

ARI Research Note 90-19



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# **The Army Family Research Program: First Meeting of the Scientific Advisory Committee**

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University of Maryland

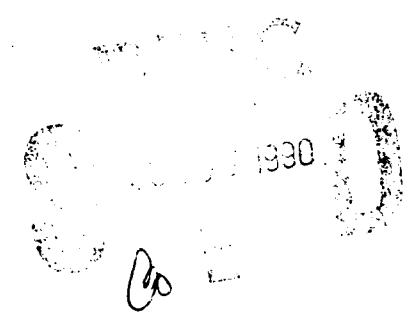
for

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D. Bruce Bell**

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**Manpower and Personnel Research Laboratory  
Paul A. Gade, Acting Director**

**April 1990**



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THE ARMY FAMILY RESEARCH PROGRAM: FIRST MEETING OF THE  
SCIENTIFIC ADVISORY COMMITTEE

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December 1, 1987

MEMORANDUM

TO: Paul Gade  
ARI Technical Monitor  
Army Family Research Program (AFRP) and  
AFRP Researchers via Al Cruze, Project Director

FROM: Mady Wechsler Segal  
Chair, Scientific Advisory Committee (SAC)

SUBJECT: First Meeting of the SAC, September 14-16, 1987

This is a report of the first meeting of the Scientific Advisory Committee. Since this is the first report from the SAC, it serves to establish the charge to the committee and the ground rules for operation. Therefore, I have included in this report our understanding of our charge and some of the operating procedures we will use, as well as our initial feedback on the planned research.

The following members of the SAC were present for all or part of the meeting:

Philip Bobko	Charles C. Moskos
Ellen Galinsky	Walter R. Schumm
George Levinger	Mady W. Segal
Janice Fanning Madden	

Richard A. Berk and William H. Mobley were not able to attend but provided written comments to the plan.

THE ARMY FAMILY RESEARCH PROGRAM: FIRST MEETING  
OF THE SCIENTIFIC ADVISORY COMMITTEE

I. CHARGE TO THE SAC (INCLUDING GROUND RULES AND ORGANIZATIONAL CLIMATE)

During the meeting, several ARI staff members spoke about the charge to the Committee and about the background and Army environment for the research. We heard from Ed Johnson, Technical Director; N. Kent Eaton, Chief, Manpower and Personnel Laboratory; Paul Gade, Chief, Personnel Utilization Technical Area, and Technical Monitor for the AFRP.

The SAC's role is to provide expert, informed judgment regarding the technical and scientific merits of the research being performed. SAC members serve as advisors to ARI (the Technical Monitor and the Task Scientists) and to contract researchers performing the work (especially the Principal Scientist and Task Leaders).

The SAC reports to ARI. Thus, any advice given to the AFRP staff, either by the SAC as a whole or by individual members, should be documented in writing and reported to ARI. (The administrative procedures for doing this are noted below.)

In the planning and execution of the research, there will be compromises between scientific purity and timely applicability to Army policies. The SAC is to stay anchored in the technical aspects of the research. However, it is necessary to consider the organizational climate regarding the research in order to understand what is feasible.

Many important Army agencies and leaders are interested in families of Army personnel only to the extent that families have impacts on Army readiness, including via the retention of qualified soldiers. It is required that the research yield timely, usable products, including policy recommendations (and estimates of what implementation of the recommendations will produce). The emphasis is on objective, measurable outcomes - in terms that operational Army leaders understand as important.

The SAC is being asked not only to review research after it has been conducted, but even more importantly to critique plans for research. It is especially important for us to critique plans in advance and to provide advice regarding improvements. If the project is in accordance with our judgments, we may at times be asked to serve as technical advocates.

There will be times when the SAC has access to data that have not been edited, cleared, or released. When we are informed that we have been given access to such information, we must recognize that it is privileged and must not release it.

The SAC should ask for any information we feel we need in order to accomplish our task.

Regarding administrative procedures: we need to document in writing for ARI any advice given regarding the project. This can be done by sending me a copy and I will copy it and pass it on to Paul Gade. Alternatively, a copy can be sent to Al Cruze; ask him to send a copy to me and one to Paul Gade. The latter may be the most efficient way to proceed.

For future meetings, materials will be sent to each of us in advance. Anyone who expects not to be able to attend the meeting will try to send me comments on the materials in advance of the meeting, if possible (or as soon thereafter as possible).

After each meeting, I will prepare a draft report. I will send it to Al Cruze at RTI. He will send a copy to each SAC member and ask that comments be sent to me. I will incorporate those comments into the revised report as much as possible. For some specific comments made by individual SAC members, I may duplicate them and send them along with the report. Three members' comments are included as attachments to this report because they should be extremely useful to the project team and would have been difficult and time-consuming to incorporate into the body of the report.

Our next meeting is being planned for January 1988. (SAC members will inform Al Cruze's office of their schedule of availability in January.)

At this time, the SAC would like to know how feedback will be provided to us regarding what happens to the advice we give.

## II. CRITIQUE OF THE DRAFT OF THE FIVE-YEAR RESEARCH PLAN

### A. Overall Critique

Our overall reaction is that this is a very valuable project. It is important and it is ambitious.

Even if there are places where the research fails to demonstrate an effect, having that knowledge is preferable to having no knowledge at all.

These issues have not been previously addressed empirically in a systematic, integrative way before. (Therefore, it will not be surprising if time is needed to develop the specifics of the plan.)

It is important that the project is being conducted as a whole, with attention to the integration of various pieces, rather than having separate pieces being conceived as separate projects being conducted under separate contracts. However, that is what makes this work so ambitious and why careful attention must be paid at the beginning to the way the pieces fit together.

We want to emphasize that all of the criticisms we make below must be read with the understanding that the Committee's overall appraisal of the project plans is highly favorable. A great deal of thought by very talented and knowledgeable scientists has gone into this project.

Further, we recognize that our comments are extensive. We sympathize with the researchers whose task it is to incorporate them. Perhaps the most important task for the project team is to clarify its major priorities.

### B. Breadth, Depth, Integration, and Priorities

The research needs to focus more. There is some diffusion of research questions. Pieces of the project are being pulled away from some of the main purposes and research questions in ways that will be difficult to integrate because they require different conceptual apparatus and different methodologies than the main thrust.

We recommend that mechanisms be set up for making judgments regarding priorities among research components. These would involve both carefully constructed criteria as well as coordination among members of the project staff.

We recommend that additional projects not be added to the research plan. (The exception to this would be the occurrence of an unforeseen critical event relevant to important Army family issues. Also, the design should be flexible enough that serendipitous insights can be added to the design as the study evolves.) There are already many distinct projects. Indeed, we believe that several of the projects in the plan can be deleted with considerable gain in focus and ability to concentrate resources in more productive directions. While we do not feel it is appropriately our task to determine the Army's priorities, we do think that on scientific and technical grounds alone, some thrusts can be given low priority. For example, the potential extension of the project to include DA civilians and

their spouses or to include families of reserve personnel would require attention to different scientific literature, different conceptual frameworks, and different methodologies - and, therefore, should be avoided.

#### C. Specification of the Research Questions

The conceptual model presented in the plan is not a theory. Further, each box is not a variable, but rather is a cluster of variables. There needs to be another level of specification before there can be any testing.

Without the additional specification, there is the danger that the results of the work will be only descriptive, not analytic.

Using the model, specific hypotheses to be tested (or at least possible relationships to be examined) should be derived. These hypotheses (or research questions) should identify specific Army policies, practices, and programs whose impact is being tested. There needs to be clear specification of which relationships between variables are to be tested, with the variables clearly defined (including the specific policies or programs to be analyzed with specific other variables).

With regard to policy and program impact, once the conceptual and measurement designs are formulated, it may be useful to develop a matrix of hypotheses and analyses by potential impact on policy and program areas. This step may help further focus the conceptual and analytic models so as to be maximally useful to the user community.

In identifying Army policies, practices, and programs whose impact is being studied, the design should not be so specific as to close off the possibilities of discovering which ones matter for family strength, satisfaction, readiness, retention, etc. That is, the hypotheses can identify potential policy areas and specific policies, but should not put on blinders too early and thereby miss important insights that should come from the research.

Derivation of important hypotheses or questions must be based on theory and prior knowledge (including previous research). Certainly, the results of the projects labelled in the plan as "developmental activities" should be used here.

#### D. Perspectives Needed

The nature of the research questions regarding Army families clearly requires an interdisciplinary perspective. Both in deriving hypotheses (and research questions) and in setting priorities among them, there is knowledge that must be brought to bear. Some important perspectives need more attention than they appear to be getting. In order to understand the Army-family system, especially as it is likely to be characterized in the future, requires consideration of the changing nature of military organization and macro-societal trends affecting military personnel. Important issues to consider include: the nature of the military institution, the relationship of the military to the rest of society, changing military technology and personnel requirements, demographic trends, and changes in the U.S. in families and in gender roles.

We suggest the following sources for the researchers to consider. On the macro organizational changes in the Army which impact upon family issues, a good starting place is Segal's article, "The Military and the Family as Greedy Institutions." They should also look at Hamilton I. McCubbin, et al., Families in the Military System (Sage, 1976), especially the article by Finlayson on the Officer Wife. On general change, they may as well look at the institution to occupation thesis. See Moskos' 1977 and 1986 articles in Armed Forces & Society (a reprint of the later article has been sent to RTI). Also, a selective reading of David R. Segal and H. Wallace Sinaiko, ed., Life in the Rank and File would be advisable, especially the chapters by Moskos and by M. Segal.

#### E. Data Collection Strategy Decisions

Questions were raised at the meeting regarding the need for specific research methodologies, most notably whether it would be necessary to use a longitudinal design for the survey. The consensus on the Committee is that once the important questions are delineated, data needs and analysis decisions should be derived from these. This includes the question of the uses of a longitudinal data collection design.

There were some written comments during the meeting on the tradeoffs between collecting longitudinal data on individuals/units versus collecting more extensive cross-sectional data, including retrospective histories. An advantage of retrospective histories is that you can follow a significantly longer time period which permits analysis of family life cycle, Army career cycle, spouse's job history, and fertility child spacing. A disadvantage of retrospective histories is that the sample is censored: we have only survivors and no data on leavers. A longitudinal survey has the advantage of not censoring and of permitting analysis of retention; it has the disadvantage of being costly.

More serious methodological concerns were raised in written comments from several SAC members following the meeting. The most critical come from our methodological expert, Dick Berk. These are included in their entirety as Attachment 3. Other concerns, including those which reinforce Berk's, are contained in the following four paragraphs.

The questionnaires and interview processes will be obtrusive measures to the extent they encourage participants to engage in introspection and more "rational" decision processes. Some control group demographic and criteria comparisons may be useful to assess the effects of the obtrusive measures.

With regard to longitudinal data, the completeness of T-2 measures, both independent and dependent variables, is crucial to the success of the study. Significant loss of sample or method variance will be problematic if the T-2 procedures are not carefully planned. Pages 111-112 raises several troublesome questions.

If T1 and T2 are done in survey form, it is critical to assess intervening events between the two times carefully lest one conclude that some change at T2 is due to event A when it was actually due to some unmeasured event B.

Conducting panel followups is likely to be an unsuccessful and economically expensive undertaking. Not only is the time rather short (both for the conduct of the research and its analysis), the attrition a nagging likelihood, and the statistical causal modeling of dubious usefulness (see Bobko's concerns, his pp. 5-6, as well as Berk's, his page 2), but there is also concern about the likely reactivity of research participants' responses—with Time 1 responses probably influencing those of Time 2. In other words, those concerns should be addressed before a final decision is made about that aspect of the research.

We do not have consensus on the Committee as to the balance between the advantages and disadvantages of longitudinal data collection. Despite the concerns noted above, some of us still believe that the longitudinal design, while costly, time-consuming, and fraught with methodological problems which must be addressed, is worthwhile because of the potential gains in understanding the dynamics of family and other influences on retention and readiness.

#### F. Qualitative Methods

We are impressed with many aspects of the plan, including the incorporation of both quantitative and qualitative approaches. Both types of perspectives and methods are necessary to fully understand the processes involved in the system of interaction between the Army and the families of its personnel. We applaud the use of in-depth interviewing.

The capacity for the interplay between quantitative and qualitative results is excellent.

Some sources we recommend on qualitative methodology are: William J. Filstead, ed., Qualitative Methodology (Markham, 1970); John Van Maanen, ed., Qualitative Methodology (Sage, 1983); and Michale Quinn Patton, Qualitative Evaluation Methods (Sage, 1980).

#### G. Attention to Curvilinear and Interaction Effects

It is important for the research to be planned with attention to testing for curvilinear relationships and interaction effects among the variables. Indeed, some specific expectations for such relationships and effects can be derived from theoretical views and from previous empirical research.

For example, it could well be expected that the relationship between family strength and retention is curvilinear. Some of the weakest families may be forced out of the Army because of the problems they cause. Some of the strongest families may leave because of the difficulty of maintaining a strong family within the military.

#### H. The Conceptual Model

Reciprocal effects need to be addressed.

There are some problems with the general way in which the model is now presented that, hopefully, will be clarified with the derivation of specific hypotheses. One important concern is the model's connection

between satisfaction and readiness. Research on organizational behavior shows that satisfaction does predict turnover (retention in the model), but does not predict performance in any simple way. Be wary of expecting certain components of readiness to be affected by satisfaction when there is no reason to expect a relationship. (This comment is related to a comment below on readiness measurement, but is here because of its implication for the presentation of the conceptual model.)

As noted on pages 19 and 22, choice behavior is a function of comparisons between the current status and alternative situations. However, analysis of choice behavior also must capture individual assessment of expected future career in the military relative to civilian alternatives. It can be argued that future expectations rather than current assessments are the stronger influence on choice behavior. Thus, e.g. on page 22, "comparative satisfaction" should be complemented with "comparative future satisfaction" as integrative predictive constructs.

#### I. Integration of the Research Plan - and Later the Results

The Committee is concerned that the research plan is disjointed. It needs to be better presented. We recognize the difficulty of integrating such a large set of pieces and coordinating the activities of so many researchers. However, we feel attention should be addressed to this problem now.

Some of the difficulty in presenting the plan in a coherent way may be due to the problem of integrating the task structure with the conceptual model and the data collection components. The four tasks each correspond to a box in the conceptual model. It appears that the emphasis now is on developing the constructs within each task and in determining appropriate measurement technologies. This may be appropriate at this stage in the research. However, it is likely that continuation of this organization later will interfere with integration of questions and results. The links between and among the constructs in the model will become increasingly important; indeed, they are the focus of the research. Perhaps the further specification referred to in section C above can be used to guide the integration - and a better presentation of the plan.

In the interests of integration in the research plan and the results, we recommend various forms of attention to Task 5, such as allocating meeting time to it and appointing advisors to it.

#### J. Time to Complete the Research

We are concerned that the six months at the end of the project allotted for analysis of the second wave of the longitudinal survey is not sufficient.

#### K. Issues Regarding Family Strength

Given the large number of variables to be included in the survey, it is important to develop brief but valid measures.

One suggestion regarding demographic information to be gathered is to ask about the military background of family members (because of potential influence on variables in the model).

The values of the individual are important in determining what constitutes family strength and in what context.

The relationship between family strength and retention is relevant not only for married soldiers, but for single ones as well. Single soldiers should be studied to determine the degree to which their existing non-marital relationships affect their career decisions. Further, single soldiers' career decisions may be affected not only by their current relationships, but also by their perceptions of the effects of Army policies on the possibilities for combining an Army career with a desirable family life.

A variety of specific self-report measures of family strength are recommended for consideration. Schumm recommends measuring the following concepts (items are included in separate comments) with priority to those marked with an (\*):

- (\*) Marital social desirability
- (\*) Marital stability in addition to brief measures of marital satisfaction
  - Daily hassles (to measure stress)
- (\*) Length of courtship before decision to marry current spouse
- (\*) Work/family role strain
- (\*) Legitimacy of Army demands on family members
  - Congruence
  - Positive regard
  - Locus of control
  - Depressive affect
  - Premarital counseling factors (from Army or non-military sources)
- (\*) Intentions to enlist in the USAR if leaving active duty (retention for deployment/mobilization even if off active duty)
  - Attitudes towards possible future Army family policy changes
- (\*) Boundary ambiguity of military member (issue of when, how often military member can be counted on to be with the family)
- (\*) Active family religious orientation (using religion to solve family problems in creative ways)
- (\*) Army/family fit factors
- (\*) Aversive communication/nagging about work/family conflicts
- (\*) Family life satisfaction/parental satisfaction
  - Discussion, time together measures

See also Attachment 2 (part 1) for detailed suggestions.

#### L. Issues Regarding Retention

The relationship between family factors and retention of reserve personnel is likely to be very different from active duty personnel. The relationship is likely to involve different processes and different factors; it certainly involves different populations. (As indicated above, one suggestion of a way to focus the research better is to remove the reserves from consideration on this project.)

The two studies of retention decision-making processes that are planned (in-depth family study and key MOS study) can be integrated by just selecting people from different MOSs.

Questions were raised at the meeting regarding the use of the term "key" to refer to MOSs. What criteria determine the inclusion of specific MOSs?

Retention decisions for officers are different from those for enlisted personnel. There are different incentives, compulsions, etc. (One way to focus the study would be to concentrate on enlisted personnel, though we do not recommend eliminating officers from consideration.) There should be no problem with developing and estimating the model separately for officers and enlisted personnel (or for other categorical breakdowns, such as special skill areas).

The operationalization of retention needs to be clarified. Is it being seen as a dichotomy of retained versus not retained (e.g., reenlistment versus separation)? If someone is retained but disaffected, does that get included with readiness rather than retention? Is the same true of such behaviors as refusal of command?

Further possible taxonomies for operationalizing "retention" need to be considered. Will we measure "intention to re-enlist" or "intention to leave" (these will result in non-isomorphic responses)? Are two people who re-enlist after their first tour twice as good as one very experienced person who re-enlists after five tours (note: the Navy's RAND model may make use of these distinctions)? Is a person who goes AWOL counted equally with a person who does not re-enlist? Will someone who is barred from re-enlistment (for failing to meet Army standards) be counted equally with someone who meets standards but chooses not to re-enlist?

See also Attachment 1 (especially parts 3, 10, 11, etc.)

The research should address the relative importance of specific factors in their impact on retention for specific kinds of people. It should not just compare family with non-family factors.

It is critical to evaluate retention not only in terms of active duty versus "getting out" but in terms of what the member does once off active duty. If those leaving active duty join the active reserve or the IRR, they still remain trained and deployable to some extent and are less of a loss to the total Army than if the soldier leaves the system entirely (reduced losses in training spent on the soldier and whoever must replace him, including recruitment costs).

Soldier perceptions of how many key supervisors asked him to stay may help capture the curvilinear effects associated with retention (i.e., if few senior personnel sincerely ask the soldier to stay or if they discourage soldier's retention, that may reflect situation in which retention would be undesirable for the Army).

Another way to measure the value of a soldier for retention would be the ratio of rank to years of service; Army might be less interested in retaining soldiers with low ratios.

The researchers may want to consider the Fishbein-Ajzen model for predicting retention, perhaps with a focus on individuals with 4 to 7 and 18 to 20 years of service as critical time spans for making retention decisions.

See also Attachment 2 (part 2)

Mobley notes have having participated in a major longitudinal study in the Marine Corps has made him particularly sensitive to the importance of advance attention to criterion definitions and tracking. Since readiness and retention are multidimensional and can be assessed at both the individual and unit levels of analysis, care must be taken to specify the operational definitions of readiness and retention at both the individual and unit levels of analysis: to assure in advance repeated accessibility to appropriate criterion data; mechanisms to track criterion data over time; an ability to efficiently match individual and unit criterion data with the various independent variable data over time; and to develop appropriate statistical models for individual and unit levels of analyses.

#### M. Issues Regarding Readiness

It is important that care be taken in developing measures of readiness that are appropriate to this project. While it is obviously of great benefit to be able to use measures that have already been developed and for which there are data available, there is also a real danger involved. For some of the existing measures, there is no basis, either in applicable theoretical perspectives or in previous research, to expect that family strength or family satisfaction would have an effect. Measures of readiness to be used in this research should be chosen because of the hypothesized influences of family factors on them. (Of course, they need to be credible and important dimensions of readiness.)

The model proposed in the research plan clearly contains a constellation of satisfaction variables/constructs as predictors of retention and performance. As noted earlier, the connection to retention is much more readily substantiated than the connection to other performance indices. Here's another (hopefully constructive) way for thinking about these issues. Project A's criterion space includes five factors: MOS-specific technical knowledge, Army-wide knowledge, effort and leadership, personal discipline, and military bearing. It would be critical to think about how family issues would impact on each of these dimensions separately (as well as how they would impact on retention). I/O theory would certainly predict substantial differential impact. Further, the definition of individual readiness might include some weighted combination of these factors. To the extent that one factor gets more weight than the other factors, the predictability of "readiness" could disappear (or reappear!).

See also Attachment 1 (especially parts 1, 2, 4)

One Committee member offers an alternative strategy for dealing with the possible relationships (or lack thereof) between satisfaction variables and retention/readiness. Janice Madden comments as follows in the next paragraph:

The planned use of "satisfaction" measures and "family strength" measures troubles me. I am concerned that these subjective measures which are problematic both in predicting readiness and/or retention and in obtaining empirical measures will demand a lot of the project's resources (especially precious interview/data collection time) and will not correlate with retention or "objectively" measure readiness. However, the real reason we worry about these satisfaction measures is that, in spite of the "weakness" of statistical connections to objective measures of readiness, we believe a satisfied soldier is a better one -- i.e. a ready one. Therefore, why not interact satisfaction measures and retention as the dependent variable, rather than use satisfaction as an independent (or explanatory) variable. So, for example, we have four (or more depending on categories of subjective measures) behavioral outcomes: (1) satisfied and retained; (2) unsatisfied and retained; (3) satisfied and departed; (4) unsatisfied and departed. If an unsatisfied soldier is a poor one, we want to maximize the proportion in category (1) relative to all other categories. We are especially interested in making category (2) people "satisfied" and category (3) people "retained."

More direct measures of unit readiness are needed. (These do not have to be gathered on all units selected for study, but can be done on a subsample.) These could include, for example, AWOL rates. Ethnographic studies are needed to complement the quantitative, existing measures.

The definition of unit readiness appears on page 33 of the research plan. Unfortunately, the definition of "unit" is not addressed. Attention needs to be paid to when unit means "platoon," when it means "company," etc.

The preliminary workshops that are planned in Task 3 will be critical in uncovering aspects of "individual readiness" that are not covered in existing measures of soldiers' individual performance. This is even more critical when attention shifts to "unit readiness."

Individual readiness should include subjective measures, such as attitudes regarding deployment. It is not sufficient to include cognitive measures of performance.

Connections between family factors in readiness and Army policies and programs need to be made clear.

The literature on the relationship between corporate relocation and family issues should be reviewed.

Unit readiness as perceived by the soldier is important, particularly as a check on invalidity in official reports. Furthermore, readiness is not an isolated factor but depends on the type of war the unit might be involved in. A unit might be "ready" for Nicaragua but not Central Europe or vice versa. Even if official reports indicate a unit is ready, if most unit members feel otherwise there are surely some implications for readiness.

Another aspect of unit readiness from a leader's point of view is the amount of time lost dealing with non-operational matters, particularly counseling about problems stemming from drug abuse, alcohol abuse, or

family problems. Even if a unit is technically ready, if its leaders are spending 20% of their time on family problems rather than further developing their tactical skills, readiness is being reduced compared to what it might be.

See also Attachment 2 (part 3)

Efforts should be made to communicate with researchers currently studying Army unit cohesion (including its relationship to family factors). There are several projects ongoing at WRAIR (Department of Military Psychiatry). Two contact people to discuss that research are LTC Larry Ingraham and LTC Paul Furukawa.

#### N. Issues Regarding Spouse Employment

How is spouse employment being defined? It should include more than just whether or not the spouse is employed. Consideration should be given to extent of employed hours (compared to desired hours), status and pay of job compared to qualifications (such as education), benefits, and other conditions of employment.

In describing potential policies and programs regarding spouse employment, it is important to include the evaluation criteria to be used in judging effectiveness.

In collecting information on spouse employment, it is important to identify spouses of active duty soldiers who are themselves Army reservists.

Spouse employment may be a more salient issue for certain combinations of family income levels and children's ages. (For example, see Attachment 2, page 4.)

#### O. Other Issues Regarding the Research Plan

How will the anonymity of survey respondents be protected? How will they be assured of this?

The research plan notes that the results of various data collection efforts (such as focus groups) will be "content analyzed." How will this be done?

Who will be followed up for the second wave of the longitudinal survey? What about soldiers who have left the Army? What about soldiers who are still in the Army, but who are separated or divorced from their spouse? Will separation or divorce since the first wave at least be measured? What mechanisms will be used to distinguish those first wave respondents who have left the Army by the second wave from those who are still in the Army, but cannot be located?

When the research plan refers to "leaders" and "leadership," it is important to specify the leadership level that is being considered. Distinctions should be made between unit leaders (with the unit level specified), post leaders, and major command leaders. What is meant by "post leadership conditions?" Do families actually experience installation

effects - or are they more likely to be affected by unit leaders' behavior? Are some families more affected by specific installation characteristics than others? What kinds of families?

How will qualitative data be presented?

In the comparison between high-satisfaction and low-satisfaction units, discriminant analysis may be appropriate and useful.

There are some problems with the concepts and methods in the "family service records review." Is it a negative behavior for a family to use services such as medical care and legal services (e.g., to prepare wills)? It is likely that routine, preventive use of such services, rather than detracting from readiness, actually enhances it. If the intent is to locate families with problems which drain the system's resources, then the focus should be on problems, not mere service utilization.

In discussions of programs (e.g., page 136 of the Research Plan), it is not clear what kinds of "programs" will be emphasized. The general need for specification of Army policies, programs, and practices is noted above. The need to be specific is evident here. Programs are diverse; they include recreational activities (such as softball and bowling) as well as such services as the availability of child care. Policies and practices include such diverse phenomena as long hours, frequent field duty, housing eligibility and waiting time, little individual control over geographical area of residence, time off from work for family activities, and perhaps even attitudes toward families and social climates in units.

It would be a good idea for chaplains to be involved in the project. They are major service providers in the area of family life education, and premarital and marital counseling. They might well have important ideas to contribute to model building and specification of variables.

Somewhere along the line, the project has to get basic marital data and not rely just on surveys. These data (more or less routinely available) should be by rank and sex. The dependent variable is marital status, i.e. single, married, divorced, separated, widowed, service spouse. The project should not lose sight of single soldiers (who while they may have their own problems, don't have family conflicts with the Army).

It is important for the research plan to include a sense of what the form of the data will be. That is, indications should be given regarding what the data will look like, how they will be analyzed, and how they will be presented. As one specific example, how will informal support networks be analyzed (page 149)?

See also Attachment 2 (part 5).

Attachment 1

Detailed Comments from Philip Bobko on the Research Plan

## Attachment 1

### The overall plan

1. Probably the biggest concern I have with the main focus of the project is that it attempts to demonstrate that a constellation of family issues (mostly surrounding satisfaction with spousal support, career buffering, etc.) will be predictive of a constellation of Army-relevant outcome measures. These outcome measures include both indices of turnover, re-enlistment, individual readiness, and unit readiness. Further, the model (see Exhibit 1, p. 48) involves some social comparisons (i.e., some form of equity comparison) -- implying a processual model of satisfaction.

My point is that the research plan provides a model of satisfaction as well as a constellation of satisfaction and/or attitudinal predictors. However, the I/O psychology literature is quite clear in one regard: satisfaction does not necessarily predict performance in any straightforward fashion (if at all). The same literature is also quite clear: satisfaction is likely to predict turnover/retention.

I think some stricter attention needs to be paid to this literature. That is, it would be expected that Army retention can be predicted. However, there is no a priori reason why individual or unit readiness will be predicted by the same "satisfaction" constructs. (I do see how retention can impact readiness, but not the direct causal effect of satisfaction on readiness.) This more focused attention would help generate clearer expectations about when relationships would emerge and when they wouldn't. Also, it

would avoid the current confusion of lumping together "retention" and "readiness" every time the research plan makes a prediction (e.g., on page 7, top, the global statements are about job performance, yet the specific operationalizations are focused solely on "early returns from overseas", "attentiveness", "morale").

2. Here's a shorter way of perhaps saying the same thing. Project A's criterion space includes five "factors": MOS-specific technical knowledge and proficiency, army-wide knowledge and proficiency, effort and leadership, personal discipline, and military bearing. It would be critical to think how family issues would impact on each of these separately (as well as how they would impact on retention). I think that I/O theory would predict substantial differential impact (e.g., little relation to MOS-specific performance; perhaps greater relation to military bearing). Further, the definition of individual readiness (by Task 3), will probably include a weighted combination of these performance factors. To the extent that one factor gets more weight (than the other factors) in the readiness definition, the predictability of "readiness" could disappear (or reappear). Thus, early attention to the component-wise relationships would be crucial.

3. The definition of "retention", on page 31, is "the service member's intention and actual decision to re-enlist or remain in the military". It seems to me that more careful attention to the measurement and definition of "retention" would be useful. For example,

(a) the framing literature indicates that a question using the phrase "intention to re-enlist" will not give the same information as a question phrased using "intention to leave" (i.e., the relationship between these two items will not be negatively linear). In which frame will this project ask the question?

(b) Are two people who re-enlist after their first tour twice as good as one very experienced person who re-enlists after 5 tours? (note: the Navy's RAND model uses such distinctions, I think).

(c) What's the difference between someone who goes AWOL and someone who does not re-enlist? Are these persons counted equally in the measurement process?

(d) Will someone who is barred from re-enlistment (for failing to meet Army standards) be counted "equally" with someone who meets standards but chooses not to re-enlist (i.e., the distinction between "voluntary" and "involuntary" turnover)? (More perversely, what if someone intends to reenlist, yet is barred from reenlistment? How will this person be coded in the retention measure?)

4. The definition of unit readiness appears on page 33. Unfortunately, the definition of "unit" is not addressed. I'm not sure what to suggest here, but someone needs to note when unit means "platoon", when it means "company", etc.

5. This may be a comment based on my ignorance (and probably is!), but on page 37, the statement is made that Project A has

data on "member and spouse commitment to Army life..." Does Project A really have this data for spouses?

6. This comment concerns the amount of time allocated to questionnaire responses (see pages 95-96). As I read the plan, the average completion time for the questionnaire is 50 minutes (with a questionnaire which uses all forced-choice scales). Further, it appears that the questionnaire will include measures of family structure, individual demographics, Army history, knowledge/attitudes/behavior with respect to Army unit/family/community, family wellness questions, measures of individual readiness, supervisory ratings (as a supplement), etc. (see Exhibit 7). The 50 minute time allocation is simply not sufficient. For example, the Task 3 contractor representative estimated that individual readiness measures alone will require 65 minutes for completion (in addition to all the "family"-related measures and in addition to existing Project A measures) and unit readiness measures will require another 65 minutes. Further, it just doesn't seem possible that all the "family-related measures", including those from the sub-projects, can be reliably measured in a 50 minute period (the requirements of the readiness measurement not withstanding). Finally, given the difficulty and expense of developing valid forced-choice items (see any textbook), I think the statement that "all response sets are forced-choiced" is unrealistic (this type of item doesn't really make much sense for some of the performance measures anyway).

7. On page 114, it is stated that "the main focus of the unit-level analysis will be the evaluation of the effect of family factors and family program availability on unit readiness." Why should such an effect occur? That is, besides the concern noted above (regarding satisfaction-performance relationships) will there be variation (naturally occurring or otherwise) from one "unit" to another on family factors or program availability? If, on the average, there is no difference, then relationships across units will not emerge. If there is a difference in program availability, is it because some units (e.g., combat units) have higher priorities for such programs? If so, then any unit results are confounded with type of unit. These issues need to be thought through (and are related to the previous concern about definitions of units and appropriate typologies of units).

8. The basic longitudinal design is a cross-lagged panel design (see page 115). The researchers should remind themselves that cross-lagged correlational analyses have come under severe criticism in the recent literature. For example, a widely regarded review article of this technique appears in Psychological Bulletin, Sept., 1980. The author, David Rogosa, makes some pretty strong statements for an academic journal: "Cross-lagged correlation is not a useful procedure for the analysis of longitudinal data" (p.245); "No justification was found for the use of cross-lagged correlations" (p. 257). The use of a longitudinal design is commendable and would appear to be quite useful in unpacking dynamic processes. All that is implied

here is an awareness of potential criticisms if cross-lagged correlations are used as an analytic device.

9. Regarding the notion of whether to "keep the officers" or not, I would like to reaffirm my hope that this group is kept in the analysis -- they are a critical component of the definition of unit readiness (e.g., a leader/supervisor/manager can have a substantial effect on group performance).

### Task 3

10. As I noted at the meeting, Task 3 has a multi-method, multi-component approach to the definition of individual and unit readiness. This is fine. However, one of the components in both individual and unit readiness was labeled "morale/job satisfaction". Now, it seems to me that in the model discussed earlier, job satisfaction (as a derivative of the social comparison process) is a predictor or mediator of performance. If you include satisfaction in the outcome measure (e.g., in a readiness measure) you are "building in" a relationship between predictors and criteria which is tautological and not useful. Upon further discussion with the Task 3 folk, it became clear that this component, as envisioned in the performance domain, was really an expectation about soldiers' morale and willingness to fight. The suggestion is to therefore use some version of Project A's "combat probability scale" for this component of readiness.

11. Since Task 3 is heavily measurement oriented, the preliminary workshops that are planned will be critical in uncovering aspects of "individual readiness" that are not covered in existing measures of soldiers' individual performance. This is

even more critical when attention shifts to "unit readiness". This is not a critique at all - just a reaffirmation of the need for care in these workshops (although, as in comment #4, the definition of a "unit" needs better explication).

12. Again, because of the measurement focus of Task 3, it might be fruitful for some formal coordination between the measures proposed in Task 3 and the intended measures of retention (see comment 3).

13. Regarding the Time 1/2 controversy and the measurement of unit readiness, it appears that there was no plan to measure unit readiness at Time 2. If the longitudinal design is kept, I would suggest that unit readiness be measured at Time 2, as well as at Time 1: any naturally occurring change in unit readiness could be modeled (in spite of the complexity of substantial changes in personnel) and the marginal cost of this measurement (given that individual readiness is being measured at Time 2) would be quite low.

14. Bob Sadacca shared with me in internal memoranda dated 9/10/87. On page 2 of that memo, he noted the importance of getting representative samples within each "unit" (so that aggregate readiness can be estimated with known statistical margins of error). I agree with the resultant recommendation -- to get stratified random samples of soldiers within sampled units (stratified by, perhaps, MOS and/or pay grade).

Attachment 2

Detailed Comments from Walter R. Schumm on the Research Plan

## Attachment 2

Comments on the Army Family Research Program  
Walter R. Schumm, 22 September 1987

### 1. Task 1 (Family Strengths/Wellness)

#### A. TR1 (Identification of Strong/Well Families)

(1) On page 13 of the Literature Review for Task 1, reference is made to measuring marital stability. It should be noted that marital stability and marital satisfaction can be combined to form a typology of four types of marriage, three of which are most common:

High satisfaction and high stability  
High satisfaction and low stability (infrequent)  
Low satisfaction and high stability  
Low satisfaction and low stability

To predict either satisfaction or stability alone from other variables means missing some of the information contained in the typology. I would expect that officers' wives with careers or enlisted mens' wives with good jobs would be more likely to divorce if they were in a low satisfaction, low stability marriage while unemployed wives would be more likely to remain in low satisfaction, high stability marriages.

Reference: Bugaighis, M. A., Schumm, W. R., Jurich, A. P., & Bollman, S. R.  
Factors associated with thoughts of marital separation.  
Journal of Divorce, 1985, 9(2), 49-59.

The above reference used a one item measure of instability, a frequency of having thought about separating during the previous year. A more recent scale has been cited in:

Booth, A., Johnson, D. R., White, L. K., & Edwards, J. H.  
Predicting divorce and permanent separation. Journal of Family Issues, 1985, 6, 331-346.

The above reference was also a longitudinal study with a three year time interval inbetween the surveys.

It should also be noted that in the Bugaighis study cited above, religiosity (one commonly cited family strength) led to both stability and happiness.

(2) Consider using a measure of daily hassles rather than the Minnesota FILE. In the NC 164 regional Agricultural Experiment Station project, we also found daily hassles to be a better predictor of key dependent variables, partly because the FILE we used elicited a lot of missing data. If FILE is used, one must be careful in analysis because there is a great deal of overlap between the raw events score and the perceived stressfulness of those events. That overlap or multicollinearity causes difficulties in regression analyses.

Also see Appendix A for the results of the NC 164 study in its attempt to use FILE (modified).

(3) One variable that might be useful is derived from the following study:

Grover, K. J., Russell, C. S., Schumm, W. R., & Paff-Bergen, L. A. Mate selection processes and marital satisfaction. Family Relations, 1985, 34, 383-386.

In that study of 51 wives from Manhattan, Kansas, it was observed that those who had known their current husbands for more than a year before making the decision to marry them were uniformly happy, while those who had known them a year or less were more varied in their satisfaction -- some high, some very low. It might be worthwhile to check this finding out, since it would have screening implications for Army chaplains or social workers doing premarital education or preparation. It might be a way of identifying strong families early on. The item used was a single item question.

(4) In an unpublished study to be reported at NCFR this fall, it was found that job role strain predicted parental anxiety about spending time with children and also that role strain predicted parental satisfaction. Since one of the key variables in this study is the conflict between Army and family life, the research team may want to modify some of the role strain questions to get at job stress and perhaps use the parental anxiety items to assess the family strength of time together/companionship. The Kansas parental satisfaction scale might also be used as a dependent variable. See Appendix B for the parental anxiety and role strain items. Appendix B also contains the parental satisfaction scale. References for the parental satisfaction scale include:

James, D., Kennedy, C. E., & Schumm, W. R. Changes in parental attitudes and practices following a religiously oriented parent education program. Family Perspective, 1986, 20(1), 45-59.

James, D. E., Schumm, W. R., Kennedy, C. E., Grigsby, C. C., Shectman, K. L., & Nichols, C. W. Characteristics of the Kansas Parental Satisfaction Scale among two samples of married parents. Psychological Reports, 1985, 57, 163-169.

(5) Field studies undertaken by the research team have noted that the Army wants spouses who don't bitch about Army life. Accordingly, it might be useful to include a brief "bitch" scale in the form of the "nag" or "aversive communication" subscale of the Marital Communication Inventory. The scale can be found in several places:

Eggeman, K., Moxley, V., & Schumm, W. R. Assessing spouses' perceptions of Gottman's temporal form in marital conflict. Psychological Reports, 1985, 57, 171-181.

Schumm, W. R., Anderson, S. A., Race, G. S., Morris, J. E., Griffin, C. L., McCutchen, M. B., & Benigas, J. E. Construct validity of the Marital Communication Inventory. Journal of Sex & Marital Therapy, 1983, 9, 153-162.

Schumm, W. R., Race, G. S., Morris, J. E., Anderson, S. A., Griffin, C. L., McCutchen, M. B., & Benigas, J. E. Dimensionality of the Marital Communication Inventory and marital conventionalization: a third report. Psychological Reports, 1981, 48, 163-171.

In an unpublished study of husbands it was found that aversive communication had a greater impact on husbands with high self-esteem than those with low self-esteem, probably because they felt they didn't deserve being treated with low respect. It is likely that Army husbands may likewise resent being treated at home the way they may get treated or not expect to be treated (if they are an officer) at work.

- (6) As noted by AFCS, the study should identify types of families in terms of numbers of children and types of children (living at home, not living at home, adopted, foster, step-children, etc.). Couples should be identified in terms of first marriage, remarriage, etc. Another interesting distinction would be to identify the couple's parents in terms of having been military, to test the notion that military brats can adapt to the military life more easily.
- (7) Marital social desirability was not mentioned in the research program. I would recommend including a short version of the Edmond's marital conventionalization scale (Appendix C) as a way of controlling for the internal validity of the family data. For an example of the use of such an abbreviated scale, see:

Anderson, S. A., Russell, C. S., & Schumm, W. R. Perceived marital quality and family life-cycle categories: a further analysis. Journal of Marriage and the Family, 1983, 45, 127-139.

Schumm, W. R., & Bugaighis, M. A. Marital quality over the marital career: alternative explanations. Journal of Marriage and the Family, 1986, 48, 165-168.

Note that Dr. Bowen (Caliber) has also used such an abbreviated version of the scale in his Chaplains study.

- (8) In the same studies cited in (7) above, time for discussion was found to be a key intervening variable between work related stressors and marital satisfaction. The time/discussion subscale from the Marital Communication Inventory is used in the Eggeman et al. reference cited in (5) above and is reproduced in Appendix D.
- (9) Dr. Segal's paper on conflicts between greedy institutions noted sources of dissatisfaction with Army life including lack of respect for spouse's independence, lack of freedom, resentment at being required to do things in off duty time, lip service (only) towards family demands, lack of fair treatment of enlisted personnel relative to officers. Army families may not want or like being tied up with Army requirements off-duty. Therefore, I propose a scale to measure perceived legitimacy of Army demands (see Appendix F) as one factor to predict Army/family fit.

- (10) I would recommend consideration of two scales, in addition to the parental satisfaction scale mentioned in (4), to measure satisfaction. The Kansas Family Life Satisfaction scale contains four items (see Appendix E) and has been published:

Schumm, W. R., McCollum, E. E., Bugaighis, M. A., Jurich, A. P., & Bollman, S. R. Characteristics of the Kansas Family Life Satisfaction Scale in a regional sample. Psychological Reports, 1986, 58, 975-980.

McCollum, E. E., Walter R. Schumm, & Russell, C. S. Reliability and Validity of the Kansas Family Satisfaction Scale in a predominately middle-aged sample. Submitted to Psychological Reports.

In the latter study, the KFLS scale was found to be correlated substantially with measures of emotional intimacy and not correlated with measures with which it had no theoretical relationship.

- (11) Locus of control was mentioned during the seminar as an important construct. It has been measured by Scanzoni, see the following reference:

Scanzoni, J., & Arnett, C. Enlarging the understanding of marital commitment via religious devoutness, gender role preferences, and locus of marital control. Journal of Family Issues, 1987, 8, 136-156.

A single item measure of locus of control has been used, that has correlated significantly with Rotter's overall scale and has been found to predict marital satisfaction. See:

Bugaighis, M. A., Schumm, W. R., Bollman, S. R., & Jurich, A. P. Locus of control and marital satisfaction. Journal of Psychology, 1983, 114, 275-279.

Bugaighis, M. A., & Schumm, W. R. Alternative measures of perceived locus of control. Psychological Reports, 1983, 52, 819-823.

- (12) The Kansas Marital Satisfaction Scale, used by Dr. Bowen (Caliber) in the chaplains study may be useful here. It contains only 3 items and has demonstrated reliability and concurrent validity with Spanier's much longer Dyadic Adjustment Scale. It also has correlated well with a variety of hypothesized concepts. See:

Anderson et al. and Schumm & Bugaighis as cited in (7)(page 3).

Barnes, H. L., Schumm, W. R., Jurich, A. P., & Bollman, S. R. Marital satisfaction: positive regard versus communications as explanatory variables. Journal of Social Psychology, 1984, 123, 71-78.

Shectman, K. L., Bergen, M. B., Schumm, W. R., & Bugaighis, M. A. Characteristics of the Kansas Marital Satisfaction Scale among female participants in community childbirth education classes. Psychological Reports, 1985, 56, 537-538.

- Schumm, W. R., Nichols, C. W., Shectman, K. L., & Grigsby, C. C. Characteristics of responses to the Kansas Marital Satisfaction Scale by a sample of 84 married mothers. Psychological Reports, 1983, 53, 567-572.
- Schumm, W. R., Scanlon, E. D., Crow, C. L., Green, D. H., & Buckler, D. L. Characteristics of the Kansas Marital Satisfaction Scale in a sample of 79 married couples. Psychological Reports, 1983, 53, 583-588.
- Mitchell, S. L., Newell, G. K., & Schumm, W. R. Test-retest reliability of the Kansas Marital Satisfaction Scale. Psychological Reports, 1983, 53, 545-546.
- Schumm, W. R., Hess, J. L., Bollman, S. R., & Jurich, A. P. Marital conventionalization revisited. Psychological Reports, 1981, 49, 607-615.
- Schumm, W. R., Milliken, G., Poresky, R. H., Bollman, S. R., & Jurich, A. P. Issues in the measurement of marital satisfaction in survey research. International Journal of Sociology of the Family, 1983, 13, 129-143.
- Grover, K. J., Paff-Bergen, L. A., Russell, C. S., & Schumm, W. R. The Kansas Marital Satisfaction Scale: a further brief report. Psychological Reports, 1984, 54, 629-630.
- Copeland, J. M., Bugaighis, M. A., & Schumm, W. R. Relationship characteristics of couples married thirty years or more. Journal of Alternative Lifestyles, 1984, 7, 107-114.
- Schumm, W. R., Anderson, S. A., Benigas, J. E., McCutchen, M. B., Griffin, C. L., Morris, J. E., & Race, G. S. Criterion-related validity of the Kansas Marital Satisfaction Scale. Psychological Reports, 1985, 56, 719-722.
- Grover, K. J., Russell, C. S., Schumm, W. R., & Paff-Bergen, L. A. Mate selection processes and marital satisfaction. Family Relations, 1985, 34, 383-386.
- Schumm, W. R., Jurich, A. P., Bollman, S. R., & Bugaighis, M. A. His and her marriage revisited. Journal of Family Issues, 1985, 6, 221-227.
- Schumm, W. R., Barnes, H. L., Bollman, S. R., Jurich, A. P., & Bugaighis, M. A. Self-disclosure and marital satisfaction revisited. Family Relations, 1986, 35, 241-247.
- Eggeman, K., Moxley, V., & Schumm, W. R. Assessing spouses' perceptions of Gottman's temporal form in marital conflict. Psychological Reports, 1985, 57, 171-181.
- Schumm, W. R., Paff-Bergen, L. A., Hatch, R. C., Obiorah, R. C., Copeland, J. M., Meens, L. D., & Bugaighis, M. A. Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale. Journal of Marriage and the Family, 1986, 48, 381-387.

Hatch, R. C., James, D. L., & Schumm, W. R. Spiritual intimacy and marital satisfaction. Family Relations, 1986, 35, 539-545.

Moxley, V., Eggeman, K., & Schumm, W. R. An evaluation of the "Recovery of Hope" program. Journal of Divorce, 1986, 10, 241-261.

- (14) It might be a good idea to consider measuring depressive affect. Two scales have been used for this, both presented with all items in the following papers:

Vega, W. A., Kolody, B., & Valle, J. R. The relationship of marital status, confident support, and depression among Mexican immigrant women. Journal of Marriage and the Family, 1986, 48, 597-605.

(uses the CES-D scale; see Appendix G).

Menaghan, E. G. Depressive affect and subsequent divorce. Journal of Family Issues, 1985, 6, 295-306.

(uses an abridged version of the Hopkins Symptom Checklist; see Appendix H).

Depressive affect would be a personal strengths measure or possibly one type of outcome measure.

- (15) The congruence subscale of the Barrett-Lennard Relationship Inventory might be a useful measure, particularly in combination with the same RI subscale of positive regard. See:

Schumm, W. R., Barnes, H. L., Bollman, S. R., Jurich, A. P., & Dugaighis, M. A. Self-disclosure and marital satisfaction revisited. Family Relations, 1986, 35, 241-247.

In that study it was found that the combination of low regard and low congruence was very strongly associated with low marital satisfaction.

Affective involvement is cited in the literature review; regard might be a good measure of that concept.

- (16) I think that a process item should be added to the religious orientation variables discussed in the literature review. It would tap the notion of depending on God in handling family conflict. It might read something like this:

family

We try to depend on God's guidance in the process of dealing with problems.

- (17) Priority in the Task 1 area should be development of brief but valid measures. If some measures cannot be used in the large data set, they might be used in some of the follow-up studies.
- (18) A typology of Army/family fit in exchange terms might be derived from the following items:

If I (my spouse) were to leave the Army upon my (his) ETS, our family life would (circle BEST answer):

- 1 IMPROVE GREATLY
- 2 IMPROVE SLIGHTLY
- 3 WOULD NOT CHANGE
- 4 WOULD GET SLIGHTLY WORSE
- 5 WOULD GET MUCH WORSE

If I (your spouse) were to stay in the Army for a career, our family life would (circle BEST answer):

same response categories

If I (your spouse) were to leave the active Army and join the Army Reserve or National Guard, our family life would (circle BEST answer):

same response categories

For singles, the questions would have to be modified to something like my chances for a good marriage.

- (19) Some possible items to use for measuring family strengths are included in Appendix I, as recommended for a study on family strengths in Nebraska.

B. TR 5 (Army family use of support mechanisms)

- (1) Segal (1986)(greedy institutions paper) discusses areas of improvement for Army families. I think some effort should be made to tap the sorts of improvements Army families would like, with the following sort of scale:

The Army is considering a variety of ways to provide improved living and working conditions. Some of these ideas are listed below. Please indicate how much you would like to see the Army implement each of the following ideas and how likely you think the Army is to do it: (Circle BEST answer)

- |                                |                                   |
|--------------------------------|-----------------------------------|
| 1 - Would like it a lot        | VL - very likely to be done       |
| 2 - Would like it a little     | SL - somewhat likely to be done   |
| 3 - no opinion either way      | UL - somewhat unlikely to be done |
| 4 - Slightly against the idea  | NL - not at all likely to be done |
| 5 - Very much against the idea |                                   |

Local unit commanders giving soldiers more time off after field exercises	1	2	3	4	5	VL	SL	UL	NL
Longer tours in each location	1	2	3	4	5	VL	SL	UL	NL

More assistance in helping spouses  
get good jobs

Expanded child care facilities

Expanded hours of operation for  
child care facilities

Higher quality child care in  
post child care facilities

Higher separation pay

Additional bonus pay for  
personnel in key, time-  
consuming leadership  
positions (e.g., platoon  
sergeant, first sergeant,  
company commander)

Parental leave with pay after  
having a baby.

Less discrimination in employment  
practices in on-post jobs for  
spouses

Education and job training  
services for spouses

A "cafeteria" approach to military  
benefits in which each soldier  
could decide which benefits he/she  
wanted to focus on

Reducing Army interference with  
off-duty time (e.g., mandatory  
social events, volunteering, etc.)

- (2) I think a secondary analysis should be made with the 1985 DoD study to predict satisfaction with family environment from the other variables, for different groups of couples, as has been done by Dr. Bowen in a paper in which he predicted satisfaction with Army life from satisfaction with family environment.
- (3) I think the AFCS or chaplains might consider as a product deliverable, a videotape for families in which families and professionals discuss down to earth Army/family fit issues; this could be used as a discussion starter in premarital counseling classes or family life education programs.
- (4) The chaplains currently have many premarital counseling programs in place, which are designed to get new Army families off to a good start. I think data would be useful to see how well that has been done. A checklist might be designed as follows:

Please check the following items that describe the sort of premarital preparation experience you had before marrying your present spouse: (Check as many as apply)

- ☐ Conducted by an Army chaplain (if they did not receive PMC, instructions will tell them to skip to next question)
- ☐ Conducted by a civilian pastor or rabbi
- ☐ Conducted by a chaplain or pastor whose religious views were similar to those of both myself and my spouse.
- ☐ Was mandatory (required) for us to be married
- ☐ Was voluntary but we were strongly encouraged to participate in it.
- ☐ Was voluntary, little pressure put on us to participate.
- ☐ Included at least one session after we were married
- ☐ Altogether, the experience involved more than 8 hours of our time.
- ☐ We were able to ask all the questions we wanted.
- ☐ The experience gave us a much better idea of what marriage is really like.
- ☐ We were very happy with the help we received.
- ☐ We were disappointed in what we learned (i.e. learned much less than you had hoped to)
- ☐ The pastor discussed possible Army/family conflicts in depth with us or chaplain
- ☐ The pastor/chaplain seemed well qualified to be doing premarital counseling.
- ☐ The pastor/chaplain met with us privately at least some of the time.
- ☐ At least some of the time, we met with other couples who were also participating in premarital counseling with our pastor/chaplain.
- ☐ The pastor/chaplain really helped us bring God into our relationship.
- ☐ We felt free to discuss almost anything about marriage with the pastor/chaplain.
- ☐ I can still remember quite clearly some of the things we learned from our premarital preparation with the chaplain/pastor.

- (20) Another issue of type of family is where one spouse is on active duty and the other is in the Reserves. I just counseled three wives who fell into that category this past weekend at my drill. Such a combination may facilitate empathy between spouses while not tying up both spouses with problems such as concurrent field duty, etc.
- (21) Another variable of interest might be boundary ambiguity as it pertains to the active duty member. Recently, a chaplain said that a former single parent said that marriage to an army man was more difficult than being a single parent because of the uncertainties involved in when he would be home, when he could be served meals, and his frequent absences away from family. It led to ambiguity about whether he was really a viable part of the family or not. Pauline Boss's scales might be adapted to this situation.

## 2. TASK 2 (Retention)

TR 7 (Relationship of Army practices to retention)

TR 9 (Characteristics of Army families that stay)

- (1) Since the total Army retains a soldier if he joins the Reserve Components after ETS from active duty, retention variables should include leaving active duty to join the USAR/ARNG or vice versa (leaving the USAR/ARNG to go active duty, which happens often).
- (2) Sometimes an individual leaves the Army simply because no one conveyed the impression that the Army really wanted him to stay. Therefore, I think a question should be included that taps the perception of the degree to which the Army wants him/her. For example,

Please indicate with a checkmark as many of the following individuals as have sincerely asked you to continue your active service past the date that you are currently scheduled to leave the Army:

- ☐ Unit retention counselor
- ☐ Unit first sergeant
- ☐ Unit commander
- ☐ Battalion commander
- ☐ At least one member in your unit not in the chain of command
- ☐ Your immediate supervisor (if not already listed above)
- ☐ Your spouse (or closest girlfriend if not married)
- ☐ Your mother
- ☐ Your father

What is the rank of the highest ranking person who has asked you to stay (fill in blank): \_\_\_\_\_.

Also might add Battalion Sergeant Major to the above list.

- (3) Retention may be a function of expected probabilities associated with family life; see item A18 in Task 1 section for items.
- (4) I think that depressive affect or anxiety may be a good proxy for psychological absence at work. See papers listed under item A14 in Task 1 section and also:  
  
Menaghan, E. G., & Lieberman, M. A. Changes in depression following divorce: a panel study. Journal of Marriage and the Family, 1986, 48, 319-328.
- (5) Check for curvilinear effects in your theory and later in the analysis. The Army may be retaining the middle ground, losing its best and worst soldiers in disproportionate ratios.
- (6) Recommend absenteeism and ratio of rank/years service as indicators useful for retention. The ratio of rank/years provides a rough indicator of how successful the soldier has been.

- (7) I think that critical periods of 4 to 7 or 18-20 should be checked with special interest since it is probably during those stages of a career that decisions about long term retention are being made.
- (8) I was surprised that the Fishbein model of behavioral intentions was not applied to the retention problem. Intent to reenlist could be the dependent variable predicted by beliefs of significant others times desire to comply with their beliefs and by subjective evaluation of positive and negative aspects of Army life times the probability of the consequences happening.

3. TASK 3 (Readiness)

- (1) I would suggest using the rank/years of service ratio as an index of job performance (at least in theory, the best personnel are supposed to be promoted). It is also very convenient to measure.
- (2) One unit level aspect of readiness could be ascertained by the following table:

In your unit, how many hours<sup>per month</sup>, on average, have you spent dealing with soldier problems associated with the following issues:

alcohol abuse

\_\_\_\_\_ Hours spent in counseling individual soldiers

\_\_\_\_\_ Hours spent in preventive education (discouraging alcohol abuse

drug abuse

\_\_\_\_\_ same as above

\_\_\_\_\_ same as above

family problems

\_\_\_\_\_ same as above

\_\_\_\_\_ same as above

- (3) I have concerns about defining some readiness indicators.
  - a. Inspection reports are often biased by friendships previously established between the unit commander and the inspectors.
  - b. Some evaluators grade "harder" than others.
  - c. Readiness standards and criteria may differ for combat, combat support, and combat service support units.
  - d. Readiness standards may differ depending on the unit's intended mission and type of war. While "brush fire" conflicts are much more probable than a major war in Europe, the worst case scenario involves the latter. Most army units train for the war in Europe, thus they may not be as ready for the more likely "brush fire" type of conflict.
  - e. To correct for these problems, I think that unit members' reports of readiness should be obtained and included in any index of readiness.

#### 4. TASK 4 (Spouse employment)

I think it will be important to assess interaction effects between hours employed, number of preschool children, and income (controlling for social desirability. In the following reference, it was found that full-time employment detracted from the amount of time for discussion in marriage only for mothers with preschool children and whose overall family income was lower than average.

Schumm, W. R., & Bugaighis, M. A. Marital quality over the marital career: alternative explanations. Journal of Marriage and the Family, 1986, 48, 165-168.

#### 5. TASK 5 (Integration)

- (1) Page 115 of the Program Outline suggests the use of cross lagged panel correlation to assess directionality of influence. However, this technique has low power. Rather, I suggest following Menaghan's example, as in

Menaghan, E. G., & Lieberman, M. A. Changes in depression following divorce: a panel study. Journal of Marriage and the Family, 1986, 48, 319-328.

She predicted TIME 2 scores from TIME 1 scores in order to assess the effects of other TIME 1 variables on the changes occurring between time 1 and time 2.

- (2) Janet Kohen published a paper in Journal of Family Issues, somewhere in the 1983-85 time frame, called "The military career as a family affair." She pointed out that the dynamics of family issues would probably differ for active duty Army personnel and Reservists. For the latter, self employment may be important (employer/USAR conflicts), perhaps more so than for spouse employment among active duty personnel. Models may be constructed differently therefore for USAR and active duty families.
- (3) The idea of combining quantitative and qualitative research is a sound one that can be very productive.
- (4) A number of references are not cited (in text but not in reference section) in the Plan for the research program.
- (5) The study cannot be conducted with DA civilians unless additional funds are committed to the project or other components are dropped.
- (6) Reciprocal paths should be considered for some of the variables. While fully recursive models probably cannot be computed, crude attempts to check on recursiveness can be done by hand calculator using formulae given in:

Schumm, W. R. Comments on "Marital cohesion: a path model." Journal of Marriage and the Family, 1984, 46, 499-500.

- (7) Refer to the following paper for ideas on how to analyze stressor models:

Schumm, W. R., Bollman, S. R., Jurich, A. P., & Bradshaw, K. Statistical methods for evaluating interactions between stressor variables and coping strategies. Paper presented at the Research and Theory section, National Council on Family Relations, Dearborn, Michigan, November 7, 1986.

- (8) If the standard deviations of husbands and wives are found to differ, then it might be valuable to check for a typology that was found in three Kansas studies as reported in:

Schumm, W. R., Jurich, A. P., Bollman, S. R., & Bugaighis, M. A. His and her marriage revisited. Journal of Family Issues, 1985, 6, 221-227.

What was found was that when husbands and wives differed in their marital satisfaction by large margins (8 points or more on the Kansas Marital Satisfaction Scale) it was almost always the wife who was dissatisfied the most. Such a gap would have implications for retention if it tied in with satisfaction with Army life.

- (9) I think that chaplains should be involved in the project since they are major service providers in the area of family life education and premarital counseling. This is a good idea because they might well have some important ideas to contribute to model building and what types of variables they might want included.
- (10) Further theoretical work needs to be done regarding possible interaction effects between variables. In general, combinations of adverse factors show up as interaction effects due to the "straw that broke the camel's back" process.
- (11) While there is probably not enough room to pursue perceived linkages between variables in the large study, such linkages should be pursued in the follow up studies. For example, questions might include:

My families' satisfaction with army life is a major factor in my decision to stay in the Army (agree or disagree Likert type scale).

If I had severe family problems (e.g., child who was trying to run away, spouse was being very critical and harsh, etc.), my work performance would suffer.

- (12) The T1/T2 component of the study is good but needs to have some data on events occurring before and inbetween. Possible significant events could include:

change of units  
new unit commander (better)  
new unit commander (worse)  
unit changed location or post  
unit was disbanded, joined a totally new outfit  
new first sergeant (better)  
new first sergeant (worse)  
new immediate supervisor (better)  
new immediate supervisor (worse)

unit passed a major inspection  
unit failed a major inspection  
unit passed all major inspections  
unit failed most major inspections  
unit went overseas for a month or more  
unit left post to train elsewhere for a month or more  
unit was engaged in combat with an enemy force  
unit was involved in civilian disturbance (riot control)  
unit member died of drug overdose  
unit member died in accident  
unit member became sick and died

- (13) There is very little time at the end of the project to analyze data. Project may need to be extended or reinforced with additional personnel at the end (both would cost more money).
- (14) Project should make use of results from chaplain's study by Dr. Bowen (Caliber) and from USAR 1986 worldwide survey; time conflicts are perhaps the most interesting variable in the latter study.

Appendix A (Schumm's comments)

Data for this appendix were not immediately available.

Appendix B (Schumm comments)

Items for the Kansas Parental Satisfaction Scale

1. How satisfied are you with your children's behavior?
2. How satisfied are you with yourself as a parent?
3. How satisfied are you with your relationship with your children?

Response categories:

Extremely satisfied  
Very satisfied  
somewhat satisfied  
mixed  
somewhat dissatisfied  
very dissatisfied  
extremely dissatisfied

Parental Anxiety Items

- |   |    |   |   |   |    |
|---|----|---|---|---|----|
| 37. I spend as much time with my children as I feel I should. (this question concerns only those children who are living with you and your husband) | SD | D | ? | S | SA |
| 38. My children are very upset about my leaving them on those occasions when I have to be somewhere for an hour or two without them.                | SD | D | ? | S | SA |
| 39. I find it difficult to relax and have fun with my children.   | SD | D | ? | S | SA |

NOTE: the above items were used with mothers who had at least one child under 13 years of age (i.e. they don't make as much sense for adolescents, especially #38).

Appendix B (continued)(Schumm comments)

Parental role strain items

42. Women today are finding it necessary to fulfill dual roles as a good parent and as a good housewife and/or employee (at work).

How often do you encounter difficulties in trying to combine being a good parent AND also fulfilling all your other responsibilities adequately?  
(Circle number)

- 1 NEVER
- 2 SELDOM
- 3 SOMETIMES
- 4 FREQUENTLY
- 5 VERY FREQUENTLY

43. How much of a problem are these difficulties (if any) to you? (Circle number)

- 1 NOT A PROBLEM AT ALL
- 2 A SLIGHT PROBLEM
- 3 A MODERATE PROBLEM
- 4 A SERIOUS PROBLEM

Appendix C (Schumm comments)

Abbreviated Edmonds Marital Social Desirability Scale

Please read each statement and decide whether it is TRUE as applied to you, your husband, or your marriage or whether it is FALSE. (Circle your answers)

- |   |   |  |
|---|---|--|
| T | F | 15. Every new thing I have learned about my husband has pleased me.                          |
| T | F | 16. I have some needs that are not being met by my marriage.                                 |
| T | F | 17. My husband and I get angry with each other sometimes.                                    |
| T | F | 18. My marriage is a perfect success.  |
| T | F | 19. There are times when my husband does things that make me unhappy.                        |
| T | F | 20. I don't think any couple could live together with greater harmony than my husband and I. |

Another format for the above response categories would be to add a ? inbetween the T and F. A five response Likert type set of categories could be used, but doing that will lead respondents to think that it is just another marital adjustment scale, yielding very high ( $r = .70+$ ) correlations with the KMS Scale instead of the  $r = .45-.50$  usually found with the response categories shown above.

Additional items might include (note that both sets are balanced, with two items each referring to marriage, spouse, and relationship, parallel to the KMS scale).

- 21. My husband has all of the qualities I've always wanted in a husband.
- 22. My marriage could be happier than it is.
- 23. My husband and I sometimes get on each other's nerves.
- 24. I have never regretted my marriage, not even for a moment.
- 25. There are some things about my husband that I do not like.
- 26. I don't think anyone could possibly be happier than my husband and I when we are with one another.

Appendix D (Schumm comments)

Marital Communication Inventory Subscales for Time/Discussion and Aversive Communication

Discussion

- 37. Do you and your husband (wife) talk about things which are of interest to both of you?
- 39. Do you discuss intimate matters with him (her)?
- 40. Do you and your husband (wife) discuss your personal problems with each other?
- 43. Do you and your husband (wife) talk over pleasant things that happen during the day?
- 46. Do the two of you ever sit down just to talk things over?

The above items could be rewritten to start with "How often do ....."

Response categories include always, frequently, often, seldom in the original scale. However, it might be wise to add a category of "never" to balance things out. Permission to use the items on this page should be obtained from Family Life Publications, P. O. Box 427, Saluda, North Carolina (they sell the total questionnaire, but have given me permission to use the items in my research).

Aversive Communication

- 4. Is your husband's (wife's) tone of voice irritating?
- 5. Does he (she) have a tendency to say things that would be better left unsaid?
- 9. Does your husband (wife) nag you?
- 29. Does your husband (wife) insult you when angry with you?
- 38. Does your husband (wife) sulk or pout very much?

Of the above five items, #38 is the one that has not always factored with the other four, so it can easily be omitted.

The numbers shown are those of the original MCI and may be changed to fit their actual sequence in a survey.

## Appendix E (Schumm comments)

### Kansas Family Life Satisfaction Scale

- 6a. Using the Satisfaction Scale, circle the number which indicates how satisfied or dissatisfied you are with . . .

	<u>SATISFACTION</u>						
(1) Your family life.	1	2	3	4	5	6	7
(2) Your relationship with your spouse.	1	2	3	4	5	6	7
(3) Your relationship with your child(ren).	1	2	3	4	5	6	7
ANSWER (4) only if you have more than one child in your family.							
(4) Your children's relationship with each other.	1	2	3	4	5	6	7

The following set of instructions was issued with each questionnaire in the original study. Of course, the instructions could be combined with the lead in to the question or the responses could be positioned appropriately above the numbers.

Dear Husband/Wife:

Many researchers who study families only interview one spouse. We are interested in the thoughts and opinions of both husband and wife. This is why we are leaving a questionnaire to be completed by you.

We would appreciate your answering the questions on the following pages. The questionnaire will take about 30 minutes to complete. Most questions will ask how satisfied you are or how important something is to you.

Select the number which best fits the way you feel and circle the appropriate number for each question.

The SATISFACTION SCALE is as follows:

Extremely <u>Dissatisfied</u>	<u>Dissatisfied</u>	Somewhat <u>Dissatisfied</u>	<u>Mixed</u>	Somewhat <u>Satisfied</u>	<u>Satisfied</u>	Extremely <u>Satisfied</u>
1	2	3	4	5	6	7

The IMPORTANCE SCALE is as follows:

Extremely <u>Unimportant</u>	<u>Unimportant</u>	Somewhat <u>Unimportant</u>	<u>Mixed</u>	Somewhat <u>Important</u>	<u>Important</u>	Extremely <u>Important</u>
1	2	3	4	5	6	7

The first satisfied question asks you to circle the number that indicates how satisfied or dissatisfied you are with the amount of education you received. If you are somewhat satisfied, circle number (6). If you feel about equally satisfied-dissatisfied, circle number (4), mixed.

Appendix F (Schumm comments)

Legitimacy of Army Demands Scale (TEST)

Army life places many demands upon families. To what extent do you think the Army has the right to ask of you the following things? Please circle the most appropriate response, in your own opinion.

	No Right at all	Some right on rare occasions	Usually should have the right	Always should have the right
1. Expect families to accept the soldier's being away from home				
a. During weekdays	1	2	3	4
b. During occasional field exercises	1	2	3	4
c. During frequent field exercises	1	2	3	4
d. On long unaccompanied tours overseas	1	2	3	4
e. Unexpectedly, as on no-notice emergency readiness drills	1	2	3	4
f. More than 60 hours a week on the job on a regular basis	1	2	3	4
g. More than 80 hours a week on the job on a regular basis	1	2	3	4
h. Without getting time off or "comp time" for extra hours put into work previously	1	2	3	4
2. Expect families to accept the following situations:				
a. Separate clubs and facilities for officer and enlisted families	1	2	3	4
b. Preferential employment for the wives of officers as opposed to enlisted	1	2	3	4
c. Substandard on-post housing	1	2	3	4
d. Pressure on wives to volunteer their time for off-duty socials and community affairs	1	2	3	4
e. Substandard medical care in Army facilities	1	2	3	4
f. Good medical care but with long waiting lines to see a doctor	1	2	3	4

Appendix F (continued)

- g. Requiring soldiers to accept tours in locations they do not like
- h. Requiring soldiers to do regular physical exercise (PT)
- i. Requiring soldiers to obey orders that do not make sense at the time (assuming the orders are legal)
- j. Requiring soldiers to be away on training when their wife is having a baby.
- k. Requiring soldiers to pull CQ or staff duty on holidays

(perhaps more items could be added or some deleted/modified)

## Appendix G

### CES-D Scales

#### APPENDIX

##### THE CENTER FOR EPIDEMIOLOGICAL STUDIES-DEPRESSION SCALE (CES-D)

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating, my appetite was poor.
3. I felt I could not shake off the blues, even with help from my family and friends.
4. I felt I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people disliked me.
20. I could not "get going."

(Note: Positive affect items are reverse scored.)

From page 605, August 1986 Journal of Marriage and the Family

## Appendix H

### Menaghan's Depressive Affect Scale

Menaghan / DEPRESSIVE AFFECT AND DIVORCE 303

#### APPENDIX A Measures of Depressive Affect, Economic Problems, and Marital Distress

(1) <u>Depressive Affect</u>	Unstandardized Regression Weights (lambda values)
During the past week, how often did you:	
(a) Lack enthusiasm for doing anything?	1.00 <sup>1</sup>
(b) Feel low in energy or slowed down?	1.16
(c) Feel downhearted or blue?	1.15
(d) Feel bored or have little interest in doing things?	1.11
(e) Have trouble getting to sleep or staying asleep?	1.01
(f) Feel lonely?	.99
(g) Lose sexual interest or pleasure?	.90
(h) Cry easily or feel like crying?	.81
(i) Feel hopeless about the future?	.76
(j) Have a poor appetite?	.69

Correlated errors between items a and b, c and h, e and i within each time point.

Average factor/concept correlation =  $92 \chi^2 / d.f. = 3.14$

From page 303, September 1985 Journal of Family Issues.

## Appendix I

### Items on Family Strengths Recommended to Doug Abbott of University of Nebraska

The following items might be selectively used to assess interpersonal family strengths:

Looking for the best in each other

Praying with each other about personal concerns

Recognizing each other's value as an important person

Forgiving each other's faults

Accepting each other as less than perfect

Being open to what other family members are feeling inside

Being willing to talk about what you are feeling inside

Doing unexpected positive things for each other

Accepting constructive criticism graciously

Looking for creative ways to spend pleasant times together

Not responding to criticism with your own complaints

Really wanting to know what's been going on with each other during the day

Letting God help us love each other more

Attacking problems rather than each other

Taking time to really listen to each other

Doing nice things for each other secretly, without expecting appreciation for them right away.

Developing long term goals for our family

Helping each other to grow spiritually and personally

Bringing out the best in each family member

Allowing family members to be themselves

Being committed to improving our family life

Building up each other's sense of worth

Appendix I (continued)

Helping each other relate to God in more depth

Enjoying our times with each other

Dealing kindly with minor faults rather than nagging about them

Working out conflicts rather than acting as if they didn't exist

Respecting each person's being unique and different

Considering the long term effects of our actions when making decisions

Appendix J

Kansas Marital Satisfaction Scale

	EXTREMELY DISSATISFIED	VERY DISSATISFIED	SOMEWHAT DISSATISFIED	MIXED	SOMEWHAT SATISFIED	VERY SATISFIED	EXTREMELY SATISFIED
11. How satisfied are you with your marriage? (Circle number)	1	2	3	4	5	6	7
12. How satisfied are you with your relationship with your husband? (Circle number)	1	2	3	4	5	6	7
13. How satisfied are you with your husband as a spouse? (Circle number)	1	2	3	4	5	6	7

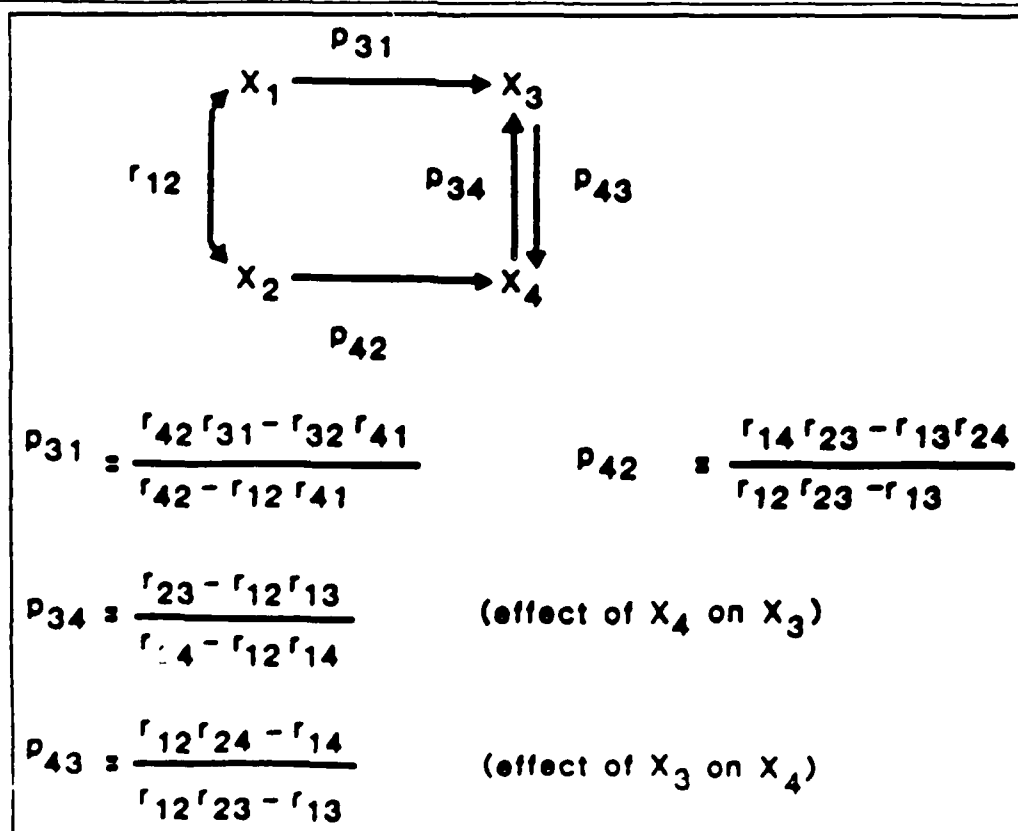
## Appendix K

Comments on Pittman & Orthner's (in press, JMF) paper, "Predictors of Spousal Support for the Work Commitments of Husbands"

1. On page 7, "the oldest of which was 3.9 years of age" probably refers to the average age of the oldest child, but that should be made to read more clearly; the way it sounds now, it might be that none of the families had any child older than 3.9 years of age.
2. On page 13, it is noted that satisfaction with life in an organization could cause marital/personal adjustment.
3. On page 15, marital is misspelled "martial" second line from the bottom of the page.
4. Since one part of F1 (satisfaction with life in the organization) is the organization as a child rearing milieu, I would suspect that the place of that F1 variable in the model might vary depending on the number of children one had (untested interaction effect that probably should be tested, by running model for couples with versus couples without children).
5. My primary concern lies with the assumption of one-way paths in the model. Crude estimates of reciprocal paths can be estimated using the formulae reported previously in

Schumm, W. R. Comments on "Marital cohesion: a path model" JMF, May 1984. Refer to formulae below.

FIGURE. REGRESSION COEFFICIENTS FOR A MODEL WITH A SINGLE SET OF NONRECURSIVE EFFECTS



# Appendix K (continued)

The correlations are as follows when

- X1 = Husband's occupational status
- X2 = Years in the organization
- X3 = Marital and personal adjustment
- X4 = Satisfaction with life in the organization

<u>Initial Sample</u>	<u>Replication Sample</u>
$r_{12} = .06$	.01
$r_{24} = .05$	.09
$r_{14} = .07$	.05
$r_{23} = .07$	.07
$r_{13} = .19$	.16

Therefore path from X3 to X4 ( $p_{43}$ ) (initial sample)

$$= \frac{(.06)(.05) - (.07)}{(.06)(.07) - (.19)} = \frac{.0030 - .0700}{.0042 - .0700} = \frac{-.0670}{-.0658} = 1.0$$

The path from X4 to X3 ( $p_{34}$ )(initial sample)

$$= \frac{(.07) - (.06)(.19)}{(.05) - (.06)(.07)} = \frac{.07 - .012}{.05 - .004} = \frac{.06}{.050} = 1.2$$

While both results are suspect due to the  $r$  being greater than one, they suggest an approximately equal reciprocal effect (neither predominant). This contradicts assumptions made in the paper even though the model here adopts the same relative impact of X1 and X2.

In the replication sample,

$$p_{43} = \frac{(.01)(.09) - (.05)}{(.01)(.07) - (.16)} = \frac{-.049}{-.159} = .30$$

$$p_{34} = \frac{(.07) - (.01)(.16)}{(.09) - (.01)(.05)} = \frac{.07}{.09} = .78$$

In this result the path from X4 (satisfaction with life in the organization) to X3 (marital/personal adjustment) is larger, the opposite of what was assumed in the paper's model.

# Appendix K (continued)

The path(s) between spousal support and satisfaction with life in the organization are also debateable.

X1 = husband's occupational status

X2 = years in the organization

X3 = satisfaction with life in the organization

X4 = spousal support for husband's work commitments

<u>Initial Sample</u>	<u>Replication Sample</u>
$r_{12} = .06$	.01
$r_{24} = .24$	.20
$r_{14} = .02$	.07
$r_{23} = .09$	.05
$r_{13} = .05$	.07

Therefore in the initial sample,

$$p_{43} = \frac{(.06)(.24) - (.02)}{(.06)(.09) - (.05)} = \frac{.0144 - .020}{.0054 - .050} = \frac{-.0056}{-.0446} = .12$$

$$p_{34} = \frac{(.09) - (.06)(.05)}{(.24) - (.06)(.02)} = \frac{.0870}{.23} = .38$$

In the initial sample, the predominant effect is from spousal support for husband's work commitments to satisfaction with life in the organization.

In the replication sample,

$$p_{43} = \frac{(.01)(.20) - (.07)}{(.01)(.05) - (.07)} = \frac{-.07}{-.07} = 1.00$$

$$p_{34} = \frac{(.05) - (.01)(.07)}{(.20) - (.01)(.07)} = \frac{.05}{.20} = .25$$

In the replication sample, the predominant effect is as was specified in the paper.

# Appendix K (continued)

The path(s) between personal/marital adjustment and spousal support for husband's work commitment are also possibly recursive.

X1 = husband's occupational status

X2 = years in the organization

X3 = marital and personal adjustment

X4 = spousal support for husband's work commitment

<u>Initial Sample</u>	<u>Replication Sample</u>
$r_{12} = .06$	.01
$r_{24} = .24$	.20
$r_{14} = .02$	.07
$r_{23} = .07$	.07
$r_{13} = .19$	.16

Therefore, in the initial sample,

$$p_{43} = \frac{(.06)(.24) - (.02)}{(.06)(.07) - (.19)} = \frac{-.0056}{-.184} = .003$$

$$p_{34} = \frac{(.07) - (.06)(.19)}{(.24) - (.06)(.02)} = \frac{.055}{.23} = .24$$

Thus, in the initial sample the predominant path is from spousal support for husband's work commitment to personal/marital adjustment.

In the replication sample,

$$p_{43} = \frac{(.01)(.20) - (.07)}{(.01)(.07) - (.16)} = \frac{-.068}{-.153} = .44$$

$$p_{34} = \frac{(.07) - (.01)(.16)}{(.20) - (.01)(.07)} = \frac{.068}{.200} = .34$$

In the replication sample, the paths are approximately equal, though the expected path from marital/personal adjustment to spousal support for husband's work commitment is a bit larger.

Overall, we have three paths in two samples to be concerned with. In the six comparisons, three are the opposite of the paper's specification, two show approximately equal reciprocal effects, and only one ( possibly two) paths are in the specified direction. Therefore, future research and theory should take these results into consideration.

Attachment 3

Comments from Dick Berk on the Research Plan

### Attachment 3

I have lots of reactions to the proposal, but they are not easily summarized. A major problem is that the possible difficulties I see in the research design and proposed analysis may stem from necessarily very brief discussions in the documents I read. So, what follows are really several topics for further exploration with whomever worries about the technical side of things.

1. Many of the data sets will be collected through "endogenous sampling." This is almost never a good idea and at the very least will greatly complicate one's statistical analyses (see for example, Hausman and Wise, Social Experimentation, Chapter 5, NBER, 1985; Conlisk and Havemen, "Design Model Issues in Social Experimentation," Journal of Human Resources, Fall, 1986). More likely, it will lead to bias in any statistical estimates.

2. Heckman-like adjustments for sample selection bias are not robust. They rest on heroic assumptions, which if violated, really do make a difference. These adjustments should be used only as a last resort (e.g., Little, "A Note about Models on Selectivity Bias," Econometrica, 53, 1469-1474; 1985). In the proposal, these adjustments are advertised with no consideration of whether they could possibly make sense.

3. Longitudinal data hardly guarantees proper specification. Problems of omitted variables and functional form remain, and in addition, it is all too easy to be seduced by such temporal problems as regression to the mean. In other words, the validity of the longitudinal design is being grossly oversold (e.g., Heckman and Robb, "Alternative Methods for Evaluating the Impact of Interventions," in Heckman and Singer, Longitudinal Analysis of Labor Market Data, Cambridge University Press, 1985).

4. The proposal rests heavily on structural equation modeling, often using latent variables, at the very time when increasing doubts are being expressed about such approaches by the statistical community (in the works of Freedman, Holland, Rubin, Rogosa, Feinberg, etc) and many social scientists (e.g., Duncan, Lieberman, Cotton, etc). For an example in the specific case of longitudinal data see Rogosa and Willett ("Satisfying A Simplex Structure is Simpler than it Should Be," Journal of Educational Statistics, Summer, 1985). One can get a general sense of the debates from the summer 1987 issue of the Journal of Educational Statistics. But that issue is hardly the last word.

5. The planned data analyses are ripe for all sorts of type I errors. With so many analyses of some many possible models, you'll be guaranteed to find 1 in 20 effects significant at the .05 level. Over the very large number of tests planned, that's a lot of findings. At the very least, significance tests will need to be dramatically discounted. More useful would be collecting enough data to do split-half replications.

6. Here and there, statistical procedures are proposed that clearly will not meet (or even come close) to the necessary assumptions. For example, discriminant analysis requires that the explanatory variables be distributed multivariate normal. These data will not be. Moreover, you can get the same job done with logit models for which multivariate normality is not needed.

7. Given all of these possible problems and others, I wonder if the emphasis of the proposal is in the wrong place. I would seriously consider shifting a lot of the effort away from the modeling and toward the randomized experiments that might be done. This is briefly mentioned near the end of the proposal and in my view should be brought front and center.