

Working and Living in Bosnia: Experiences of Dutch IFOR Soldiers

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When the Dutch contributions to the actions in the former Yugoslavia became more permanent, an increasing need arose to draw lessons from the experiences gained. Therefore, several studies were set up to investigate such varying subjects as leadership, family problems and stress (cf. Vogelaar and Kramer, Flach and Zijlmans, in this issue). Most of these studies were conducted after the soldiers returned from their missions. Respondents were asked to look back to their experiences in Bosnia. Obviously, this type of data collection has limitations relating to retrospective biases and other shortcomings of memories. Few studies were conducted on the spot, i.e. while the soldiers were still in Bosnia. Furthermore, few studies had a longitudinal and prospective design, in order to account for changes in the experiences of soldiers while performing their "tour of duty." The project described in this article aims to compensate for both shortcomings in earlier studies.

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The study *Working and Living in Bosnia* was intended to give a broad overview of work-related opinions, experiences and subjective well-being of soldiers in a peace-supporting operation. As such, this project stands in a long tradition in the social sciences relating to 'the experience of work' (e.g. Littler, 1985). In this tradition studies on industrial, service and even household workers are amply available. Military studies of this type, however, are not so abundant. Nevertheless, there is a certain tradition of this type of military studies starting with the famous study on the "American Soldier" (Stouffer et al., 1949). During this Second World War project, various volumes on "adjustment during army life" and "combat and its aftermath" were produced. In these studies work-related aspects such as esprit and commitment, job satisfaction and promotion opportunities were investigated. Later studies of this type were more limited, obviously corresponding to the more confined character of military operations especially in the seventies and later. But the interest in working and living experiences during military missions steadily increased. During the Bosnian missions, several studies of this type were executed among (as far as we know) US, Swedish and Dutch military (see e.g. Johansson, 1997a and 1997b, Bartone et al., 1996, see also for the Somalian mission: Miller and Moskos, 1996).

This somewhat renewed interest in working experiences and even the safety and healthiness of the working environment of the military has a reason. As a consequence of the introduction of All Volunteer Forces, such as in the Netherlands, there is ample reason to treat sol-

diers as ordinary workers (see e.g. Moskos and Wood, 1988). More than before, personnel in the armed forces tend to see their military work as “just another job.” As such, military work should be considered and dealt with by Human Resources Management in the armed forces. Furthermore, the study was set up for pragmatical reasons. The insights of the study were expected to be helpful for the preparation of other missions.

Questions and Research Model

The study had a broad and exploratory character, as a result of which many topics were included in the project. Five of these topics are further analyzed in this article on the basis of seven research questions. The first five questions deal with the opinions and experiences of the soldiers about each subject at one, two or three points in time. The last two research questions aim to investigate how feelings about work and subjective well-being are affected by job characteristics and experiences at work.

The seven questions were formulated as follows:

1. What did military personnel think of their preparation?
2. How did military personnel experience the job itself?
3. How did military personnel experience the working conditions?
4. How did military personnel feel about their work?
5. What is the subjective well-being of military personnel?
6. Did the quality of the preparation of military personnel, the experience of the job itself, or the experience of the working conditions affect the feelings about their work?
7. Did the quality of the preparation of military personnel, the experience of the job itself, the experience of the working conditions, or the feelings about the work affect the subjective well-being of the deployed?

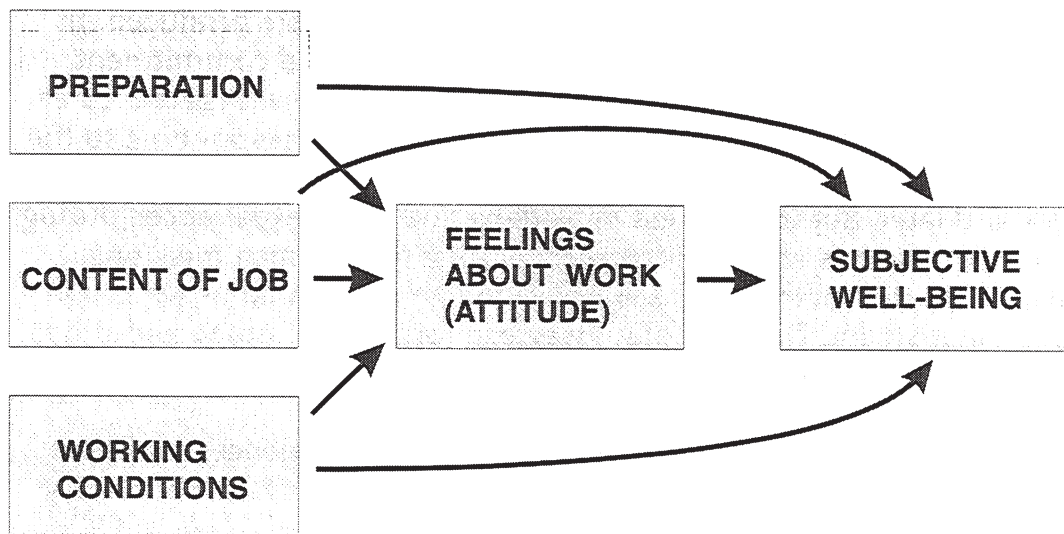


Figure 1: Research Model.

The seven questions can be organized in a simple research model which guides us through the content of this article.

Method

In this article the data collected during the first rotation of IFOR (December 1995 until June 1996) is analyzed. The Dutch contribution to this peace-supporting force consisted of a Mechanised battalion (1(NL)Mechbat) and a Logistic and Transport battalion (1(NL)Logtbat). We approached 1(NL)Mechbat for our study. This battalion was operating under British command in the northern part of Bosnia-Herzegovina near Vitez, Jajce and Skender Vakuf. It was deployed in both Bosnian-Serb and Moslem/Bosnian-Croatian areas. Its main task was to see to the implementation of the Dayton Peace Agreement. Specifically, it was concerned with the warring parties' abandonment of the declared zones of separation, the withdrawal of heavy weapons to the barracks, the organisation of elections, and the refugees returning to their homes.

1(NL)Mechbat was made up of two infantry companies, a cavalry squadron, medical units, military engineering units and staff units. The infantry and the cavalry were the units that had to enforce the peace between the parties. The engineers had to construct or improve locations, encampments and roads. Furthermore, they had to demine the roads in the area in which 1(NL)Mechbat operated. The medical units had to help and transport wounded soldiers.

For our survey, we selected 13 platoons in such a way that the different units of which 1(NL)Mechbat was made up were well-represented: 4 infantry platoons, 4 cavalry platoons, 2 engineer platoons, and 3 medical platoons. Our intention was to have every member of these platoons fill in the questionnaires. At three points in time questionnaires were handed to the soldiers (T₁: about two weeks after arrival in Bosnia; T₂: about 11 weeks after arrival; T₃: just before the return to the Netherlands). In this way the whole period was covered.

The questionnaires were distributed to the platoon commanders by our contact in Bosnia (a member of the military social service). Platoon commanders distributed the questionnaires among their men and collected them when they had completed them. Anonymity was guaranteed because every soldier had to put his or her questionnaire into an envelope and close it before handing it to the platoon commander. Each soldier's questionnaire, filled in at different points in time, could be retraced because they had been instructed to fill in a code, that was known only to him or her.

The five subjects have been measured at one, two, or three points in time. We used a number of criteria when selecting measurement scales: the questionnaires at each point in time could be completed in less than half an hour, the questions should not need further explana-

tion, the questions should fit in with the experiences of soldiers as closely as possible at the specific point in time. In the Appendix, a description is given of the concepts we researched at different points in time. In the 'Results' section, the specific items are described.

The numbers of respondents at the different points in time were 216 (T1), 186 (T2), and 214 (T3). This means that of the maximum number of possible respondents, about 300, between 62% and 72% participated. This response rate is rather satisfactory. However, the number of persons with traceable responses at three points in time was rather low: 86. The other respondents filled in their questionnaires at two or less points in time, or forgot to fill in their codes. There were much more respondents with traceable codes at two points in time: 137 (T1 and T2), 129 (T1 and T3), 95 (T2 and T3). Therefore, we used pair-wise deletion of missing values in the data analysis.

All scales were subjected to reliability analysis (Cronbach's Alpha). Because the analysis of the work characteristics suggested that more than one factor was underlying the 15 items, we subjected these items to principal component analyses. The results of these principal component analyses were the same for T1 and T3: one factor indicating 'Positive Work Characteristics' (interesting, nice, etc.), a second factor indicating 'Dangerous Work Characteristics' (dangerous, risky, etc.) and a third factor indicating 'Negative Work Characteristics' (boring, unclear, etc.).

The results of Cronbach's Alpha analyses and the means of the resulting scales are presented in Table 6 in the Appendix. The Cronbach's Alphas all have acceptable values. Therefore, the items of which the specific measures consisted were added up and divided by the number of items. In this way scales were created. Of these scales the mean values have been calculated. These are presented in the Appendix as well.

Descriptive Results

In this section, we will have a closer look at the general results of each of the measures. In the first five subsections we will present the general results for the items the soldiers had to respond to. Furthermore, we will explore the differences between the separate points in time and the various hierarchical levels: soldiers, corporals, NCOs, officers.

In addition, we will give some indications of differences between the various military units (especially tank versus infantry platoons).

PREPARATION

The results of the scale, as indicated in the Appendix, show that the soldiers in general felt relatively well-prepared for their mission. This general result is confirmed by the more specified data presented in Table 1.

Table 1: Statements about Preparation (%).

| | <i>I (very) much agree</i> | <i>I agree to some extent</i> | <i>I do not agree</i> |
|--|--------------------------------|-----------------------------------|---------------------------|
| <i>It is clear what we have to do in Bosnia.</i> | 69 | 26 | 5 |
| <i>I know how the different parties feel about each other.</i> | 30 | 54 | 16 |
| <i>I know how the parties feel about us.</i> | 15 | 50 | 35 |
| <i>The exercises prepared us well for our deployment in Bosnia.</i> | 24 | 33 | 43 |
| <i>Through the training our platoon has become a tight unit.</i> | 35 | 40 | 25 |
| <i>We are adequately armed for our task.</i> | 71 | 21 | 8 |
| <i>I know enough about being a deployed soldier.</i> | 42 | 42 | 16 |
| <i>I know how to deal with the population.</i> | 33 | 47 | 20 |
| <i>I am well-prepared for the tasks that I have to perform.</i> | 56 | 27 | 17 |
| <i>I am well-prepared for living on a compound.</i> | 44 | 30 | 26 |
| <i>I know exactly what I am allowed and what I am not allowed to do as a deployed soldier.</i> | 62 | 31 | 7 |
| <i>All in all I am confident that we will do a good job.</i> | 56 | 35 | 9 |

From most items it can be concluded that the soldiers felt pretty well-prepared for their mission and job in Bosnia. They felt especially certain about what had to be done in Bosnia and what they were allowed or not allowed to do. They were least certain about how the warring parties would feel about them and how to deal with the population. Also, the soldiers were not so certain that the exercises had been a good preparation for the mission. A breakdown analysis of the scale 'Preparation' shows significant and remarkable differences between the four hierarchical levels, indicating that officers and NCOs felt most prepared, whereas soldiers and corporals felt least prepared.

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THE JOB ITSELF

The job itself was described with 15 adjectives measuring work characteristics. These characteristics have been measured at T1 (prospective, expectations) and T3 (retrospective, experiences). As mentioned earlier, these 15 adjectives could be subsumed under three more general headings, qualifying the work as positive (interesting, nice), as dangerous (dangerous, risky) and as negative (boring, unclear). The results indicate that a number of items belonging to the dimensions 'dangerous' and 'positive' work characteristics have decreased at T3 as compared to T1. This suggests that the work became less positive (i.e. less interesting, less nice, less adventurous) and at the same time less dangerous (i.e. less risky, less dangerous and less exciting). Presumably, military (wo)men connect a certain kind of danger and risky excitement with a positive evaluation of their work. This conclusion based on the separate items also follows from the scale-level analyses. T-test

analyses show significant differences between points in time for the scales 'Positive Work Characteristics' and 'Dangerous Work Characteristics.' There is no significant difference for the scale 'Negative Work Characteristics.'

As to hierarchical level, officers and NCOs view their work significantly more positive than privates and corporals. This is the outcome of a breakdown analysis at T₁ and T₃. The other two scales show no differences between the hierarchical levels. The soldiers of the tank platoons considered their work in general less positive than did the members of the other platoons, especially the infantry. We will observe comparable distinctions as to job experiences between cavalry and other platoons also later on in this analysis.

Intercorrelations between T₁ and T₃ suggest that the military are fairly consistent in their opinions of the work characteristics. There is a strong correlation between the scales 'Dangerous Work Characteristics' and 'Positive Work Characteristics' at the same moment in time. This is another indication that soldiers who think their work more dangerous, are likely to see their work as more interesting.

WORKING CONDITIONS

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In addition to the characteristics of the job itself the respondents could indicate whether they were hindered by (physical) inconveniences at work, lack of safety and stressful events. These data were collected at T₂, which lay about halfway through the mission. In general, there were no overwhelming problems as regards inconveniences at work. Only one of the eleven inconveniences was considered annoying by more than 50% of the sample. This was the hinder by dirt, smear and dust. Also, a fairly substantial percentage of the military (30-40%) was hindered by climatological conditions such as cold, change of temperature, draught or wind and by noise. Only very few respondents (5% or less) were hindered by dangerous chemical substances, vapour, mist, gas, vibrations, tremors, or explosions. Compared to ordinary work in industrial or service organizations in the Netherlands the hinder perceived to be resulting from working conditions during the IFOR operation is unequivocally moderate (Kompier and Marcelissen, 1990). The scale 'Inconveniences' shows no differences between the four hierarchical levels.

Respondents were furthermore asked whether they would describe their work as safe. Of the respondents 68% said they would. There were no differences between the hierarchical levels. Apparently, more than two-thirds of the military consider their work in Bosnia as safe. This is a large number, but somewhat less than the number for Dutch workers in industry and services, of which some 80% consider their work as safe (Kompier and Marcelissen, 1990). Obviously, working during IFOR is perceived as relatively safe but not as safe as working in ordinary conditions in the Netherlands.

STRESSFUL EVENTS

In addition to the previous items, which stem from research into industrial working conditions, respondents were asked how often they personally experienced the following events during their mission in Bosnia (the items were used in an earlier study by Johansson, 1997a and 1997b). The results of both studies are presented in Table 2.

Table 2: Events Personally Experienced during Tour of Duty - Dutch IFOR Soldiers Compared to Swedish UNPROFOR Soldiers (cf. Johansson, 1997a and 1997b) in Percentages.

| | Dutch IFOR Soldiers | | | Swedish UNPROFOR Soldiers | | |
|---|---------------------|--------|--------------|---------------------------|--------|--------------|
| | Never | Seldom | Almost Daily | Never | Seldom | Almost Daily |
| Cross Mine Danger Area | 17 | 34 | 49 | 13 | 43 | 44 |
| Negotiations/Confrontations at Checkpoints | 47 | 26 | 27 | 12 | 39 | 49 |
| That the parties prevented you or your colleagues from fulfilling your mission. | 70 | 28 | 2 | 12 | 32 | 56 |
| Cross Area Where Hostilities Take Place | 94 | 5 | 1 | 24 | 44 | 32 |
| Shelling Of or Near Camp | 61 | 36 | 3 | 21 | 52 | 27 |
| Witness Shelling of Villages/Towns | 93 | 5 | 2 | 26 | 45 | 29 |
| Aggressiveness between Civilian Population | 64 | 31 | 5 | 20 | 64 | 16 |
| Subjected to Direct Shelling | 91 | 8 | 1 | 29 | 54 | 17 |
| Theft of NATO/Army Properties | 76 | 20 | 4 | 36 | 52 | 12 |
| Seen Dead or Wounded People | 66 | 23 | 11 | 44 | 49 | 7 |
| That Reinforcement/Relief was Impossible | 91 | 8 | 1 | 45 | 43 | 12 |
| That Communications Did Not Function in Critical Situations | 68 | 22 | 10 | 47 | 41 | 12 |
| That Rules of Engagement Prevented You from Answering Hostile Fire | 96 | 3 | 1 | 66 | 21 | 13 |
| Witness Cruelty to Civilian Population | 92 | 6 | 2 | 70 | 25 | 5 |
| Fire Warning Shots | 89 | 8 | 3 | 89 | 10 | 1 |
| Employ Effective Fire | 95 | 5 | 0 | 95 | 5 | 0 |
| Disarm Fighters | 79 | 18 | 3 | - | - | - |

A comparison of the Dutch IFOR military with Johansson's study of Swedish UNPROFOR military reveals many differences. There are only few stressors to which Dutch soldiers have been exposed, such as the crossing of mine danger areas or the negotiations/confrontations at checkpoints. The Swedish UNPROFOR soldiers reported to have been confronted with many stressors, some of them quite often or even daily. Apparently, the differences in experiences with stressful events

during the UNPROFOR and IFOR missions are huge. A comparison of the hierarchical levels indicates that officers have experienced more stressful events than corporals and ordinary soldiers. This is hardly surprising since officers in their commanding role are the first to take responsibility when exceptional events take place.

UNEXPECTED PROBLEMS

Five questions were asked about the problems relating to unexpected situations, failures and absence of others, and the division of the workload among members of the platoon. It became clear that 20 to 30 per cent of the respondents experienced hinder from these situations in their daily work. A comparison of the hierarchical levels shows no differences.

Intercorrelations of the variables discussed so far indicate that soldiers described their work as less safe the more they were hindered by inconveniences. Also, soldiers experienced more unexpected problems when they were confronted with more stressors and when they had less information and means.

FEELINGS ABOUT WORK

In this subsection the four scales measuring aspects of feelings about the work will be described.

One of the scales measures experienced meaningfulness of the work. It was measured at two points in time, i.e. halfway and at the end of the mission. The results reveal that the work was rather meaningful to the military. Furthermore, two of the four items show significant differences over time, indicating that the work became more meaningful at the end of the mission as compared to the military's experienced meaningfulness halfway through the mission. A comparison of the two points in time at the scale-level shows a similar significant increment in experienced meaningfulness during the second half of the mission ($p < .05$). There are differences between the hierarchical levels as well. For both T2 and T3 officers and NCOs consider their work more meaningful than ordinary soldiers and corporals.

As to general work satisfaction, it can be said that the respondents were rather satisfied about their work. The items and the scales show no differences between the two points in time. There was no change in satisfaction. There are differences between the hierarchical levels though. Just as is the case with the experienced meaningfulness, officers and NCOs are more satisfied with their work than soldiers and corporals, at both T2 and T3. A comparison of the platoons shows that two tank platoons were significantly less satisfied with their work than other platoons.

Further results concerning job satisfaction are presented in Table 3.

Table 3: Responses to the Items on Job Satisfaction in Percentages.

| | Yes | Not Sure | No |
|--|-----|----------|----|
| <i>The work is the same day after day.¹</i> | 33 | 22 | 45 |
| <i>It is the wrong sort of job for me.¹</i> | 17 | 17 | 66 |
| <i>The work is worthwhile.</i> | 60 | 32 | 8 |
| <i>The work is routine.¹</i> | 42 | 26 | 32 |
| <i>Time passes quickly.</i> | 70 | 19 | 11 |
| <i>The work is satisfying.</i> | 45 | 35 | 20 |
| <i>This job is better than other jobs I have had.</i> | 28 | 40 | 32 |
| <i>The work seems pointless.¹</i> | 19 | 28 | 53 |

¹These items were worded negatively deliberately.

This table shows that the majority of the respondents was rather positive about their jobs. Just as with general work satisfaction, there are differences between the hierarchical levels. Officers and NCOs were more satisfied with their jobs than privates and corporals.

Nine questions were asked about felt work pressure. The results indicate that most of the military experienced their work as rather pressing. Especially the mental workload and the long working hours were considered to be heavy. There were no significant differences in this respect between the hierarchical levels.

High intercorrelations at different points in time show that soldiers who thought their work satisfying or meaningful at T₂ are of the same opinion at T₃. Work Pressure does not seem to have any relationship with satisfaction or meaningfulness.

SUBJECTIVE WELL-BEING

At the beginning and the end of the mission the question was asked 'How do you feel in general?' Of all the respondents 63% felt optimistic and 3% felt pessimistic at T₁. At T₃ the percentages were about the same: 58% felt optimistic and 3% pessimistic. At both points in time there were significant differences between hierarchical levels: officers and NCOs felt more optimistic than privates and corporals.

Also, at T₁ and T₃ the question was asked 'What do you think of your physical condition?' Of all the respondents 75% indicated at T₁ to be in good shape. Only 2% felt to be in bad shape. At T₃ there was a small decline in physical condition: 66% felt to be in good shape and 5% felt to be in bad shape. At T₁ there were differences between the hierarchical levels, indicating that officers and NCOs felt to be in better shape than ordinary soldiers and corporals. Military personnel of three tank platoons judged their physical condition at T₃ as clearly worse

than the (wo)men of the other units.

Five questions were asked about the quality of sleep. The large majority of the respondents slept well during the mission. Only 10 to 20% responded (somewhat) negatively to questions relating to sleep quality. There were no differences between the hierarchical levels.

Absence from work due to sickness in the six-month period of deployment occurred very rarely: only 16% of the respondents reported sick at least once during the mission. This number is lower than in ordinary Dutch organizations (which is some 50%). However, visiting a doctor occurred somewhat more frequently as compared to industry or services (Kompier and Marcelissen, 1990). Several mechanisms may underlie these findings: first, there is not much opportunity to report sick during a mission whereas the (on average young) population of soldiers may be expected to be rather healthy; on the other hand seeing a doctor who is on the spot can be helpful to recover quickly from (small) physical ailments and complaints which may have a preventive impact precluding complaints developing into serious illnesses.

122 At T₁ and T₃ questions were asked about general feelings. The questions were divided into three scales: fear, depression and irritatedness. The results show that there are few differences between T₁ and T₃. Only two items, belonging to the scale Fear show differences, indicating a decrease at T₃ with respect to T₁, implying that they felt, in general, somewhat less jumpy and nervous at the end of the mission. This difference also shows at scale-level. There are no differences with respect to the other two scales: Depression and Irritatedness. A comparison of the three scales shows that respondents felt most irritated and least depressed. There are no differences between hierarchical levels.

The intercorrelations between the scales measuring subjective well-being reveal that respondents are consistent in their opinions over time. The correlations between the items measuring general feeling and the scales Fear, Depression and Irritatedness at the same point in time are also high. At different points in time the intercorrelations are not significant. Quality of Sleep is negatively correlated with the T₃ measures Fear, Depression, and Irritatedness, suggesting that good sleep is good for one's mental health which comes as no big surprise.

Explanatory Results

FEELINGS ABOUT WORK

Feelings about work may relate to aspects of the job itself. The question, however, is how they relate and to what aspects specifically. This research question was analyzed by means of multiple regression analyses. For every variable measuring 'feelings about the work' (as dependent variables), the variance was explained three times by the following (sets of) independent variables: (1) the preparation-scale, (2)

the scales measuring the job itself, and (3) the scales measuring the working conditions. Because the dependent variables are considered to be effects of the independent variables, we used only those independent variables in each analysis, which were measured at an earlier or at the same point in time as that particular dependent variable.

In the analyses we used a BACKWARD procedure. In this procedure, those independent variables, which do not contribute significantly to the explained variance of the dependent variable ($P > .10$), are deleted from the regression equation. In this way, only the most relevant variables are left in the equation.

In Table 4 the results of the multiple regression analyses are presented.

Table 4: Results of the Multiple Regression Analyses with BACKWARD Procedure with Feelings about the Work as Dependent Variables and Respectively Preparation, Job Characteristics and Working Conditions as Sets of Independent Variables (the Standardized Weights and the Resulting Proportion of Explained Variance (R^2) are Presented).

| | Experienced Meaningfulness | | Work Satisfaction | | Satisfaction with Job | Pressure |
|----------------------------|-------------------------------|------|-------------------|------|--------------------------|----------|
| | T2 | T3 | T2 | T3 | T2 | T2 |
| Preparation T1 | .22* | .38* | .25* | .40* | .27* | d |
| R ² | .05* | .14* | .06* | .16* | .07* | .00 |
| Job Characteristics | | | | | | |
| Positive T1 | .29* | d | .34* | d | .39* | d |
| Danger T1 | d | d | d | d | d | .18 |
| Negative T1 | -.30* | -.15 | -.19* | -.10 | d | d |
| | | | | | | |
| Positive T3 | - | .61* | - | .72* | - | - |
| Danger T3 | - | d | - | - | - | - |
| Negative T3 | - | -.15 | - | -.12 | - | - |
| R ² | .18* | .52* | .18* | .63* | .15* | .03 |
| Working Conditions | | | | | | |
| Inconveniences T2 | d | d | d | d | -.26* | .25* |
| Safety T2 | d | d | d | .18 | d | -.22* |
| Stressors T2 | d | d | d | d | d | d |
| Information and Means T2 | .19 | .20 | .25* | d | d | .18 |
| Unexpected Problems T2 | d | d | d | -.20 | -.14 | .17 |
| R ² | .04 | .04 | .06* | .08 | .10* | .16* |

* $p < .01$

- This independent variable has not been taken into account due to time sequence considerations.

d This variable was deleted in the BACKWARD procedure ($P_{out} > .10$).

Table 4 shows that good preparation affects the feelings of meaningfulness and satisfaction many months later. Both at T2 and T3 a significant amount of variance of experienced meaningfulness, work satisfaction, and satisfaction with the job itself can be explained by the variable 'preparation.' 'Feelings of work pressure' are not explained by the preparation variable. Feelings of meaningfulness and satisfaction are also explained by job characteristics. Especially the positive work characteristics, but also the negative work characteristics, have an effect on experienced meaningfulness, work satisfaction, and satisfaction with the job itself. Dangerous work characteristics have no effect on these dependent variables. However, they do have a weak effect on work pressure.

The variables measuring working conditions have only a weak effect on the experienced meaningfulness. They have a somewhat stronger effect on the measures of satisfaction. However, the strongest effect of working conditions is on the felt work pressure. Four of the five variables contribute to the work pressure: the degree to which a soldier is hindered by inconveniences, the extent to which he or she feels unsafe, the measure in which he or she has information and means, and in which he or she is confronted with unexpected problems all lead to greater pressure for the soldier.

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SUBJECTIVE WELL-BEING

In this subsection the same procedure is followed as in the previous subsection, but now with the variables measuring Subjective Well-being as dependent variables.

Table 5: Results of the Multiple Regression Analyses with BACKWARD Procedure ($P_{out} > .10$) with Subjective Well-Being as Dependent Variables and Respectively Preparation, Job Characteristics, Working Conditions and Feelings about the Work as Sets of Independent Variables (the Standardized Weights and the Resulting Proportion of Explained Variance (R^2) are Presented).

| | General Feeling | | Physical Condition | | Sleep | Fear | | Depression | | Irritatedness | |
|----------------------------|-----------------|------|--------------------|------|-------|-------|------|------------|-------|---------------|-------|
| | T1 | T3 | T1 | T3 | T2 | T1 | T3 | T1 | T3 | T1 | T3 |
| Preparation | .28* | .36* | d | .19 | d | -.19* | -.18 | -.24* | -.23* | -.16 | -.25* |
| R^2 | .08* | .13* | .00 | .04 | .00 | .04* | .03 | .06* | .05* | .03 | .06* |
| <i>Job Characteristics</i> | | | | | | | | | | | |
| Positive T1 | .29* | d | .19* | d | .17 | d | d | d | d | d | d |
| Danger T1 | d | d | -.15 | d | d | .14 | d | d | d | d | d |
| Negative T1 | -.20* | d | d | d | d | .20* | d | .26* | d | .19* | d |
| | | | | | | | | | | | |
| Positive T1 | - | .38* | - | .25* | - | - | d | - | d | - | -.15 |
| Danger T1 | - | d | - | - | - | - | d | - | d | - | d |
| Negative T1 | - | -.17 | - | - | - | -.25* | - | .20 | - | .06 | |
| R^2 | .15* | .20* | .04 | .06* | .03 | .07* | .06* | .07* | .04 | .04* | .07 |

| <i>Working Conditions</i> | | | | | | | | | | | |
|--------------------------------------|---|----------|---|----------|----------|---|----------|---|----------|---|----------|
| <i>Inconveniences T2</i> | - | -.28* | - | <i>d</i> | -.33* | - | .19 | - | <i>d</i> | - | <i>d</i> |
| <i>Safety T2</i> | - | <i>d</i> | - | <i>d</i> | <i>d</i> | - | <i>d</i> | - | <i>d</i> | - | <i>d</i> |
| <i>Stressors T2</i> | - | <i>d</i> | - | <i>d</i> | <i>d</i> | - | <i>d</i> | - | <i>d</i> | - | <i>d</i> |
| <i>Information and Means T2</i> | - | .17 | - | <i>d</i> | <i>d</i> | - | <i>d</i> | - | <i>d</i> | - | <i>d</i> |
| <i>Unexpected Problems T2</i> | - | <i>d</i> | - | <i>d</i> | <i>d</i> | - | <i>d</i> | - | <i>d</i> | - | .20 |
| <i>R²</i> | - | .12* | - | .00 | .11* | - | .04 | - | .00 | - | .04 |
| | | | | | | | | | | | |
| <i>Experienced Meaningfulness T2</i> | - | <i>d</i> | - | <i>d</i> | <i>d</i> | - | <i>d</i> | - | <i>d</i> | - | <i>d</i> |
| <i>Experienced Meaningfulness T3</i> | - | <i>d</i> | - | <i>d</i> | - | - | <i>d</i> | - | <i>d</i> | - | .24 |
| <i>Work Satisfaction T2</i> | - | <i>d</i> | - | <i>d</i> | <i>d</i> | - | <i>d</i> | - | <i>d</i> | - | <i>d</i> |
| <i>Work Satisfaction T3</i> | - | .42* | - | .50* | - | - | <i>d</i> | - | <i>d</i> | - | -.40* |
| <i>Satisfaction with Job T2</i> | - | <i>d</i> | - | <i>d</i> | .36* | - | <i>d</i> | - | -.32* | - | <i>d</i> |
| <i>Work Pressure T2</i> | - | <i>d</i> | - | <i>d</i> | -.13 | - | .19 | - | <i>d</i> | - | <i>d</i> |
| <i>R²</i> | - | .18* | - | .25* | .16* | - | .03 | - | .10* | - | .08 |

* $p < .01$

- This independent variable has not been taken into account due to time sequence considerations.

d This variable was deleted in the BACKWARD procedure ($P_{out} > .10$).

Table 5 shows that the quality of the preparation affects general feelings (feeling optimistic) and feelings of fear, depression, and irritativeness for prolonged periods of time. There was no significant relationship between the preparation and the physical condition or the quality of sleep. Positive and negative work characteristics influenced subjective well-being. General feelings of well-being and physical condition were mostly influenced by positive work characteristics, and feelings of fear and depression were mostly influenced by negative work characteristics. Some variables of subjective well-being were influenced by the working conditions. The general feeling was more pessimistic and the quality of sleep was less, the more the soldiers were hindered by inconveniences in their work environment. Measures of satisfaction influenced subjective well-being. The results suggest that soldiers who were satisfied with their work felt more optimistic, experienced a better physical condition, felt less depressed and irritated, and had a better sleep quality.

Conclusions and Discussion

This study was initially set up with UNPROFOR experiences in mind. During UNPROFOR, many soldiers complained about feelings of meaninglessness and frustration. They experienced a lot of stressors, such as being shot at or being provoked, without being able to do anything back. In that period, the parties kept on fighting each other. UNPROFOR did not have escalation dominance and was tactically not prepared to enforce peace upon the parties. For instance, when NATO aircraft had bombed Bosnian-Serb positions in May 1995, the Bosnian-Serbs could easily take hundreds of hostages among UNPROFOR military personnel (see the contribution by Flach and Zijlmans in this issue). During IFOR, on the other hand, the warring parties complied with the arrangements in the Dayton agreements. Furthermore, IFOR was more heavily armed and better prepared to make the parties act according to the Dayton Peace Agreement. A comparison of our study of the stressors experienced by Dutch IFOR soldiers with the study of Johansson (1997a and 1997b) of four Swedish UNPROFOR battalions makes clear the difference between UNPROFOR and IFOR. Few of the stressors that the Swedish had experienced, were experienced by the Dutch soldiers.

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There are also other indications that IFOR is seen as a relatively safe operation. First, two thirds of the respondents thought their work safe. At the time this item was answered, the soldiers knew that the parties were upholding the Dayton Peace Agreement. The most dangerous aspect of the soldiers' work were the ever-present mines. Second, scales measuring the job itself indicate that the work could be described as less dangerous at the end of the mission than at the beginning of the mission. This observation is well-supported by the developments in the area. Dutch IFOR-1 soldiers left for Bosnia with the idea that the possibility existed that they might have to fight their way into Bosnia: till then, the warring parties had broken almost every agreement. This idea will most certainly have influenced their initial opinions about the dangerousness of the mission. It turned out to be different. The parties did what had been asked of them and after three months the heavy weapons had been removed to the barracks. After that time the situation relaxed. Soldiers were assigned tasks of a more humanitarian character. It is an interesting finding though that as their tasks became less dangerous, soldiers also described these tasks as becoming less positive (i.e. less interesting, adventurous and valuable). However, it may be expected that this relation will completely reverse at a certain level of violence. Beyond this level one may assume that military work is no longer considered to be very positive, interesting, adventurous and so on. Presumably, the relation between how military work is experienced and the danger attached to this work resembles a reversed U.

Although the work of IFOR soldiers may have been rather safe, the

survey also indicates some problems that deserve attention. A number of soldiers said they were hindered by certain inconveniences. In recent years, many soldiers have complained of health problems after a mission. For instance, in 1997 concerns have been raised about possible health problems that resulted from living on polluted soil in a compound in Lukavac in Bosnia. Complaints about dirt, smear, and dust (64%) or about stench (23%) should therefore be taken seriously. The work was considered rather satisfying by IFOR soldiers. A substantial proportion of the soldiers found their work meaningful and worth doing. Also they felt well prepared for the tasks that had to be performed. Officers and NCOs thought their work to be more satisfying and meaningful than soldiers in the lower ranks. These results correspond with civilian research in which employees higher in the hierarchy are generally more satisfied with their jobs than employees lower in the hierarchy (Berger and Cummings, 1979). A striking outcome is that personnel of tank platoons generally were less positive when judging their work and working conditions, their physical condition and the meaningfulness of their contribution. Obviously, tank platoons did not have a meaningful role to play during IFOR other than showing military presence and providing escalation dominance. As such, this role is highly important, but for tank personnel and their officers it apparently is not satisfying enough just to be there without being able to manoeuvre with their vehicles. All in all, however, the soldiers, in general, felt rather well and relatively few soldiers suffered from feelings of fear and depression. However, a fairly large proportion of the soldiers suffered from feelings of irritatedness now and then.

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From the multivariate analyses a number of conclusions can be drawn, though they also lead to questions for further research. Firstly, good preparation for the mission seems to be crucial for feeling satisfied with the work in particular and with life in Bosnia in general. Better prepared soldiers not only felt better at the beginning of the mission, but the effects lasted throughout the mission and even seem to be stronger at the end of the mission than they were at the beginning of or halfway through the mission. The question remains, however, why this effect is stronger towards the end of the mission.

Secondly, positive work characteristics, such as interesting or valuable work, had very strong effects on work satisfaction, experienced meaningfulness or general feelings. It is interesting to conclude that positive work characteristics also influenced feelings about physical condition and, weakly, the quality of sleep. Negative work characteristics, such as unclear or unrewarding work, mainly had their effect on negative feelings such as fear, depression, and irritatedness. However, they also contributed in a negative way to general feelings, to experienced meaningfulness and to work satisfaction. The obvious conclusion is therefore that it seems important to improve the positive work characteristics and to reduce the negative work characteristics. However,

the question is how the soldiers' opinions about their work developed. Were their opinions mostly influenced by the work itself? And what is or can be the role of social information processes (e.g. the leader or other soldiers expressing their opinions) in the forming of these opinions (e.g. Salancik and Pfeffer, 1978)?

Thirdly, of the working conditions, the inconveniences in particular had a strong effect on a number of dependent variables. From the analyses it can be concluded that the more the soldiers were hindered by a number of circumstances, the less satisfied they were with their jobs, the more pressure they felt from their work, the less optimistic they felt, and the worse they slept. This perhaps comes as no surprise to those who consider soldiers to be ordinary employees doing "just another job." These findings suggest that the prevention of inconveniences - as much as possible - contributes to the well-being of the soldiers during a mission. A variable that hardly showed any relationship with any of the dependent variables is the frequency of stressors. We initially thought that this variable would to a large extent influence most of the dependent variables such as satisfaction, meaningfulness, general feelings and feelings such as fear, depression and irritability. A possible explanation for the lack of influence is the small number of incidents with which the IFOR soldiers have been confronted.

Fourthly, high work satisfaction seems not only to be a value in itself, but our study also indicates that it has an effect on a number of aspects of subjective well-being. Soldiers who were more satisfied with their work felt more optimistic, experienced a better physical condition, felt less depressed and irritated, and, what is most interesting, they slept better.

Appendix: Description of Variables

PREPARATION (T1):

One scale of 12 items (a four-point scale) about subjects such as task clarity, how to deal with the warring parties or the local population, self-confidence, the exercises, etcetera.

THE JOB ITSELF (T1 AND T3):

One scale of 15 adjectives indicating work characteristics. Respondents were asked to indicate if they expected that their work *would be* like this (T1) or *had been* like that (T3) (on a four-point scale) on items such as dangerous, exciting, irresponsible, unclear, etcetera.

WORKING CONDITIONS (T2):

This subject was measured on five subthemes.

1. Inconveniences (T2): respondents were asked to describe if they experienced any nuisances (yes or no) because of 11 items such as cold, warmth, moisture, noise, etcetera.
2. Safety of the job (T2): 1 item (Would you describe your work here

- in Bosnia generally as safe?) (yes or no).
3. Frequency of stressors (T2): respondents were asked to indicate on a four-point scale how much they were confronted with stressors such as the crossing of mined areas, being shot at, the disarmament of fighters, etcetera. (Johansson, 1997).
 4. Information and means (T2): 4 items about the adequacy of information and means (yes or no).
 5. Unexpected problems (T2): 5 items about mistakes or absence of others (yes or no).

FEELINGS ABOUT THE WORK (T2 AND T3):

This subject was measured using four subthemes.

1. Experienced meaningfulness (T2 and T3): 4 items (on a five-point scale) about the sense and usefulness of the work (Hackman and Oldham, 1974; Foeken, 1979).
2. Work satisfaction (T2 and T3): 5 items (on a five-point scale) indicating general feelings about the work (Van Dongen, 1969).
3. Satisfaction with the job itself (T2): 8 items (on a three-point scale) indicating if the job is worthwhile.
4. Work pressure (T2): 9 items indicating physical and mental work load (yes or no).

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SUBJECTIVE WELL-BEING (T1, T2, AND T3):

This subject was measured using six subthemes.

1. General feeling (T1 and T3): 1 item (How do you feel in general? optimistic, undecided, pessimistic).
2. Physical condition (T1 and T3): 1 item (How do you rate your physical condition? rated on a five-point scale).
3. Quality of sleep (T2): 5 items indicating sleep problems (yes or no).
4. Fear (T1 and T3): 5 items indicating the incidence (on a four-point scale) of feelings of nervousness and tension (Algera, 1981).
5. Depression (T1 and T3): 6 items indicating the incidence (on a four-point scale) of feelings of sadness and loneliness (Algera, 1981).
6. Irritatedness (T1 and T3): 3 items indicating the incidence (on a four-point scale) of feelings of anger and annoyance (Algera, 1981).

In Table 6 the results of reliability analyses and means of the scales are given.

Table 6: Results of Reliability Analysis (Cronbach's Alpha) and Means of the Measures.

| Measures/Scales | Min-Max Values | Cronbach's Alphas | | | Means | | |
|-------------------------------------|-------------------|-------------------|-----|-----|-------|------|------|
| | | T1 | T2 | T3 | T1 | T2 | T3 |
| <i>Preparation</i> | 1 - 4 | .78 | - | - | 3.17 | - | - |
| <i>Work Characteristics</i> | | | | | | | |
| <i>Positive</i> | 1 - 4 | .83 | - | .89 | 2.80 | - | 2.53 |
| <i>Dangerous</i> | 1 - 4 | .79 | - | .82 | 2.26 | - | 2.02 |
| <i>Negative</i> | 1 - 4 | .62 | - | .69 | 1.67 | - | 1.78 |
| <i>Working Conditions</i> | | | | | | | |
| <i>Inconveniences</i> | 1 - 2 | - | .72 | - | - | 1.25 | - |
| <i>Safety of the Job</i> | 1 - 2 | - | * | - | - | 1.70 | - |
| <i>Stressors</i> | 1 - 4 | - | .77 | - | - | 1.33 | - |
| <i>Information and Means</i> | 1 - 2 | - | .76 | - | - | 1.80 | - |
| <i>Unexpected Problems</i> | 1 - 2 | - | .63 | - | - | 1.26 | - |
| <i>Feelings about the Work</i> | | | | | | | |
| <i>Experienced Meaningfulness</i> | 1 - 5 | - | .77 | .68 | - | 3.34 | 3.41 |
| <i>Work Satisfaction</i> | 1 - 5 | - | .84 | .81 | - | 3.30 | 3.23 |
| <i>Satisfaction with Job Itself</i> | 1 - 3 | - | .71 | - | - | 2.27 | - |
| <i>Work Pressure</i> | 1 - 2 | - | .64 | - | - | 1.48 | - |
| <i>Subjective Well-Being</i> | | | | | | | |
| <i>General Feeling</i> | 1 - 3 | * | - | * | 2.60 | - | 2.53 |
| <i>Physical Condition</i> | 1 - 5 | * | - | * | 3.83 | - | 3.63 |
| <i>Quality of Sleep</i> | 1 - 2 | - | .78 | - | - | 1.82 | - |
| <i>Fear</i> | 1 - 4 | .73 | - | .75 | 1.58 | - | 1.50 |
| <i>Depression</i> | 1 - 4 | .81 | - | .73 | 1.49 | - | 1.49 |
| <i>Irritatedness</i> | 1 - 4 | .86 | - | .82 | 2.03 | - | 2.10 |

* Scale consists of 1 item.

- Not measured at this point in time.

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