Social acceptance	.042	.093	.035	.055	.036	.059	.037	.065
24. Aesthetic and fun motivation	.013	.057	.022	.075	.026	.079	.018	.046
25. Challenge	.012	.029	.001	.005	.013	.042	.009	.024
26. Missions	.001	.003	.001	.012	.001	.005	.004	.013
27. Discipline	.005	.013	.007	.011	.010	.014	.012	.029
28. Social aims	.042	.088	.009	.027	.017	.026	.016	.034
29. Economic Well Being	.011	.011	.036	.046	.021	.025	.036	.040
30. To be a Volunteer	--[a]	--	--	--	--	--	.000	.003
31. To avoid boring	.029	.039	.024	.033	.023	.039	.011	.022
32. Lack of alternatives	.006	.010	.035	.075	.027	.056	.057	.100
33. To be in the army but not drafted	--	--	--	.005	.001	.003	.000	.005
34. Family Tradition	.002	.016	.001	.001	.007	.015	--	--
35. Justice	.006	.016	--	--	.003	.009	--	--
36. To Educate and command men	.016	.064	--	--	.005	.005	--	--
37. Army Values	.018	.047	--	--	.009	.027	--	--
38. Responsibility	.010	.019	--	--	.002	.006	--	--
39. Stimulating	.014	.033	--	--	.001	.006	--	--
40. Sense of Sacrifice	.009	.013	--	--	.002	.005	--	--
41. Professional	.006	.023	.000	.001	.003	.006	--	--
42. Active Life	.020	.054	--	--	.022	..051	--	--
43. Legion etrangere	--	--	--	--	.000	.003	--	--

Note : the two highest indeces for each group in boldface

[a](--) applicable

Table 3. Attitudes Towards the Army as a Function of Motives and Linkages Between Motives

Model	Groups			
	Army Academy	Garibaldi Brigade	Folgore Brigade	Volunteers training camp
1. Motives				
R^2	.20[b]	.10[b]	.12[b]	.08[b]
2. Linkages				
R^2	.02	.04[a]	--	.06[a]
3. Motives plus linkages				
R^2	.20[b]	.13[b]	--	.12[b]
4. Test of linkages				
F-value $_{(df1, df2)}$	<1 $_{(1,133)}$	3.75 $_{(1,111)}$[a]	--	1.42 $_{(2,126)}$
5. Test of motives				
F-value $_{(df1, df2)}$	6 $_{(1,133)}$[b]	5.25 $_{(2,111)}$[b]	8.06 $_{(2,121)}$[b]	4.28 $_{(2,126)}$[b]
N	140	115	124	131
Significant predictor variables:	Useful for the Government (+) Patriotism (+) Active Life (+) Economic independence (-) Aesthetic and fun motivation (+)	Independence(-) Passion (+) Work→Lack of alternatives (-)	Aesthetic and fun motivation (+) Financial security (-)	Passion (+) Future (-)

[a] p. ≤ .05
[b] p. ≤ .01
(+) positive effect
(-) negative effect

Table 4. Intentions to Re-enlist in the Army as a Function of Motives and Linkages Between Motives

Model	Groups			
	Army Academy	Garibaldi Brigade	Folgore Brigade	Volunteers in training
1. Motives				
$\underline{R^2}$	.19[b]	.08[b]	.19[b]	.15[b]
2. Linkages				
$\underline{R^2}$	.07[b]	.03[a]	.05[a]	.09[b]
3. Motives plus linkages				
$\underline{R^2}$	.20[b]	.09[b]	.23[b]	.21[b]
4. Test of linkages				
$\underline{F}$-value $_{(df1, df2)}$	$<1_{(2,134)}$	$1.42_{(1,112)}$	$3.33_{(2,117)}$[a]	$5.00_{(2,124)}$[b]
5. Test of goals				
$\underline{F}$-value $_{(df1, df2)}$	$7.22_{(3,124)}$[b]	$8.57_{(1,112)}$[b]	$7.5_{(4,117)}$[b]	$10_{(2,124)}$[b]
$\underline{N}$	140	115	124	131
Significant predictor variables:				
	Financial security (-) Experience (-) Future (-)	Self-esteem (+)	Active life (+) Challenge (-) Economic well-being (-) Work→Financial security (-) Social aims (-)	Right thing to do (+) Financial security→Future (-) Satisfaction (+) Passion (+)

[a] p. ≤ .05
[b] p. ≤ .01
(+) positive effect
(-) negative effect

Table 5. Affective Commitment to the Army as a Function of Motives and Linkages Between Motives

Model	Groups			
	Army Academy	Garibaldi Brigade	Folgore Brigade	Volunteers in training
1. Motives				
R^2	.27[b]	.13[b]	.11[b]	.22[b]
2. Linkages				
R^2	.09[b]	.03[a]	.04[a]	.03[a]
3. Motives plus linkages				
R^2	.29[b]	.13[b]	.15[b]	.25[b]
4. Test of linkages				
F-value $_{(df1, df2)}$	2.31 $_{(2,131)}$	<1 $_{(1,110)}$	5.71 $_{(1,119)}$[a]	5.00 $_{(1,124)}$[a]
5. Test of goals				
F-value $_{(df1, df2)}$	6.17 $_{(6,131)}$[b]	4.16 $_{(3,110)}$[b]	5.14 $_{(3,119)}$[b]	7.33 $_{(5,124)}$[b]
N	140	115	124	131
Significant predictor variables:				
	Economic independence (-) Aesthetic and fun motivation (+) Educate and command men (+) Financial security(-) Experience (-) Future (-)	Passion (+) Right thing to do (+) Fulfillment (+)	Social acceptance→Self-esteem (-) Passion (+) Financial security(-) Patriotism (+)	Right thing to do (+) Social aims (+) Passion (+) Satisfaction (+) Work (+) Financial security →Future (-)

[a] p. ≤ .05
[b] p. ≤ .01
(+) positive effect
(-) negative effect

Table 6. Continuance Commitment to the Army as a Function of Motives and Linkages Between Motives

Model	Groups			
	Army Academy	Garibaldi Brigade	Folgore Brigade	Volunteers in training
1. Motives				
R^2	.24[b]	.06[a]	--	.05[a]
2. Linkages				
R^2	.08[b]	--	--	.05[b]
3. Motives plus linkages				
R^2	.24[b]	--	--	.09[b]
4. Test of linkages				
F-value $_{(df1, df2)}$	$<1_{(2,135)}$	--	--	$6.42_{(1,127)}$[a]
5. Test of goals				
F-value $_{(df1, df2)}$	$14.28_{(2,135)}$[b]	$3.46_{(2,112)}$[a]	--	$6.42_{(1,127)}$[a]
N	140	115	124	131
Significant predictor variables:				
	Work (+) Altruism (-)	Experience (-) Usefulness (-)		Work-Financial→security (-) Experience(-)

[a] p. ≤ .05
[b] p. ≤ .01
(+) positive effect
(-) negative effect

Table 7. Normative Commitment to the Army as a Function of Motives and Linkages Between Motives

Model	Groups			
	Army Academy	Garibaldi Brigade	Folgore Brigade	Volunteers in training
1. Motives				
R^2	.21[b]	.04[a]	.04[b]	.22[b]
2. Linkages				
R^2	.03[a]	.04[a]	.07[b]	.13[b]
3. Motives plus linkages				
R^2	.23[b]	.08[a]	.10[b]	.25[b]
4. Test of linkages				
F-value $_{(df1, df2)}$	4.35 $_{(1,135)}$[a]	5.00 $_{(1,112)}$[a]	3.33 $_{(2,120)}$[a]	1.66 $_{(3,124)}$
5. Test of goals				
F-value $_{(df1, df2)}$	6.66 $_{(3,135)}$[b]	5.00 $_{(1,112)}$[a]	3.20 $_{(1,120)}$	6.66 $_{(3,124)}$[b]
N	140	115	124	131
Significant predictor variables:				
	Useful for the Government (+) Aesthetic and fun motivation (+) Patriotism (+) Work→Future (-)	Experience→Education/training (-) Independence (-)	Work→Lack of alternatives (+) Financial security →Economic independence (-)	Patriotism (+) Satisfaction (+) Financial security(-)

[a] p. ≤ .05
[b] p. ≤ .01
(+) positive effect
(-) negative effect

Table 8. Summary of Tests of Contrast Effects for High Instrumentality/Utilitarianism and Low Altruistic/Experiential Motivation versus the Remaining Contributions

	Dependent Variable				
	Attitudes	Intentions	Affective Commitment	Continuance Commitment	Normative Commitment
A. Army Academy					
t-value	2.18	3.11	27.30	1.93	.64
p (one-tail)	<.025	<.005	<.005	<.050	ns
B. Garibaldi Brigade					
t-value	2.52	1.63	1.42	.44	.36
p (one-tail)	<.010	<.100	<.100	ns	ns
C. Folgore Brigade					
t-value	1.63	.060	.55	1.94	.09
p (one-tail)	<.100	ns	ns	<.050	ns
D. Volunteers in training					
t-value	2.85	2.79	2.73	1.00	2.45
p (one-tail)	<.005	<.005	<.005	ns	<.010

Appendix

Table A1. Implication matrix for Army Academy

Abstract Ratio		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Out deg's
0.873	1 Right thing to do		0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
0.809	2 Maturation	0		0	4	0	1	3	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	13
0.800	3 Family	1	0		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
0.788	4 Fulfillment	1	0	0		1	11	7	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	24
0.743	5 To avoid boring	0	0	0	1		4	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	9
0.680	6 Satisfaction	0	1	0	18	0		11	0	1	2	0	0	0	0	0	0	0	3	4	1	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	48
0.676	7 Self-esteem	1	7	0	8	0	6		0	1	2	0	1	0	0	0	1	0	1	8	0	1	5	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	44
0.667	8 Lack of alternatives	0	0	0	0	1	0	0		0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
0.667	9 Sense of sacrifice	0	1	0	0	0	1	1	0		0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
0.617	10 Useful for Government	7	1	0	0	0	2	5	0	0		1	0	1	0	0	2	0	7	1	2	0	0	0	0	1	0	0	0	13	0	2	0	0	0	0	0	1	0	0	46
0.585	11 Future	0	0	6	3	0	0	0	1	0	0		0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	17
0.567	12 Economic independence	0	0	1	0	0	2	0	0	0	0	0		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	7	0	1	0	0	0	0	0	0	0	0	13
0.545	13 Humanitarian purposes	3	0	0	0	0	1	0	0	0	0	0	0		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
0.529	14 Responsibility	0	0	0	1	0	4	2	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
0.500	15 Friendship	0	0	0	0	0	1	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.500	16 Usefulness (in general)	1	1	0	3	0	3	2	0	1	2	0	0	0	0	0		0	5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	19
0.488	17 Financial security	0	1	1	0	0	0	1	0	0	0	3	4	0	0	0	0		0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	21
0.481	18 Social aims	8	2	0	2	0	3	3	0	0	5	0	0	4	0	0	3	0		1	5	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	41
0.458	19 Social acceptance	0	1	0	2	0	6	20	0	2	2	2	0	0	2	0	0	0	2		0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	2	0	0	0	1	45
0.455	20 Altruism	2	0	0	4	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0		1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
0.433	21 Stimulating	0	2	0	1	0	5	1	0	0	2	1	0	0	0	0	0	0	0	0	0		0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	17
0.423	22 Challenge	0	2	0	1	1	3	6	0	0	0	0	0	0	0	0	0	0	0	1	0	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
0.417	23 Discipline	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
0.400	24 Justice	0	0	0	0	0	0	3	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
0.381	25 Army values	5	1	0	3	0	1	4	0	1	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
0.375	26 Active Life	0	2	0	2	11	5	0	0	0	1	0	0	0	0	0	2	0	1	0	1	0	0	0	0	0		1	0	0	0	0	1	1	2	0	0	0	0	0	0	30
0.354	27 Experience	1	4	0	0	8	0	1	2	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1		0	0	0	0	4	0	3	1	0	0	0	0	0	31
0.333	28 Missions	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	2
0.322	29 Patriotism	13	0	0	0	0	0	3	0	1	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	40
0.321	30 Independence	0	5	1	1	0	1	4	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	19
0.286	31 Professional	0	0	0	1	0	3	1	0	0	2	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0		2	0	0	0	1	0	0	0	0	15
0.268	32 Education/training	0	8	0	3	0	7	0	0	0	3	3	3	0	0	0	0	0	1	5	0	0	0	0	1	0	0	0	0	0	0	3		0	0	1	1	0	0	2	0	41
0.263	33 To educate and command men	1	3	0	4	0	1	0	0	0	18	1	0	0	5	0	1	0	5	0	0	0	1	0	0	0	0	0	0	0	0	1	0		0	0	0	0	1	0	0	42
0.235	34 Aesthetic and fun motivation	0	1	0	1	3	4	5	0	0	1	0	0	0	0	0	0	0	0	5	0	1	4	0	0	0	3	9	0	0	0	0	1	0		0	0	0	1	0	0	39
0.211	35 Socialization	1	8	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		0	0	0	1	0	0	15
0.188	36 Career	1	2	0	1	0	1	5	0	0	0	1	0	0	1	0	2	0	0	2	0	2	0	0	1	1	0	0	0	1	0	0	0	2	1	1		0	1	0	0	26
0.133	37 Family tradition	0	1	0	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0		3	0	0	13
0.086	38 Passion	0	1	0	14	0	18	3	0	1	2	0	0	0	0	0	1	0	0	0	0	4	0	4	1	5	6	3	0	1	0	1	2	2	5	0	0	0		0	0	74
0.043	39 Work	2	0	3	1	0	1	0	3	0	1	9	2	0	0	0	1	17	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0		0	44
0.000	40 Economic Well being	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
In degrees		48	55	12	89	26	102	92	6	8	74	24	17	6	9	1	19	20	38	38	10	13	11	5	6	16	18	17	1	19	9	6	15	15	12	4	6	2	7	2	10	

Table A2. Implication matrix for Garibaldi Brigade

Abstract ratio		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	Out deg's
1.000	1 Family tradition		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.880	2 Right thing to do	0		0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	5
0.800	3 Economic well being	0	0		1	0	0	0	0	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
0.792	4 Family	0	1	0		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
0.736	5 Satisfaction	0	1	0	0		0	0	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
0.722	6 To avoid boring	0	0	0	0	0		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	10
0.714	7 Altruism	0	4	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5
0.667	8 Discipline	0	0	0	0	0	0	0		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
0.666	9 Fulfillment	0	0	0	1	5	0	1	0		2	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0.666	10 Maturation	0	2	0	1	0	0	0	0	2		0	1	0	2	1	0	2	0	0	0	0	0	2	1	0	0	0	0	0	0	0	2	0	0	18
0.666	11 Economic independence	0	1	2	1	0	0	0	0	3	2		0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	1	1	0	0	0	6	0	0	20
0.655	12 Future	0	0	0	9	1	0	0	0	1	1	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	14
0.633	13 Social acceptance	0	1	0	0	2	0	0	0	2	0	0	1		1	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	19
0.620	14 Socialization	0	0	0	0	0	0	0	0	0	2	0	0	1		1	4	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	11
0.512	15 Education/training	0	0	0	0	0	0	0	0	0	12	0	1	0	0		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	10
0.500	16 Friendship	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0		0	0	0	0	0	0	0	0	0	0	1	3	2	0	0	2	0	0	21
0.468	17 Independence	0	1	2	0	0	0	0	0	0	1	8	0	0	0	0	0		0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
0.467	18 Humanitarian purposes	0	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0		0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	17
0.463	19 Lack of alternatives	0	1	0	0	2	2	0	0	1	0	2	5	0	0	0	0	0	0		1	5	0	0	0	0	0	0	0	0	0	0	1	0	0	8
0.450	20 Usefulness (in general)	0	0	0	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0		1	0	0	0	0	0	0	1	2	0	0	0	0	0	22
0.410	21 Financial security	0	3	14	3	3	0	0	0	2	1	13	8	0	1	0	0	3	0	3	0		1	0	0	0	0	0	0	4	0	0	0	0	0	59
0.400	22 Career	0	0	1	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	1	0	0	0	6
0.384	23 Patriotism	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0		5	0	0	0	0	0	0	0	1	0	0	16
0.347	24 Useful for the Government	0	3	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	9		0	0	0	0	0	0	0	0	0	0	15
0.333	25 Challenge	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	1	0	0	2
0.333	26 Social aims	0	3	0	0	0	0	2	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0		0	0	0	0	0	1	0	0	10
0.293	27 Aesthetic and fun motivation	0	0	0	0	3	2	0	0	4	0	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	1	0		7	0	0	0	8	0	0	29
0.291	28 Experience	0	1	0	0	2	9	0	0	1	14	0	1	2	7	10	0	1	1	1	0	0	0	0	0	0	0	3		0	1	1	1	0	0	56
0.149	29 Work	0	2	1	2	1	0	0	0	4	0	2	10	0	1	0	0	0	0	12	1	25	0	0	0	0	0	0	0		0	1	1	0	0	63
0.143	30 Missions	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0		0	0	0	0	6
0.094	31 Passion	1	1	0	0	5	0	1	2	9	1	0	1	4	1	2	1	1	0	0	1	2	0	0	2	0	0	3	7	1	0		2	0	0	48
0.070	32 Self-esteem	0	1	0	0	0	0	1	1	1	2	0	1	3	0	0	0	0	0	0	2	0	0	0	0	0	1	1	0	1	0	0		0	0	15
0.000	33 To be in the Army but not drafted	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0		0	3
0.000	34 Professional	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1
In degrees		1	37	20	19	28	13	10	4	36	40	28	36	19	17	22	5	15	7	19	9	41	4	10	8	1	5	12	23	11	1	5	35	0	0	

Table A3. Implication matrix for Folgore Brigade

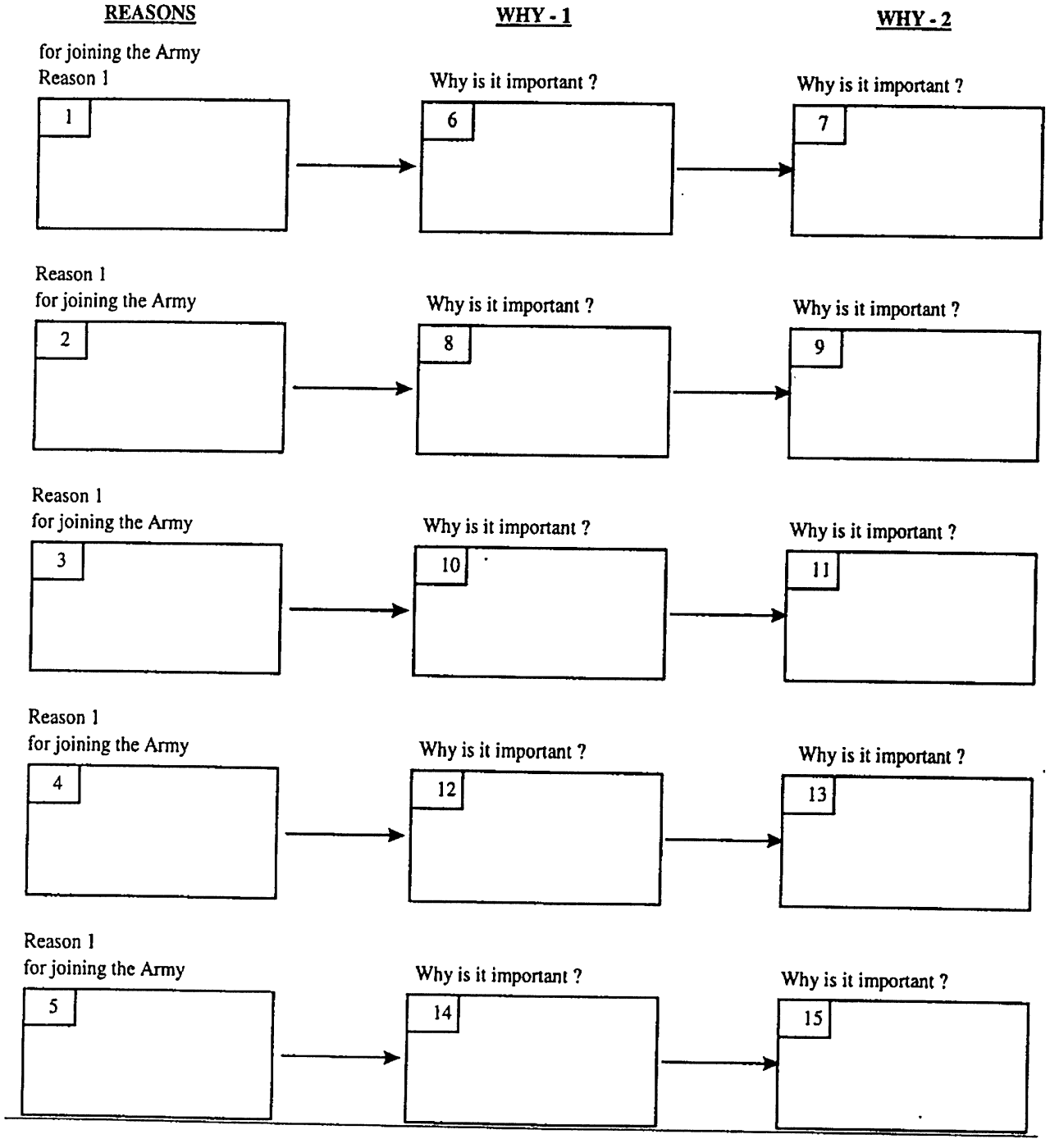
Abstract ratio			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Out deg's
0.910	1	Family		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
0.860	2	Right thing to do	0		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.840	3	Economic Well Being	1	0		0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
0.820	4	Maturation	0	0	0		0	6	0	0	0	1	1	1	1	2	0	0	1	0	0	1	0	2	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
0.800	5	Altruism	0	0	0	0		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.750	6	Self-esteem	0	0	0	3	0		3	0	0	4	0	1	5	1	0	1	0	0	0	0	1	0	0	1	1	0	0	0	1	0	4	0	1	0	0	0	1	0	0	0	0	0	0	28
0.730	7	Fulfillment	1	0	0	1	0	7		1	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	18
0.720	8	Discipline	0	0	0	1	0	1	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
0.690	9	Friendship	0	1	0	0	0	1	0	0		0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
0.660	10	Satisfaction	0	1	0	1	0	2	6	0	0		0	0	3	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0	22
0.650	11	Social aims	0	0	0	1	1	0	0	0	0	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	7
0.620	12	Future	9	0	0	3	0	1	0	0	0	0	0		1	1	0	0	0	0	0	0	1	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	23
0.620	13	Social acceptance	0	0	0	2	0	14	0	0	0	1	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	17
0.600	14	Education/training	0	0	0	10	0	1	1	0	0	0	0	5	0		0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	0	1	0	0	0	0	1	0	27
0.590	15	To avoid boring	0	0	0	0	0	1	0	0	0	0	0	0	1	0		0	1	1	0	0	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	12
0.580	16	Useful for Government	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0		0	1	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
0.570	17	Economic independence	1	2	5	3	0	0	0	0	0	0	0	1	0	0	0	0		0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
0.540	18	Usefulness (in general)	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
0.500	19	Family tradition	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	6
0.500	20	Sense of sacrifice	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0.500	21	Professional	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0.480	22	Socialization	0	1	0	5	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
0.480	23	Lack of alternatives	1	0	1	0	0	0	0	0	0	3	0	2	0	0	1	0	0	1	0	0	0	1		5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	0	21
0.440	24	Financial security	4	0	10	0	0	0	0	0	0	1	0	7	0	0	0	0	10	0	0	0	0	0	3		0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	37
0.430	25	Active life	0	0	0	2	0	4	0	0	0	1	1	0	1	0	3	2	0	0	1	0	0	0	0	0		0	0	0	0	1	1	0	0	0	0	0	5	0	0	0	0	0	22
0.420	26	Justice	0	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
0.410	27	Independence	2	1	0	7	0	3	1	1	0	1	0	0	0	1	0	0	5	0	0	0	0	0	0	0	0	0		0	0	0	2	0	0	0	1	0	2	0	0	0	0	0	27
0.400	28	Responsibility	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
0.380	29	Patriotism	0	1	0	1	0	4	3	0	0	0	0	0	0	2	0	6	1	0	0	0	0	0	0	0	0	0	0	0		0	0	0	2	0	0	0	0	0	0	0	0	0	20
0.330	30	Humanitarian purposes	0	1	0	0	3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	6
0.330	31	Aesthetic and fun motivation	0	0	0	0	0	8	5	0	2	3	0	0	8	1	3	1	1	0	0	0	0	1	0	0	1	0	0	0	1	0		0	0	0	2	0	4	0	0	0	0	0	41
0.330	32	To be in the Army but not drafted	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	1	0	0	0	0	0	2
0.330	33	Army values	0	1	0	1	0	0	2	1	0	1	2	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	0	0	2	0	0	0		0	0	0	0	0	0	0	0	0	14
0.310	34	Career	0	0	0	1	0	2	3	0	0	3	1	0	1	0	0	0	0	0	1	0	0	0	1	0	1	2	0	0	0	0	0	0	0		0	0	0	0	2	2	0	0	0	20
0.310	35	Challenge	0	0	0	5	0	12	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	21
0.250	36	Missions	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	21
0.200	37	Experience	0	0	0	33	0	6	3	0	0	3	3	4	0	22	10	0	1	1	0	1	1	4	0	0	4	0	0	0	0	0	6	0	1	1	4	0		1	0	0	0	0	0	3
0.200	38	Stimulating	0	0	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	4
0.130	39	Work	2	0	0	2	0	2	0	0	0	4	0	15	1	0	0	0	2	1	0	0	0	0	14	19	0	0	3	0	0	0	1	1	0	0	0	0	1	0		0	0	0	0	68
0.100	40	Passion	0	0	0	2	0	9	14	5	4	11	0	3	2	4	0	2	0	0	3	0	0	2	0	0	7	0	3	0	2	0	3	0	3	1	0	0	6	0	0		0	0	0	86
0.000	41	To be a volunteer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	1
0.000	42	To educate and command men	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
0.000	43	Legion Etrangére	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		3
In degrees			21	13	16	90	4	87	50	8	9	42	13	39	28	41	18	14	23	6	6	2	3	13	21	30	17	3	19	2	12	3	20	1	7	9	10	1	30	1	11	10	0	4	0	

Table A4. Implication matrix for Volunteers in Training

Abstract ratio			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	Out deg's
0.910	1	Economic Well Being		2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
0.850	2	Family	0		1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
0.850	3	Right thing to do	0	0		0	0	0	0	1	0	4	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	8
0.710	4	Satisfaction	0	0	0		0	0	0	2	3	0	1	1	0	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	13
0.700	5	Maturation	1	1	0	2		1	0	3	0	0	0	0	2	4	2	1	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	0	0	23
0.680	6	Economic independence	1	0	0	0	2		0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
0.650	7	Usefulness (in general)	0	0	1	1	0	0		0	0	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7
0.640	8	Self-esteem	0	0	1	2	3	0	0		9	0	8	0	0	1	1	0	1	2	2	0	1	1	1	1	0	1	0	0	0	0	0	0	0	35
0.580	9	Fulfillment	1	2	2	9	4	0	0	8		1	4	0	0	0	1	5	3	0	0	0	1	0	0	0	1	3	0	2	0	0	2	0	0	48
0.580	10	Altruism	0	0	8	1	0	0	1	2	0		1	0	1	0	0	0	0	0	1	0	0	0	2	1	0	0	0	1	0	0	0	0	0	19
0.570	11	Social acceptance	0	0	1	4	0	0	2	9	2	0		0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	2	23	0	0	0	0	46
0.560	12	Lack of alternatives	3	3	0	0	1	0	1	1	3	1	1		0	0	1	0	1	0	0	10	0	0	0	2	0	0	1	2	0	7	0	0	0	35
0.550	13	Socialization	0	0	0	0	1	0	0	0	0	0	1	0		0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
0.520	14	Independence	0	0	0	0	2	3	0	1	0	0	0	0	0		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7
0.500	15	Future	6	16	0	1	1	1	0	2	3	0	0	9	0	0		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	51
0.500	16	To avoid boring	0	0	0	2	0	0	2	0	0	0	0	1	0	0	0		0	0	0	0	9	1	0	1	0	0	0	0	3	0	3	1	0	0
0.480	17	Useful for Government	0	0	6	1	1	0	1	2	0	0	0	0	0	0	2	0		14	2	0	0	0	3	1	1	0	0	0	0	0	0	0	0	34
0.470	18	Patriotism	0	0	11	0	0	0	0	0	1	2	1	0	0	0	0	0	13		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
0.460	19	Social aims	0	0	3	1	0	0	0	0	0	7	0	0	0	0	0	0	3	0		0	0	0	1	0	0	0	0	1	0	0	0	0	0	16
0.450	20	Financial security	17	10	1	0	0	7	0	2	0	0	1	11	0	1	12	1	0	0	0		0	0	0	0	0	0	0	2	0	2	1	0	0	51
0.450	21	Education/training	0	0	2	1	15	0	0	1	1	1	3	0	1	1	4	0	0	1	1	1		0	0	2	0	0	0	9	0	5	0	0	0	49
0.420	22	Discipline	0	0	0	0	5	0	0	1	1	0	2	0	0	0	0	0	3	0	0	0	2		0	1	0	0	0	0	0	0	0	0	0	15
0.410	23	Humanitarian purposes	0	0	5	0	0	0	0	1	1	6	0	0	0	0	0	0	0	0	2	0	0	0		2	0	1	0	0	0	0	0	0	0	18
0.390	24	Experience	0	1	0	0	12	1	0	2	1	2	1	3	0	1	1	0	0	0	0	0	16	1	0		2	2	0	0	0	0	2	0	0	48
0.390	25	Aesthetic and fun motivation	0	0	0	0	0	0	0	4	6	0	2	1	0	0	1	0	0	0	1	0	5	0	0	4		0	1	0	0	0	0	0	0	25
0.380	26	Challenge	0	0	0	0	3	0	0	5	0	0	2	0	0	0	1	0	0	0	0	0	0	1	0	1	0		0	0	0	0	0	0	0	13
0.330	27	Missions	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0		0	0	0	0	1	0	0	8
0.300	28	Career	1	1	2	2	2	0	0	6	11	0	0	2	0	0	10	2	0	2	0	4	2	0	0	2	1	0	0		0	2	7	0	0	58
0.250	29	Friendship	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		0	0	0	0	3
0.200	30	Work	2	4	1	3	0	1	4	3	2	0	0	20	0	0	13	0	0	0	0	29	1	0	0	3	0	0	0	1	0		0	0	0	85
0.150	31	Passion	0	0	3	2	3	0	0	5	14	2	3	1	1	1	5	0	4	6	0	0	3	5	1	6	10	1	2	2	0	1		0	0	81
0.000	32	To be a volunteer	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	3
0.000	33	To be in the Army but not drafted	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0		5
In degrees			32	40	49	33	55	15	13	63	61	27	33	50	5	10	57	10	32	27	14	57	41	11	13	34	16	8	4	25	23	23	15	0	0	

Appendix

We would like you to express your personal reason for joining the Army.
For the questions below, please follow this sequence: 1. List five reason you have for wanting to join the Army and place these in the boxes in column # 1 under **REASONS**. 2. Then take your first reason and think of why this is important to you. Place your answer in the box adjacent to your first reason in column #2 (If you have difficulty identifying why the reason is important to you, think about how you would feel if the reason was thwarted or did not take place). 3. After answering why your first reason is important, think about why the answer given is , in turn, important and put your response in the box in column #3 (again, if you have difficulty , think about how you would feel if the answer in the box in column #2 did not happen). 4. Repeat steps 2 and 3 for each remaining reason in column #1.
We have placed numbers in the upper left corners of each box to remind you of the sequence to follow.
If you really can not list five reasons, leave one blank. But try your best.



Organizational Commitment

1. I would be very happy to spend the rest of my career with the Army.
2. I enjoy discussing Army with people outside of it.
3. I really feel as Army's problems are my own.
4. I think that I could easily become as attached to another organization as I am to Army.
5. I do not feel like part of the family at Army.
6. I do not feel emotionally attached to Army.
7. Army has a great deal of personal meaning for me.
8. I do not feel a strong sense of belonging to Army.
9. I'm not afraid of what might happen if I quit Army without having another job lined up.
10. It would be very hard for me to leave Army right now, even if I wanted to.
11. Too much in my life would be disrupted if I decided I wanted to leave Army now.
12. It would be too costly for me to leave Army now.
13. Right now, staying with Army is a matter of necessity as much as desire.
14. I feel that I have few options to consider leaving Army.
15. One of the few serious consequences of leaving Army would be scarcity of available alternatives.
16. One of the major reasons I continue to work for Army is that leaving would require a considerable personal sacrifice – another organization may not match the overall benefits I have here.
17. I think that people these days move from organization to organization too often.
18. I do not believe that a person must always be loyal to his or her organization.
19. Jumping from organization to organization does not seem at all unethical to me.
20. One of the major reasons I continue to work for Army is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.
21. If I got another offer for a better job elsewhere I would not feel it was right to leave Army.
22. I was taught to believe in the value of remaining loyal to one organization.
23. Things were better in the days when people stayed with one organization for most of their career.
24. I do not think that wanting to be a "Army man" is sensible anymore.