Social identifications and prosocial behavior among hospital employees

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Preface

My dissertation is about *prosocial behavior* - a study of who people help and support. Through my questionnaires, I have discerned something about such behavior. The dissertation process has convinced me that helpful and supportive behavior is not only a researcher-generated phenomenon; it has real existence as well. I have met it through the people mentioned below :

The first one is my main advisor *Tom Colbjørnsen.* Tom has been a good partner during the entire process. He has guided me through the process, given me valuable comments and advice, encouraged me and provided high speed to the project. I have often felt like *now* being at the point where Tom had wanted me to be at the *previous* check-point. *Jørn K. Rognes*, always to-the-point in his comments, raising crucial questions and issues to elaborate. Additionally, Jørn has been a good supporter of my project, he has encouraged me, and when I visited the US, I was invited to his and his wife's residence. *Ole Berg*, who I have had the pleasure to know for more than 10 years, always generously gives valuable comments, in this case from the "Mecca" of health care administration research in Norway.

Also other scholars and academic staff at the *Institute of organization science at The Norwegian School of Economics and Business Administration* have given me valuable comments and encouragement whenever I visited Bergen.

The main body of the study has been done at the *Institute of Social sciences at Agder College* in Kristiansand. The college has been helpful in providing me with the necessary infrastructure. The academic staff at the institute has interestedly and patiently listened to my descriptions of the project from its very beginning. They have posed to-the-point questions and given valuable comments both at the institute meetings and to my drafts.

My employer, *Agder Research Foundation* has demonstrated great generosity. I now will bring some of my knowledge and experience gained from the dissertation work back to the foundation. I hope that this will be a contribution, for further enrichment of professionalization of the foundation as well as for its economic proliferance.

Previous colleagues at the hospital in Kristiansand have helped me, both by working out the questionnaire and by interpreting the results. Thus, they have helped me keep my study closely related to real life in hospitals.

The administrative staff of the *participating hospitals* had much work supplying me with the necessary mailing lists, etc. The respondents made great efforts to give answers to my questionnaire items. Without their efforts, no results would have emerged, and my project would not have succeeded.

By giving their recommendations to my study, the research institution responsible for examining the life and work of physicians, (*Legekårsundersøkelsen*), and the nurse' union (*Norsk Sykepleierforbund*) gave valuable contributions to the response rate in the study.

In September/October 1994 I had the pleasure to meet with the world-wide most prominent contributors to the Social Identity Theory and Self-categorization theory research tradition: *Dominic Abrams, Fred A. Mael, Marilynn B. Brewer, David M. Messick, Blake E. Ashforth, Michael A. Hogg* and *Roderick M. Kramer*. To meet with them were the most impressive events during my work with this dissertation. Their generosity in giving me comments from the highest possible professional level and their friendliness and encouragement have been immensely valuable, also since I subsequently have had the pleasure of mailing with them.

Randi Rosenberg Hall and *Ove Sandvik* have given me valuable help, correcting my text into a more proper English.

To write this dissertation would have been an impossible project without help and support from my family. Therefore, when I am now at the end of the process, I am most grateful to my wife *Sigrunn* and our sons *Knut, Roar* and *Kristian*. They have been of immense value to me by helping me, encouraging me and by taking my parts of the domestic chores for a long time. Additionally, the trips to Bergen have offered the opportunity to meet with Roar at his student residence there.

The work is now completed; thanks to the above mentioned people I can look back on one of best periods of my life. I am very grateful for having learnt more about prosocial behavior than just what I found in statistical tables.

Kristiansand, May 30, 1996

Helge Hernes

Research questions 1

In this chapter the themes of the analysis and the research questions of the study are presented. Further, the structure of the the dissertation is outlined

Organizational subunits and work-related groups such as professions are important for the individuals that comprise them. Mael and Ashforth (1992) posit that due to the erosion of nuclear family, neighborhoods etc. etc., identifications to organizations often comprise a major component of the individual's sense of self. The same is probably not less true for the groups *within* organizations, (Kramer, 1991:205). The processes *within* such groups are important. The primary focus of this study, however, is the relations *between* them. In some organizations, e.g. hospitals such intergroup relations are pervasive; such organizations may be conceptualized as a collection of intergroup relations. One reason for this significance of intergroup relations in hospitals is that the *hierarchical authority* is limited. Organizational subgroups have great *autonomy*; they may to a great extent resist management. Additionally, such autonomy is necessary to avoid unhandy capacity problems in the hospital administrative system. On important matters, therefore, subgroups in hospitals, whether they are made up by professions and/or by departments, interact directly (Brett and Rognes, 1986). This applies to coordination of tasks, professional or administrative decisions and social processes within the hospitals. Thus, hospital management, is the management of a myriad of such

intergroup relations. Skillful handling of them is a condition for successful hospital management. And knowledge about them is necessary for practicing such management. Finally, the organizational subgroup phenomenon is especially significant in hospitals because the primary work is done by highly and *differenciatedly* educated people, thus differing from organizations dominated by one profession, e.g. educational institutions (Walby and Grenwell, 1994:17): The hospital employees find themselves as belonging to both the departments at which they have their work and to their professions.

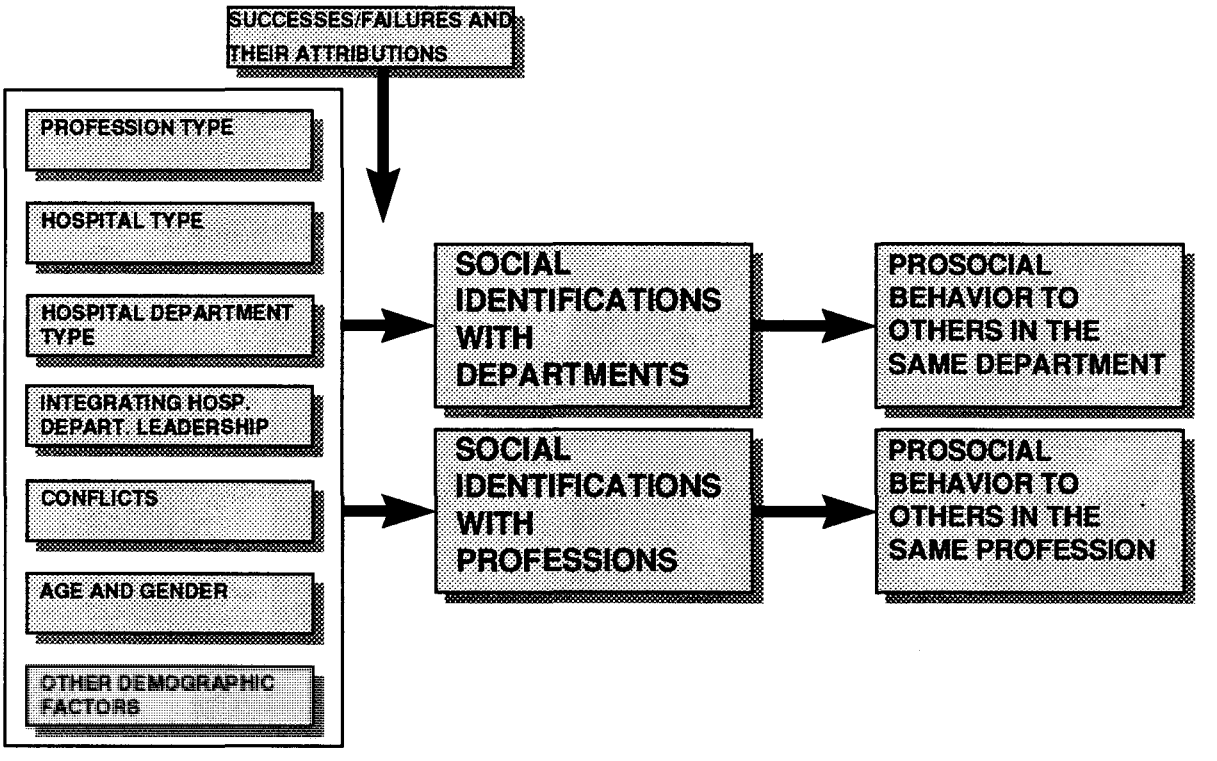
This study starts with the question, with which of these two groups do hospital employees have the strongest *identifications*? This is how Social Identity Theory (SIT - Tajfel and Turner, 1985, Hogg and Abrams, 1988) and Self-Categorization Theory (SCT - Turner et. al.,1987) conceptualize intergroup relations. These theories posit that individuals *categorize* themselves and others into groups. The group to which oneself is categorized is called *ingroup*, while *outgroup* is the label for other one(s). Between groups some patterns evolve: The differences between them are exaggerated, the evaluations of the ingroup tend to be more positive than those of the outgroup. Further, people tend to discriminate in favor of the ingroup members when they cooperate and when they are helping and supporting others. In this study such *prosocial behavior* is examined.

When intergroup relations are conceptualized as social identifications, it is interesting to know something about the *magnitude* of them, in this case those with departments and professions. Next, according to Kramer (1993:256), research on the determinants of organizational identifications is rather sparse. To know about the *antecedents* of social identifications, therefore, is interesting as well. The *first* research question of this study, accordingly, is to find the magnitude of these identifications and how they are affected by some explanatory variables. These independent/control variables are of different types. The first one is the *profession type* (doctors and nurses). *Integrating hospital department leadership* is hypothesized to influence social identifications. Further, the effects of *conflicts*, *hospital type* and *hospital department type* are examined. Age, gender and other demographic characteristics are included in the model as control variables as well. These are stable factors while the final explanatory variable, successes/failures and their attributions, is more situational. It is hypothesized to influence the social identifications interactively. These explanads are partly chosen because they are assumed to affect the social identifications and partly because some of them can be manipulated by organizational action.

As mentioned above, SIT/SCT predict positive associations between social identifications with a group and prosocial behavior to members of that group. The *second* research question is a test of this proposition in the hospital setting: What kind of association are there between social identifications with departments and professions and prosocial behavior towards members of these groups.

These research questions are demonstrated in the model of the study which is worked out in chapter 3 and 7. To make it easier to see the structure of the study it is presented here as well:

Figure 1.1 - Model



To examine these questions, an empirical study among doctors and nurses without managerial responsibilities is done. The study encompasses 49 Norwegian hospitals and 145 hospital departments. 917 filled-in questionnaires were received, which constitutes a response rate of 44.0 per cent.

The present study represents a link between organization design theorizing (Galbraith, 1973, Mintzberg, 1979) and the predominantly experimental research tradition of intergroup relations (SIT and SCT). In organization design theory, the principles of work division (functional and market-based organizational subunits) has been thoroughly discussed. The phenomenon of professions in organizations has also been dealt with, e.g. Mintzberg's (1979) *professional bureaucracy* organizational configuration. One characteristic of this configuration is that the so-called operating core is the most significant one among the organizational units. This organization theory approach has remained silent, however, on the organization design and processes *within* the *operating core*; how the professional work is divided in departments and the fact that more than one profession may be present in this organization unit. The intergroup relations within the operating core, thus become quite complex. The intergroup relation research tradition, on the other hand, has been predominantly experimental and micro oriented;

organizational studies on this field has been lacking, (Kramer, 1993). By linking these theoretical approaches, this study adds to the knowledge about complex organizations generally, and multiprofessional organizations as hospitals specifically. This study's contribution to the SIT/SCT research tradition is the development of a framework for studying the relationships between stable and situational identifications and a thorough examination of the dimensionality of the social identification concept. A large number of operationalizations of the concept is used, to a great extent with the same wordings for the identifications with organizational subunits and professions.

The *managerial* interest of the present study is based on the premise that processes among hospital employees in the operating core are add up to significant aggregates for the organization. One type of such micro processes is the intergroup relations: The relations between professions and organizational subunits in a hospital do not necessarily contribute to good coordination of the hospital activities. They may just as well impede coordination between groups. In organizations in which one must rely on various forms of voluntary cooperation (opposed to compulsory coordination, Jacobsen, 1993), this is a structural problem. Knowledge about hospital employees' identifications therefore may be used for the improvement of the relations and coordination between groups. The role of the departments in the overall management of hospitals may also be affected by the intergroup relations. Strong identifications with professions would probably limit the degree to which the departments might be the real basic units in hospitals, e.g. in accounting. Thus, knowledge about the intergroup relations, is of interest when decisions about the role of the hospital departments are taken, securing that they are not based on non-existent conditions about identifications in the organization. Reasoning about social identifications may be of relevance for the design of the formal hospital department management as well. This is a hot topic in the Norwegian health care sector debate. The two groups participating in this study have different positions on this issue. Nurses prefer the *two* manager model of the hospital departments, which means that the head senior consultant and the nurse manager comprise the department management together. Physicians, one the other hand, insist on *one* manager (the head senior consultant) of each department.

In this study, the *multigroup* phenomenon is focused: Individuals find themselves as member of two groups that are *crosscutting* each other. They categorize themselves and their colleagues into in/in-groups, in/outgroups, out/in-groups and out/out-groups according to whether they have none, one or both of the memberships in the two groups in common with the other ones. Additionally, the organizational subunit and the profession dimensions are not exhaustive, hospital employees are members of groups made up by their gender, age etc. etc. This phenomenon is not restricted to hospitals, even if the hospital setting is an ideal one for studying them, (Walby and Greenwell, 1994:13). Some of the results of this study, therefore, may be generalized to other settings. However, there are some special characteristics of the context of this study, that may reduce this external validity: Few, if any, other organizations have such a multitude of professions and organizational units. The intergroup relations therefore may be different in other organizations. Additionally, Norwegian hospitals experience very

limited competition; organizationally dysfunctional intergroup behavior therefore may occur to a larger degree than in more market oriented organizations.

This dissertation is divided into 9 chapters: In this *first* chapter the research questions have been outlined. In the *second* chapter, the theoretical basis for the study is described. The emerging variables are presented and built together in chapter *three* in which the hypotheses derived are also described. The data collection strategies and procedures are described in the research design chapter, the *fourth*. Then the operationalization procedures are presented in chapter *five,* which precedes the measurement analysis in chapter *six*. These analyses are used for working out an operationalized model for the study (chapter *seven*). The results of the study are presented in chapter *eight* and the entire study is summed up and discussed in chapter *nine*. List of items, descriptive statistics and copies of the questionnaires are presented in appendices.

Theory 2

In the first section of this chapter the theoretical basis for the study, Social Identity Theory - SIT and Self-Categorization Theory - SCT are presented and a framework for studying multigroup memberships is worked out. Second, the group dimensions in this study, organizational subunits and professions, are described. In the third part of the chapter, the predicted behavioral outcome of social identifications, prosocial behavior, is presented.

Theories of intergroup relations

Since the early 1970s, when Henri Tajfel (Tajfel, Billig, Bundy and Flament,1971) did his now famous *minimal group* experiments, Social Identity Theory (SIT), and later Self-Categorization Theory (SCT), have been the predominant theoretical approach for studying intergroup relations. Among the preceding approaches, that of Sherif (1966) is one of major significance, maintaining that structural characteristics like competition of scarce resources etc. was the major explanation of intergroup relations.

SIT and SCT take another position, that distinct intergroup behavior is fully possible even in the absence of scarce resources or other manifest conflict dimensions. The one and only necessary condition is that people define themselves and other as members of groups, that they *categorize* themselves and others into ingroups and outgroups. A group is defined "in predominantly cognitive terms as a collection of individuals who

perceive themselves to be members of the same social category" (Turner et. al. 1987:101) No experience of common fate, no social structure, no face-to-face interaction and no limits as to size of the group is included in the definition, the categorization of oneself and others into groups is the crucial point. The issue of causal order is important here: While earlier theorists regarded interpersonal relations as antecedents for group formation, SIT/SCT's position is that group formation (by categorizing) is the psychological process that makes social cohesion, cooperation and influence possible (Turner et. al., 1987:40).

As mentioned above, the starting point was the experiments of Henri Tajfel, which demonstrated manifest discriminating behavior between explicitly randomly assigned groups. In a series of experiments in the mid 1980's Brewer and Kramer (Brewer and Kramer, 1984, Kramer and Brewer 1984, 1986) demonstrated the linkages between social identifications and cooperation. In short, individuals are more cooperative when group-level identity is reinforced or made salient (Kramer and Goldman, 1995).

At the end of the 1980s, SIT and SCT had achieved the position of being the dominant paradigm for studying intergroup relation. This applies to organizational behavior as well (Ashforth and Mael, 1989), even if the impacts on this field has been limited (Kramer, 1993).

The main proposition of SIT and SCT is that people are answering the question "Who are you?" by referring to one of the groups of which they are members (ingroup) opposed to other groups (outgroups). By such identification to groups, it is assumed that the individual's "self" is linked to these groups: "Social identification therefore, is the perception of oneness with or belongingness to some human aggregate (Ashforth and Mael, 1989:21):

> "When social identity is salient, the group is represented in the individual self-concept. Self-conception as a group member, rather than interpersonal relationships within groups or explicit social pressure, is what creates the uniformity of group behavior." (Abrams and Hogg, 1990:4).

This *social* identity is different from *personal* identity (which is a matter of relations to other persons in the same group) and from *human* identity (which is about relations to other species), Turner et. al. (1987:45). Thus a continuum emerges from personal to human identity. The social identity may be enhanced or reduced dependent on whether the ingroup is perceived to be distinct and whether it is perceived as better than outgroups: "Social identity is always attached to some social referent, usually a social group. If your psychological fortunes wax and wane with the fortunes of that social referent, then you identify with the referent" (Augoustinos and Walker 1995:98).

The above mentioned "oneness with or belongingness to some human aggregate" - "when *I* becomes *we"* (Brewer 1991:476) is coined *depersonalization.* This is the basic process underlying group phenomena, "a shift towards the perception of self as an interchangeable exemplar of some social category and away from the perception of self as a unique person defined by individual differences from others" (Turner et. al., 1987:50-51). According to Abrams (1990:93),

> "When personal identity is salient, individual group members are likely to resist group pressure, or to comply but not conform, or simply to ignore the group. In contrast, when self-categorization as a member of the group (social identity) is salient, group members are likely to conform to group norms, seek uniqueness for the group and to ignore their personal identity".

This process is assumed to have *cognitive* as well as *behavioral* consequences. Even if the cleavage between them may be somewhat arbitrary, a distinction is drawn here between these 2 types of consequences:

Cognitive consequences:

Once a social identity has become *salient* for a person, (for the processes leading to this, see below), there is a tendency to *exaggerate* the intergroup differences, *the accentuation effect* (Turner et. al. 1987:49, Abrams and Hogg, 1990:2-3). This process is believed to satisfy a fundamental motive to simplify the subjective environment in ways which are meaningful in that particular context (Hogg and Abrams, 1993:184). The other side of this coin is relative heterogeneity or the outgroup homogeneity effect: The ingroup members are perceived as being more heterogeneous than the outgroup members (Brewer 1993:6, Messick and Mackie, 1989).

According to SIT/SCT "people are evaluated positively to the degree that they are perceived as prototypical of the self-category in terms of which they are being compared" (Turner et. al. 1987:57). Thus *ethnocentrism* emerges - the "we are better than them" - effect. This attraction to one's own group as a whole, according to Turner et. al. (1987:61) depends upon the perceived prototypicality of the ingroup compared with relevant outgroups.

In sum, the cognitive consequences of social identifications may be referred to as *ingroup or intergroup bias.* In this study such ingroup bias is the fundament on which the operationalizations are worked out, see chapter 5.

Behavioral consequences:

SIT and SCT provide a link between social cognition and group behavior (Brewer, 1993:1). The basic mechanism is that the degree to which the self is depersonalized, according to Turner (et. al. 1987:65), so is self-interest: ".....the perception of identity between oneself and ingroup members leads to a perceived identity of interests in terms of the needs, goals and motives associated with ingroup membership". When personal identities are salient, according to Kramer (1993:245), individuals are more likely to focus on their own outcomes and, accordingly, cooperation is less likely. When organizational identity is salient, Kramer continues, individuals are more likely to take into considerations the collective consequences of their actions. By looking at self-interest as a *variable* rather than as a constant (Perrow, 1986, Kramer, 1993:262), one departs from regarding individuals as inherently self-interested. SIT/SCT provides a framework, of which there are few (Kramer, 1993), to account for other-regarding behavior. This other-regarding behavior is by Turner et. al. (1987) conceptualized as *empathic altruism* - the goals of other ingroup members are perceived as one's own and *empathic trust* - other ingroup members are assumed to share one's own goals. The common concept may be called *depersonalized trust*, cfr. Kramer and Goldman (1995), who posit that inclusion in a common category may lead individuals to perceive themselves as more similar to other members of that category and thereby empathizing more strongly with others in their group:

> "The self-interested egocentric view of human nature does not explain why individuals risk or sacrifice personal comfort, safety, or social position to promote group benefit .....People die for the sake of group distinctions-----". (Brewer, 1991:475)

The other side of the coin is that this favoring of ingroup members implies a discrimination *against* outgroup members; people's discrimination in favor of ingroup members at the expense of outgroup members:

> "Once a group identification has been established, intragroup orientations are characterized by the best of human motivations: perceived mutuality, co-operation and willingness to sacrifice individual advantage for the sake of group goals. However, when in-group identity is achieved through differentiation from other groups at the same level of organizations, intergroup orientations are characterized by just the opposite: perceived conflict of interests, social competition and willingness to sacrifice joint welfare for the sake of in-group advantage". (Brewer and Schneider 1990:178).

Thus, by suggesting that lack of cooperation and prosocial behavior, and even intergroup conflict, stems from the very fact that groups exist, SIT/SCT provides a fairly pessimistic view of intergroup harmony (Ashforth and Mael, 1989:31).

Cooperation and other-regarding behavior are not the only predicted behavioral consequences of social identifications. Hogg (1992) emphasizes group cohesiveness and Ashforth and Mael (1989) posit that individuals tend to choose activities congruent with salient aspects of their identities.

Contact between members of groups may change the behavioral intergroup pattern. The traditional approach, that of Allport (1954), referred to by Johnston and Hewstone (1990) is that such contacts *improve* the intergroup relations. Recently, this view has been challenged (Johnston and Hewstone 1990:186): "--- contact *per se* is not sufficient to produce an improvement in intergroup relations". Intergroup contact provides an opportunity for comparisons between groups (op cit c. 187) . Such comparisons may improve the intergroup relations. On the other hand, the possibility of conflict arises also. Johnston and Hewstone offer no complete framework for which of these effects is the strongest one. It is an empirical matter, therefore, in what direction intergroup relations are influenced by intergroup contact.

Multigroup membership

The above discussion is about the simple case where an individual is member of *one* group relative to one or more outgroups. Regularly, however, an individual "has many hats" i.e. he or she is member of *many* groups:

> "If a very simple society existed in which only a single group membership were possible, social identity would be predictable on the basis of the groups`s attributes and would be highly stable across situations and over temporal periods....An industrialized society produces social fragmentation, division of labor, and a heterogeneity of interests; as a consequence social identity is determined by membership in many different types of groups." (Allen et. al. 1983:96)

Such multigroup membership situations may be analyzed along at least 4 dimensions:

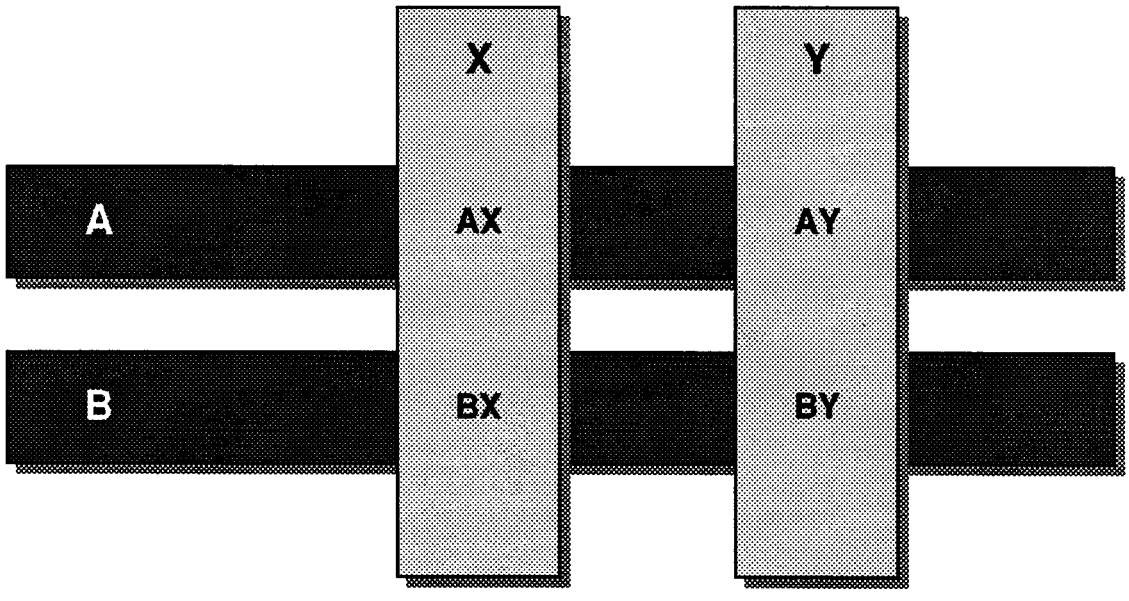
- *conceptualization* of the multigroup membership - i.e. whether the groups are subgroups of each other or groups on the same level
- the *strength* or *salience* of the potential identifications.
- whether or not the group memberships are *concordant* or *discordant* (in harmony with or at odds with each other)
- whether the identifications are *stable* or *varying* across *specific situations.*

Conceptualization of multigroup membership. Multiple group memberships may be conceptualized along two dimensions: *First*, it is a *level* issue; one subgroup of which a

person is a member, e.g. a working group may be a subgroup of another group, e.g. a department which in turn may be a part of a division or an entire organization. According to Kramer (1991:203), the identification level is supposed to vary among situations. Kramer posits, however, that the individual's identification is defined to the primary group in the organization: "-- it is postulated here that organizational identification is defined, all else being equal, at the level of the individual's primary group in the organization. By primary group is meant simply the group with which an individual most frequently interacts and in terms of which other members of the organization interact with him or her" (Kramer, 1991:205).

The *second* issue is about groups that are *not* subgroups of each other; e.g gender, age group, ethnic groups etc. etc. Some such group memberships are overlapping each other (for instance gender and occupations like nurses, oil operators etc.). Other multigroup memberships are *orthogonal,* e.g. membership in one group is entirely independent on membership in the other group. This last case can be described as *crossed categorizations* (Hewstone, Islam and Judd, 1993). By two orthogonal dimensions and dichotomous variables, four groups emerge: Double ingroup, double outgroup, ingroup-outgroup and outgroup-ingroup. This may be illustrated in this way:

Figure 2.1 - Crosscutting group memberships



Salience of identifications. SIT and SCT presume that in each situation one and only one identification is *salient*:

> "Turner postulated that an inherent tension or antagonism exists between different psychological identities. When one identity is dominant, he suggested, the impact of the others will be recessive. When one becomes figure, the others become ground." (Kramer 1993:256).

Which identification is really the salient one, may vary across situations. This is explained by the categorization process:

> "The basic mechanism is the cognitive process of categorization which accentuates similarities among stimuli (whether they are physical, social or aspects of the self) belonging to the same category and differences among stimuli belonging to different categories on dimensions believed to be correlated with the categorization." (Tajfel 1959, Tajfel and Wilkes, 1963, here cited from Hogg and McGarty, 1990:12).

This categorization mechanism according to prototypical characteristics may also be described as "*the principle of metacontrast*": "The salient category is that which simultaneously minimizes intracategory differences and maximizes intercategory differences within the social frame of reference." (Turner et. al. 1987:46-47, Hogg and McGarty, 1990:14).

Further, the salient social identification is assumed to be explained by the interaction between *accessibility* and *fit*:

> "--the salience of some ingroup-outgroup categorization in a specific situation is a function of an interaction between the 'relative accessibility' of that categorization for the perceiver and the 'fit' between the stimulus input and category specifications." (Turner et. al., 1987:54).

Accessibility is defined as

> "-- the readiness with which a stimulus input with given properties will be coded or identifies in terms of a category -- the more accessible the category the less input required to invoke the relevant categorization, the wider the range of stimulus characteristics that will be perceived as congruent with category specifications and the more likely that other less accessible categories which also fit stimulus input will be masked. Two major determinants of accessibility are past learning of what tends to go with what in the environment, its `redundant structure`, and the person's current motives.---The idea of fit simply refers to the degree to which reality actually matches the criteria which define the category." (Turner et. al., 1987:55).

This is in accordance with Bruner (1957:129-130):

> "The greater the accessibility of a category, (*a*) the less the input necessary for categorization to occur in terms of this category, (*b*) the wider the range of input characteristics that will be "accepted" as

> fitting the category in question, (*c*) the more likely that categories that provide a better or equally good fit for the input will be masked".

Concordance/discordance. There may be tension or antagonism between identifications. Alternatively, they may be in harmony with each others. This distinction is conceptualized by Allen et. al. (1983:97) as *discordant* or *concordant* identifications: "Social identities associated with two different group memberships are discordant if they are inconsistent or contradictory in a logical or psychological sense" (Allen et. al. 1983:97). The relations between potential identifications, are thus assumed to vary, rather than being a constant.

Individuals are expected to be able to live with discrepancies between discordant identifications:

> "Individuals have multiple, loosely coupled identities, and inherent conflicts between their demands are typically not resolved by cognitively integrating the identities, but ordering, separating, or buffering them. This compartmentalization of identities suggests the possibility of double standards, apparent hypocrisy, and selective forgetting". (Ashforth and Mael, 1989:35).

Stability of social identifications. According to the SIT and SCT approach, identifications vary across situations:

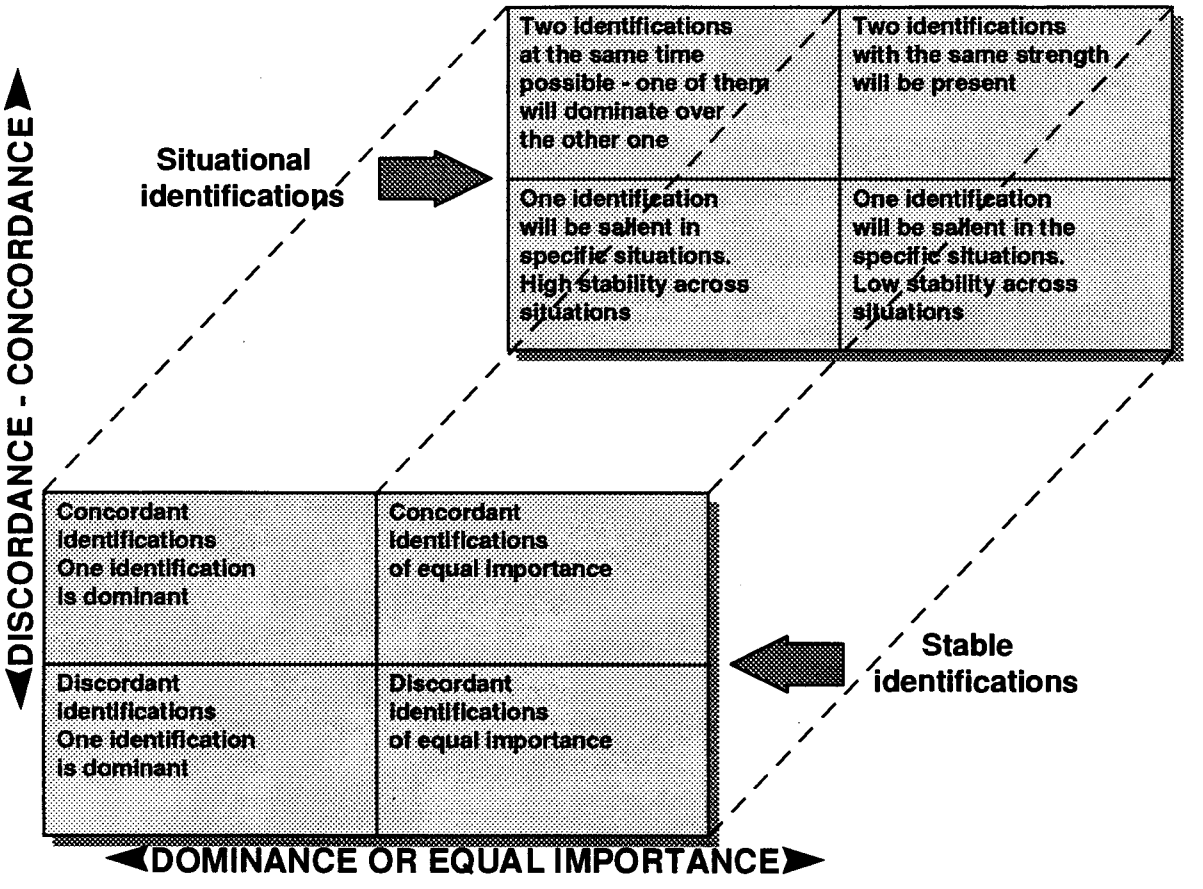
> "Individuals often describe, and presumably experience, identity as a relatively stable entity, reflecting the existence of clearly defined preferences, values, attitudes, and dispositions ----- They feel, for example, that they know who they are, what they are like, and can predict how they will act in a variety of situations. This phenomenology is deceptive. Identification in organizations is neither stable nor fixed. Rather, it depends largely on the context in which the individual is embedded. A given identity may be highly salient in one context, exerting considerable impact on perception, judgment, and behavior. In another setting, the same identity may have low salience and exert little impacts". (Kramer 1993:255).

This analysis does not exclude the possibility, however, that social identifications may be quite stable. Turner et. al. (1987:52), differentiate between *spontaneous/emergent* identifications and *preformed* identifications, thus opening for a delineation between stable and situational identifications

The degree to which identifications vary, however, is an empirical question. Alternatively, Hewstone, Islam and Judd (1993), by focusing on the stable aspects of identifications by crossed categorizations, suggest that some identifications are of equal importance to each other, while in other situations, one may dominate the other or others.

By bringing the above mentioned issues together, the framework below emerges, The vertical dimension represents concordance/discordance. In the horizontal dimension it is distinguished between identifications of different and of equal importance.

Figure 2.2 - Stable and situational identifications



The quadrants to the left indicate the *stable* aspects of social identifications while the upper right quadrants indicate the corresponding *situational* identifications.

Situational factors probably strengthen or weaken the above mentioned stable identifications. The framework suggests that these processes to vary according to 1) whether the relation between the stable identifications is that of dominance or not and 2) whether they are concordant or discordant: By highly discordant identifications, one of them presumably is salient in the specific situations, squeezing the other ones out. In another situation, however, another identification may be salient. By concordant identifications, on the other hand, it seems plausible that two identifications may be salient at the same time. The degree to which one or more identifications may be salient in the same situation, in this framework thus is regarded as a variable, rather than a constant, dependent on their relative importance and on whether these identifications are concordant or discordant. Which of two identifications is the dominant one, thus,

explains which of the two potential identifications will be salient (by discordance) or strongest (by concordance).

Successes and failures by multiple group memberships

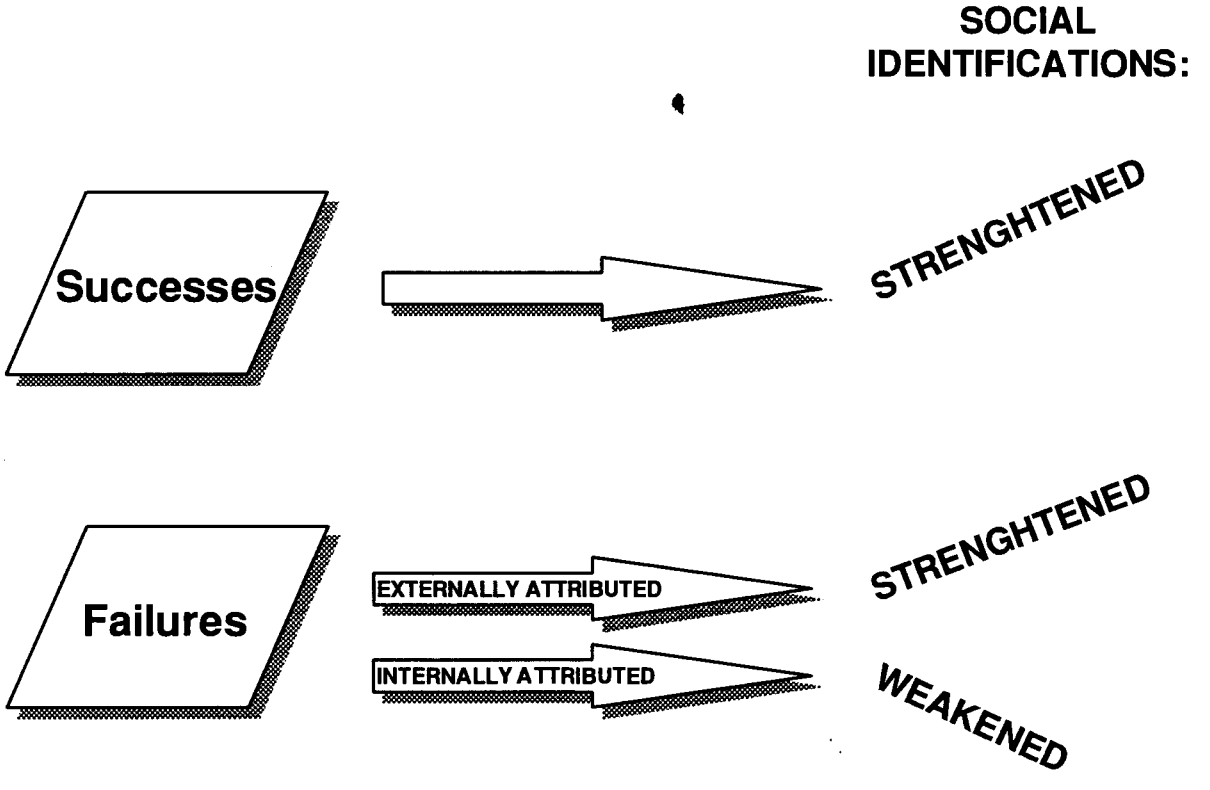
By multiple group memberships, individuals may define membership to groups from a desire to participate in successes and to avoid identifications with failure groups. Kramer (1991:221) presents an example of such processes:

> "Lyndon Johnson provided an amusing illustration of this shift in salient categorization during the 1960 presidential elections. Upon hearing some of the incoming election returns, he called John F. Kennedy and commented, "I hear you're losing Ohio but we're doing fine in Pennsylvania".

In failure groups, however, the attribution of the failures matter: If the failures or threats are explained by factors beyond the organization's control, organizational identification may actually increase. (Kramer 1993:258)

This idea is illustrated in the figure below:

Figure 2.3 - Successes/failures and social identifications



Previous SIT/SCT empirical research

Up to now, this chapter has mainly discussed the theoretical approach to intergroup relations. The entire research tradition, however, is founded on results from experiments. In this paragraph, the results of these experiments and real-life intergroup relations research are described. Henri Tajfel's (Tajfel, Billig, Bundy and Flament, 1971) experiments were conducted in order to examine the consequences, if any, of mere categorizations. The participants were allocated to two groups, apparently according to whether they over- or underestimated number of dots projected on a screen. In fact, however, they were divided *randomly* into the two groups. The participants allocated points to two persons, sequentially posed for them, sometimes two persons from the ingroup (made up by the underestimators or underestimators), sometimes one from the ingroup and one from the outgroup, and sometimes two from the outgroup. The points to be allocated in each step of the experiment might be chosen among the below combinations (example of matrix):

Table 2.1 - Pay-off matrix in the minimal group experiment

Allocation to a member of the group of overestimators	7	8	9	10	11	12	13	14	15	16	17	18	19
Allocation to a member of the overestimators group	1	3	5	7	9	11	13	15	17	19	21	23	25

On average, the participants chose the 12:11 alternative, thus avoiding the obvious discrimination in favor of the ingroup alternative, and, interestingly, not choosing the maximum pay-off (for both groups) alternative 19:25, either. This experiment is *the minimal group experiment* on which the SIT/SCT research tradition has been founded. Realistic conflicting interests between the groups cannot explain the results, neither a maximizing ingroup or joint profit strategy can. The discrimination seems to stem from categorization alone, even this is completely random.

The next major empirical investigations of intergroup relations were the Brewer and Kramer experiments (Kramer (Brewer and Kramer, 1986, Kramer and Brewer 1984, 1986). They are based on the social dilemma approach, e.g. Brewer and Schneider (1990). The first one was a resource management problem: The participants could take points from a common pool, which was replenished so that it could be maintained at a high level. Salience of identity was manipulated by single lotteries. According to the predictions, when *personal* identity was salient, the participants took more points from the common pool, compared with the case of salient *group* identities. The difference was most remarkable when the pool level dropped. The second social dilemma experiments was a collective action problem in which the individuals were given a certain number of resources. Subsequently they decided how much to keep for themselves and how much to give to the common pool. The results of this experiment were more mixed than in the

resource management experiment. Mael and Ashforth (1992) in a study of alumni of a college found that identification with the Alma Mater was positively associated with organizational distinctiveness and prestige and with absence of intraorganizational competition, but not with interorganizational competition. Further, the organizational identification was positively associated with individual-level variables such as satisfaction with the organization, tenure as students and with sentimentality. The hypothesized outcomes of organizational identifications, financial contributions, willingness to advice others to the college and voluntary action for the college were also found. The above mentioned studies are the only known ones in which *behavioral outcomes*, according to the terminology in this study, are studied. Thus, real-life studies of intergroup relations in which behavioral outcomes are included, are wanted while there are several non-experimental studies of cognitive consequences of social identifications: Oaker and Brown (1986) investigated the intergroup relations between nurses in various fields of nursing. They found clear ingroup bias in intergroup attitudes (measured by the questions: "How friendly are nurses from --- ?" etc.), while there was *negative* correlation between their measures of group identifications ("I am a person who considers the ... group important" etc.) and intergroup attitudes bias. The results of a meta-analysis of ingroup bias studies, Mullen, Brown and Smith (1992) were that the ingroup bias effect was highly significant and of moderate magnitude.

Related construct - Organizational commitment

There are some similarities between the social identification construct and *organizational commitment* (Mowday, Steers and Porter, 1979, 1982, Mathieu and Zajac, 1990). According to Mathieu and Zajac, *attitudinal* organizational commitment is most commonly studied, defined as

> "The relative strength of an individual's identification with and involvement in a particular organization. Conceptually, it can be characterized by at least three factors: a) a strong belief in and acceptance of the organization's goals and values; b) a willingness to exert considerable effort on behalf of the organization; and c) a strong desire to maintain membership in the organization".

The *conceptual* differences between this definition of organizational commitment and social identification are: *First*, while social identifications is primarily a cognitive/perceptual construct, organizational commitment also includes affective/emotional aspects. *Second,* while in the social identification framework, behavior is regarded as a measure or outcome of the identifications, organizational commitment focuses on *intentions* to behave (not actual behavior) in accordance with the interests of the organization, and to exert effort on behalf of the organization. Thus, the social identification construct delineates more clearly between the cognitive/perceptual aspects on the one hand and the behavioral ones on the other hand. Further, no element of intentions is included in the social identification concept.

Further, social identification is a more neutral and descriptive construct than the more value-laden organizational commitment concept. Zaccaro and Dobbins (1989) examine the level issue of organizational commitment by distinguishing between commitment to the entire organization and commitment to organizational subgroups . In this way the analysis is brought more close to the focus of this study in which groups within organizations are examined. Their findings substantiate a conceptual distinction between group and organizational commitment (page 271). Wallace (1995) investigated the organizational and professional commitment among lawyers and found different antecedents for these types of commitment. Differences wee also found between commitment in professional and nonprofessional organizations. *Empirically*, the social identification concept is found to be distinct from organizational commitment in a study of Mael and Tetrick (1992). They measured social identifications by the items described in chapter 5 of this dissertation while organizational commitment was measured by the questions developed by Mowday, Steers and Porter (1979). Confirmatory factor analyses revealed that the social identification concept was distinct from organizational commitment.

The multigroup membership dimensions in this study - organizational sub-units and professions

So far, the theoretical discussion and the framework for studying multigroup memberships is general and context-independent. To study these phenomena, two dimensions had to be found which both were assumed to be of major importance for the people involved in the intergroup relations. Departments and professions in hospitals were chosen because they offer an ideal context for studying the multigroup membership issue. At the same time, insight in the daily life hospital processes is interesting and useful by itself. The department and the profession dimensions are two main characteristics of long-time traditions and thereby of present society, both with major implications for modern organizations: The *department* dimension in organizations is a manifestation of the bureaucracy (Weber, 1978). The phenomenon that work is divided into organizational subunits and that there are hierarchical relations with the next organizational level is an integrated part of the bureaucracy. Membership in a department probably is of major importance for the people involved, both because of the *real* effects of such belonging and as a result of the taken-for-granted importance of the department dimension, cfr. Scott (1995:35) who distinguishes between three variants of *institutionalization* of which the *cognitive* is the one in which the taken-for-granted mechanism is most elaborated. The recent efforts in the Norwegian health care sector to strengthen the role of the departments in the hospital accounting etc. may have enhanced the importance of the departments in the context of this study. The *profession* dimension is a consequence of a "--- society (is) based on human capital created by education and enhanced by strategies of closure, that is, the exclusion of the unqualified" (Perkin, 1989:2). This phenomenon is proliferating, we never had so many "-nomes" and "-logists", (Torgersen, 1994:14). The profession dimension has the same characteristics as the department dimension: It is important by itself and this importance is enhanced by the taken-for-grantedness both of the profession phenomenon itself and of its importance. making this dimension more easily accessible by categorizations, cfr.

above citation from Bruner (1957). Thus, both during education and by subsequent practice, the proefession dimension is made an organizationally important issue. This is so because it combines the intraorganizational and the organization-environmental perspective: By their very nature professions encompass a multitude of organizations, each of them may be transitory for the professionals. The main source for know-how in professional organizations, thus is intraorganizational subunits, technostructure (Mintzberg, 1979), but professional schools, associations and colleagues outside the organization. In the case of professional organizations, the boundary between the organization and the environment therefore is much more permeable than by other organization types.

Subsequent to the *general* analysis of organizational subunits and profession dimensions, some theoretical approaches to organization design and profession are reviewed:

Organizational subunits

In most organizations work is divided into subunits. The organization design approach (Galbraith, 1973, Mintzberg, 1979) is the main framework for analyzing the principles according to which such division into departments is made. Work division and integration are the main concepts and the most fundamental delineation made is that between *functional* and *market-based* work division. By functional organizing the work is divided according to skill, work processes or function i.e. by *means*. By market-based organizing, on the other hand, the work is divided by *ends*; output, client or place. In their discussion of identifications with organizational subunits, Ashforth and Mael (1989:24) suggest that identifications may differ between functional and market organized enterprises. In organizations of the machine bureaucracy type, functional work division is the main principle while in the divisonalized structure, market-based work division is dominating. In the professional bureaucracy organization configuration, Mintzberg maintains that these principles are collapsed. Thus, a department structure which is quite similar across hospitals emerges.

Professions

There are several approaches to defining professions and to distinguishing between levels of professionalization:

Torgersen (1972:10-11) describes a profession as characterized by 1) a certain long-time formal education that is acquired by 2) persons that broadly speaking are oriented to reach certain 3) occupations that according to social norms can not be filled with other persons than those with that certain education. According to this analysis, there is a high professionalization level when these criteria are fulfilled.

Etzioni (1964:78) distinguishes between two variants of professional organizations: 1) Full-fledged professional organization in which the professional authority is based on long time education (5 years or more), when the question about life and death either/or confidential information is involved, and where knowledge is created and applied rather than just communicated, and 2) semi-professional organizations where the professional authority is based on shorter education, other values than life and death confidence. Additionally, there is another connection to administrative authority in such organizations:

> "First, professional work here has less autonomy; that is, it is more controlled by those higher in ranks and less subject to the discretion of the professional than in full-fledged professional organizations; though it is still characterized by greater autonomy than blue- or white-collar work. Second, the semi-professionals often have skills and personality traits more compatible with administration, especially since the qualities required for communication of knowledge are more like those needed for administration than those required for the creation and, to a degree, application of knowledge. Hence these organizations are run much more frequently by the semi-professionals themselves than by others.
>
> The most typical semi-professional organization is the primary school. The social-work agency is the other major semi-professional organization. A semi-professional sector, rather full-fledged organization, is found in the nursing service of hospitals." (Etzioni 1964:87).

Berg's (1987) discussion of professions is based on the concepts *scientific* and *empirical knowledge*. The first category is developed through systematic and usually institutionalized research, while the latter is developed through trial and error, i.e. in a less systematic and methodical way than by scientific knowledge (p. 30-31). Berg also distinguishes between two types of *values* or purposes towards which occupations may oriented: *Autotelical* values are autonomous, representing purposes on their own. Values as health, justice, religious salvation and beauty are examples of such values. Heterotelical values, on the other hand, are instrumental and based on something beyond themselves (p. 32). On the basis of these two dimensions Berg concludes that scientific occupations with entirely autotelical orientation are autonomous both as to goals and means. They can operate on their own and only to a moderate extent they need be connected to other, superordinate occupations. According to Berg it is common to call such occupations *professions*.

On the basis of these three approaches it is possible to distinguish between occupations that are professions and those that are not, and between occupations with different levels of professionalization. The employee groups in the hospital departments do not differ much from each other as to the connection between education and occupation. Some differences exist between the lengths of the education for physicians and nurses. According to Berg (1987:34) both physicians and nurses have autotelical values while physicians have a more scientific knowledge basis than the latter.

Not only the professions by themselves, but the relationships between them (Abbott, 1992) are interesting and important in the analysis of interprofessional relations. According to Walby and Greenwell (1994:12), the two professions studied here, doctors and nurses, have complicated relationships that are mediated by a number of principles involving both difference and complimentarity, on the one hand, and hierarchy and subordination on the other. According to Walby and Greenwell, the boundary between medicine and nursing, is one of the best places to investigate interprofessional relations.

Behavioral outcome of social identifications - prosocial behavior

The predicted behavioral outcome of social identifications is cooperation and prosocial behavior. There is a fundamental difference between these two constructs: While prosocial behavior (like any behavior) is an *individual-level* construct, cooperation is a *relational* one. Cooperation necessarily involves more than one person and is contingent upon a reciprocal response from one or more others. Behavior, on the other hand is an individual-level construct, even if it may be directed towards one or more others (beneficiaries as well as victims).

Behavior in organizations may be categorized according to a variety of dimensions. In a recent review Van Dyne, Cummings and Parks (1995) propose a nomological network for *extra-role* behavior which is defined as "--behavior which benefits the organization and/or is intended to benefit the organization, which is discretionary and which goes beyond existing role expectations" (p. 218). They examine four extra-role behavior constructs: Organizational citizenship behavior, prosocial organizational behavior, whistle-blowing and principled organizational dissent, (p. 216). At least three issues emerge:

First, a crucial point in the above definition is the restriction that the behavior have to benefit or intended to benefit the organization. Van Dyne et. al. label such behavior *positive*. The question then arises how to handle the opposite, *negative*, behavior. One alternative is to regard positive and negative behavior as *values* of a variable ranging from the negative to the positive. Another alternative is to consider t may be, however, that positive extra-role behavior as a concept distinct from negative extra-role behavior.

Second, positive or positively intended behavior is not necessarily *functional for the organization*. It may even be directly dysfunctional e.g. when an employee, by helping a colleague, is attaining goals different from those of the organization.

The *third* issue concerning the extra-role behavior construct is the problem of differentiation between in-role and extra-role behavior; what is role prescribed and what is discretionay behavior.

The interesting point here is what kind of behavior that are predicted from the social identifications and what is most interesting when the research questions are considered. These conclusions are drawn: *First*, SIT and SCT predict positive behavior, regardless of whether these behaviors are values on a variable ranging from negative to positive or a concept distinct from negative behavior. Except for intergroup conflicts SIT and SCT are remarkable silent as to the possibility of negative behavior. *Second*, the analysis of intergroup relations in this study necessitates analyzing behavior that are functional as well as dysfunctional for the organization while positive or positively-intended for individuals or groups within the organizations. The strict limitation that the behavior must benefit the organization as a whole in VanDyne et. al's definition, is relaxed in this study, thus explicitly allowing for sub-optimizing behavior. *Third*, for the purpose of this study, it is neither necessary nor fruitful to limit the behavioral outcome variable to include only strict extra-role behavior.

Thus, in spite of the recommendations by Van Dyne et. al. (1995) to avoid the prosocial behavior concept (Brief and Motowidlo,1986), it is useful in this study. It includes both organizationally functional and dysfunctional, "role prescribed" and "extra role" behavior.

Brief and Motowidlo (1986) propose this definition of the concept:

> "Prosocial organizational behavior is behavior which is (a) performed by a member of an organization, (b) directed toward an individual, group, or organization with whom he or she interacts while carrying out his or her organizational role, and (c) performed with the intention of promoting the welfare of the individual, group, or organization toward which it is directed."

They distinguish between the below mentioned types of prosocial behavior:

1. Assisting co-workers with job-related matters
2. Assisting co-workers with personal matters
3. Showing leniency in personnel decisions
4. Providing services or products to consumers in organizationally consistent ways
5. Providing services or products to consumers in organizationally inconsistent ways
6. Helping consumers with personal matters unrelated to organizational services or products
7. Complying with organizational values, policies, and regulations
8. Suggesting procedural, administrative, or organizational improvements

9. Objecting to improper directives, procedures, or policies
10. Putting forth extra effort on the job
11. Volunteering for additional assignments
12. Staying with the organization despite temporary hardships
13. Representing the organization favorably to outsiders

In their review of directions for further research Brief and Motowidlo suggest that the underlying dimensionality in prosocial behavior should be examined:

> "The analysis presented here suggests 13 different ways in which people can act prosocially in organizations, but they probably covary to form a smaller number of underlying factors. People who frequently act prosocially in some ways are also likely to act prosocially in other ways. More information about the factor structure of prosocial behavior should help identify relatively independent dimensions which might have quite different patterns of antecedents and consequences." (page 720).

Summary

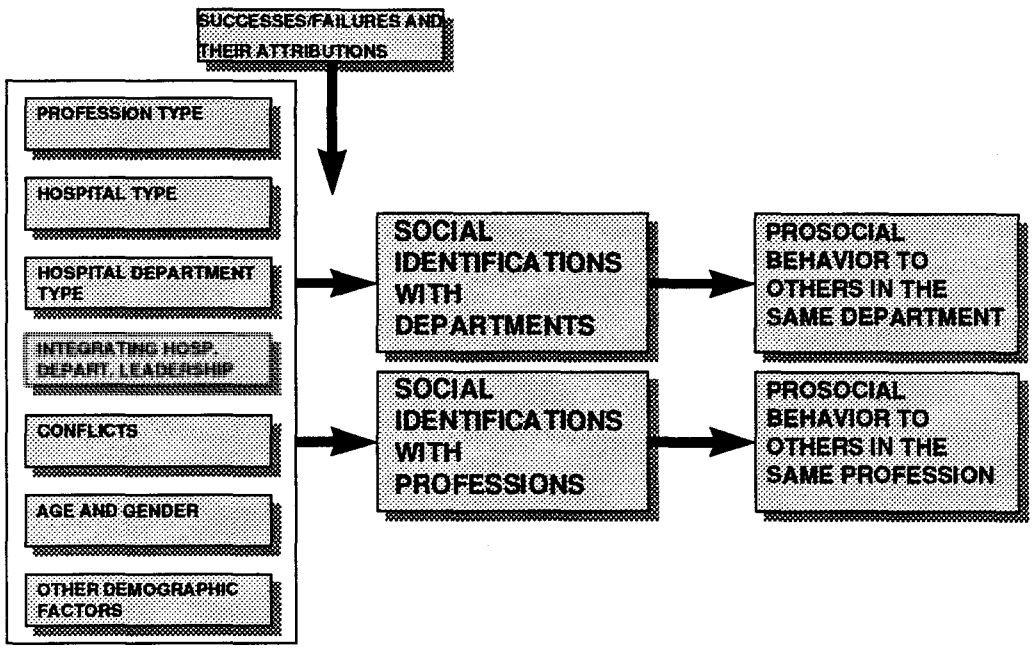
The main present theoretical approach to the study of intergroup relations SIT/SCT is described in this chapter. In this analysis the *social identification* concept is the primary one, defined as the "oneness with or belongingness to some human aggregate" (Ashforth and Mael 1989:21). These social identifications are assumed to have *cognitive* as well as *behavioral* consequences. The predicted cognitive consequences are used as basis for the measurement of social identifications in this study. In the next chapter the social identifications are built into a model as *intermediate variables*. The predicted behavioral consequences of the social identifications, discriminating prosocial behavior, are described in the last part of this chapter. These behavioral consequences are *outcome variables* in the model. In this chapter the dimensions in the multigroup analysis, organizational subgroup and the profession dimensions are also described, simultaneously describing one of the explanatory variables in the study, profession type.

Model and hypotheses 3

In this chapter the theoretical model for the study is developed by presenting the variables of the study and the associations between them. From the model, hypotheses are derived.

First, the model, presented in chapter 1 is recalled:

Figure 3.1 - Model



Variables

Beginning with the phenomenon to be studied, intergroup relations, first the intermediate variables, social identifications, are presented below, Then the *antecedents* and the *consequences* of the social identifications are described.

Intermediate variables - Social identifications

The social identification concept, the "oneness with or belongingness to some human aggregate (Ashforth and Mael, 1989, is thoroughly described in chapter 2. In the model, the social identifications are included as *two* variables: Social identifications with organizational subunits and social identifications with professions. By incorporating them as *two* variables, they are assumed to vary independently of each other.

Independent/control variables

The SIT/SCT research tradition has been predominantly experimental. The few real-life studies done (Oaker and Brown, 1986, Mael and Ashforth, 1992) have not formed any coherent pattern for which explanatory variables to include in the research models, cfr. Kramer (1993:256) who posits that research about the determinants of social identification is rather sparse. Thus, there is no unequilvocally theoretical basis for the selection of explanatory and control variables in this study. The only exception is the effects of successes and failures and their attributions for which hypotheses are explicitly derived from the work of Kramer (1991, 1993), see chapter 2. Rather, knowledge about the context of the study have guided the search for independent variables. In addition to evaluate potential variables as to their explaining power, an attempt was also made to provide *managerially* interesting and useful knowledge, i.e. to find variable that might be *manipulated* by organizational action. For the latter reason the selection of variables was based on the assumption that it is managerially interesting to know both which such variables that *do* influence the social identifications and which do *not*. These criteria led to a model in which variables of various types are included. Even if none of them can be regarded as internally inconsistent, they admittedly are of very different kinds. Below a description of them is given, starting with those for which hypotheses are worked out. Subsequently the control variables are described.

Explanatory variables. Profession type: According to chapter 2 professions may be analyzed as to a variety of dimensions. Ideally, *all* these dimensions should be included in the study as distinct variables. The profession dimensions, however do not vary independently; rather *each profession is a composite of these dimensions*. By including a variety of professions in the study, variability for many of the dimensions would

nevertheless have been accomplished. Some practical consideration are of signifance here, however: In many hospital departments, doctors and nurses are the *only* present professions, for example, e. g. auxialliary nurses are not employed in all hospital departments, and some occupations, e.g. physioterapists are organized as separate departments, delivering services to the clinical hospital units. A trade-off was thus faced between 1) incorporating only doctors and nurses in the study, thereby excluding other interesting interprofessional relations such as those with the auxilliary nurses and 2) including other professions in the study, whereby either the number of departments would have been reduced or "empty cells" would have occurred, i.e. in departments without other occupations than doctors and nurses would have participated. Two professions were sufficient to investigate the theoretical issues of this study. Further, doctors and nurses are the main professions in Norwegian hospitals both as to number of employees and when importance of their work is considered. Therefore, the composites of dimensions or characteristics by *these* professions were included in the profession type variable. By this choice the *main* purpose of the study could be accomplished, but important questions about the interprofessional relations in hospitals remain unexamined. By incorporating profession type in the analysis, it is assumed that there are similarities within these groups. That is not to say, however, that there are no differences *within* the professions, e.g. as to the schools at which the medical or nurse education was received.

Hospital department management/integrating leadership: One of the main topics in the organization design literature e.g. Mintzberg (1979) is the choice between functional and market organizing. By *functional* organizing the work is divided by *means* i.e. by bases of knowledge, skill, work process or function. By *market* organizing, on the other hand, the work is divided by *ends* i.e. by clients, place etc. (Mintzberg 1979:114). According to Mintzberg, in the so-called *professional bureaucracies*, these principles are collapsing, the work is divided by function and market simultaneously. This analysis is an explanation for why the composition of work groups in hospitals, is relatively similar across hospitals: There are less options for organization design variations in professional organizations than in many other organization types where the choice between market and function as the organizing principle regularly is one of the most important ones. This similarity of hospital departments makes comparisons between the same type of departments at different hospitals possible. *Within* each of these departments the hospital department management might impact the relations between the occupational groups. In this way they influence the intergroup relations both between departments and between professions. The formal hospital department management design, the one-manager or two-manager model probably is of importance here. Additionally, it is important how the leadership is actually exercised. The concept *integrating hospital department leadership* is used here. It incorporates the formal management design. Additionally, it includes the degree to which the hospital department management emphasizes and enhances belonging to organizational subunits and makes attempts to reduce the profession intergroup conflicts.

Successes/failures: According to the theoretical description in chapter 2, successes and failures in organizational units as well as in professions are expected to impact the social

identifications in the hospitals: Strengthening the identifications by successes and by externally attributed failures.When failures are internally attributed, on the other hand, the identification are supposed to be weakened.

Control variables. Hospital type: The Norwegian hospital structure reflects a division of responsibilities for diagnosing, treating and caring the patients. Some specialized hospitals have patients from the entire country, some have responsibilities for regions of the country, som for counties (of which there are 19) and some for local regions. In some counties there are specialized psychiatric hospitals while in other counties the psychiatric departments are integrated in the general hospitals. According to these differences, the hospitals vary substantially as to their size, recruitment of professionals/professional level and prestige etc. For psychiatric hospitals there may be differences as to their professional paradigms or approaches as well. These differences among hospitals may affect the social identifications. Hospital type, accordingly, is included in the model of this study. The study does not encompass hospitals with only one clinical department; the belongingness to a hospital department was assumed to be otherwise the the usual ones if the hospital and the hospital department collapsed. The participating hospitals were grouped into 6 types, see chapter 5.

Hospital department type: The Norwegian hospitals are organized into departments according to the medical specialties: Internal medicine, surgery, neurology, psychiatry etc. Accordingly, the organizational structure is quite similar across hospitals. Between these department types, differences may emerge regarding size of departments (e.g. internal medicine compared with otorhinolaryngology), type of work, e.g. anesthesiology compared with psychiatry, relative number of occupational groups,e.g. departments of psychiatry in which there regularly are more employees with other occupations than doctors and nurses compared with hospital departments for somatic diseases. There may also be professional prestige differences between the hospital department types. Within the hospital departments there regularly are subunits, ward units. This organizational level is not included in this study. To examine the main theoretical question of crosscutting identifications, more than one group level would be redundant. The managerial interest of the study is focused on the department level while in accounting etc. the ward unit level is of less interest. Finally, doctors often have their work in more than one ward unit, making the analyses more complex than necessary.

Conflicts: Conflict is a well-used concept in organizational research, e.g. Thomas (1976). Since this study is focused on categorization processes rather than on real opposing interests between groups, conflicts is *not* a central concept here. This is not to exclude the possibility. however, that the perceived conflict levels in the participating hospitals may impact the social identifications. Conflicts are therefore incorporated in the study as a control variable. In chapter 5 the operationalizations of conflicts are described, encompassing conflicts at the hospital and at the hospital department level and conflicts between departments as well as between professions.

Age, gender and other demographic factors/contact with other professions: The social identifications may vary according to the respondent's age and gender. Further, the above mentioned variables hospital type and hospital department type are characteristics of the respondent's *present* work environment. There may be factors in his/her *past* as well, that explain the social identifications. The theoretical interesting mechanism here, is their *contacts* with other persons. In the context of this study this means the degree to which they have worked together with people of various in-group/out-group combinations described in chapter 2, e.g. in the same and other types of department at other hospitals, in other departments at the same hospital, other practices etc. As described in chapter 2, there is a rather equivocal theoretical basis for hypothesizing the impacts of intergroup contact. Because of this doubt as to the effects of the variables, the demographic factors are incorporated in the model as *control* variables, see appendix for more details about the various items. To examine this issue may be *managerially* interesting; knowledge about the associations between *past* work and *present* social identifications may be utilized to design career patterns that benefit the organization.

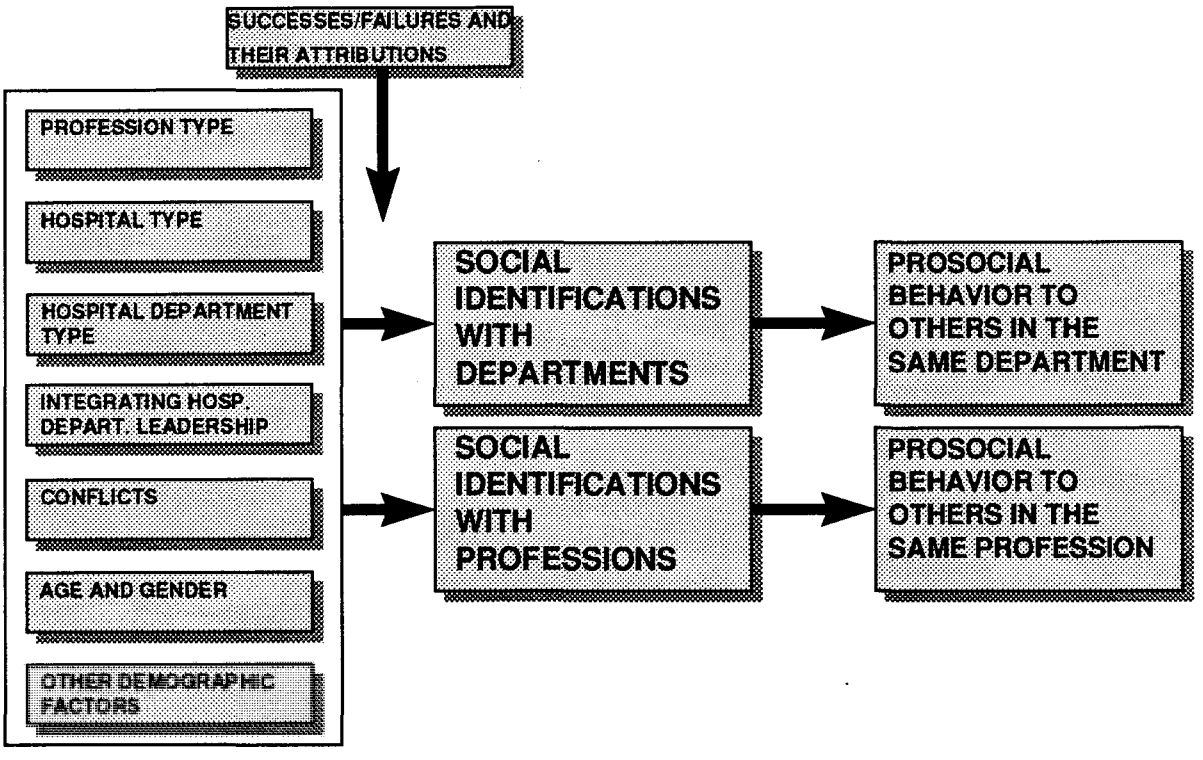
Outcome variables - Prosocial behavior

The prosocial behavior concept is described in chapter 2. In this study the *direction* of such behavior is the interesting point, i.e. towards whom (members of which group) people direct their help, support etc. Accordingly, two distinct variables are incorporated in the model: Prosocial behavior to others in the same organizational subunit and prosocial behavior to others in the same profession.

Model

The above listed variables are built together in the model for the study which for presentational reasons are showed above in chapter 1 and at the beginning of the present chapter as well.

Figure 3.2 - Theoretical model



Some remarks on the presentation of the model have to be made: First, the box around the additive independent variables and the arrows from that box are placed there instead of a great many arrows from each of these variables to the two intermediate ones. The arrow from the "Unusual events and their attributions" - variable is an indicator of interactive associations.

Hypotheses

The two types of hypotheses in this study differ considerably: The hypothesized associations between the intermediate variables and the outcome variables are theory-generated ones, directly derived from SIT/SCT. One type (the cognitive) of the predicted consequences of social identifications is used as *measures* of the identifications. The other consequence type (the behavioral) is used as an outcome *variable*. Since the delineation between these two types is somewhat arbitrarily, the hypothesized associations between the intermediate and the outcome variables are close. It may even be questioned whether they are tautological (if the cleavage between cognitions/perceptions on the one hand and behavior on the other hand is not upheld). On this point, the study is a *theory-testing* one. The hypotheses of associations between the explanatory/control variables and the intermediate variables, on the other hand, are different from those described above: For these associations there is no established theoretical framework from which hypotheses can be derived. The empirical studies made are to a great extent experimental, and in the real-life ones, no coherent pattern of independent variables has emerged. Thus, hypotheses for the associations between the

explanatory/control variables and the intermediate variables, rather than being theory-generated, they are based on knowledge of the context studied. These hypotheses therefore are more tentative than the above mentioned ones, more based on reasoning about the phenomena in question. than on strict theoretical deduction. On this point the study is not primarily a theory-testing one, rather its contribution is to increase the understanding of *which* variables that affect social identifications and the specific impacts of each of them.

Subsequent to the above *general* description of the hypotheses, groups of hypotheses and each hypothesis are described:

Hypotheses for the associations between explanatory variables and the intermediate variables

Profession type: Recall from chapter 2 that the profession type variable is composite of various characteristics or dimensions of the professions. There are several approaches to the analysis of professionalization, e.g. analysis of the links between education and jobs, length of education, knowledge base and the values according to which the professionals are doing their work, see chapter 2. This is no exhaustive list; there also are other differences between professions as well, in this case between doctors and nurses: For instance, their numbers are quite different - there are many more nurses than doctors. Accordingly, the nurses normally are more engaged in team-work (not necessarily cross-professional) than doctors. Further, doctors are less stationary within hospitals than nurses and they regularly are more mobile across hospitals and regions than nurses are. There may be differences as to the professional attitudes between the occupations, such as their interest for professional matters such as research results etc. Composite variables as explanads in a model have major impacts for the development of hypotheses which then must be built on the *totals* of characteristics for a category. This is likely to make the hypotheses more tentative than when single characteristics vary independently. In this case length of education, type of knowledge and values all are indicators on which doctors are consistently on a higher or on the same level as nurses. It is assumed here that these characteristics imply a higher degree of socialization and internalization to profession norms and thus that doctors have stronger identifications to profession than nurses. Doctors, further, e.g. by working more individually than nurses and by being less numerous, are assumed to have weaker identifications to departments than nurses. Thus,

H_1: The identifications with departments are weaker for physicians than for nurses

H_2: The identifications with profession are stronger for physicians than for nurses

Integrating hospital department leadership: Recall that the integrating hospital leadership variable comprises both the formal aspects of how the hospital department management

is designed and the daily work and cooperation of and between the head senior consultant and the nurse manager. The characteristics of integrating hospital department leadership is that cooperation *between* the professions in the departments is emphasized, the department dimension in the crosscutting situation is favored when in conflict at the expense of the profession dimension. The goals of the *entire* department are highlighted. Thus, highly integrating hospital department leadership is assumed to impact social identifications to departments positively,. By both directly and indirectly to de-emphasize the profession dimension, the opposite is assumed to be the impact for social identifications to professions:

H_3: There is a positive association between integrating hospital department leadership and social identifications with departments

H_4: There is a negative association between integrating hospital department leadership and social identifications with professions

Successes and failures: The social identifications are assumed to be positively affected by successes in the ingroup, for failures the impact is dependent on how the event is attributed, see chapter 2. By incorporating successes and failures in the model, a *situational* aspect of the social identifications is brought into the analysis. Because of this situational characteristic of the successes/failures variable, its influence is assumed to be different from the additive effects of the other variables. Thus, rather than influencing the intermediate variables, social identifications, this success/failures situational variable the *associations* between other variables. An effect of the integrating hospital department leadership variable on the social identifications, for example, is hypothesized to be strengthened or weakened of the successes/failures variables. Whether the associations are influenced positively or negatively depends on the diverse alternatives in the successes/failures framework developed in chapter 2. For the profession type variable, these effects are quite indeterminable. Thus, hypotheses for the effects of successes/failures are not worked out in relation to H_1 - H_2 , but for H_3 - H_4 only:

H_5: Successes regarding departments interactively strengthen the association hypothesized in H_3

H_6: Failures regarding departments interactively strengthen the association hypothesized in H_3 when attributed to external causes

H_7: Failures regarding departments interactively weaken the association hypothesized in H_3 when attributed to internal causes

H_8: Successes regarding professions interactively strengthen the association hypothesized in H_4

H_9: Failures regarding professions interactively strengthen the association hypothesized in H_4 when attributed to external causes

H_{10}: Failures regarding professions interactively weaken the association hypothesized in H_4 when attributed to internal causes

Hypotheses for the associations between the intermediate variables and the outcome variables

According to SIT/SCT social identifications have behavioral consequences: Mediated by empathic altruism and/or by empathic trust, people are assumed to discriminate between groups as to towards whom they are giving help, support etc. Ingroup members are supposed to be favored at the expense of outgroup members. In the crosscutting setting of this study, the social identifications to departments is hypothesized to positively affect the prosocial behavior to department ingroup members. Correspondingly, the social identifications to professions are assumed positively to impact the prosocial behavior to profession ingroup members. Thus,

H_{11}: **There is a positive association between social identifications with departments and prosocial behavior directed towards other persons within the same department**

H_{12}: **There is a positive association between social identifications with profession and prosocial behavior directed towards other persons in the same profession**

Research design 4

In this chapter the strategies and procedures for collecting data are described.

The main propositions in this study are that some explanatory variables (profession type, integrating hospital leadership etc.) have some effects on the intermediate variables (social identifications) which in turn are predictors of some behavioral variables (direction of prosocial behavior). To examine whether these propositions turned out to be confirmed, an appropriate research design had to be worked out, that is strategies for collecting the data necessary to test the model.

To get variability for all the variables in the model, a large number of cases had to be provided, thus indicating that some sort of *variable analysis*, in contrast to *case analysis* (Miles and Huberman, 1994) was done. Within this main research design approach, from the framework of stable and situational identifications developed in chapter 2, a question with major implications for the research design arises: The framework proposes that the associations between the stable and the situational identifications are dependent

on 1) whether or not the identifications are concordant or discordant (in harmony or at odds with each others) and on 2) the relative importance of them; that is whether one of them is dominating over the other one or whether they are of equal importance. Based on this framework, some different research strategies may be chosen: *First*, a study could be done in which *both* the stable *and* the situational identifications were included. That study would be a test of whether the associations between the stable and the situational identifications actually are as proposed in the framework. *Second*, a study of the stable identifications alone might be done. The *third* alternative was to limit the study to situational identifications. The original plan for this study was the first alternative; to include both the stable and the situational identifications. The salience of the identifications had to be manipulated to accomplish this alternative, i.e. to discern the differences between identifications in situations where different identifications were made salient. This was attempted in a pilot study, which, however, was not successful, see below.

The choice, therefore, was between the two remaining options. No known studies have reported about the relationships between identifications to organizational subunits and professions in hospitals. Little is known, therefore, about both the stable and the situational aspects of these social identifications. The best choice in this situation was to examine the stable identifications; to examine the situational identifications without taking the stable ones into consideration did not seem to be an appropriate strategy. The assumption was then made that the identifications in question were not totally fluctuating (Kramer, 1993). If they were, a study of the stable aspects of them would have been meaningless. Even if this study is predominantly focused on the stable identifications, it was also attempted to include the situational aspects by posing an open-ended question about successes/failures (unusual events) and their attributions.

To examine these stable identifications the main requirement for the research design was that data from a large enough number of respondents to draw conclusion were obtained and that these data could be considered as representative for the population. As to the first of these points, the study had to encompass hospitals and hospital departments providing a variety of values on the explanatory and control variables, hospital type, hospital department type, integrating hospital leadership, conflicts etc. The representativeness issue, on the other hand, would imply that a method providing a maximum response rate e.g. telephone interviews was used. A trade-off therefore was faced between the attributes of telephone interviews and mailed questionnaires. Mailed questionnaires were chosen as method for the study: Within a given resource frame as to time and money, this method normally give a higher absolute number of responses.

The next research design issue was *who* the informants in the study should be. Recall that the variables in the model are of different types: The explanatory variables are partly about *simple facts* such as age, gender etc. Others are *perceptual* constructs such as evaluation of hospital department leadership and conflicts. The intermediate variables are *cognitive/perceptual* while the outcome variables are *behavioral*. As to the

cognitive/perceptual variables, self-reporting was the only method available; no others than the persons in question can report how they perceive their identifications to groups etc. For the measurement of the behavioral construct, direction of prosocial behavior, on the other hand, data could have been provided from other informants (colleagues, managers etc.). By obtaining behavioral data from other persons than the individuals in question, other motivational aspects than the self-reporting problems have to be taken into consideration. While in the case of self-reporting the risk is that people report too positively about themselves, others persons' evaluations may suffer from sympathies or antipathies as well as from lacking information about the focal person's behavior. There is a risk, therefore, that such informants might have given biased information and/or be based on some generalized impression rather than exact information about the primary respondents' behavior. Recall that very specific information was needed, cfr. the research question and the model, see chapters 1 and 3. By obtaining information from two or more informants, e.g. both the focal person and others, it would have been possible to get a relatively complete information about the behavior in question. It would, however, have made data collection very resource-demanding. Because of confidentiality considerations it would also have been considerable risk for non-responses. The conclusion, thus, was that the cognitive as well as the behavioral data were provided by self-reporting measures, despite the objections posed by Podskakoff and Organ (1986) that self-reported data about different issues may be problematic.

The research design, thus, is a cross-sectional one with self-reported data as measures for most of the variables. The information about hospitals, hospital type, professions etc. was obtained by pre-coding of the questionnaires and directly from the hospital administrations. This design may discern the correlation between the variables. It says nothing, however, about the causal directions of the effects.

In February - March 1995 a two-step pilot study was done at one middle-sized Norwegian hospital. First, about 10 persons filled in a draft of the questionnaire, followed by a conversation in which they gave their comments to the questions posed. Then a second draft of the questionnaire was mailed to about 200 respondents at the same hospital (other ones than in the first step). At this point the questionnaire was worked out in 3 versions, each respondent received one of them. The distribution of questionnaires among the individual respondents were done at random. In the first version, the first point in the questionnaire was to list the main differences between the respondents' *departments* and the other departments at the hospital. In the second version, the same instruction was given, the only difference was that the respondents were asked to list thw differences between their *profession* and other professions. In the third group, no such questions were posed. In all 3 versions items for measuring the independent/control variables, the intermediate variables and the outcome variables were included. These three versions of the questionnaire were worked out as an attempt to *manipulate the salience* of the identifications: The third group was a control group for a test whether the introductional questions did enhance the social identifications to departments and professions respectively. They did not; there were no differences whatsoever between the three groups as to the item scores. In addition to be a test of this manipulation of

salience attempt, the two pilot study steps described above gave valuable information for the elaborating of the final version of the questionnaire, including a preliminary investigation of the variability and dimensionality of the concepts. Both the preliminary versions and the final questionnaires were worked out in two versions, one for doctors and one for nurses.

Doctors and nurses without any formal management responsibilities at all Norwegian hospitals were the population of this study. More precisely, the population was defined to include what in the Norwegian context is called section senior consultant (seksjonsoverlege) and contact nurse (kontaktsykepleier). These jobs normally have *some* managerial tasks, by and large, however, the work was expected to be clinical and warding. On the other hand what in the Norwegian terminology is called "Avdelingsoverlege"» for doctors and "Oversykepleier" and "Avdelingssykepleier" were *not* included in the population. These occupation categories, on the other hand, were informants for the integrating hospital department leadership variable and the conflict variable, see chapter 6 about measurement analysis. In that chapter it is described that this information is *not* incorporated in the analyses of this study.

In March 1995 inquires were sent to the management of Norwegian hospitals assumed to have more than one clinical department with a request for participating in this study. The constraint that the hospitals should have more than one clinical department was stipulated because of the need to investigate the relations to other departments, see the research questions in chapter 1. Recommendations from the research institution responsible for examining the life and work of physicians (Legekårsundersøkelsen) and the nurses' union (Norsk Sykepleierforbund) were obtained and referred to in the letters to the hospital managements. Totally 73 hospitals were asked to take part in the study. At the end of the set time limit, 54 hospitals had agreed to participate in the study, of which 5 turned out to have only one clinical department. Thus the study encompasses 49 hospitals, distributed as to hospital types according to the table below:

Table 4.1 - Hospitals in the study - distribution as to hospital types

	Number of hospitals
Hospitals with less than 500 employees	20
Hospitals with 500 - 1000 employees	12
Hospitals with 1000 - 1500 employees	2
Hospitals with more than 1500 employees	3
University/special hospitals	5
Psychiatric hospitals	7
Total	49

Dependent on what criteria used, the total number of hospitals in above categories vary. Normally, however, the total number of hospitals in Norway is estimated to about 85. Thus, a good representativeness among the hospitals was obtained. That is true for the geographical dimension too: Among the 19 counties in Norway, 18 are included in the study.

To obtain a sufficient number of filled-in questionnaires, it was planned to mail about 2000 of them. Subsequently, the *number* of departments was decided, *in which* departments the respondents should be found and the number of respondents in each of these departments. Some compromises between conflicting considerations had to be made at this step of the study: At the small hospitals, there are very few doctors. In order, totally, to get a rather equal distribution of respondents between doctors and nurses, doctors are relatively over-represented at the large hospitals while the opposite is true for nurses. 8 types of hospital departments were included in the study: Departments of anesthesiology, pediatrics, gynecology, surgery, internal medicine, neurology, otorhinolaryngology (ear/nose/throat diseases) and psychiatry. The selection of hospital departments, by and large, was done to mirror the distribution of department types at the Norwegian hospitals.

From the hospitals, that participated in the study, names and occupational positions for the doctors and nurses were obtained. The limit of occupation size to be included in the study was 0.75.These lists were used for mailing the questionnaires to all doctors and nurses or a random sample of them in the departments selected, according to this key system:

Table 4.2 - Key for the selection of hospital departments and respondents within them

	Number of departments included	Doctors	Nurses
Hospitals with less than 500 employees	All	All	4
Hospitals with 500 - 1000 employees	2 - 4	14	10
Hospitals with 1000 - 1500 employees	3 - 4	14	10
Hospitals with more than 1500 employees	3 - 4	14	10
University/special hospitals	2 - 4	14	10
Psychiatric hospitals	All	All	7

If the total number of employees in a category within one departments was less than the above listed figures, then *all* the doctors/nurses in that department were included in the study.

As far as possible, the senior consultants and the registrars were represented with equal numbers in each of the participating departments.

Due to capacity constraints, the questionnaires were mailed in portions during May 1995. In most cases envelopes containing the personal letters were sent to the hospitals. In the individual envelopes, on which name and department of the individual respondents were written, the questionnaire, an introduction letter an information sheet as well as an envelope for returning the questionnaires without cost for the respondents were included. In the introduction letters, there was an orientation about the purpose of the study, with recommendations from the above mentioned instances, information about a lottery among the respondents with some premiums (a week-end journey for 2 persons to any place in Norway, 5 graphic prints and 10 boxes (1 kg) with assorted chocolate) and about the deadline for replying. The respondents were also promised to receive information about the results of the study. Totally 2086 questionnaires were mailed.

Due to the portional mailing of the questionnaires, the deadlines varied among the respondent groups. To the respondents with deadline before June 7. 1995, a reminder was sent by telefax. Because of the summer holidays then approaching, the reminder was not sent to the last part of the respondents - the risk would be substantial that these reminding faxes would not be received before that holiday started

Among the 2086 mailed questionnaires, 917 was returned in filled-in condition, thus a response rate of 44.0 per cent was obtained. For senior consultants the response rate was 46.5 per cent, for registrars 40.6 per cent and for nurses 44.0 per cent. Among the hospitals the response rate varied from 25.0 per cent through 85.7 per cent. These variations were found as to hospital type and hospital departments type

Table 4.3 - Response rates according to hospital types

	No. of question-naires mailed	No. of question-naires received	Response rate in per cent
Hospitals with less than 500 employees	486	220	45.3
Hospitals with 500 - 1000 employees	614	274	44.6
Hospitals with 1000 - 1500 employees	145	77	53.1
Hospitals with more than 1500 employees	235	91	38.7
University/special hospitals	380	159	41.8
Psychiatric hospitals	226	93	41.1
Unspecified		3	
Totals	2 086	917	44.0

Table 4.4 - Response rates according to hospital department types

	No. of questionnaires mailed	No. of questionnaires received	Response rate in per cent
Departments of anesthesiology	232	105	45.3
Departments of pediatrics	137	77	56.2
Departments gynecology	196	81	41.3
Departments of surgery	486	196	40.3
Departments of internal medicine	553	249	45.0
Departments of neurology	55	29	52.7
Departments of otorhinolaryngology (ear/nose/throat diseases)	50	21	42.0
Departments of psychiatry	377	156	41.4
Unspecified		3	
Totals	2 086	917	44.0

Two tests of the representativeness of the data were done: *First* a comparison was made between the questionnaires that were returned at a point of time when the respondents *had* received the telefax reminder (146 cases) and the other questionnaires. Of 76 items tested, 5 turned out to be significantly different ($p<0.05$). *Second*, 47 respondents at the 4 hospitals for which a higher response rate than 60 per cent were obtained were compared with the other ones. In this test, 3 items provided significantly different responses. As far as what can be concluded from these tests, it does not seem to be any major representative problems in the study. No definite conclusion can be drawn from these tests, however.

At the same time as the questionnaires were mailed, information about the hospitals were obtained from the hospital managements. This information was about the size of the hospitals (measured by number of beds, number of patients, number of employees etc.), accounting system and about the formal hospital department management structure. Among the various size measures, number of employees was chosen as the criterion according to which the distinction between the hospital types was made. Other measures would have given approximately the same pattern, only slightly different categorizations would have occurred. The information about the accounting system and about the formal hospital department structure gave too little variability to be of use in this study: Nearly all the hospitals reported some variants of the two-manager department model and some sorts of decentralized accounting system.

Operationalizations 5

In this chapter, the links between the variables in the model and the items in the questionnaires (and other methods of obtaining data) are described. In appendices, both exact copies of the questionnaires and the items in a systematic manner, according to the placement *of the variables in the model are found*

The data in this study were obtained in three ways: *First*, information from the hospitals (formal department management design, type of hospital and various measures of size and systems of accounting). *Second*, the questionnaires were coded (profession type, hospital, hospital department) and *finally*, the respondents filled the questionnaires which had items of two different kinds: 1) Direct questions about age, gender etc. and 2) Likert-scale items for measuring some underlying constructs. In the development of these items a medium-sized pilot study was done, see chapter 4.

Independent variables:

Integrating hospital department leadership: Information about the formal management structure was obtained from the hospital administrations. The items measuring the non-structural hospital department leadership variables focused on the degree to which the

head senior consultant and the nurse behaved as representatives for their professions, the cooperation between them and the degree to which the respondents considered them to act like an integrated department management. These are central questions as to how the two positions are exercising their leadership.

Conflict: The conflict level items were quite generally formulated, focusing on two potential conflict dimensions, between departments and between professions. Two organizational levels were included in the questions: The hospital level and the hospital department level. Thus, in the questionnaires there were items about the conflict level 1) between departments, 2) between professions at the department level and 3) between professions at hospital level.

Successes/failures: Here open-ended questions were used: The respondents were asked to tell about unusual events as to their departments and their professions. They also were asked to give explanations for what had happened. The answers were content analyzed and the results were coded according to the degree to which the story told 1) was about department and/or profession and 2) the degree to which internal or external attributions were given. This open-ended question was used because the unusual events, by their very nature, might be son different that it was difficult to give wording to specific items.

Intermediate variables - social identifications:

Social identity can not be measured directly (Hogg, 1992). There are three approaches to this measurement issue: *First*, some general measures of social identifications have been developed e.g. by Mael and Tetrick (1992) and Mael and Ashforth (1992). This approach has some similarities with that of Oaker and Brown (1986). A typical item of those developed by Mael/Tetrick/Ashforth is: "When someone criticizes (*name of organization etc.*), it feels like a personal insult". *Second*, social identifications can be measured by their predicted cognitive effects, see chapter 2. According to Messick and Mackie (1989:63), intergroup bias has been measured by a variety of dependent variables: Performance evaluations, attributions, general evaluative ratings and trait ratings. Hogg (1992) emphasizes that one must understand the social content and context of the specific group being studied to measure social identifications properly. *Third*, the social identifications can be measured by the outcome in allocation experiments etc. (money or points, Messick and Mackie, 1989).

In this study, the two first ones of the above alternatives are used: *First*, translations and adjustments of the items generated in the above mentioned studies of Mael and Tetrick (1992) and Mael and Ashforth (1992). *Second*, context-specific items primarily based on the ethnocentrism effect of social identifications were developed. The *third* alternative, outcome of resource allocations in experiments, is not used in this study in the logic of which such measures would be an outcome variable, rather than a measure. Totally 26 social identification items were used in the questionnaire.

In the Mael and Tetrick (1992) study, the below listed items are found:

"When someone criticizes (this organization), it feels like a personal insult".

"I'm very interested in what others think about (this organization)".

"When I talk about this organization, I usually say "we" rather than "they" ".

"This organization's successes are my successes".

"When someone praises this organization, it feels like a personal compliment".

"I act like (name of organization) person to a great extent".

Further, Mael and Ashforth (1992) use these items:

"When someone criticizes (name of school), it feels like a personal insult"

"I'm very interested in what others think about (name of school)".

"When I talk about this school, I usually say 'we' rather than 'they' ".

"This school's successes are my successes".

"When someone praises this school, it feels like a personal compliment".

"If a story in the media criticized the school, I would feel embarrassed".

Some of these items were not used, the remaining were translated into Norwegian, the first column is the department items; the second column for professions (doctor - for nurses the necessary modifications were made.

y_5 DPCRIT: *Når noen kritiserer denne avdelingen, føler jeg det som et personlig angrep*

y_6 DPTHIN: *Jeg er svært interessert i hva andre tenker om min avdeling*

y_1 DPSUCC: *Jeg opplever det slik at denne avdelingens suksess er min suksess*

y_2 DPCOMP: *Når jeg hører noe positivt om denne avdelingen, føler jeg det som kompliment også til meg*

y_{17}PFCRIT: *Når noen kritiserer leger, føler jeg det som et personlig angrep*

y_{18}PFTHIN: *Jeg er svært interessert i hva andre tenker om leger*

y_{13} PFSUCC: *Jeg opplever det slik at andre legers suksess er min suksess*

y_{14} PFPOSI: *Når jeg hører noe positivt om andre leger, føler jeg det som et kompliment også til meg*

Additionally, items for the specific context of the study were worked out: Work related ethnocentrism items were considered to be those that might be most valid for measurement of social identifications in this context with professionals as respondents. Accordingly, items like "We perform more important/difficult tasks", we work more seriously" etc. were used. Effectiveness and quality evaluations were asked for as well. To create variation these questions were not formulated as comparisons with other groups. Instead, the overall (dis)satisfaction was asked for on a -3 to +3 scale. This scale was used to avoid too many obvious +1-answers. Because of the common observation that hospital employees, like most public sector employees, are highly interested in budget allocation issues, budget evaluations were also used as indicators of social identifications. At last, questions about the heterogeneity of groups were included. To a great extent the same wordings were used when questions were asked about organizational subunits and about professions.

The validity of the social identification operationalizations must be evaluated according to 3 issues:

First, the items used in earlier studies have turned out to be reliable there.

Second, as to the items derived from the predictions of SIT/SCT, if these predictions are questionable, so are the items. Thus the validity of the operationalizations has to evaluated in the light of an evaluation of the whole theory; do categorizations have the cognitive and behavioral consequences described in chapter 2? Some discussion of this issue is found in chapter 9.

Third, Validity indications to a great extent may be based on the measurement analysis results, see chapter 6 where these results are presented and commented.

Outcome variable - direction of prosocial behavior

While the cognitive consequences (ingroup bias) are utilized for measurement of the social identifications, the behavioral consequences are the basis for the outcome variable of the study.

To obtain information about the beneficiaries of prosocial behavior two tables (for job-related and private-related matters respectively) were used. In these tables the respondents were asked to report some characteristics of the persons whom they had given help, support etc. during the last 6 months: Age group, gender, department (own or other) and profession (own, "opposite" according to the doctor/nurse dimension and other). The development of these tables went through many stages: Advice from colleagues and results from the pilot study which indicated that this type of question was usable. A number of more specific questions on the same table form gave convergent

patterns of answers. This was taken as an indicator of the validity of the questions. The number of such tables was reduced in the final questionnaire compared with those in the pilot study. The possibility to obtain information about behavior from others than the primary respondents is discussed in chapter 4 where the conclusion is drawn that this should not done in this study. The tables were the main source for obtaining data about the direction of prosocial behavior. Additionally, items were generated, to a great extent from Brief and Motowidlo's (1986) 13 point list, see chapter 2:

Contact
Being contacted
Representative
Colleague
Advice
Put in good words for somebody
Giving priority to other things than effectiveness

As far as possible, these items were given wordings according to .the square ingroup/outgroup-table introduced in chapter 2.

The questionnaire items are listed in a systematic manner in appendix A.

Measurement analysis 6

This chapter reports the measurement analysis of the variables in the model, i.e. factor analyses of the questionnaire items.

The operationalizations of the variables are described in chapter 5. The below presentation is predominantly focused on those variables that were measured by multiple items. First, the measurement of the independent/control variables are analyzed, then the intermediate variables, social identifications, and at last the outcome variables, indicating direction of prosocial behavior.

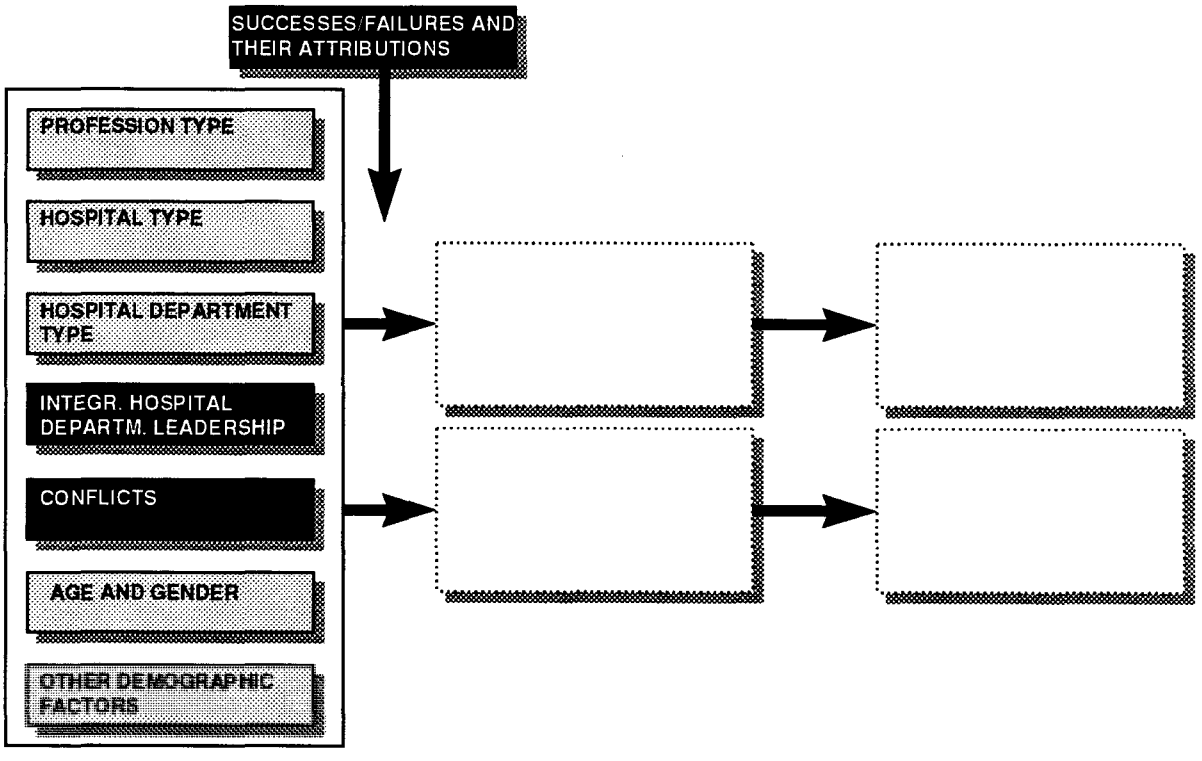
Explorative factor analyses (Principal-axis factoring with Varimax rotation) were used. Other methods give approximately the same results. Missing values are pairwise deleted. Below, the number of factors extracted and the factors with eigenvalue > 0.5 are reported as to eigenvalue and explained variance. In most cases the loadings for factors including factors with eigenvalue > 1.00 are reported. In some cases, however, two *analyses are done, one of them with eigenvalues near 1.00. Factor with loadings > 0.5 are reported in* **bold** *letters. The items are labeled according to the notations in chapter 5. Factor score variables, developed from the below reported factor analyses are labeled with shadowed letters and an abbreviation* FC.... *in the bottom of the tables with an indicator of the content of the variable. This is done only for the variables that are used in the regression analysis reported in chapter 8.*

Independent variables/control variables:

Recall that the predictors of social identifications are those presented in the below displayed section of the model:

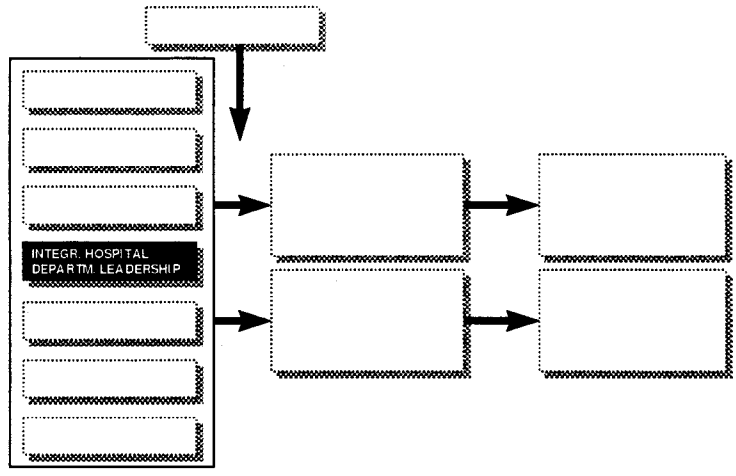
Figure 6.1 - Independent/control variables

Negative boxes (black background and white letters) indicate that the variable is operationalized by multiple items and thus measurement analyses are done and reported in this chapter.



Integrating hospital department leadership

Figure 6.2 - Integrating hospital department leadership



Originally, this variable was supposed to encompass 1) the *formal* aspects of the hospital department, i.e. whether the head senior consultant alone (the one-manager model) or together with the nurse manager (the two-manager-model) comprised the hospital department management and 2) the cooperation between these two occupations. As described in chapter 4 about the research design data from the hospitals about the formal departments management structure failed to be useful: Nearly all the hospitals reported some form of the two-manager model. This does *not* exclude the possibility, however, of using the integrating hospital department leadership variable since it is comprised of the questionnaire items as well.

2 pairs of items were used to measure the cooperation between the head senior consultant and the nurse manager:

Evaluations of the head senior consultant and the nurse manager separately:

x_{18} **DPHSCO**: The head senior consultant is more a representative for the doctors than a manager for the entire department *Avdelingsoverlegen er mer en representant for legene enn en leder for hele avdelingen* (reversed) and x_{19} **DPLNUR**: Reversed: The nurse manager is more a representative for the nurses than a manager for the entire department *Oversykepleier er mer en representant for sykepleierne enn en leder for hele avdelingen* (reversed),

Evaluations of the cooperation between the head senior consultant and the nurse manager:

x_{20} **MANONE**: The head senior consultant and the nurse manager act like one joined management towards the physicians and the nurses in the department *Avdelingsoverlege og oversykepleier fremstår som èn samlet ledelse overfor legene og sykepleierne i avdelingen* x_{21} **MANCOP**: The cooperation between the head senior consultant and the nurse manager in our department is excellent *Samarbeidet mellom avdelingsoverlege og oversykepleier ved vår avdeling er meget godt.*

The table below reports the results from *two* factor analyses. Two analyses were done because, in the first one, the second factor turned out to have an eigenvalue near 1 (0.94).

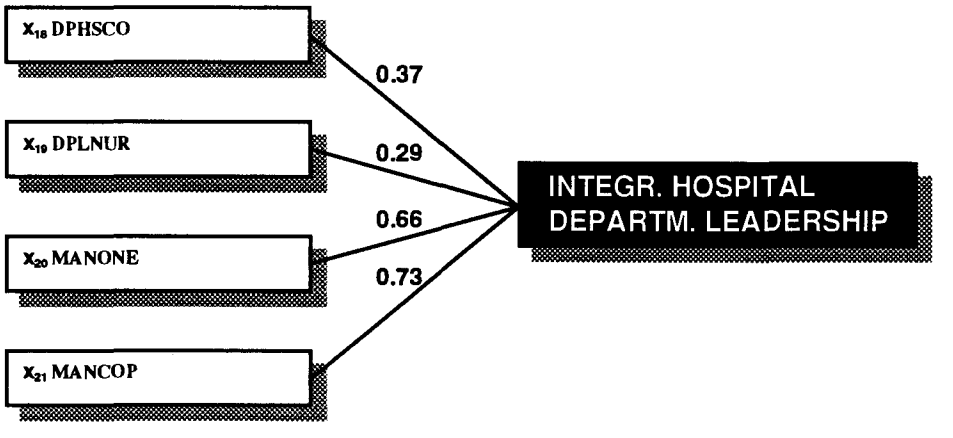
Table 6.1 - Factor analysis - Integrating hospital department leadership

Totally 4 factors were extracted

Factors:	Eigenvalues:	Pct. of variance:
1	1.79	44.8
2	0.94	23.6
3	0.80	20.1

	Factor analysis no 1	Factor analysis no. 2 - 2 factors extracted	
	Factor 1 loadings:	**Factor 1 loadings:**	**Factor 2 loadings:**
x_{18} DPHSCO	0.36695	0.16992	**0.51929**
x_{19} DPLNUR	0.28952	0.12537	**0.38389**
x_{20} MANONE	**0.65633**	**0.63607**	0.20019
x_{21} MANCOP	**0.73236**	**0.71912**	0.24434
Factor score variable:	FCDPLEAD		

Figure 6.3 - Factor analysis - Integrating hospital department leadership



x_{18} DPHSCO: Reversed: The head senior consultant is more a representative for the doctors than a manager for the entire department *Avdelingsoverlegen er mer en representant for legene enn en leder for hele avdelingen* x_{19} DPLNUR: Reversed: The nurse manager is more a representative for the nurses than a manager for the entire department *Oversykepleier er mer en representant for sykepleierne enn en leder for hele avdelingen* x_{20} MANONE: The head senior consultant and the nurse manager act like one joined management towards the physicians and the nurses in the department *Avdelingsoverlege og oversykepleier fremstår som èn samlet ledelse overfor legene og sykepleierne i avdelingen* x_{21} MANCOP: The cooperation between the head senior consultant and the nurse manager in our department is excellent *Samarbeidet mellom avdelingsoverlege og oversykepleier ved vår avdeling er meget godt*

The *first* analysis shows that the integrating hospital department leadership is an *uni*dimensional construct. The first factor explains a large amount of the variance and all the 4 items have positive loadings, even if the two evaluation of cooperation items have higher factor loadings than the evaluation of the managers individually. The *second* analysis shows that there are both a *cooperation* dimension (the evaluation of the items) and a *profession* dimension (the evaluation of the two managers items). The factor score variable FCDPLEAD is computed from the *first* of the above described factor analyses. This was done because of the large amount of variance explained. Additionally, *all* the items have substantial loadings even if there is a difference between the two pairs of items.

The integrating hospital department leadership variable was measured also by asking questions to the hospital department managers (head senior consultant, nurse manager and department nurse (avdelingssykepleier)). The comparison of the scores from the main respondents with those from the hospital department managers are interesting in their own right. Analyses done, while not reported in this dissertation, show that inclusion of these measures in the data analysis, however, does not impact the overall results of this study. It can also be argued that the main respondents' *perceptions* of the hospital department leadership are the most interesting information, even if they should happen to be different from those of the managers. The measures obtained from the hospital department managers, therefore, are not included in the regression analyses reported in chapter 8.

Conflicts

Conflicts were measured by items including two conflict dimensions - between departments and between professions. Two levels were included in the operationalizations: The hospital level and the hospital department level. Thus, 3 conflict items were included in the study:

Figure 6.4 - Operationalizations of conflicts

	Between departments	**Between professions**
Hospital level	**x_{22} CFLDEP Conflict level between departments**	**x_{23} CFLPRF Conflict level between professions at the hospital**
Hospital department level		**x_{24} CFLPDP Conflict level between professions in the department**

One factor analysis was done:

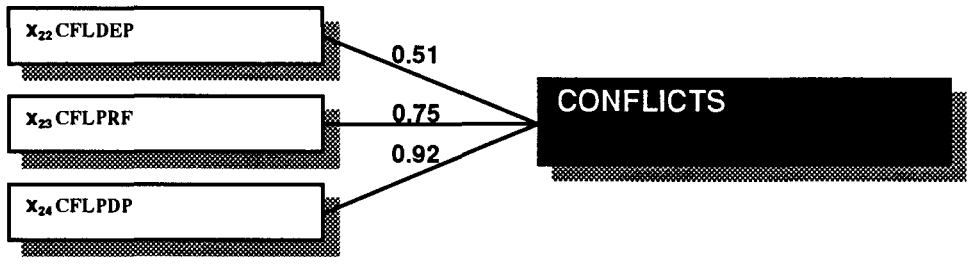
Table 6.2 - Factor analysis - conflicts

Totally 3 factors were extracted

Factors:	Eigenvalues:	Pct. of variance:
1	2.04	68.0
2	0.66	21.9

	Factor 1 loadings:
x_{22} CFLDEP	0.51149
x_{23} CFLPRF	0.75006
x_{24} CFLPDP	0.91856
Factor score variable:	FCCFL

Figure 6.5 - Factor analysis - conflicts



x_{22} CFLDEP: There is a high conflict level between the clinical departments at this hospital *Konfliktnivået mellom de kliniske avdelingene ved dette sykehuset er høyt* x_{23} CFLPRF: There is a high conflict level between physicians and nurses at this hospital *Konfliktnivået mellom leger og sykepleiere ved dette sykehuset er høyt* x_{24} CFLPDP: There is a high conflict level between physicians and nurses at this department *Konfliktnivået mellom leger og sykepleiere ved denne avdelingen er høyt*

The first factor explains a very high amount of the variance (68 per cent). All 3 items have high loadings on this factor, ranging from 0.51 through 0.92. The conflict level, thus, unequivocally is an unidimensional construct: The respondents do *not* discriminate as to whether the conflicts are between departments or professions. Neither are they discriminating between conflicts at the hospitals level and at the hospital department level. The factor score variable FCCFL is incorporated in the multiple regression analysis reported in chapter 8. Like the measurement of the integrating hospital leadership variable, see above, the conflict items were also posed to the hospital department managers. For these items, too, incorporation into the data analyses would have added little to the results. Additionally, it can be argued here as well, that the respondents' perceptions are most important. Therefore, the responses from the hospital department managers are not included in the further analyses.

Successes/failures - unusual events and their attributions:

Successes/failures were measured by an open-ended question in which the respondents were asked to give a description of unusual events, if any, in their departments and/or their professions. They were also asked to give *their* description of *why* those things had happened. Only in 207 of the 917 questionnaires, this question was answered. These answers were content analyzed according to 4 scales made up by the below listed questions:

- To what degree has the event anything to do with the respondent's *department*? x_{56} UNEVDP
- To what degree has the event anything to do with the respondent's *profession*? x_{57} UNEVPF
- To what degree has the respondent explained the event by action in his/her *department* (in contrast to external action)? x_{58} ATTRDP
- To what degree has the respondent explained the event by action in his/her *profession* (in contrast to external action)? x_{59} ATTRPF

These 4 variables, then, were factor analyzed:

Table 6.3 - Factor analysis - Successes/failures and their attributions

Totally 4 factors were extracted

Factors:	Eigenvalues:	Pct. of variance:
1	1.73	43.2
2	1.36	34.0
3	0.64	15.9

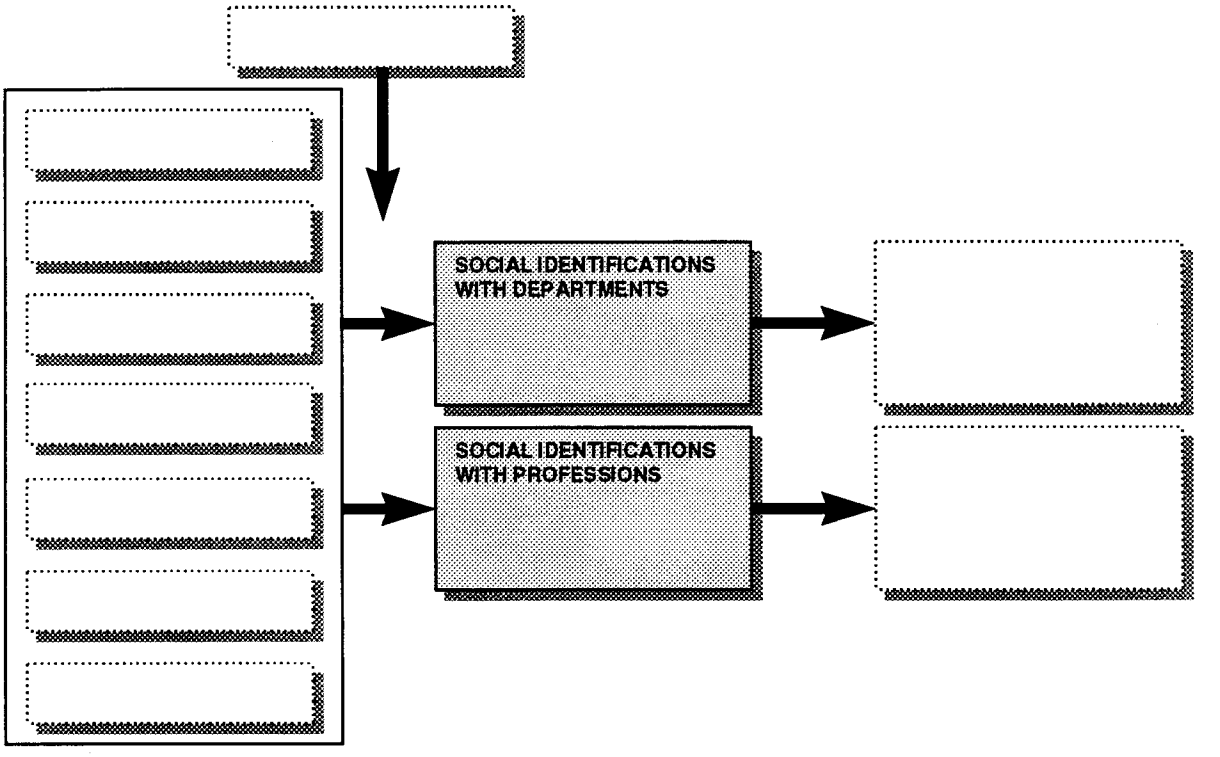
	Factor 1 loadings:	Factor 2 loadings:
x_{56} UNEVDP	-0.07263	**-0.58621**
x_{57} UNEVPF	-0.08303	**0.60241**
x_{58} ATTRDP	**0.85097**	-0.10794
x_{59} ATTRPF	**0.84510**	0.09566

Two distinct factors emerge: The first one is an attribution factor, which means that there are covariances between external/internal attributions independent of whether the event is a department- or profession-oriented one. The second factor is comprised by the department and/or the profession dimension. The different signs (positive and negative) indicate that the events described typically are either department or profession-oriented. Because of the low number of respondents giving answers to this question and the high correlations, caution had to be shown by using these data in further analyses. These data, therefore, are not included in the regression analyses.

Intermediate variables - social identifications:

Recall that the social identifications were incorporated in the model as two variables:

Figure 6.6 - Intermediate variables - Social identifications



The social identifications (both to departments and to professions) were measured by 1) items translated and adjusted from earlier social identification studies, 2) ingroup bias items evaluating the work of ingroup compared with outgroup, 3) evaluation of effectiveness and quality items, 4) budget allocation evaluation items and 5) heterogeneity evaluation items.

Organizational subunit variables:

Factor analyses of the social identifications with departments gave these results:

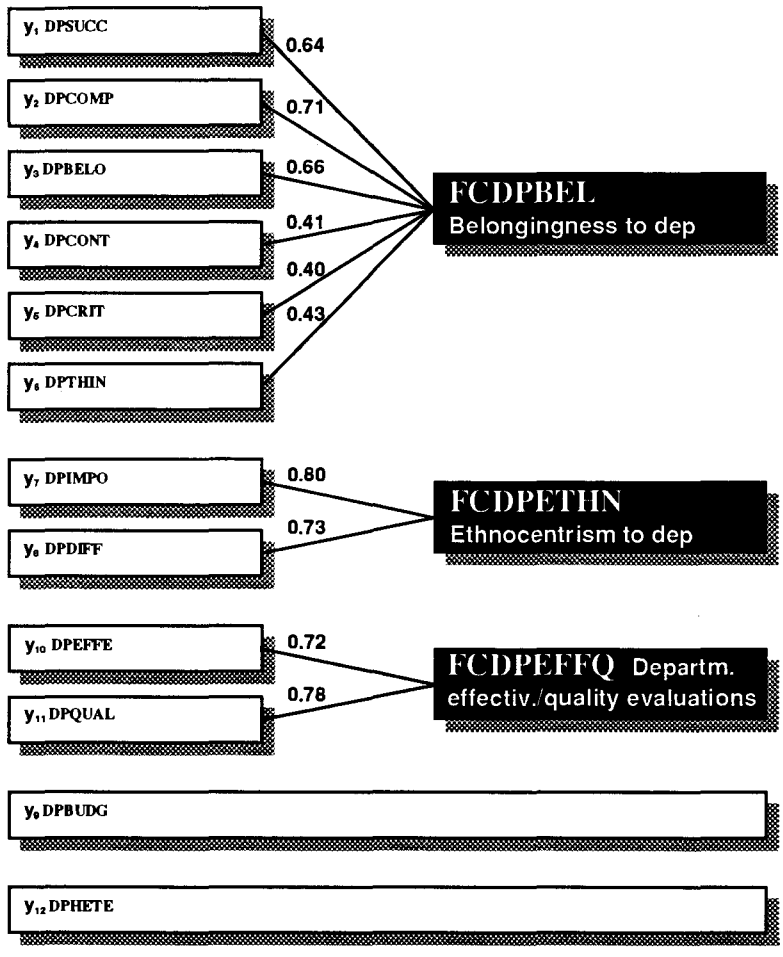
Table 6.4 - Factor analysis - Social identifications with departments

Totally 12 factors were extracted

Factors:	Eigenvalues:	Pct. of variance:
1	2.91	24.3
2	1.61	13.4
3	1.40	11.6
4	1.06	8.8
5	0.97	8.1
6	0.84	7.0
7	0.76	6.3
8	0.69	5.7
9	0.52	4.3

	Factor 1 loadings:	Factor 2 loadings:	Factor 3 loadings:	Factor 4 loadings
y_1 DPSUCC	**0.64214**	0.10682	0.01894	-0.10758
y_2 DPCOMP	**0.71010**	0.08502	-0.02090	-0.03246
y_3 DPBELO	**0.66484**	0.16562	0.04708	0.13400
y_4 DPCONT	0.40976	0.27325	0.10340	-0.00517
y_5 DPCRIT	0.40268	0.09991	-0.00103	0.40416
y_6 DPTHIN	0.42693	0.04793	0.01435	0.29910
y_7 DPIMPO	0.08224	0.09835	**0.80251**	0.13357
y_8 DPDIFF	0.02417	0.01312	**0.72887**	-0.06828
y_9 DPBUDG	-0.03311	-0.07198	0.08903	0.20647
y_{10} DPEEFE	0.11675	**0.71620**	-0.02865	0.00295
y_{11} DPQUAL	0.13536	**0.78334**	-0.02957	-0.04929
y_{12} DPHETE	-0.02834	-0.08036	-0.03722	0.01097
Factor score variables:	FCDPBEL	FCDPEFFQ	FCDPETHN	

Figure 6.7 - Factor loadings - Social identifications with departments



y_1 DPSUCC: I feel this department's success as my success *Jeg opplever det slik at denne avdelingens suksess er min suksess* **y_2 DPCOMP**: When listening to something positive about this department, I take it as a personal compliment *Når jeg hører noe positivt om denne avdelingen, føler jeg det som kompliment også til meg* **y_3 DPBELO:** Belonging to this department is an important aspect of my identity *Tilhørighet til denne avdelingen er en viktig del av min identitet* **y_4 DPCONT:** I want to stay in this *department Jeg ønsker å fortsette i denne avdelingen* **y_5 DPCRIT:** When someone criticizes this department, it feels like a personal insult *Når noen kritiserer denne avdelingen, føler jeg det som et personlig angrep* **y_6 DPTHIN:** I am very interested in what other people think about my department *Jeg er svært interessert i hva andre tenker om min avdeling* **y_7 DPIMPO:** This department has more important tasks than (most) other departments *Denne avdelingen har viktigere oppgaver enn (de fleste) andre sykehusavdelinger* **y_8 DPDIFF:** The tasks of this department are more difficult than at (most) other departments *Arbeidsoppgavene ved denne avdelingen er vanskeligere enn ved (de fleste) andre sykehusavdelinger* **y_9 DPBUDG:** Budget allocations to this department have been distinctly insufficient in recent years *Denne avdelingen har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset* **y_{10} DPEFFE:** I regard the effectiveness of work at this department as .... *Jeg anser at effektiviteten av det arbeid som denne avdelingen utfører er ....* **y_{11} DPQUAL:** I regard the quality of work at this department as.... *Jeg anser at kvaliteten på det arbeid som denne avdelingen utfører er .....* **y_{12} DPHETE:** The employees in this department are very heterogeneous *Ansatte i denne avdelingen er en meget heterogen/uensartet gruppe*

On the *first* factor, 3 items have high loadings (>0.6). These are all measures from the Tetrick/Mael/Ashforth-studies about successes in, compliments to and belonging to the group, in this case the department in which the respondents have their work. 3 other items have substantial loadings, too (>0.4). These items are about continuing to work in the department, the reaction of someone's criticizing of the department and the interest in what others think about the department. All these 6 items are aspects of the respondents' feeling of *belonging* to their departments - partly a direct question and

partly other aspects of their feeling of belonging to the department. This factor, accordingly, has been
labeled The belonging to department dimension FCDPBEL

On the second factor, the evaluations of effectiveness and quality of work have high loadings(>0.7). It has been labeled The department effectiveness/quality evaluation dimension FCDPEFFQ.

The ingroup bias made up by evaluation of importance and difficulty of work have high (>0.7) loadings on the third factor. These items, thus, are measuring ethnocentrism. The factor, accordingly, has been labeled The ethnocentrism to department dimension FCDPETHN

Two items remain, having low scores on all the 4 factors extracted: y_9 DPBUDG the budget allocation to department evaluation item and y_{12} DPHETE the department heterogeneity item. These items, therefore, are incorporated *directly* in the regression analyses.

Profession variables:

As described above, the items for measuring social identifications with professions were generated in the same way as those for departments: Translations and adjustments from the Tetrick/Mael/Ashforth items, ethnocentrism items about importance, difficulty and for professions also seriousness of work, effectiveness/quality evaluations and evaluation of heterogeneity.

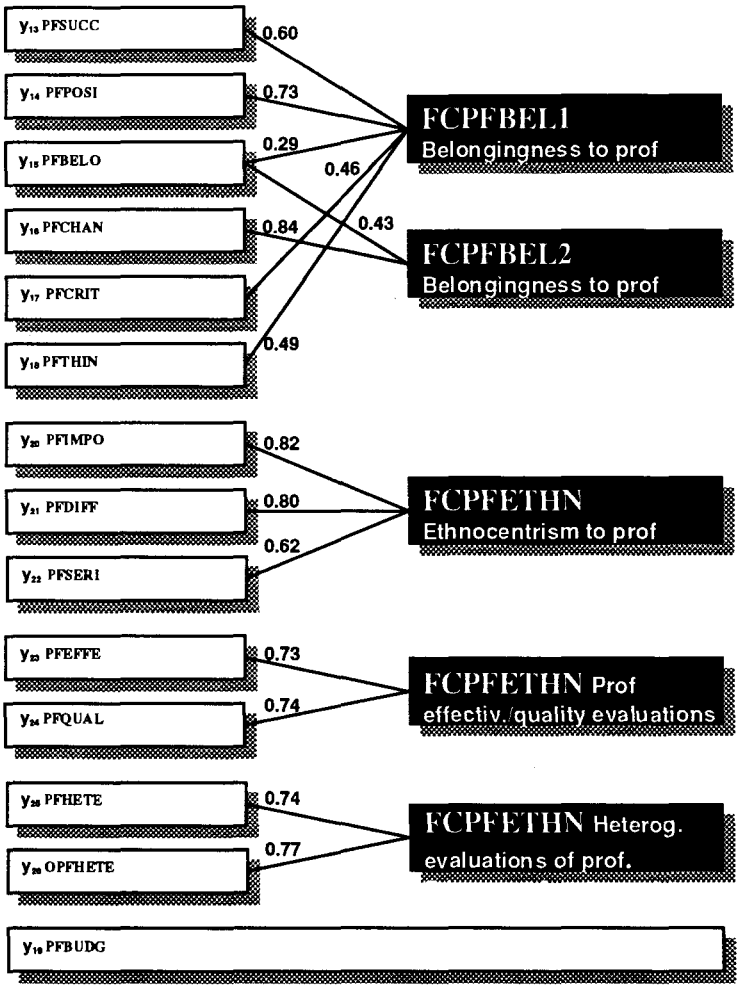
Table 6.5 - Factor analysis - Social identifications with professions

Totally 14 factors were extracted

Factors:	Eigenvalues:	Pct. of variance:
1	2.39	17.1
2	2.21	15.8
3	1.56	11.2
4	1.41	10.1
5	1.24	8.8
6	0.94	6.7
7	0.84	6.0
8	0.69	4.9
9	0.57	4.1
10	0.54	3.8

	Factor 1 loadings:	Factor 2 loadings:	Factor 3 loadings:	Factor 4 loadings	Factor 5 loadings
y_{13} PFSUCC	0.03373	**0.60195**	-0.01675	0.05585	0.15733
y_{14} PFPOSI	-0.02648	**0.72739**	-0.02767	0.05506	0.13329
y_{15} PFBELO	0.09610	0.29111	0.00661	0.08379	0.43274
y_{16} PFCHAN	-0.01248	-0.01167	-0.00366	0.04964	**0.84392**
y_{17} PFCRIT	0.14819	0.45779	-0.05527	0.02748	-0.05665
y_{18} PFTHIN	-0.03695	0.49443	0.03182	0.04273	0.00920
y_{19} PFBUDG	0.17752	0.13307	0.01524	0.03354	-0.02044
y_{20} PFIMPO	**0.82096**	-0.00175	0.02153	-0.04507	0.07372
y_{21} PFDIFF	**0.80477**	-0.05214	0.05979	-0.06225	0.00293
y_{22} PFSERI	**0.62111**	0.05867	0.04697	0.00100	0.03496
y_{23} PFEFFE	-0.03868	0.07052	-0.01939	**0.73477**	0.05767
y_{24} PFQUAL	-0.00119	0.09389	0.02737	**0.74262**	0.05432
y_{25} PFHETE	0.07623	-0.04219	**0.74184**	-0.00767	-0.03967
y_{26} OPFHET	0.04606	0.00054	**0.77423**	0.01571	0.04189
Factor score variables:	FCPFETHN	FCPFBEL1	FCPFHETE	FCPFEFFQ	FCPFBEL2

Figure 6.8 - Factor loadings - Social identifications with professions



y_{13} PFSUCC: I feel other physicians' success as my *success Jeg opplever det slik at andre legers suksess er min suksess* y_{14} PFPOSI: When listening to something positive about physicians, it is felt as a personal compliment *Når jeg hører noe positivt om andre leger, føler jeg det som et kompliment også til meg* y_{15} PFBELO: Belonging to the occupation of physician is an important aspect of my identity *Tilhørighet til legeyrket er en viktig del av min identitet* y_{16} PFCHAN: I consider changing to another occupation than the job of a physician *Jeg kan tenke meg å skifte til et annet yrke enn legeyrket* (reversed) y_{17} PFCRIT: When someone criticizes physicians, it feels like a personal *insult Når noen kritiserer leger, føler jeg det som et personlig angrep* y_{18} PFTHIN: I am very interested in what other people think about physicians *Jeg er svært interessert i hva andre tenker om leger* y_{19} PFBUDG: Budget allocations to physicians have been distinctly insufficient in recent years *Legene har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset* y_{20} PFIMPO: Physicians have more important tasks than nurses *Leger har viktigere oppgaver enn sykepleiere* y_{21} PFDIFF: The tasks of physicians are more difficult than those of *nurses Leger har vanskeligere arbeidsoppgaver enn sykepleiere* y_{22} PFSERI: Physicians take their work more seriously than nurses do *Leger tar yrket sitt mer alvorlig enn det sykepleiere gjør* y_{23} PFEFFE: I regard the effectiveness of physicians' work as .... *Jeg anser at effektiviteten av det arbeid som leger er ....* y_{24} PFQUAL: I regard the quality of physicians' as .... *Jeg anser at kvaliteten på det arbeid som leger utfører er ....* y_{25} PFHETE: Physicians are very heterogeneous *Leger er en meget heterogen/uensartet yrkesgruppe* y_{26} OPFHET: Nurses are very heterogeneous *Sykepleiere er en meget heterogen/uensartet yrkesgruppe*

On the *first* factor, the importance, difficulty and seriousness of work items have high loadings (>0.6). These items expresses ethnocentrism ingroup bias - an overestimation of
the ingroup compared with the outgroup. This factor, thus, is labeled The ethno-

centrism to profession dimension FCPFETHN.

Two items concerning success and listening to something positive, have high loadings (>0.6) on the *second* factor. Two other items, about criticism and interest of what others are thinking, have substantial loadings (>0.4), too. These items thus all have something to do with belonging to professions. This factor, thus is labeled The first belonging to profession dimension FCPFBEL1. The indication "first" is set because two items with similar content, the direct question about belonging and the wish to change occupation question, do *not* load on this factor. These items, on the other hand, have high loadings on the fifth factor as shown below.

The third factor in the factor analysis has high loadings on the heterogeneity of own and the other profession (doctor/nurse). This factor is thus labeled The heterogeneity of profession dimension FCPFHETE.

As mentioned above, not all items with belonging content load on the factor labeled FCPFBEL1. The remaining two load, admittedly with quite different loadings, on the fifth factor. The two items are the wish to change to another occupation (factor loading 0.84) and the
direct question about belonging (factor loading 0.43). These two items constitute The second belonging to profession dimension FCPFBEL2.

One item, the evaluation of budget allocation to profession, does not load on any of the 5 factors. This item, therefore, is included directly in the multiple regression analyses.

Correlation tables of social identification factor scores and items

From the above reported two factor analyses of the social identification totally items 8 factor scores are computed. Additionally 3 items did not load on any of the extracted factors: y_9 DPBUDG, y_{12} DPHETE, y_{19} PFBUDG. They will be used directly in the regression analyses. Instead of the initial *two* social identification variables, *eleven* have now emerged. The correlations between these variables are shown in the table below:

Table 6.6 - Correlations between social identification dimensions and items

	FCDP BEL	FCDP ETHN	FCDP EFFQ	y_9 DPBUDG	y_{12} DPHETE	FCPF BEL1	FCPF BEL2	FCPF ETHN	FCPF EFFQ	y_{19} PFBUDG	FCPF HETE
FCDPBEL	1.00										
FCDPETHN	0.03	1.00									
FCDPEFFQ	0.10	-0.02	1.00								
y_9 DPBUDG	-0.05	0.10	-0.09	1.00							
y_{12} DPHETE	-0.03	-0.04	-0.10	0.06	1.00						
FCPFBEL1	0.41	0.07	0.02	0.09	-0.01	1.00					
FCDPBEL2	0.28	0.05	0.11	-0.04	-0.01	0.04	1.00				
FCPFETHN	-0.05	0.16	-0.03	0.14	0.07	0.00	0.01	1.00			
FCPFEFFQ	0.12	-0.02	0.74	-0.01	-0.06	0.04	0.03	-0.03	1.00		
y_{19} PFBUDG	0.03	0.08	-0.01	0.40	0.01	0.15	-0.03	0.19	0.04	1.00	
FCPFHETE	-0.04	-0.00	-0.01	0.01	0.45	-0.03	-0.02	0.03	-0.02	0.01	1.00

FCDPBEL: The belonging to department dimension FCDPETHN: The ethnocentrism to department dimension FCDPEFFQ: The department effectiveness/quality evaluation dimension y_9 DPBUDG: Budget allocations to this department have been distinctly insufficient in recent years *Denne avdelingen har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset* y_{12} DPHETE: The employees in this department are very heterogeneous *Ansatte i denne avdelingen er en meget heterogen/uensartet gruppe* FCPFBEL1:The first belongingness to profession dimension FCDPBEL2: The second belongingness to profession dimension FCPFETHN: The ethnocentrism to profession dimension FCPFEFFQ: The profession effectiveness/quality evaluation dimension y_{19} PFBUDG: Budget allocations to physicians have been distinctly insufficient in recent years *Legene har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset* FCPFHETE: The profession heterogeneity dimension

Two main conclusions can be drawn from this table: *First* there are high positive correlations between dimensions and items made up by the same of questions. Thus, the correlations between

The belonging to department dimension FCDPBEL
and
the first belonging to profession dimension FCPFBEL1 is 0.41

The belonging to department dimension FCDPBEL
and
the second belonging to profession dimension FCPFBEL2 is 0.28

The department effectiveness/quality evaluation dimension FCDPEFFQ
and
The profession effectiveness/quality dimension FCPFEFFQ is 0.74

y_9 DPBUDG
/
and
y_{19} PFBUDG is 0.40

y_{12} DPHETE

and
FCPFHETE: The profession heterogeneity dimension is 0.45

while between
FCDPETHN

and
FCPFETHN: The ethnocentrism to profession dimension is 0.16

Second, the correlations between the department dimensions/items are low; ranging from -0.10 to +0.10. The same is true for the correlations between the profession dimensions/items. Here the range is from -0.03 through 0.19.

The unequivocal conclusion, then, is that type of questions posed, and *not* the departments and profession groups is what construes the correlations among the variables. This intriguing finding may be interpreted in several ways:

One alternative is to question the social identification concept; whether it is of interest and significance. It can be argued that if it were interesting, significant and thereby useful, it should have been able to distinguish between the departments and the professions to which the doctors and nurses belong. Both groups probably are of significance for the respondents.

Second, the social identification concept *is* an interesting one, but it is not properly measured in this study. The original operationalizations may be suspicious; they may for example be American context-dependent or poorly translated into Norwegian. It is an interesting point that studies up to now have not included more than one dimension, thus not tested the operationalizations, like in this study, in a *crosscutting* setting. The operationalizations developed for this study, of course, have not been tested earlier, and the results of this measurement analysis may be an indication that some of these measures were somewhat insufficient for measuring the social identifications.

Third, only the ethnocentrism measures are valid since they are the only ones that do discriminate between departments and professions, i.e. on these measures the scores on the department items vary independently of the scores on the profession items.

Fourth, the concept is interesting, it is operationalized properly and it really is multidimensional. This means that there are correlations between the identifications to departments and professions.

Combinations of these interpretations, of course, are possible.

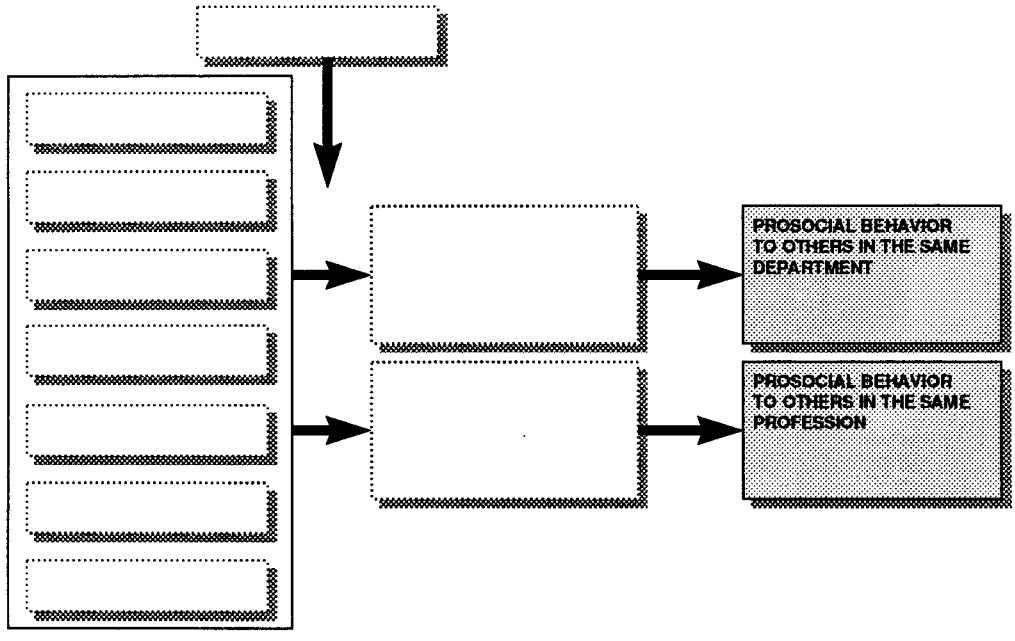
For further analyses in this dissertation the fourth of the above mentioned alternatives is chosen. This does not mean that the other alternatives are not viable. Among the long list of operationalizations, however, it is unlikely that *none* of them should measure the social identifications and being usable for further analyses. To use them in the further analyses, however, will add to the knowledge of social identifications e.g. by examining what effects each of these social identification dimensions has on the outcome variables in the model.

This is a crucial point of this study. No definite answer can be given to the question which of the above mentioned alternatives is the most appropriate one. By using the same wording for measuring the social identifications with departments and with professions, a *contamination* phenomenon may have arisen: The respondents may for instance have filled in the questionnaires to obtain constince between the departments and the profession items. in question. When the scores of the social identification are considered, see chapter 8, this interpretation is not a likely one: The mean scores on two such items may vary substantially even if they are correlated. Another approach to the interpretation of these results is that by studying social identifications in a crosscutting setting, a phenomenon is found which has not been revealed in previous studies: When measuring social identifications to *one* group, the correlations-by-type-of-item-phenomenon found in the present study, of course could not be revealed. Thus, when in previous studies it is reported that the measures demonstrate high reliability, this is not necessarily contradictory to the measurement results of this study.

Outcome variables - direction of prosocial behavior

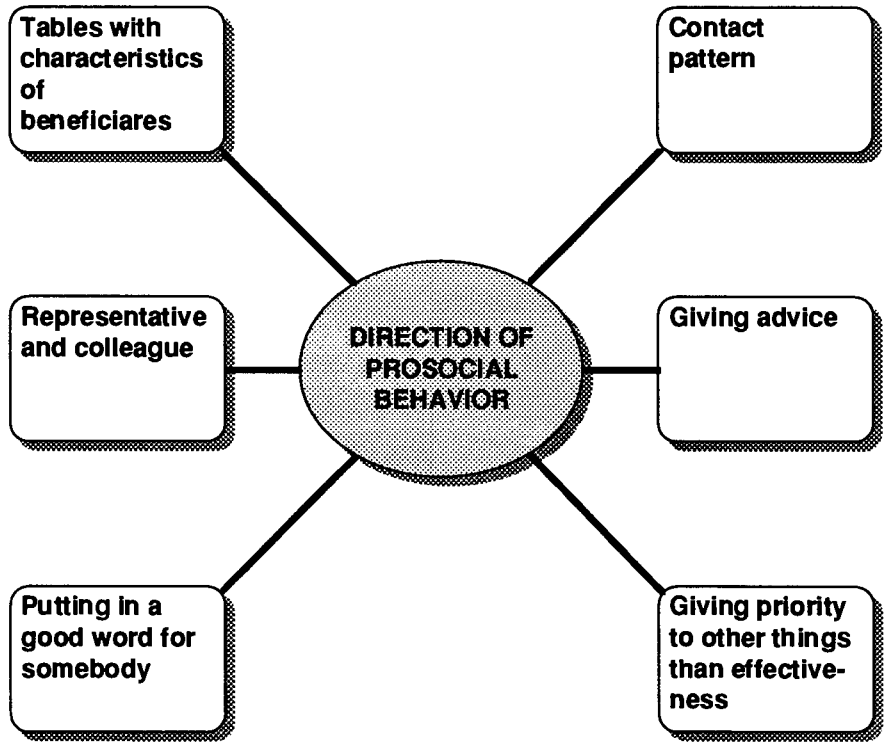
Recall that in the model, direction of prosocial behavior is the outcome variable:

Figure 6.9 - Direction of prosocial behavior - Variables in the model



The direction of prosocial behavior was measured by six groups of items:

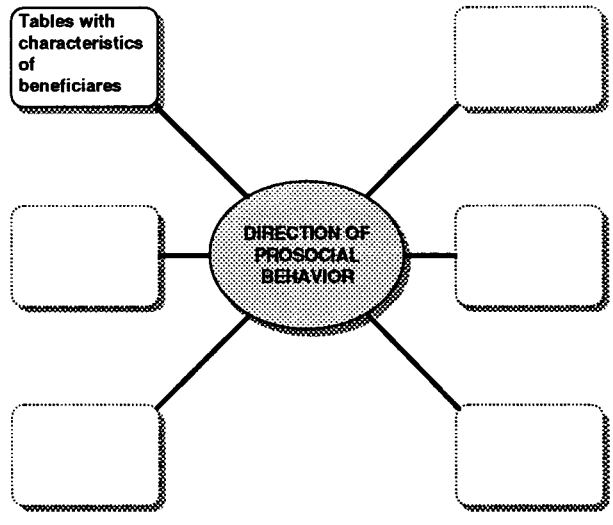
Figure 6.10 - Measurement of direction of prosocial behavior



In the tables, the respondents were asked to give some standardized information of the persons whom they had given help, support etc. during the last 6 months. The items were predominantly formulated according to the ingroup/outgroup matrix presented in chapter 2. The contact pattern items, however, the within/outside dimension is used instead of the department dimension. The below reported factor analyses demonstrate that only the information from tables did discriminate between both the organizational subunit and the profession dimension as beneficiaries of prosocial behavior. The other ones, therefore, are not used in the regression analyses reported in chapter 8.

Results from tables about direction of prosocial behavior (job-related and private matters)

Figure 6.11 - Measurement of direction of prosocial behavior - Tables



The respondents were asked to give some details about the persons to whom they had given help and support during the last 6 months. Two tables were filled in by the respondents: For job-related and private related prosocial behavior respectively. The results stemming from these questions are computed and summarized into 6 variables:

z_1 AMJPRS	Number of persons towards whom the respondents had given help and support in job-related matters
z_2 AMPPRS	Number of persons towards whom the respondents had given help and support in private matters
z_3 JPRSDP	Computed relative number of persons in the same organizational subunit to whom the respondents had given help and support in job-related matters
z_4 PPRSDP	Computed relative number of persons in the same organizational subunit to whom the respondents had given help and support in private matters
z_5 JPRSPF	Computed relative number of persons in the same profession to whom the respondents had given help and support in job-related matters
z_6 PPRSPF	Computed relative number of persons in the same profession to whom the respondents had given help and support in private matters

z_3 - z_6 were computed by a two-step procedure: In the *first* step, the reported prosocial behavior to *professions* were dichotomized into 1=own and 2=other. The department dimension in the questionnaires had only two values which were labeled 1=own and 2=other. Each of the reported behaviors had then been given values on a 1 - 2 scale for department and a 1 - 2 scale for profession. Two variables on the individual beneficiary of prosocial behavior level, then, were defined - one for departments and one for profession. The *next* step was to summarize for each respondent. The totals were divided with the number of prosocial behaviors reported. The then emerging two variables, are computed measures of the degree to which each respondent's prosocial behavior is directed to ingroup or to outgroup members. A value 1.0 on these variables, thus, indicates that *all* his or her reported behaviors are directed to *ingroup* members while a value 2.0 indicates that all the reported behavior is *outgroup* directed.

These 6 variables, when factor analyzed, gave this pattern:

Table 6.7 - Factor analysis - Prosocial behavior - Information from tables

Totally 6 factors extracted

Factors:	Eigenvalues:	Pct. of variance:
1	1.54	25.7
2	1.28	21.4
3	1.23	20.5
4	0.75	12.4
5	0.64	10.6
6	0.56	9.3

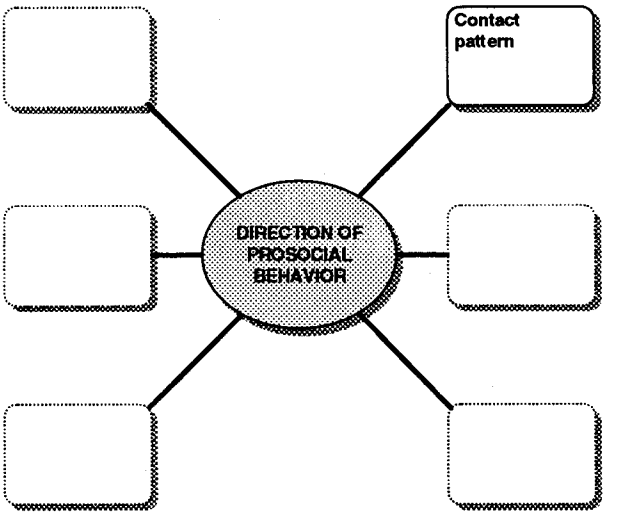
	Factor 1 loadings:	Factor 2 loadings:	Factor 3 loadings:
z_1 AMJPRS	0.05435	**0.80847**	0.15069
z_2 AMPPRS	0.03438	**0.82854**	-0.13459
z_3 JPRSDP	-0.02671	0.11425	**0.77728**
z_4 PPRSDP	0.06579	-0.10124	**0.79077**
z_5 JPRSPF	**0.84179**	0.01916	0.02178
z_6 PPRSPF	**0.83527**	0.06744	0.01723
Factor score variable:	FCPSPRF		FCPSDEP

z_1 AMJPRS: Computed amount of prosocial behavior in job matters z_2 AMPPRS: Computed amount of prosocial behavior in private matters z_3 JPRSDP: Relative number of ingroup members (organizational subunits) mentioned (job matters) z_4 PPRSDP: Relative number of ingroup members (organizational subunits) mentioned (private matters) z_5 JPRSPF: Relative number of ingroup members (profession) mentioned (job matters) z_6 PPRSPF: Relative number of ingroup members (profession) mentioned (private matters)

Three distinct factors emerge: 1) The relative amount of prosocial behavior directed to others in the same *profession*, FCPSPRF, 2) the total amount of prosocial behavior and 3) the relative amount of prosocial behavior directed to others in the same *organizational subunit,* FCPSDEP. Since only the direction of prosocial behavior is of interest (not the total volume) in this study, the second factor is not used in the regression analyses reported in chapter 8.

Contact pattern:

Figure 6.12 - Measurement of direction of prosocial behavior - Contact pattern



The contact pattern was measured by asking how often the respondents *did contact* others in 4 specified groups and how often *they were contacted* by others in those groups.

Table 6.8 - Factor analysis - Contact pattern

Totally 8 factors were extracted

Factors:	Eigenvalues:	Pct. of variance:
1	3.67	45.9
2	1.46	18.2
3	0.97	12.1
4	0.65	8.2
5	0.51	6.3

	Factor 1 loadings:	Factor 2 loadings:
z_7 COOPOD	**0.78313**	0.12847
z_8 COAPOD	**0.62840**	0.24813
z_9 COOPOH	0.18909	**0.66223**
z_{10} COAPOH	0.21942	**0.64724**
z_{11} BCOPOD	**0.81131**	0.16349
z_{12} BCAPOD	**0.61584**	0.33366
z_{13} BCOPOH	0.18860	**0.70514**
z_{14} BCAPOH	0.15381	**0.66705**

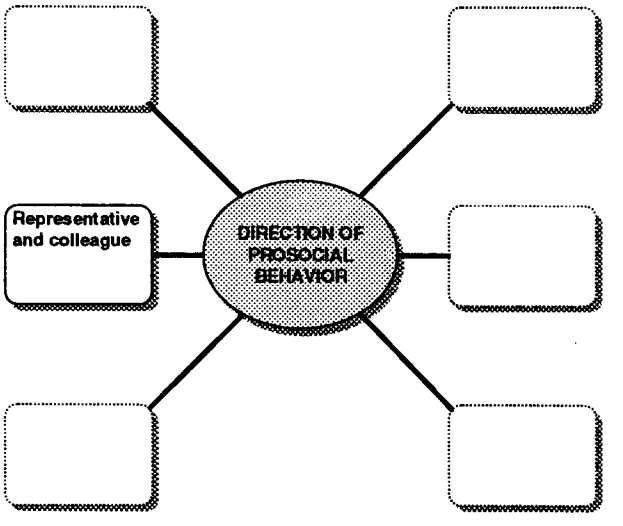
z_7 COOPOD: How often, approximately, do you contact other physicians in other departments at this hospital? *Anslagsvis hvor ofte tar du kontakt med leger ved andre avdelinger ved dette sykehuset?* z_8 COAPOD: How often, approximately, do you contact nurses in other departments at this hospital? *An-*

slagsvis hvor ofte tar du kontakt med sykepleiere ved andre avdelinger ved dette sykehuset? z_9 COOPOH: How often, approximately, do you contact physicians outside this hospital? *Anslagsvis hvor ofte tar du kontakt med leger utenfor dette sykehuset?* z_{10} COAPOH: How often, approximately, do you contact nurses outside this hospital? *Anslagsvis hvor ofte tar du kontakt med sykepleiere utenfor dette sykehuset?* z_{11} BCOPOD: How often, approximately, do physicians in other departments at this hospital contact you? *Anslagsvis hvor ofte tar leger ved andre avdelinger ved dette sykehuset kontakt med deg?* z_{12} BCAPOD: How often, approximately, do nurses at other departments at this hospital contact you? *Anslagsvis hvor ofte tar sykepleiere ved andre avdelinger ved dette sykehuset kontakt med deg?* z_{13} BCOPOH: How often, approximately, do physicians outside this hospital contact you? *Anslagsvis hvor ofte tar leger utenfor dette sykehuset kontakt med deg?* z_{14} BCAPOH: How often, approximately, do nurses outside this hospital contact you? *Anslagsvis hvor ofte tar sykepleiere utenfor dette sykehuset kontakt med deg?*

On the first factor, the 4 "other department" items have high loadings, ranging from 0.62 through 0.78. These items include both professions and both *contacting* and *being contacted* by others. The 4 outside hospital items, correspondingly, have high loadings on the second factor, here too irrespective of profession and of contacting or being contacted. Thus, there is a clear within/outside hospital dimension in the data. There is no discrimination as to *professions,* however: The "own profession" and "other profession" items have about the same factor loadings. Such discrimination is necessary for measuring the direction of prosocial behavior. These items thus are not incorporated in the regression analyses.

Group representative and colleague

Figure 6.13 - Measurement of prosocial behavior - Group representative and colleague



Questions were posed about the respondents' evaluations to what degree they were good representatives/colleague for their organizational subunit and profession. Accordingly, 4 questions were posed for which the below factor analysis is done:

Table 6.9 - Factor analysis - Group representative and colleague

Totally 8 factors were extracted

Factors:	Eigenvalues:	Pct. of variance:
1	2.43	60.7
2	0.70	17.5
3	0.53	13.3

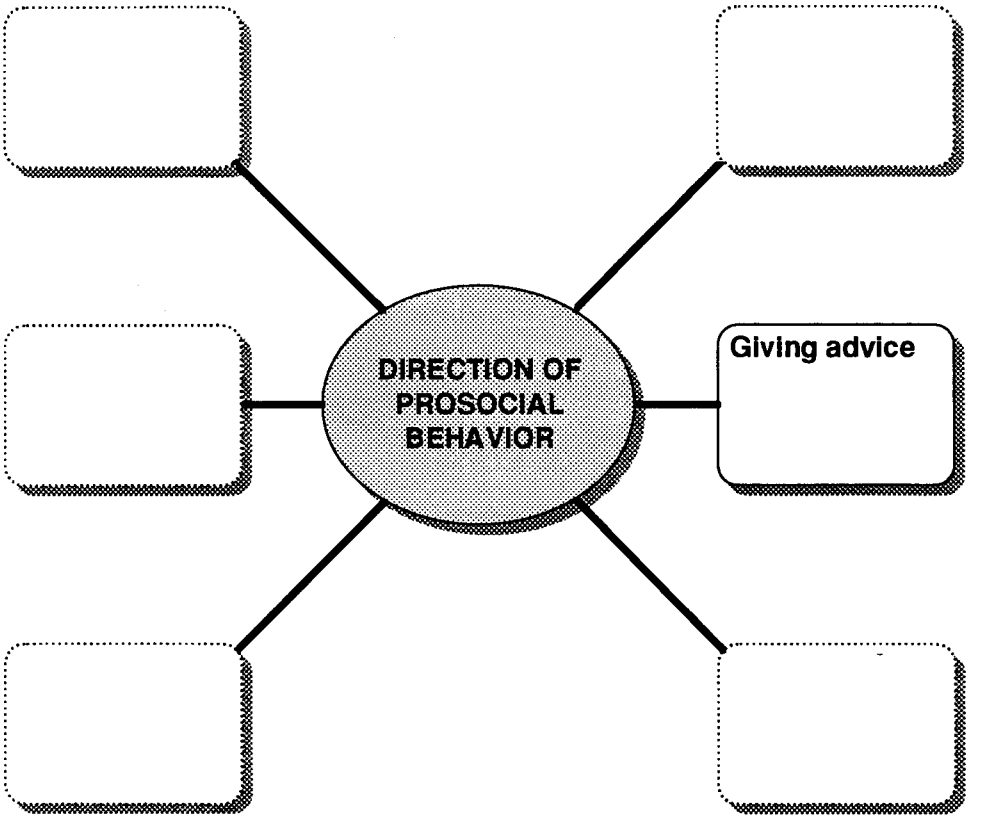
	Factor 1 loadings:
z_{15} REPPRF	**0.74977**
z_{16} COLPRF	**0.64219**
z_{17} REPDEP	**0.80208**
z_{18} COLDEP	**0.56498**

z_{15} REPPRF: I am publicly a good representative for *physicians Jeg er utad en god representant for leger* z_{16} COLPRF: I am a good colleague towards physicians irrespective of what type of medical work they are doing *Jeg er en god kollega overfor leger uavhengig av hvilken type legearbeid de utfører* z_{17} REPDEP: I am publicly a good representative for my department *Jeg er utad en god representant for min avdeling* z_{18} COLDEP: I am a good colleague towards the others in this department irrespective of what occupations they have *Jeg er en god kollega overfor de andre ved denne avdelingen uavhengig av hvilket yrke de har*

The factor analysis demonstrate a large amount of variance explained (60.7%) and high loadings (>0.5) on all items. Thus, these items turn out to be unidimensional. This implies that there is no discrimination between the department items and the profession items. This lack of dimensionality made these items, too, unusable as measures of the direction of prosocial behavior.

Giving advice to other persons:

Figure 6.14 - Measurement of prosocial behavior - Giving advice to other persons



Questions were posed as to what degree the respondents gave advice to members of the 4 ingroup/outgroup combinations:

Figure 6.15 - Operationalizations of giving advice

	Own department	Other departments
Own profession	z_{11} ADOPSD Own department own profession	z_{21} ADOPAD Other department own profession
Other professions	z_{12} ADAPSD Own department other profession	z_{22} ADAPAD Other department other profession

Table 6.10 - Factor analysis - Giving advice

4 factors Factors:	Eigenvalues:	Pct. of variance:
1	2.26	56.5
2	0.88	22.0
3	0.54	13.5

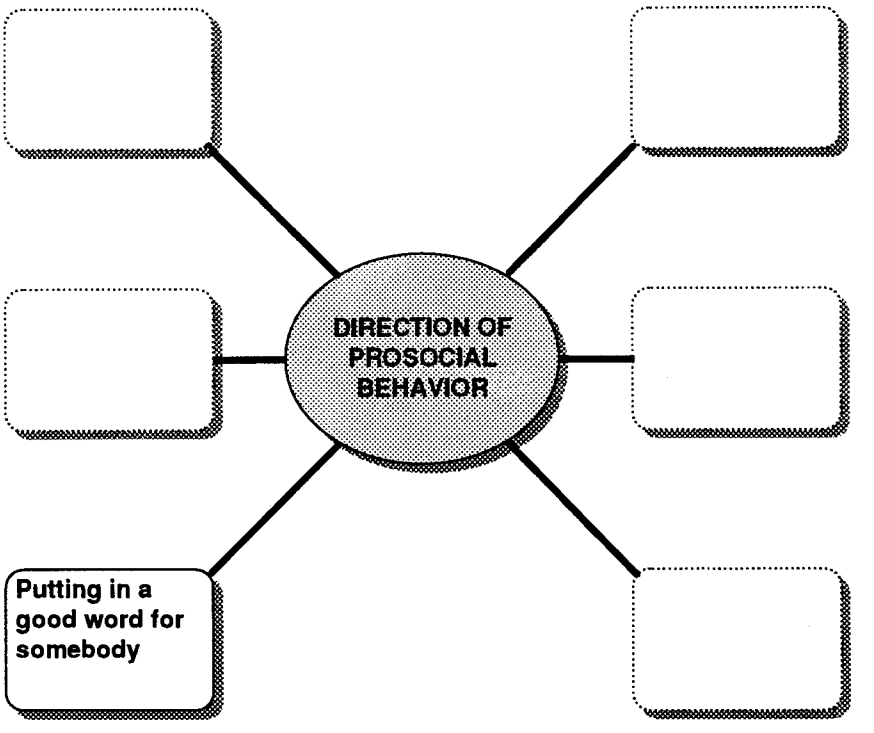
	Factor analysis no. 1	Factor analysis no. 2	
	Factor 1 loadings:	**Factor 1 loadings:**	**Factor 2 loadings:**
z_{19} ADOPSD	0.44825	0.11668	**0.77493**
z_{20} ADAPSD	**0.63445**	0.40530	**0.50499**
z_{21} ADOPAD	**0.78827**	**0.64429**	0.33611
z_{22} ADAPAD	**0.71767**	**0.93571**	0.11729

z_{19} ADOPSD: Giving advice, support and help to other physicians in this departments is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til andre leger i denne avdelingen* x_{20} ADAPSD: Giving advice, support and help to nurses in this departments is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i denne avdelingen* z_{21} ADOPAD: Giving advice, support and help to physicians at other departments at this hospital is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til leger i andre avdelinger ved dette sykehuset* x_{22} ADAPAD: Giving advice, support and help to nurses in other departments at this hospital is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i andre avdelinger ved dette sykehuset*

The eigenvalue/explained variance table demonstrate a high amount of explained variance on the first factor (56.5 per cent). The second factor has also rather high scores. Therefore, two factor analyses were done. The first demonstrates that 3 items have higher loadings than 0.6, the fourth has 0.44. Thus, there is a high degree of unidimensionality in the data material. In the second factor analysis, however, there is a distinct within/outside department dimension: The first factor here has high loadings for "other departments" items while the own department items have high loadings on the second factor. For being an useful measure of the direction of prosocial behavior in this study, however, discrimination as to professions had to be present. This is not found in the data material.

Putting in good word for somebody:

Figure 6.16 - Measurement of prosocial behavior - Putting in a good word for somebody



These questions reflect the 4 ingroup/outgroup combinations.

Figure 6.17 - Operationalizations of putting in a good word for somebody

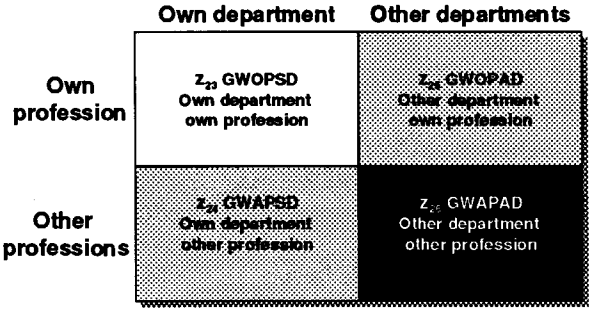


Table 6.11 - Factor analysis - Putting in a good word for somebody

4 factors extracted

Factors:	Eigenvalues:	Pct. of variance:
1	2.44	61.0
2	0.80	19.9

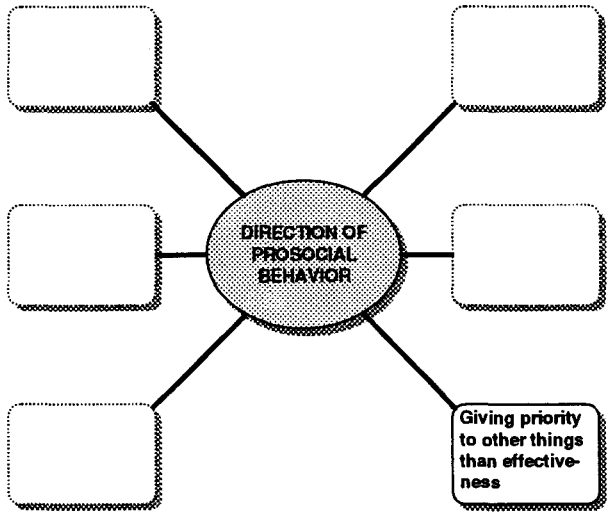
	Factor analysis no. 1	Factor analysis no. 2	
	Factor 1 loadings:	**Factor 1 loadings:**	**Factor 2 loadings:**
z_{23} GWOPSD	**0.64646**	0.20551	**0.79766**
z_{24} GWAPSD	**0.74095**	0.36372	**0.67032**
z_{25} GWOPAD	**0.72659**	**0.66136**	0.34946
z_{26} GWAPAD	**0.65899**	**0.80938**	0.21036

z_{23} GWOPSD: I occasionally put in a good word for physicians in this department *Det hender at jeg overfor leder(e) legger inn et godt ord om andre leger i denne avdelingen* z_{24} GWAPSD: I occasionally put in a good word for nurses in this department *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i denne avdelingen* z_{25} GWOPAD: I occasionally put in a good word for physicians in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for leger i andre avdelinger ved dette sykehuset* z_{26} GWAPAD: I occasionally put in a good word for nurses in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i andre avdelinger ved dette sykehuset*

A pattern with great similarities with that of the previous item groups emerges: High degree of unidimensionalility, discrimination between own and other departments, but no discrimination as to the profession dimension.

Giving priority to other things than effectiveness:

Figure 6.18 - Measurement of prosocial behavior - Giving priority to other things than effectiveness



The last group of questions were about giving priority to other things than effectiveness. The items reflected the same 4 ingroup/outgroup combinations.

Figure 6.19 - Operationalizations giving priority to other things than effectiveness

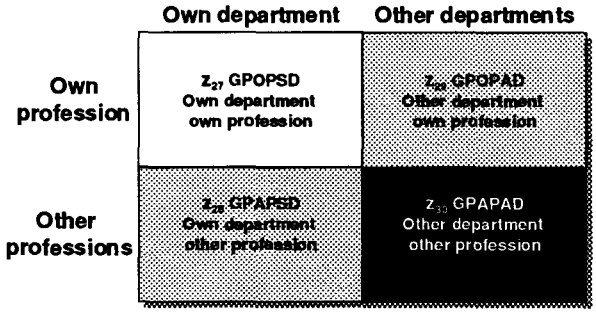


Table 6.12 - Factor analysis - Giving priority to other things than effectiveness

4 factors extracted

Factors:	Eigenvalues:	Pct. of variance:
1	2.61	65.1
2	0.85	21.4

	Factor analysis no. 1	Factor analysis no. 2	
	Factor 1 loadings:	Factor 1 loadings:	Factor 2 loadings:
z_{27} GPOPSD	**0.62074**	0.17788	**0.84241**
z_{28} GPAPSD	**0.74683**	0.36306	**0.71910**
z_{29} GPOPAD	**0.82104**	**0.76268**	0.34927
z_{30} GPAPAD	**0.73669**	**0.90841**	0.20165

z_{27}: GPOPSD I occasionally give priority to a physician in this department before considerations of effectiveness *Det hender at jeg lar hensynet til en annen lege i denne avdelingen gå foran effektivitetshensyn* z_{28} GPAPSD: I occasionally give priority to a nurse in this department before considerations of effectiveness *Det hender at jeg lar hensynet til en sykepleier i denne avdelingen gå foran effektivitetshensyn* z_{29} GPOPAD: I occasionally give priority to a physician in another department at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en lege i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn* z_{30} GPAPAD: I occasionally give priority to a nurse in another department at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en sykepleier i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn*

The result is similar to the above reported factor analyses: High degree of unidimensionality, a clear department dimension if two analyses are done while the profession dimension in the direction of prosocial behavior is still lacking.

All measures of prosocial behavior

In the above reported factor analyses, *groups* of items measuring the direction of prosocial behavior are computed separately. One important question, however, remains: What are the relationships between the items in the separate analyses, do they *together* measure some *overall* constructs? To discern this issue *all* the above reported prosocial behavior measures were put together in *one* factor analysis:

Table 6.13 - Factor analysis - all prosocial behavior measures

Totally 30 factors were extracted

Factors:	Eigen-values:	Pct. of variance:	Factors:	Eigen-values:	Pct. of variance:
1	5.59	18.6			
2	3.07	10.2	11	0.94	3.1
3	2.47	8.2	12	0.80	2.7
4	1.69	5.6	13	0.73	2.4
5	1.50	5.0	14	0.66	2.2
6	1.45	4.8	15	0.63	2.1
7	1.35	4.5	16	0.51	2.0
8	1.26	4.2	17	0.56	1.9
9	1.18	3.9	18	0.53	1.8
10	1.10	3.7	19	0.51	1.7

Loadings on factor:	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
z_1 AMJPRS	-0,01826	0,05835	-0,12515	0,05743	0,09448	-0,06022	-0,03129	0,02242	0,09393	0,41696
z_2 AMPPRS	0,09426	0,12932	0,00529	0,07032	0,08661	-0,06027	-0,09269	-0,03382	0,01369	**0,77594**
z_3 JPRSDP	-0,00040	-0,00314	-0,13257	0,01473	-0,01588	-0,01116	0,03365	0,24400	0,03623	0,02288
z_4 PPRSDP	-0,03415	0,04438	-0,01737	0,03751	0,05543	-0,04888	-0,00910	0,16283	0,08586	-0,08804
z_5 JPRSOPF	0,02366	0,05730	0,01817	-0,02321	-0,00317	-0,04914	-0,10255	0,07965	**0,69710**	0,01299
z_6 PPRSPF	-0,05632	-0,02273	0,00155	0,05139	0,02805	-0,04118	-0,01852	0,03823	**0,57447**	0,08650
z_7 COOPOD	-0,04701	-0,02384	**0,80869**	-0,00708	-0,05756	0,16808	0,03372	-0,14236	0,03339	-0,06012
z_8 COAPOD	-0,04492	0,05208	**0,55617**	-0,07880	-0,09373	0,04064	0,44807	-0,04205	-0,04302	-0,06004
z_9 COOPOH	-0,01041	0,00909	0,17859	-0,11788	-0,07564	**0,71725**	0,12112	-0,04434	-0,06509	-0,07833
z_{10} COAPOH	-0,03143	0,00124	0,15516	-0,06783	-0,05090	0,40842	**0,52651**	-0,01128	-0,14209	-0,11204
z_{11} BCOPOD	-0,02289	-0,00746	**0,81289**	-0,06229	-0,09425	0,19303	0,05573	-0,11859	0,02810	-0,07311
z_{12} BCAPOD	-0,04604	0,04749	**0,52796**	-0,07949	-0,23721	0,09042	**0,54061**	-0,00362	-0,02373	-0,02119

z_1 **AMJPRS**: Computed amount of prosocial behavior in job matters z_2 **AMPPRS**: Computed amount of prosocial behavior in private matters z_3 **JPRSDP**: Relative number of ingroup members (organizational subunits) mentioned (job matters) z_4 **PPRSDP**: Relative number of ingroup members (organizational subunits) mentioned (private matters) z_5 **JPRSOPF**: Relative number of ingroup members (profession) mentioned (job matters) z_6 **PPRSPF**: Relative number of ingroup members (profession) mentioned (private matters) z_7 **COOPOD:** How often, approximately, do you contact other physicians in other departments at this hospital? *Anslagsvis hvor ofte tar du kontakt med leger ved andre avdelinger ved dette sykehuset?* z_8 **COAPOD:** How often, approximately, do you contact nurses in other departments at this hospital? *Anslagsvis hvor ofte tar du kontakt med sykepleiere ved andre avdelinger ved dette sykehuset?* z_9 **COOPOH:** How often, approximately, do you contact physicians outside this hospital? *Anslagsvis hvor ofte tar du kontakt med leger utenfor dette sykehuset?* z_{10} **COAPOH:** How often, approximately, do you contact nurses outside this hospital? *Anslagsvis hvor ofte tar du kontakt med sykepleiere utenfor dette sykehuset?* z_{11} **BCOPOD:** How often, approximately, do physicians in other departments at this hospital contact you? *Anslagsvis hvor ofte tar leger ved andre avdelinger ved dette sykehuset kontakt med deg?* z_{12} **BCAPOD:** How often, approximately, do nurses in other departments at this hospital contact you? *Anslagsvis hvor ofte tar sykepleiere ved andre avdelinger ved dette* sykehuset kontakt med deg?

z_{13} BCOPOH	-0,01917	0,06075	0,16350	-0,00885	-0,14444	**0,82376**	0,13012	-0,06904	-0,01519	-0,02000
z_{14} BCAPOH	-0,04579	-0,01585	0,06747	-0,01211	-0,11150	0,43067	**0,55613**	0,03054	-0,11433	-0,09706
z_{15} REPPRF	0,00277	**0,74506**	-0,02361	0,05608	0,08963	-0,02307	-0,03604	0,03975	-0,07514	-0,00403
z_{16} COLPRF	-0,01011	**0,63740**	-0,01337	0,01243	0,03088	0,03206	0,00718	0,02985	0,02351	0,07920
z_{17} REPDEP	0,00446	**0,78955**	0,04607	0,12254	0,05441	-0,05492	-0,01200	0,02485	0,00415	-0,00612
z_{18} COLDEP	0,04401	**0,56933**	0,00352	0,08723	0,03298	0,08802	0,05247	-0,03947	0,09030	0,10508
z_{19} ADOPSD	0,02872	0,29993	0,04716	0,16785	0,47787	-0,07965	0,07464	-0,20924	-0,04213	0,05904
z_{20} ADAPSD	0,10567	0,10865	-0,06833	0,17114	**0,59871**	-0,18122	-0,04887	-0,09725	0,13593	0,11589
z_{21} ADOPAD	0,09369	0,05913	-0,19271	0,10599	**0,72054**	-0,06962	-0,06616	0,21560	-0,05157	0,07907
z_{22} ADAPAD	0,14555	-0,02919	-0,09836	0,13701	**0,65754**	-0,02267	-0,25765	0,20643	0,02098	0,05116
z_{23} GWOPSD	0,13796	0,20182	-0,06789	**0,67769**	0,09801	-0,05949	0,09126	-0,03765	-0,01800	0,02398
z_{24} GWAPSD	0,17036	0,10911	-0,03230	**0,73397**	0,15930	-0,05104	-0,05497	-0,04956	0,09363	0,05417
z_{25} GWOPAD	0,15045	0,04310	-0,06861	**0,59460**	0,17839	-0,14161	-0,12073	0,38339	-0,04817	0,10746
z_{26} GWAPAD	0,17589	0,01105	-0,01646	**0,53670**	0,21485	0,06556	-0,28630	0,34509	0,04429	0,07869
z_{27} GPOPSD	**0,69898**	0,09461	-0,03807	0,17478	0,06254	-0,04296	0,09256	-0,20456	-0,04928	-0,02075
z_{28} GPAPSD	**0,80438**	0,01385	-0,02701	0,18172	0,05431	0,00397	-0,02028	-0,15212	0,03495	0,02231
z_{29} GPOPAD	**0,72833**	-0,02401	-0,05393	0,10387	0,16083	-0,06143	-0,11324	0,42064	-0,07297	0,05709
z_{30} GPAPAD	**0,65302**	-0,06266	-0,02095	0,09015	0,15109	0,03437	-0,17826	0,41058	-0,01591	0,09676

z_{13} **BCOPOH:** How often, approximately, do physicians outside this hospital contact you? *Anslagsvis hvor ofte tar leger* utenfor dette sykehuset kontakt med deg? z_{14} **BCAPOH:** How often, approximately, do nurses outside this hospital contact you? *Anslagsvis hvor ofte tar* sykepleiere utenfor dette sykehuset kontakt med deg? z_{15} **REPPRF:** I am publicly a good representative for physicians *Jeg er utad en god representant for leger* z_{16} **COLPRF:** I am a good colleague towards physicians irrespective of what type of medical work they are doing *Jeg er en god kollega overfor leger* uavhengig av hvilken type legearbeid de utfører z_{17} **REPDEP:** I am publicly a good representative for my department *Jeg er utad en god representant for min avdeling* z_{18} **COLDEP:** I am a good colleague towards the others in this department irrespective of what occupations they have *Jeg er en god kollega* overfor de andre ved denne avdelingen uavhengig av *hvilket yrke de har* z_{19} **ADOPSD:** Giving advice, support and help to other physicians in this departments is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til andre leger i denne avdelingen* z_{20} **ADAPSD:** Giving advice, support and help to nurses in this department is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i denne avdelingen* z_{21} **ADOPAD:** Giving advice, support and help to physicians in other departments at this hospital is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til leger i andre avdelinger ved dette sykehuset* z_{22} **ADAPAD:** Giving advice, support and help to nurses in other departments at this hospital is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i andre avdelinger ved dette sykehuset* z_{23} **GWOPSD:** I occasionally put in a good word about physicians in this department *Det hender at jeg overfor leder(e)* legger inn et godt ord om andre leger i denne *avdelingen* z_{24} **GWAPSD:** I occasionally put in a good word about nurses in this department *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i denne avdelingen* z_{25} **GWOPAD:** I occasionally put in a good word for physicians in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for leger i andre avdelinger ved dette sykehuset* z_{26} **GWAPAD:** I occasionally put in a good word for nurses in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i andre avdelinger ved dette sykehuset* z_{27} **GPOPSD:** I occasionally give priority to a physician in this department before considerations of effectiveness *Det hender at jeg lar hensynet til en annen lege i denne* avdelingen gå foran effektivitetshensyn z_{28} **GPAPSD:** I occasionally give priority to a nurse in this department before considerations of effectiveness Det hender at jeg lar hensynet til en sykepleier i denne *avdelingen gå foran effektivitetshensyn* z_{29}**:** I occasionally give priority to a physician in other departments at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en lege i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn* z_{30} **GPAPAD:** I occasionally give priority to a nurse in other departments at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en sykepleier i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn*

10 factors with eigenvalue > 1.0 were extracted. By and large these factors are the same ones as in the separate analyses reported above; none of the factors extracted in this last analysis are composed of items from more than one of the above reported group of items. Thus, the conclusions from the separate analyses remain: No overall construct measuring the direction of prosocial behavior is emerging from the factor analysis including all the prosocial behavior items.

Summary

The results of the measurement analysis can be summed up in 3 points: *First*, the examined explanatory/control variables, integrating hospital department leadership, conflicts and successes/failures all seem to be *unidimensional*. For the two first ones, integrating hospital department leadership and conflicts this result implies that *one* factor score for regression analyses is computed for each construct. For the successes/failure variable the opposite conclusion was drawn: Because of few answers on this question and the above mentioned unidimensionality, it was not considered proper to include this variable in regression analyses. *Second*, among 26 items measuring social identifications with organizational subunits and with professions, substantial correlations as to type of question were found, e.g. feeling to belong to one's department was positively associated with feeling to belong to profession. The same pattern was found for effectiveness/quality and budget allocation evaluations, but not for the ethnocentrism "we-are-better-than-them" items. This findings and their implications are discussed in this chapter, including the factor score variables generated for use in the regression analyses. *Third*, several measures of direction of prosocial behavior were used. Many of these measures turned out to discriminate between whether the respondents were asked whether they were helpful and supportive towards members of the ingroups/outgroups made up by the organizational subunit dimension. Most of the measures did not differentiate as to profession, however. The only measure that did differentiate regarding *both* the department dimension *and* the profession dimension was the tables in which the respondents were asked to state the gender, age group, departmental and profession category of the persons to whom they (most often) had given help and support during the last 6 months. By a computational process, factor score variables for regression analyses were generated. In the next chapter the implications of the measurement analyses are elaborated into an operationalized model for the study.

Operationalized model 7

In this chapter the operationalized model for the study is worked out. This model is a modified version of the initial model for this study, see chapter 1 and 2. The modifications made are implications of the measurement analysis presented in chapter 6.

Like the initial model, this operationalized model includes independent/control variables, intermediate variables (social identifications) and outcome variables (direction of prosocial behavior). The modifications made are described below.

Independent/control variables:

Two types of modifications are made:

1. All the variables about which hypotheses are worked out are incorporated in the operationalized model. However, a selection has been made among the relatively large number of control variable items; especially items about demographic characteristics of the respondents. In the questionnaire a rather high number of such items were included. By examining correlation tables and doing preliminary regression

analyses, some of these items consistently turned out to be non-important explanads for the intermediate and/or the outcome variables. To simplify the further analyses and the presentations of them as well as to reduce the multicollinearity problems, the items mentioned below were not included in the multiple regression analyses reported in chapter 8:

Table 7.1 - List of control variables not included in the operationalized model

x_{28} - x_{35}	Type of special education (nurses)
x_{38} - x_{40}	Type of present work (nurses)
x_{44} PRIVPR	Number of years of private practice (doctors)
x_{45} MUNIPR	Number of years of municipality practice (doctors)
x_{46} INSTIT	Number of years of practice in institutions (nurses)
x_{47} HOMEBA	Number of years of home based practice (nurses)
x_{48} OTHPRA	Number of years of other practices
x_{49} YHSENC	Number of years practice as head senior consultant
x_{50} YNUMAN	Number of years as nurse manager
x_{51} YDPNUR	Number of years as department nurse (nurses)
x_{52} OTHMAN	Number of years as other practices of management
x_{53} UNION	Number of years as unionist
x_{54} COUNSP	Number of years as leader of the local council for doctors
x_{55} COUNSN	Number of years as leader of the local council for nurses

For obvious reasons, there were substantial correlations between x_{26} age and x_{27} first education. To reduce multicollinearity, only one of them was included in the operationalized model; x_{26} was selected because it was considered to be of somewhat more theoretical interest (cfr. the contact hypothesis) than x_{27} age.

2. For two of the independent/control variables, integrating hospital departments leadership and conflicts, factor scores FCDPLEAD and FCCFL developed in chapter 6 are incorporated in the operationalized model.

The operationalized model, thus, includes the below listed independent/control variables:

Table 7.2 - Independent/control variables in the operationalized model

		Reference category for dummy variables:
x_1 PHSECO	Dummy variable for senior consultant (*overlege*)	x_3 NURSE
x_2 PHREGI	Dummy variable for registrar (*assistentlege*)	x_9 HSPSYC
x_4 HSSMAL	Dummy variable for hospital with less than 500 employees	x_9 HSPSYC
x_5 HSMEDI	Dummy variable for hospitals with 500 - 1000 employees	x_9 HSPSYC
x_6 HSLARG	Dummy variable for hospital with 1000 - 1500 employees	x_9 HSPSYC
x_7 HSVLAR	Dummy variable for hospital with 1500 employees or more	x_9 HSPSYC
x_8 HSUNSP	Dummy variable for university/special hospitals	x_9 HSPSYC
x_{10} DPANES	Dummy variable for department of anesthesiology	x_{17} DPPSYC
x_{11} DPPEDI	Dummy variable for department of pediatrics	x_{17} DPPSYC
x_{12} DPGYNE	Dummy variable for department of gynecology	x_{17} DPPSYC
x_{13} DPSURG	Dummy variable for department of surgery	x_{17} DPPSYC
x_{14} DPMEDI	Dummy variable for department of internal medicine	x_{17} DPPSYC
x_{15} DPNEVR	Dummy variable for department of neurology	x_{17} DPPSYC
x_{16} DPOTOR	Dummy variable for department of otorhinolaryngology (ear/nose/throat diseases)	x_{17} DPPSYC
FCDPLEAD	Factor score variable for integrating hospital department leadership	
FCCFL	Factor score variable for conflict level	
x_{25} GENDER	Gender (1=Female 2=Male)	
x_{27} EDUYEA	Year of completed basic education	
x_{36} DEPYEA	Years of practice in present department	
x_{37} ODPYEA	Number of years of practice in other departments at the same hospital	
x_{41} NOTHSP	Number of hospitals where experience has been obtained	
x_{42} SATYDP	Years of practice in the same type of department at other hospitals	

x_{43} OTTYDP	Years of practice in other types of departments at other hospitals

A test of multicollinearity between the above listed independent/control variables faces the limitation that many of them are dummy variables, making the normal test of R^2 between them meaningless. For the non-dummy variables the R^2 scores are:

FCDPLEAD	Factor score variable for integrating hospital department leadership	0.17
FCCFL	Factor score variable for conflict level	0.15
x_{25} GENDER	Gender (1=Female 2=Male)	0.48
x_{27} EDUYEA	Year for completed first education	0.67
x_{36} DEPYEA	Years of practice in this department	0.52
x_{37} ODPYEA	Years of practice in other departments at the same hospital	0.33
x_{41} NOTHSP	Number of other hospitals at which practised	0.54
x_{42} SATYDP	Year of practice in the same type of departments at other hospitals	0.35
x_{43} OTTYDP	Year of practice in other types of departments at other hospitals	0.19

Intermediate variables - social identifications

The multidimensionality of the social identification concept reported in chapter 6 is incorporated in the operationalized model; thus 11 instead of 2 intermediate variables are used:

Belonging to organizational subunits
Ethnocentrism to organizational subunits
Effectiveness/quality evaluation of organizational subunits
Budget evaluation to organizational subunits
Heterogeneity of organizational subunits (not used as intermediate variable for explaining outcome variables)
Belongingness 1 to professions
Belongingness 2 to professions
Ethnocentrism to professions
Effectiveness/quality evaluation of professions
Budget evaluation to professions
Heterogeneity of professions (not used as intermediate variable fore explaining outcome variables)

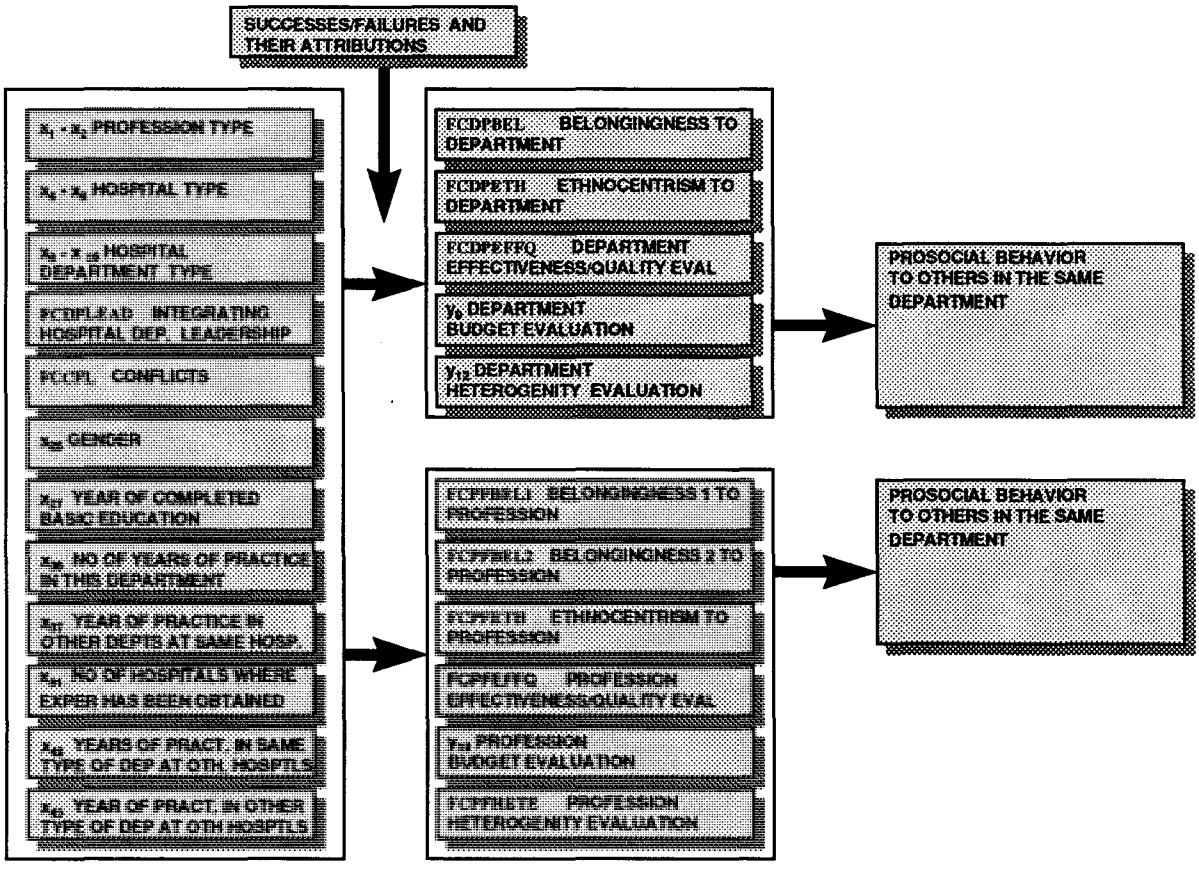
Outcome variables - direction of prosocial behavior

It was attempted to measure the direction of prosocial behavior by several different types of questions, see chapter 5: By tables in which the respondents were asked to fill in some characteristics of the persons who they had given help and support during the last 6 months and by items constructed to differentiate between the beneficiaries according to the ingroup/outgroup matrix. These items, however, failed to give the information needed for use in the regression analyses, leaving the information from the tables as the only usable measure for the direction of prosocial behavior.

Operationalized model

The above described variables are built together to form the following model:

Figure 7.1 - Operationalized model



Results 8

In this chapter the results of the study are reported. The first part is a presentation of the magnitude of the intermediate variables of the study, the social identifications and of the outcome variable, the direction of prosocial behavior. In the remainder of the chapter the relationships between the variables in the operationalized model (chapter 7) are analyzed by means of multiple regression, i.e. the intermediate and the outcome variables are explained by their antecedents. A variety of interesting results might be reported from the data material. The presentation below, however, is strictly limited to the results relevant to the research questions of study, see chapter 1.

Magnitude of the intermediate variable - social identifications

According to point 1 in the research questions (chapter 1) one of the purposes of this study is to find the magnitude of the social identifications. In the table below, the *means* and *standard deviations* of the social identification items are presented. This is done for the total data material and for doctors and nurses separately. The items are grouped according to the dimensions found in the measurement analyses, see chapter 6. The two belongingness dimensions for profession, though, are collapsed here.

Table 8.1 - Means and standard deviations for the social identification items. Totals and figures for physicians and nurses, grouped according to the measurement analysis An asterisk (*) indicates that for the items in question the scale -3 to +3 is used.

To organizational subunits:	Sum		Doctors		Nurses	
	Item means:	Item standard dev-iations:	Item means:	Item standard dev-iations	Item means:	Item standard dev-iations:
Belongingness:						
y_1 DPSUCC	0.60 n=908	1.12	0.52 n=446	1.15	0.68 n=462	1.07
y_2 DPCOMP	1.05 n=914	0.80	0.90 n=446	0.83	1.19 n=468	0.74
y_3 DPBELO	0.53 n=914	1.21	0.32 n=446	1.24	0.74 n=468	1.13
y_4 DPCONT	0.97 n=907	1.07	0.86 n=444	1.09	1.08 n=463	1.04
y_5 DPCRIT	-0.32 n=916	1.15	-0.38 n=446	1.11	-0.27 n=470	1.19
y_6 DPTHIN	0.39 n=913	1.12	0.25 n=444	1.12	0.51 n=469	1.10
Ethnocentrism:						
y_7 DPIMPO	-0.55 n=916	1.17	-0.57 n=446	1.14	-0.53 n=470	1.20
y_8 DPDIFF	-0.45 n=911	1.20	-0.49 n=443	1.19	-0.40 n=468	1.21
Budget evaluation:						
y_9 DPBUDG	-0.09 n=897	1.223	-0.10 n=437	1.20	-0.08 n=460	1.25
Effectiveness and quality evaluation:						
y_{10} DPEFFE*	1.43* n=913	1.22*	1.32* n=444	1.18*	1.53* n=469	1.24*
y_{11} DPQUAL*	1.58* n=912	1.03*	1.51* n=443	0.95*	1.66* n=469	1.10*
Heterogeneity						
y_{12} DPHETE	0.45 n=908	1.22	0.64 n=445	1.17	0.26 n=463	1.23

y_1 **DPSUCC:** I feel this department's success as my *success Jeg opplever det slik at denne avdelingens suksess er min suksess* y_2 **DPCOMP:** When listening to something positive about this department, I take it as a personal compliment *Når jeg hører noe positivt om denne avdelingen, føler jeg det som kompliment også til meg* y_3 **DPBELO:** Belonging to this department is an important aspect of my *identity Tilhørighet til denne avdelingen er en viktig del av min identitet* y_4 **DPCONT:** I want to stay in this *department Jeg ønsker å fortsette i denne avdelingen* y_5 **DPCRIT:** When someone criticizes this department, it feels like a personal insult *Når noen kritiserer denne avdelingen, føler jeg det som et personlig angrep* y_6 **DPTHIN:** I am very interested in what people think about my department *Jeg er svært interessert i hva andre tenker om min avdeling* y_7 **DPIMPO:** This department has more important tasks than (most) other *departments Denne avdelingen har viktigere oppgaver enn (de fleste) andre sykehusavdelinger* y_8 **DPDIFF:** The tasks of this department are more difficult than those of (most) other departments *Arbeidsoppgavene ved denne avdelingen er vanskeligere enn ved (de fleste) andre sykehusavdelinger* y_9 **DPBUDG:** Budget allocations to this department have been distinctly insufficient in recent years at this hospital *Denne avdelingen har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset* y_{10} **DPEEFE:** I regard the effectiveness of work at this department as .... *Jeg anser at effektiviteten av det arbeid som denne avdelingen utfører er ....* y_{11} **DPQUAL:** I regard the quality of work at this department as .... *Jeg anser at kvaliteten på det arbeid som denne avdelingen utfører er .....* y_{12} **DPHETE:** The employees in this department are very heterogeneous *Ansatte i denne avdelingen er en meget heterogen/uensartet gruppe*

To professions:	Sum		Doctors		Nurses	
	Item means:	Item standard dev-iations:	Item means:	Item standard dev-iations:	Item means:	Item standard dev-iations:
Belongingness:						
y_{13} PFSUCC	-0.50 n=909	1.09	-0.64 n=444	1.01	-0.37 n=465	1.15
y_{14} PFPOSI	-0.26 n=912	1.13	-0.50 n=443	1.03	-0.04 n=469	1.17
y_{15} PFBELO	0.79 n=908	1.09	0.81 n=443	1.07	0.77 n=465	1.10
y_{16} PFCHAN	0.94 n=911	1.19	1.01 n=443	1.14	0.88 n=468	1.23
y_{17} PFCRIT	-0.34 n=916	1.17	-0.42 n=447	1.14	-0.27 n=469	1.19
y_{18} PFTHIN	-0.07 n=907	1.18	-0.22 n=443	1.11	0.35 n=464	1.19
Ethnocentrism:						
y_{20} PFIMPO	-0.31 n=905	1.25	0.40 n=438	1.26	-0.97 n=467	0.80
y_{21} PFDIFF	0.11 n=914	1.39	1.11 n=446	1.02	-0.85 n=468	0.96
y_{22} PFSERI	-0.50 n=910	1.20	-0.10 n=442	1.29	-0.87 n=468	0.98
Budget evaluation:						
y_{19} PFBUDG	0.61 n=897	1.21	0.60 n=437	1.24	0.63 n=460	1.19
Effectiv. and quality eval.:						
y_{23} PFEFFE*	1.60* n=913	1.12*	1.46* n=444	1.11*	1.73* n=469	1.11*
y_{24} PFQUAL*	1.69* n=913	0.97*	1.55* n=444	0.92*	1.83* n=469	1.00*
Heterogeneity:						
y_{25} PFHETE	0.54 n=904	1.18	0.74 n=442	1.08	0.34 n=462	1.23
y_{26} PFOHET	0.41 n=910	1.21	0.50 n=444	1.14	0.33 N=466	1.26

13 PFSUCC: I feel other physicians' success as my *success Jeg opplever det slik at andre legers suksess er min suksess* y_{14} POSI: When listening to something positive about this physicians, it is felt as a personal compliment *Når jeg hører noe ositivt om andre leger, føler jeg det som et kompliment også til meg* y_{15} PFBELO: Belonging to the occupation of physician an important aspect of my *identity Tilhørighet til legeyrket er en viktig del av min identitet* y_{16} PFCHAN: I consider changing another occupation than the job of a physician *Jeg kan tenke meg å skifte til et annet yrke enn legeyrket* (reversed) y_{17} CRIT: When someone criticizes physicians, it feels like a personal insult *Når noen kritiserer leger, føler jeg det som et ersonlig angrep* y_{18} PFTHIN: I am very interested in what other people think about physicians *Jeg er svært interessert i hva ndre tenker om leger* y_{19} PFBUDG: Budget allocations to physicians have been distinctly insufficient in recent years at this ospital *Legene har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset* y_{20} PFIMPO: nysicians have more important tasks than nurses *Leger har viktigere oppgaver enn sykepleiere* y_{21} PFDIFF: The tasks of nysicians are more difficult than those of nurses *Leger har vanskeligere arbeidsoppgaver enn sykepleiere* y_{22} PFSERI: nysicians take their work more seriously than nurses do *Leger tar yrket sitt mer alvorlig enn det sykepleiere gjør* y_{23} EFFE: I regard the effectiveness of physicians' work as .... *Jeg anser at effektiviteten av det arbeid som leger er ....* y_{24} QUAL: I regard the quality of physicians' as .... *Jeg anser at kvaliteten på det arbeid som leger utfører er ....* y_{25} PFHETE: nysicians are very heterogeneous *Leger er en meget heterogen/uensartet yrkesgruppe* y_{26} OPFHET: Nurses are very nterogeneous *Sykepleiere er en meget heterogen/uensartet yrkes-gruppe*

Table 8.2 - Number of social identification items - grouped according to their mean scores

	Item mean scores: Range from .... through					
	-2 .... -1	-1 .... -0.5	-0.5 0	0 .... + 0.5	+0.5 .... +1	+1 .... +2
Social identifications with organizational subunits:						
Belongingness			1	1	3	1
Ethnocentrism		1	1			
Effectiveness/quality evaluation						2
Budget evaluation			1			
Heterogeneity evaluation				1		
Social identifications with professions:						
Belongingness:			4		2	
Ethnocentrism			2	1		
Effectiveness/quality evaluation						2
Budget evaluation					1	
Heterogeneity evaluation				1	1	
Sum	0	1	9	4	7	5

By and large, for the *belongingness* measures, identifications with departments are stronger than with professions, e.g. for y_1 DPSUCC the mean is 0.60 and for y_{13} PFSUCC - 0.50, and y_6 DPTHIN 0.39 in comparison with -0.07 for y_{18} PFTHIN. For the direct questions about belongingness, y_3 DPBELO and y_{15} PFBELO, the relation is the other way round, even if the differences are modest (0.53 and 0.79). On most of the belongingness measures doctors have lower scores than nurses: For y_1 DPSUCC the mean scores are 0.52 and 0.68 respectively, and for y_{13} PFSUCC -0.64 and -0.37. But here, too, there are exceptions: For y_{15} PFBELO the mean score for doctors is 1.01 while 0.88 for nurses.

On the *ethnocentrism* measures, identifications with professions are stronger than with departments on both the comparable measures: y_7 DPIMPO -0.55 and y_{20} PFIMPO -0.31 and y_8 DPDIFF -0.45 and y_{21} PFDIFF 0.11. On the ethnocentrism items, doctors have *higher* scores than nurses.

Measured by the *budget allocation evaluation* items the organization subunit score y_9 DPBUDG -0.09 is lower than the profession score y_{19} PFBUDG 0.61 On this dimension there is no significant differences between physicians and nurses. For *effectiveness/quality evaluations* items and the *heterogeneity evaluation* measures there are no significant differences either between scores for departments and professions or between doctors and nurses.

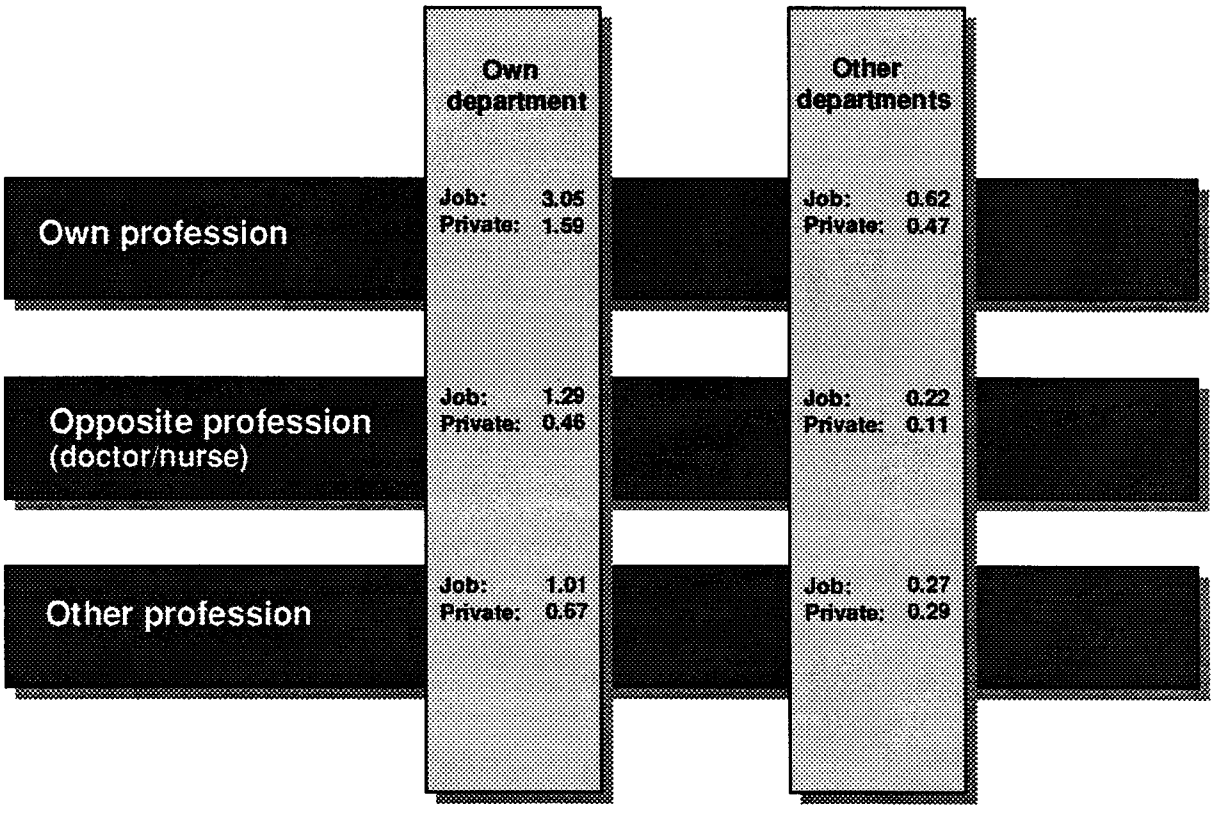
The means for the items measured by the -2 to +2 scale range from -0.55 for y_7 DEPIMP to +1.05 for y_2 DEPCOM. This variety of mean scores is an indicator of reliability; the respondents seem to have taken the questionnaires seriously. The wide range and the substantial differences between the means for department and profession on the same questions add to the results from the measurement analysis. Even if the items are correlated, as in the case of the belongingness items, they may have very different score profiles.

In a meta-analysis of ingroup/intergroup bias Mullen, Brown and Smith (1992) found that intergroup bias was quite modest. In this study 10 of the 26 social identification items have negative mean values. This result is thus in accordance with those reported in the meta-analysis.

Prosocial behavior

Constituted by 2 department (own and other) and 3 profession groups (own, opposite and other) respectively, there are 6 target groups of prosocial behavior. The mean number of reported job-related and private-related prosocial behaviors are reported in the figure below:

Figure 8.1 - Prosocial behavior to 6 target groups



At both dimensions, the *department* and the *profession*, there are consistently higher scores for the ingroup ("own") than the outgroups ("opposite" and "other"). The double ingroup, thus has the highest scores: A profession colleague in own department is the typical beneficiary of prosocial behavior. This pattern is similar for job-related and private-related prosocial behavior. The relative differences between the job- and private-related behaviors reported vary substantially, however, between the 6 target groups. The lowest ratio is found in the lower right cell: Private-related prosocial behavior to the double outgroup members are even *higher* than the job-related ones, indicating that friendship etc. may play a role here. The most substantial difference between job- and private related prosocial behavior, on the other hand, is found in the left cell in the middle row: Prosocial behavior towards the opposite profession.

As to differences between the occupational groups the figure and the table below demonstrate that the mean scores are quite similar across professions in 3 of the 6 group combinations in the figure above, while somewhat different in the remaining 3:

Figure 8.2 - Prosocial behavior - differences between doctors and nurses

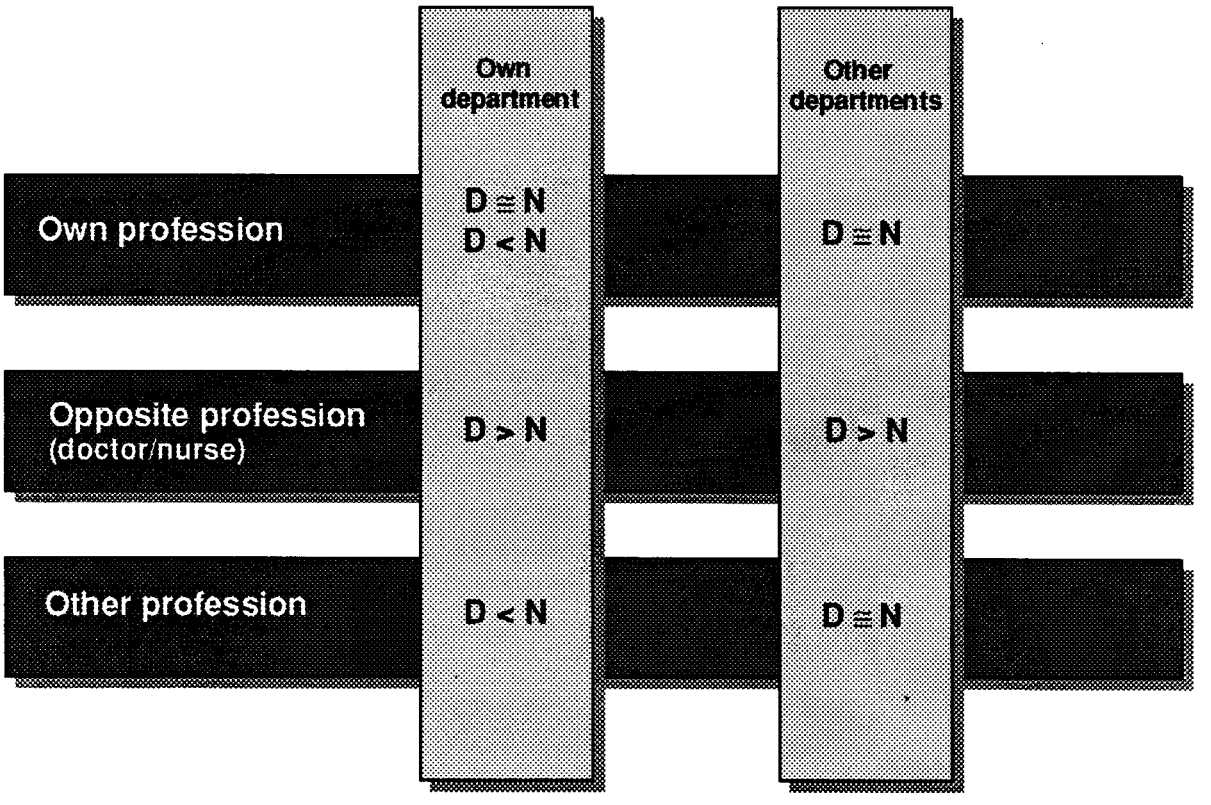


Table 8.3 - Prosocial behavior - differences between doctors and nurses
Significant differences p < 0.01 are shadowed

			Own department:	Other departments:
Own profession:	Job:	Doctors:	3.08	0.58
		Nurses:	3.02	0.66
	Private:	Doctors:	1.28	0.40
		Nurses:	1.58	0.52
Opposite profession:	Job:	Doctors:	1.97	0.32
		Nurses:	0.64	0.12
	Private:	Doctors:	1.15	0.19
		Nurses:	0.43	0.05
Other professions:	Job:	Doctors:	0.62	0.28
		Nurses:	1.38	0.25
	Private:	Doctors:	0.34	0.32
		Nurses:	0.91	0.27

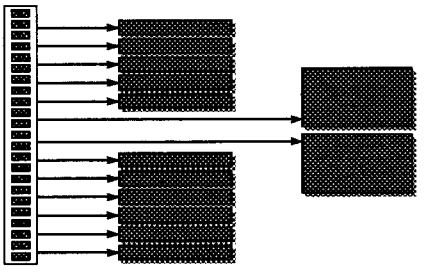
From the above figure and table these conclusions emerge: *First*, in the double ingroup box there is a difference between job-related and private-related prosocial behavior. For job-related behavior there are approximately equal scores between doctors and nurses, while for private-related prosocial behavior the figures for doctors are lower than for nurses. *Second*, doctors direct more prosocial behavior to nurses than nurses do towards doctors. This is the conclusion for in-department as well as out-department prosocial behaviors and for job-related as well as private-related prosocial behavior. For doctors' job-related prosocial behavior towards nurses in the same department, the figure is a level 64 per cent of the double ingroup level while for nurses this ratio is 21%. Thus, there is a hierarchical pattern here. *Third*, a hierarchical pattern is also found for prosocial behavior to other professions: Here doctors have *lower* mean scores than nurses, probably due to nurses help, support etc. to auxiliary nurses and other occupations on the same or lower levels than nurses in the hierarchy of occupations.

Relationships between the variables in the model:

The independent/control variables are partly on the nominal, ordinal and ratio levels. The intermediate variables are all on the ordinal level (measured by Likert scale items) while the outcome variables are on the ratio level (computations of absolute numbers of beneficiaries of prosocial behavior). For the nominal level variables with more than 2 values, dummy variables are computed. The relationships between the variables in the model have been analyzed by multiple regression, thus relaxing of the condition that the variables should be on the ratio level.

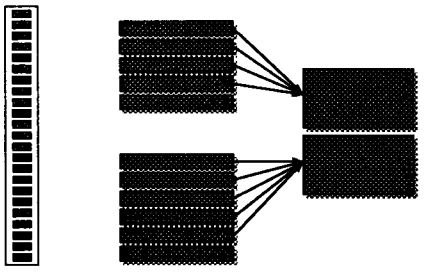
The multiple regression analyses results are presented in 3 tables below. To graphically illustrate the differences between those 3 tables, the below figures have been set up. They directly correspond with the below tables. In the *first* figure and table the relationships between the independent/control variables on the one hand and the intermediate and the outcome variables on the other hand are presented:

Figure 8.3 - Multiple regression analysis - first variant



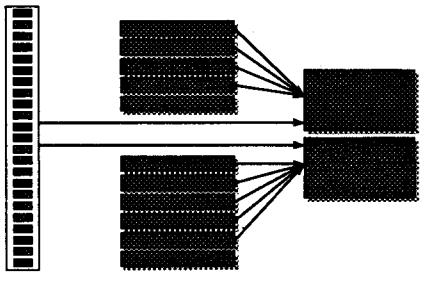
The *second* figure and table illustrate the relationships between the intermediate and the outcome variables:

Figure 8.4 - Multiple regression analysis - second variant



In the *third* figure and table the impacts of both the independent/control variables and the intermediate variables on the outcome variable are presented:

Figure 8.5 - Multiple regression analysis - third variant



All these three analyses are necessary to give answers to the research questions of the study, including to discern the direct effects of the intermediate/control variables. In this way it is investigated whether the model of the study is too restricted. The *first* one of these analyses (table 8.4) demonstrates the associations between the explanatory variables and the intermediate variables. Additionally it has the function described below. From the *second* analysis (table 8.5) the associations between the intermediate variables and the outcome variables are found. The combined effects of the intermediate *and* the independent/control variables are shown in table 8.6 from the *third* analysis. Subsequent to the above mentioned analyses, the modified model of the study is worked out, figure 8.10. The associations for this model are found in the two right columns in table 8.4 and are indicated by the two arrows in the middle of figure 8.3 above.

In the below tables, B-values are displayed in normal fonts, beta-coeffisients in **bold** fonts
while Sig T in *italics*. Significant ($p < 0.05$) relationships are shadowed.

Table 8.4 - Relationships between 1) independent variables/control variables and 2) the intermediate variables - social identifications - and the outcome variables - direction of prosocial behavior. Multiple regression analysis

	Social identifications to departments					Social identifications to professions					Prosocial behavior	
	FCDPBEL	FCDPETH	FCDPEFFQ	y_9 DPBUDG	y_{12} DPHETE	FCPFBEL1	FCPFBEL2	FCPFETH	FCPFEFFQ	y_{19} PFBUDG	FCPFHETE	FCPSDEP	FCPSPRF
x_1 PHSECO	-0.24	-0.25	0.06	-0,10	0,21	-0.71	0.19	1.08	-0.10	-0.23	0.23	0.00	0.46
	-0.13	**-0.13**	**0.03**	**-0,04**	**0.08**	**-0.39**	**0.10**	**0.54**	**-0.05**	**-0.09**	**0.12**	**0.00**	**0.28**
	0.03	*0.02*	*0.60*	*0.54*	*0.19*	*0.00*	*0.10*	*0.00*	*0.38*	*0.13*	*0.05*	*0.97*	*0.00*
x_2 PHREGI	-0.44	-0.02	-0.16	0,03	0.43	-0.28	0.27	1.16	-0.17	0.10	0.37	0.12	0.85
	-0.21	**-0.01**	**-0.08**	**0,01**	**0.14**	**-0.13**	**0.13**	**0.50**	**-0.08**	**0.03**	**0.17**	**0.07**	**0.18**
	0.00	*0.85*	*0.10*	*0.85*	*0.00*	*0.00*	*0.01*	*0.00*	*0.09*	*0.48*	*0.00*	*0.30*	*0.01*
x_4 HSSMAL	0.19	-0.10	0.19	-0,11	0.50	0.05	-0.07	-0.10	0.08	0.43	0.25	-0.01	0.12
	0.09	**-0.05**	**0.09**	**-0,04**	**0.17**	**0.03**	**-0.04**	**-0.05**	**0.04**	**0.15**	**0.13**	**0.00**	**0.07**
	0.26	*0.55*	*0.25*	*0.64*	*0.04*	*0.75*	*0.67*	*0.00*	*0.64*	*0.07*	*0.14*	*0.98*	*0.56*
x_5 HSMEDI	0.25	0.11	0.00	-0,08	0.63	0.04	-0.10	-0.11	0.00	0.37	0.18	0.05	-0.07
	0.14	**0.03**	**0.00**	**-0,03**	**0.24**	**0.02**	**-0.05**	**-0.05**	**0.00**	**0.14**	**0.10**	**0.03**	**-0.04**
	0.10	*0.53*	*0.99*	*0.71*	*0.01*	*0.79*	*0.53*	*0.41*	*0.99*	*0.10*	*0.26*	*0.80*	*0.72*
x_6 HSLARG	0.09	0.11	0.03	-0,24	0.52	-0.18	-0.15	-0.16	-0.02	0.44	0.01	0.11	0.02
	0.03	**0.03**	**0.01**	**-0,05**	**0.12**	**-0.06**	**-0.05**	**-0.05**	**-0.01**	**0.10**	**0.00**	**0.05**	**0.01**
	0.59	*0.53*	*0.87*	*0.35*	*0.04*	*0.29*	*0.40*	*0.28*	*0.90*	*0.08*	*0.98*	*0.58*	*0.93*
x_7 HSVLAR	0.13	-0.08	-0.14	0,24	0.72	-0.08	0.03	-0.14	-0.10	0.49	0.31	0.03	-0.05
	0.04	**-0.03**	**-0.05**	**0.06**	**0.18**	**-0.03**	**0.01**	**-0.04**	**-0.04**	**0.12**	**0.11**	**0.01**	**-0.02**
	0.46	*0.66*	*0.44*	*0.35*	*0.01*	*0.64*	*0.87*	*0.34*	*0.57*	*0.05*	*0.09*	*0.88*	*0.82*
x_8 HSUNSP	0.26	0.05	0.17	-0,10	0.55	0.09	0.02	-0.06	0.13	0.39	0.17	0.03	-0.13
	0.11	**0.02**	**0.08**	**-0.03**	**0.17**	**0.04**	**0.01**	**-0.02**	**0.06**	**0.12**	**0.07**	**0.02**	**-0.07**
	0.12	*0.75*	*0.31*	*0.69*	*0.02*	*0.59*	*0.90*	*0.69*	*0.43*	*0.11*	*0.33*	*0.87*	*0.52*
x_{10} DPANES	-0.05	0.61	0.36	-0,40	-0.38	-0.18	-0.21	-0.03	0.33	-0.41	0.18	0.01	-0.54
	-0.02	**0.23**	**0.14**	**-0.10**	**-0.10**	**-0.07**	**-0.08**	**-0.01**	**0.12**	**-0.10**	**0.07**	**0.00**	**-0.23**
	0.74	*0.00*	*0.02*	*0.08*	*0.09*	*0.23*	*0.18*	*0.79*	*0.03*	*0.07*	*0.26*	*0.95*	*0.01*
x_{11} DPPEDI	0.16	0.41	0.23	-0,26	-0.36	0.30	-0.16	0.01	0.15	0.14	0.18	-0.09	-0.55
	0.05	**0.13**	**0.07**	**-0.06**	**-0.08**	**0.10**	**-0.05**	**0.00**	**0.05**	**0.03**	**0.06**	**-0.04**	**-0.20**
	0.32	*0.01*	*0.15*	*0.26*	*0.13*	*0.05*	*0.32*	*0.93*	*0.35*	*0.55*	*0.28*	*0.63*	*0.01*
x_{12} DPGYNE	-0.02	-0.01	0.43	0,09	-0.39	0.16	-0.06	0.16	0.23	0.15	-0.15	-0.31	-0.36
	-0.01	**0.00**	**0.14**	**0.02**	**-0.09**	**0.05**	**-0.02**	**0.05**	**0.08**	**0.03**	**-0.05**	**-0.13**	**-0.13**
	0.88	*0.96*	*0.01*	*0.71*	*0.10*	*0.30*	*0.70*	*0.23*	*0.15*	*0.53*	*0.36*	*0.11*	*0.08*
x_{13} DPSURG	0.06	-0.12	0.38	0,10	-0.31	0.24	0.06	-0.01	0.21	-0.10	0.12	-0.16	-0.67
	0.03	**-0.06**	**0.18**	**0.03**	**-0.10**	**0.12**	**0.03**	**-0.01**	**0.10**	**-0.03**	**0.06**	**-0.10**	**-0.36**
	0.66	*0.39*	*0.01*	*0.61*	*0.14*	*0.07*	*0.70*	*0.90*	*0.13*	*0.62*	*0.42*	*0.32*	*0.00*
x_{14} DPMEDI	-0.04	-0.05	0.32	0,03	-0.30	0.15	-0.15	0.03	0.20	-0.19	0.04	-0.19	-0.61
	-0.02	**-0.02**	**0.17**	**0.01**	**-0.11**	**0.08**	**-0.08**	**0.01**	**0.11**	**-0.07**	**0.02**	**-0.13**	**-0.35**
	0.75	*0.73*	*0.02*	*0.88*	*0.13*	*0.24*	*0.29*	*0.81*	*0.14*	*0.33*	*0.78*	*0.24*	*0.00*
x_{15} DPNEVR	0.18	-0.07	0.39	-0,01	-0.38	0.44	-0.29	0.24	0.36	0.22	-0.06	-0.30	-0.39
	0.04	**-0.01**	**0.08**	**0.00**	**-0.05**	**0.09**	**-0.06**	**0.05**	**0.07**	**0.03**	**-0.01**	**-0.08**	**-0.09**
	0.39	*0.74*	*0.06*	*0.96*	*0.21*	*0.03*	*0.19*	*0.17*	*0.09*	*0.47*	*0.79*	*0.23*	*0.13*
x_{16} DPOTOR	0.14	-0.43	0.29	0,59	-0.36	0.04	-0.06	0.26	0.19	0.32	0.06	-0.44	-0.66
	0.02	**-0.08**	**0.05**	**0.07**	**-0.04**	**0.01**	**-0.01**	**0.04**	**0.03**	**0.04**	**0.01**	**-0.10**	**-0.13**
	0.55	*0.06*	*0.22*	*0.09*	*0.29*	*0.86*	*0.79*	*0.19*	*0.43*	*0.34*	*0.82*	*0.12*	*0.03*

x_1 **PHSECO:** Dummy variable for senior consultant (*overlege*) x_2 **PHREGI:** Dummy variable for registrar (*assistentlege*) x_4 **HSSMAL** Dummy variable for hospital with less than 500 employees x_5 **HSMEDI** Dummy variable for hospitals with 500 - 1000 employees x_6 **HSLARG** Dummy variable for hospital with 1000 - 1500 employees x_7 **HSVLAR** Dummy variable for hospital with 1500 employees or more x_8 **HSUNSP** Dummy variable for university/special hospitals x_{10} **DPANES:** Dummy variable for departments of anesthesiology x_{11} **DPPEDI** Dummy variable for departments of pediatrics x_{12} **DPGYNE:** Dummy variable for gynecology departments x_{13} **DPSURG** Dummy variable for departments **of** surgery x_{14} **DPMEDI** Dummy variable for medical departments x_{15} **DPNEVR** Dummy variable for neurological departments x_{16} **DPOTOR** Dummy variable for department of otorhinolaryngology ear/nose/throat diseases **Reference categories for dummy variables:** For x_1 - x_2: Nurses, for x_4 - x_8: Psychiatric hospitals, for x_{10} - x_{16}: Department of psychiatry

	Social identifications to departments					Social identifications to professions						Prosocial behavior	
	FCDPBEL	FCDPETH	FCDPEFFQ	y_9 DPBUDG	y_{12} DPHETE	FCPFBEL1	FCPFBEL2	FCPFETH	FCPFEFFQ	y_{19} PFBUDG	FCPFHETE	FCPSDEP	FCPSPRF
FC-DPLEAD	0.10	0.15	0.19	-0.14	-0.07	0.02	0.09	-0.08	0.11	-0.05	-0.04	-0.03	0.01
	0.09	**0.14**	**0.19**	**-0.09**	**-0.05**	**0.02**	**0.08**	**-0.08**	**0.11**	**-0.03**	**-0.04**	**-0.04**	**0.01**
	0.01	*0.00*	*0.00*	*0.02*	*0.24*	*0.60*	*0.04*	*0.01*	*0.00*	*0.40*	*0.37*	*0.54*	*0.88*
FCCFL	-0.09	0.11	-0.11	0.11	0.10	0.02	-0.07	0.07	-0.07	0.16	0.04	-0.06	0.02
	-0.10	**0.13**	**-0.12**	**0.08**	**0.07**	**0.02**	**-0.08**	**0.07**	**-0.08**	**0.12**	**0.05**	**-0.09**	**0.03**
	0.01	*0.00*	*0.00*	*0.03*	*0.06*	*0.57*	*0.04*	*0.02*	*0.04*	*0.00*	*0.22*	*0.13*	*0.64*
x_{25} GENDER	-0.08	0.20	-0.05	-0,04	-0.05	-0.06	-0.20	0.03	-0.06	0.01	-0.16	0.06	0.14
	-0.05	**0.11**	**-0.03**	**-0.02**	**-0.02**	**-0.03**	**-0.11**	**0.02**	**-0.03**	**0.00**	**-0.09**	**0.04**	**0.09**
	0.32	*0.02*	*0.58*	*0.75*	*0.66*	*0.46*	*0.02*	*0.66*	*0.51*	*0.96*	*0.06*	*0.52*	*0.19*
x_{27} EDUYEA	-0.01	0.00	0.00	-0,01	0.00	-0.02	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
	-0.09	**-0.01**	**0.02**	**-0.12**	**-0.03**	**-0.24**	**-0.09**	**0.00**	**0.01**	**-0.04**	**0.01**	**-0.01**	**0.03**
	0.14	*0.83*	*0.80*	*0.06*	*0.68*	*0.00*	*0.17*	*0.99*	*0.88*	*0.50*	*0.88*	*0.89*	*0.77*
x_{36} DEPYEA	0.01	0.02	0.01	0,00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02
	0.09	**0.16**	**0.04**	**0.02**	**-0.02**	**0.00**	**0.06**	**0.08**	**0.02**	**0.06**	**0.04**	**0.03**	**0.13**
	0.08	*0.00*	*0.48*	*0.68*	*0.74*	*0.96*	*0.27*	*0.05*	*0.74*	*0.29*	*0.40*	*0.69*	*0.07*
x_{37} ODPYEA	-0.02	0.00	0.01	0,02	-0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.02
	-0.09	**0.00**	**0.05**	**0.05**	**-0.04**	**-0.02**	**-0.01**	**0.06**	**0.03**	**0.04**	**0.01**	**0.08**	**0.09**
	0.03	*0.99*	*0.22*	*0.24*	*0.40*	*0.69*	*0.74*	*0.08*	*0.53*	*0.32*	*0.80*	*0.25*	*0.14*
x_{41} NOTHSP	0.01	-0.02	-0.03	-0,04	-0.01	0.03	-0.01	0.01	-0.02	0.01	-0.02	0.01	0.00
	0.03	**-0.06**	**-0.08**	**-0.07**	**-0.01**	**0.08**	**-0.02**	**0.03**	**-0.04**	**0.01**	**-0.06**	**0.04**	**0.01**
	0.59	*0.22*	*0.12*	*0.21*	*0.76*	*0.10*	*0.68*	*0.53*	*0.46*	*0.85*	*0.29*	*0.61*	*0.92*
x_{42} SATYDP	0.09	-0.10	0.16	-0.31	-0.22	0.13	-0.01	-0.12	0.15	-0.18	-0.14	-0.11	0.12
	0.05	**-0.05**	**0.09**	**-0.12**	**-0.09**	**0.07**	**-0.01**	**-0.06**	**0.09**	**-0.07**	**-0.08**	**-0.08**	**0.08**
	0.21	*0.20*	*0.03*	*0.00*	*0.04*	*0.08*	*0.85*	*0.06*	*0.05*	*0.10*	*0.08*	*0.23*	*0.20*
x_{43} OTTYDP	0.10	-0.03	-0.06	0,18	0.02	0.02	0.13	0.04	0.04	0.17	0.02	-0.03	0.21
	0.06	**-0.02**	**-0.03**	**0.07**	**0.01**	**0.01**	**0.07**	**0.02**	**0.02**	**0.07**	**0.01**	**-0.02**	**0.13**
	0.15	*0.64*	*0.41*	*0.08*	*0.84*	*0.77*	*0.07*	*0.52*	*0.53*	*0.09*	*0.82*	*0.72*	*0.02*
Constant	0.37	-0.03	-0.50	1,40	0.73	1.48	0.70	-0.53	-0.40	0.68	-0.01	0.21	-0.64
	0.47	*0.96*	*0.32*	*0.06*	*0.32*	*0.00*	*0.18*	*0.22*	*0.43*	*0.35*	*0.98*	*0.72*	*0.30*
R^2	0.13	0.13	0.14	0.08	0.05	0.17	0.06	0.44	0.08	0.06	0.06	0.06	0.19
N	917											410	

FCDPLEAD: Factor score variable for Integrating hospital leadership FCCFL: Factor score variable for conflicts. x_{25} GENDER Gender (1=Female 2=Male) x_{27} EDUYEA Year for completed first education x_{36} DEPYEA Years of practice in this department x_{37} ODPYEA Years of practice in other departments at the same hospital x_{41} NOTHSP Number of other hospitals at which practiced x_{42} SATYDP Year of practice at the same type of departments at other hospitals x_{43} OTTYDP Year of practice at other types of departments at other hospitals

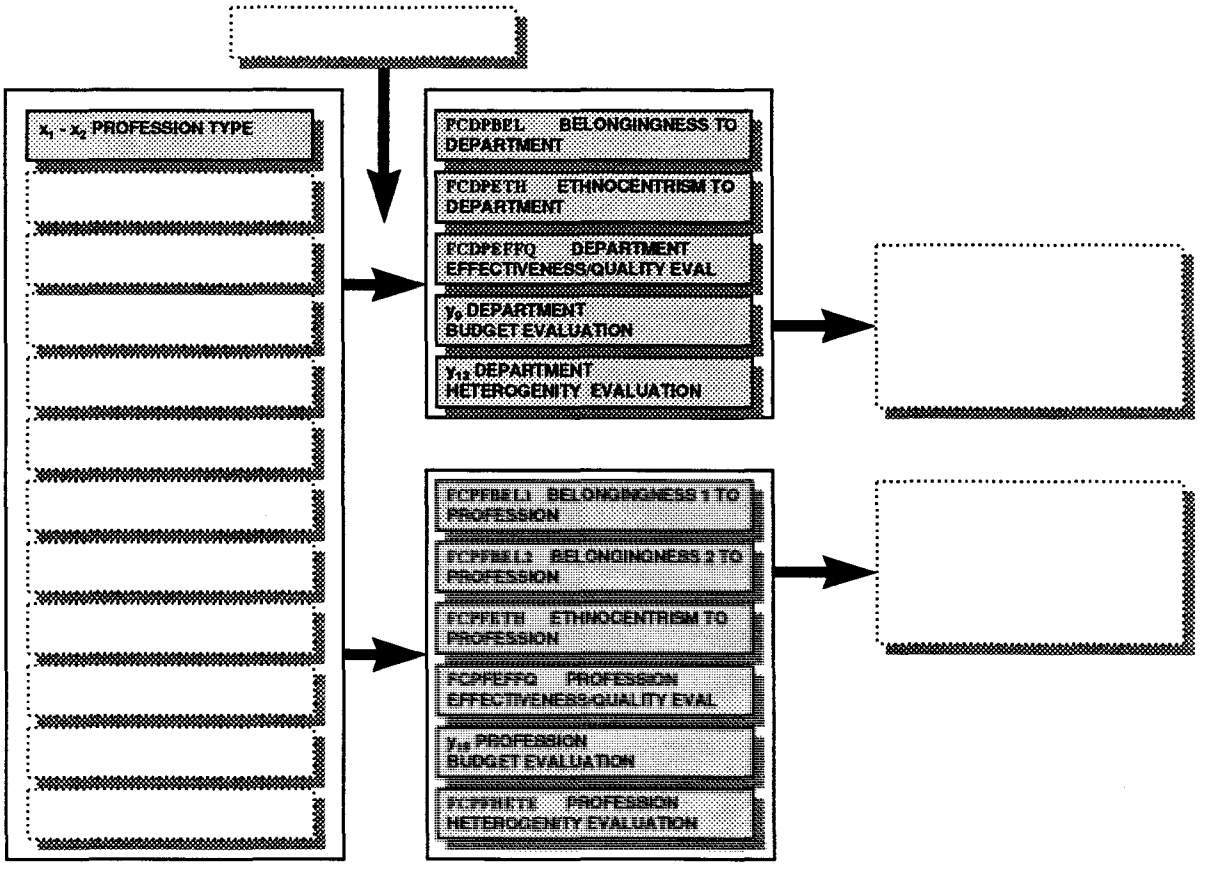
Impacts on the intermediate variable

There is a substantial difference as to the explained variance between *the ethnocentrism to profession* FCPFETH dimension, and the other variants of the intermediate variables: R^2=0.44 compared to the range 0.05 to 0.17 for the other ones.

To compare the hypotheses with the above presented results is somewhat complicated: The hypotheses of the study are worked out on the assumption that social identifications are *uni*dimensional constructs as far as one group is concerned (two-dimensional when two groups are incorporated in the analysis). The measurement analysis, however, clearly demonstrates that the social identifications are more multifaceted concepts. Hypotheses testing, accordingly, becomes more complex: Instead of comparing the relationships between hypothesis for 23 antecedents and *two* intermediate variables, the task here is to analyze 23 antecedents and *eleven* intermediate variables.

Hypotheses H_1 - H_2 - Relationships between profession type and social identifications.
Recall that in **H_1** it was hypothesized: **The identifications with departments are weaker for physicians than for nurses** and in **H_2: The identifications with profession are stronger for physicians than for nurses**

Figure 8.6 - Graphic illustration of hypotheses H_1 - H_2



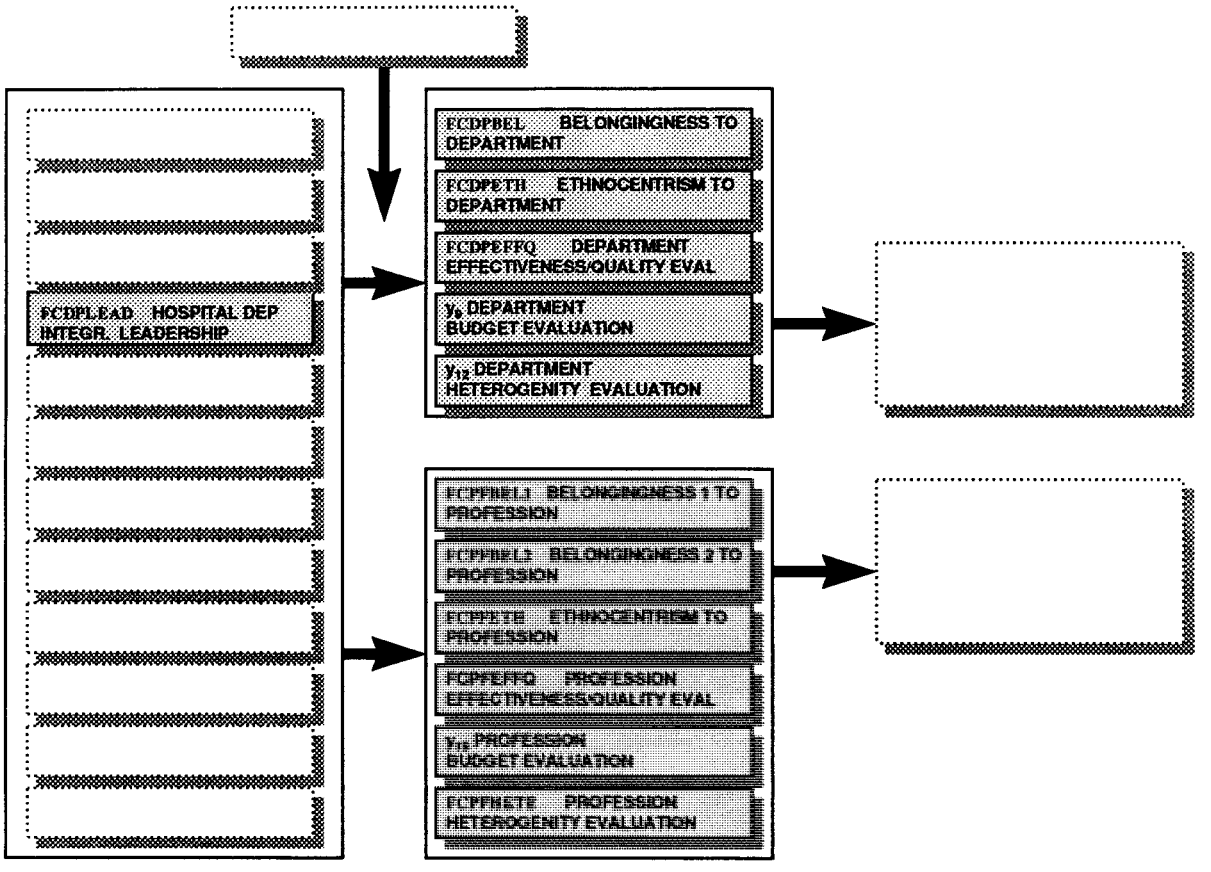
H_1 *is partly confirmed:* For the belongingness to department dimension FCDPBEL, the doctor dummy variables x_1 PHSECO and x_2 PHREGI (nurses comprise the reference category) are significantly negative. The beta-coeffisients are -0.13 and -0.13. Thus, according to the hypothesis, doctors show weaker identifications with their departments than nurses do. For the ethnocentrism to department dimension FCDPETH there is a negative impact for x_1 PHSECO, but not for x_2 PHREGI, which means that senior consultants report less "our departments is better"-perceptions than registrars. For the effectiveness/quality and budget evaluation dimensions the profession type variables have no significant impacts.

H_2 *is also partly confirmed:* One of these dimensions is the above mentioned *ethnocentrism to profession* FCPFETH, for which there is a rather substantially explained variance. The profession category variables x_1 PHSECO and x_2 PHREGI are the *main* predictors here. The beta-coeffisients are 0.54 and 0.50, thus convincingly confirming hypothesis **H_2** as far as this dimension is concerned. For the *belongingness* dimensions, however, the opposite is true. Recall that there are two belongingness dimensions. There are significant *negative* impacts on the first of these dimensions for both x_1 PHSECO and x_2 PHREGI (beta-coefficients -0.39 and -0.13) while there is a significant *positive* (beta- coefficient 0.13) effect of x_2 PHREGI on the second belongingness dimension. On the effectiveness/quality and budget evaluation dimensions neither x_1 PHSECO nor x_2 PHREGI have any significant impact.

Totally, the profession type variable turns out to have substantial effects on the social identifications, suggesting that there are major perceptual and cognitive differences between the two professions examined. This study reveals some characteristics of these differences. One can only speculate, however, which of the parts that comprises the two professions are of most importance.

Hypotheses H_3 - H_4 - Relationships between integrating hospital department leadership and social identifications. Recall that in H_3 it was hypothesized: **There is a positive association between integrating hospital department leadership and identifications with departments** and in H_4: **There is a negative association between integrating hospital department leadership and identifications with professions**

Figure 8.7 - Graphic illustration of hypotheses H_3 - H_4



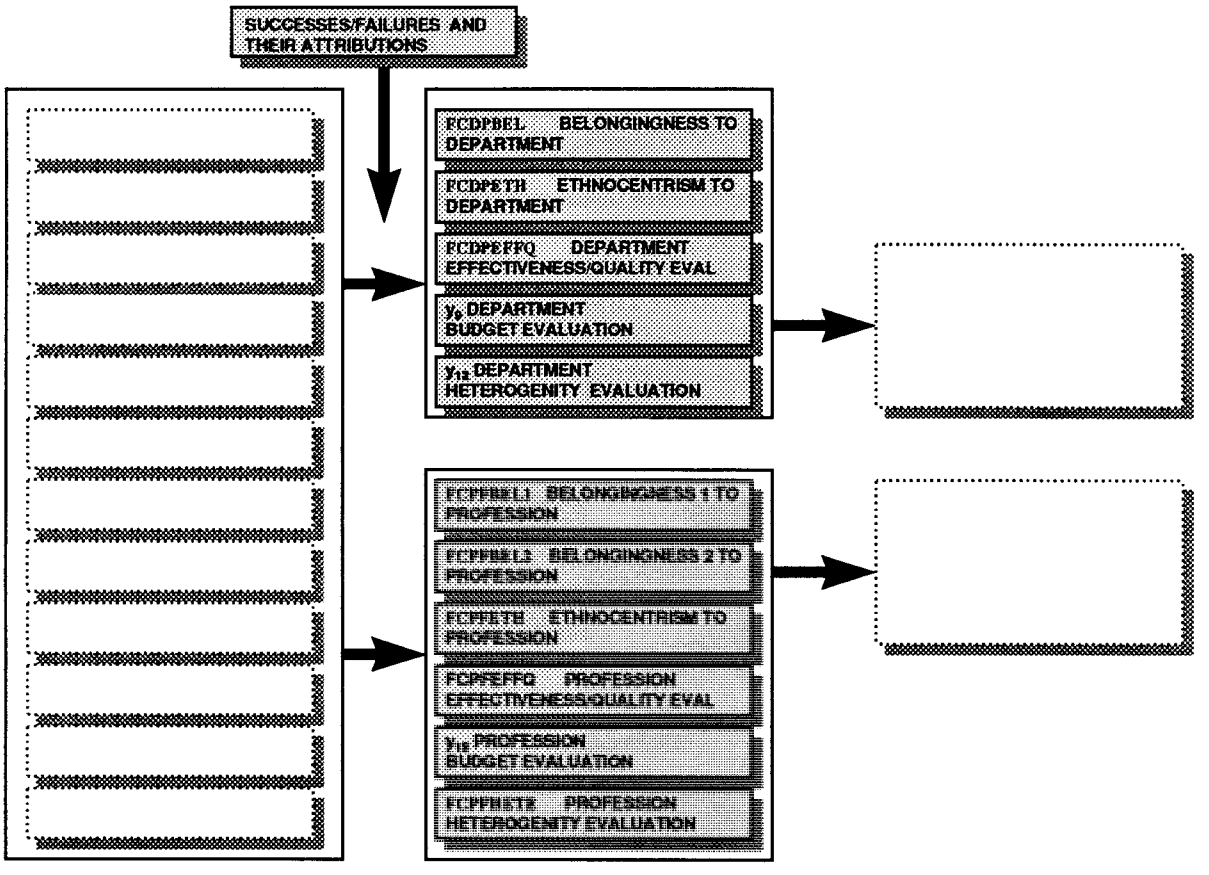
H_3 *is predominantly confirmed:* On the *belongingness to department* FCDPBEL, ethnocentrism to department FCDPETH, and department effectiveness/quality evaluation FCDPEFFQ dimensions, there are significant *positive* associations from the integrating hospital department leadership variable. The beta-coeffisients are 0.09, 0.14 and 0.19 respectively.

H_4 *is partly confirmed and partly disconfirmed:* For the ethnocentrism to profession FCPFETHN - it is confirmed (betacoeffisient -0.08). For the second belongingness to profession FCPFBEL2 dimension and the effectiveness/quality evaluation FCPFEFFQ dimensions on the other hand, there are significant *positive* effects (betacoeffisients 0.08 and 0.11). For the first belongingness to profession dimension FCPFBEL1 and for the profession budget evaluation there are no significant effects.

Hypotheses H_5 - H_{10} - Relationships between successes and failures and social identifications. Recall the following hypotheses: **H_5: Successes regarding departments interactively strengthen the association hypothesized in H_3. H_6: Failures regarding departments interactively strengthen the association hypothesized in H_3 when attributed to external causes. H_7: Failures regarding departments interactively weaken the association hypothesized in H_3 when attributed to internal causes. H_8: Successes regarding professions interactively strengthen the association hypothesized in H_4. H_9: Failures**

regarding professions interactively strengthen the association hypothesized in H_4 when attributed to external causes. H_{10}: Failures regarding professions interactively weaken the association hypothesized in H_4 when attributed to internal causes

Figure 8.8 - Graphic illustration of hypotheses H_5 - H_{10}



The small number of respondents that did answer this question limits the analyses that may be properly done and the interpretation of them. Because of the high intercorrelations between the unusual events measures to departments and to professions respectively, it was not found proper to analyze these variables separately. No test of the hypothesized interactive associations therefore is done.

Impacts of the control variables. *Hospital type.* The hospital category dummy variables (x_4 - x_7 with x_8 as reference category) have a rather limited impact on the social identifications. The effect on y_{12} DEPHET (heterogeneity among the department employees) indicate differences between the psychiatric hospitals as a reference category and the other hospital types. It is interesting that the heterogeneity evaluations have *lower* scores in the psychiatric hospitals. The overall conclusion, is that the hospital type variable has a surprisingly minor impact on the social identifications.

Hospital department type. Compared with the psychiatric departments as the reference category, 2 department types (anesthesiology and pediatrics) have significant higher scores on the ethnocentrism to department FCDPETH dimension. 4 department types (anesthesiology, gynecology, surgery and medical) have significant impact on the effectiveness/quality evaluation dimension. For the social identifications to profession dimension, the significant impacts of hospital department are few and scattered. Even if the effects of the hospital department variable are by and large more substantial than those of the hospital type, , there are small differences in social identifications across the hospital department types.

Conflict. The conflict factor score variable FCCFL has some inconsistent significant effects on the social identifications: There is a positive effect on the ethnocentrism to department FCDPETH dimension. Conflicts thus strengthen the "our department is better" - perception. There is a positive effect of conflicts on the budget allocation evaluations y_9 DPBUDG and (meaning that a higher conflict level is thus positively associated with social identifications. Conflicts have negative impacts on FCDPBEL and FCDPEFFQ. For the identifications to profession there are significant positive associations between the conflict variable and FCPFETHN and budget evaluation and significant negative associations with FCPFBEL2 and FCPFEFFQ. These results are somewhat difficult to interpret except for the associations with budget evaluations that conflicts are related to budget allocations.

Age, gender and other demographic factors: For these relations, there are quite a few and scattered significant associations. No consistent pattern is emerging. Among the significant effects, the strongest one is the effect of x_{27} EDUYEA - year for completed basic education on FCPFBEL1 the first of the belongingness dimensions. The negative sign indicates that identification is reduced by *higher* number of years of education. This means that the belongingness to profession increases as time goes on from the time when basic education is completed.

Impacts on the outcome variable - direction of prosocial behavior:

In the initial model of this study, which is a rather restricted one, it is assumed that all the impacts on the outcome variable, direction of prosocial behavior, go through the intermediate variables, the social identifications. In the table above, the associations between the explanatory/control variables and the outcome variables are also presented. This is done to discern whether the model is *too* restricted: Are there any significant effects from the independent/control variables instead of or in addition to those through the intermediate variables? This discussion is found below, after the effects of the social identifications on the outcome variable have been presented.

The below table is a summary of the results presented in table 8.3

Table 8.5 - Summary of effects of the explanatory variables on social identifications. Empty cells indicate no or minimal significant effects.

	Social identifications	
	with departments	**with professions**
Profession type	The belongingness dimension: Nurses > doctors	The belongingness dimension: Nurses > doctors The ethnocentrism dimension: Doctors > nurses
Hospital type		
Hospital department type	Higher effectiveness/quality evaluations for most other departments than psychiatric	
Integrating hospital department leadership	Positive effect on the belongingness and the ethnocentrism dimensions	Negative effect on the ethnocentrism dimension Positive effect on the effectiveness/quality evaluation dimension
Conflicts	Negative effect on the belongingness dimension Positive effect on the ethnocentrism dimension Negative effect on the effectiveness/quality evaluation dimension. Positive effect on the budget evaluation dimension	Negative effect on the belongingness dimension Positive effect on the ethnocentrism dimension Negative effect on the effectiveness/quality evaluation dimension. Positive effect on the budget evaluation dimension
Gender		
Other demographic characteristics		

Prosocial behavior explained by social identifications. Recall that three types of multiple regression analyses are done - this is the second one. It is performed to examine the associations between the intermediate variables and the outcome variables, that is to test the hypotheses $\mathbf{H_{11}}$ - $\mathbf{H_{12}}$.

Table 8.6 - Relationships between 1) intermediate variables - social identifications and 2) the outcome variables - direction of prosocial behavior

Significant ($p < 0.05$) relationships are shadowed

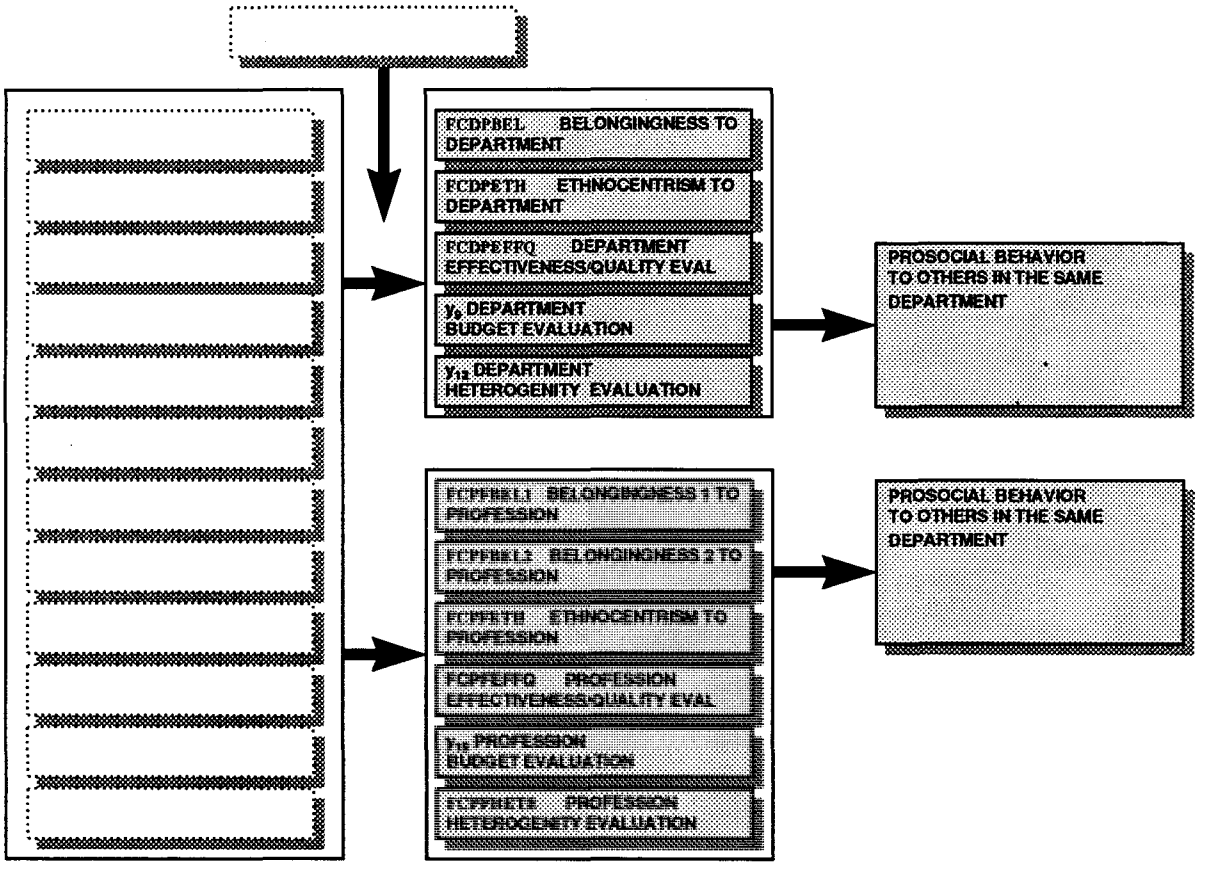
	FCPSDEP	FCPSPRF		FCPSDEP	FCPSPRF
FCDPBEL	-0.08	0.00	FCPFBEL1	-0.02	-0.05
	-0.10	**0.00**		**-0.02**	**-0.06**
	0.09	*0.97*		*0.72*	*0.30*
FCDPETH	0.06	0.01	FCPFBEL2	0.05	0.04
	0.08	**0.02**		**0.07**	**0.05**
	0.13	*0.76*		*0.19*	*0.30*
FCDPEFQ	-0.11	-0.01	FCPFETH	0.02	0.13
	-0.14	**-0.01**		**0.02**	**0.15**
	0.06	*0.84*		*0.68*	*0.00*
y9 DPBUDG	-0.03	0.00	FCPFEFQ	0.07	-0.07
	-0.05	**0.00**		**0.08**	**-0.08**
	0.38	*0.95*		*0.28*	*0.32*
FCPFBEL1	-0.02	-0.05	y_{10} PFBUDG	0.02	0.00
	-0.02	**-0.06**		**0.04**	**0.00**
	0.72	*0.30*		*0.53*	*0.99*
FCPFBEL2	0.05	0.04			
	0.07	**0.05**			
	0.19	*0.30*			
FCPFETH	0.02	0.13			
	0.02	**0.15**			
	0.68	*0.00*			
FCPFEFQ	0.07	-0.07			
	0.08	**-0.08**			
	0.28	*0.32*			
y_{10} PFBUDG	0.02	0.00			
	0.04	**0.00**			
	0.53	*0.99*			
Constant	0.02	0.01			
	0.56	*0.72*			
R^2	0.03	0.04			
N	410				

Instead of the original 917 respondents, N=410 here because a great number of respondents that did not fill in the tables with information about prosocial behavior. Between the two groups then emerging, those who did and those who did not fill in these tables, significance testing has been done. For 10 of totally 76 items there were significant ($p>0.05$) differences between these groups. No consistent pattern as to the variables having significant differences emerged.

The dimensionality of the social identifications concept has major impact on this hypotheses testing, too. Instead of 2 explanatory variables, 9 are included in the analysis.

Recall that in H_{11} it was hypothesized: **There is a positive association between social identifications with departments and prosocial behavior directed towards other persons within the same department** and in H_{12}: **There is a positive association between social identifications with profession and prosocial behavior directed towards other persons in the same profession**

Figure 8.9 - Graphic illustration of hypotheses H_{11} - H_{12}:



The above listed results are a manifest disconfirmation of these hypotheses: None of the relationships are significant except for FCPFETH on FCPSPRF. In the table above, however, a strong association between x_1/x_2 profession category and FCPFETH on the one side and between x_1/x_2 profession category and FCPSPRF on the other side. The association between for FCPFETH and FCPSPRF therefore, is likely to be a spurious one.

Prosocial behavior explained by independent/control variables *and* social identifications:

In the last analysis, the outcome variables are explained by *both* the independent/control variables *and* the intermediate variables. The differences between this last analysis and the previous ones, are indicators of which of the potential models has the best fit.

Table 8.7 - Relationships between 1) independent/control variables and intermediate variables - social identifications and 2) the outcome variables - direction of prosocial behavior

Significant ($p < 0.05$) relationships are shadowed

	FCPSDEP	FCPSPRF
x_1 PHSECO	0.04 **0.03** *0.79*	0.45 **0.27** *0.01*
x_2 PHREGI	0.11 **0.06** *0.44*	0.33 **0.17** *0.03*
x_4 HSSMAL	0.01 **0.01** 0.95	0.12 **0.07** 0.57
x_5 HSMEDI	0.06 **0.04** 0.74	-0.07 **-0.04** 0.72
x_6 HSLARG	0.10 **0.04** 0.61	0.02 **0.01** 0.94
x_7 HSVLAR	0.02 **0.01** *0.92*	-0.06 **-0.02** *0.79*
x_8 HSUNSP	0.04 **0.02** *0.84*	-0.14 **-0.07** *0.52*
x_{10} DPANES	0.01 **0.00** *0.96*	-0.52 **-0.22** *0.01*
x_{11} DPPED	-0.09 **-0.04** *0.64*	-0.55 **-0.20** *0.01*
x_{12} DPGYNA	-0.28 **-0.12** *0.15*	-0.35 **-0.13** *0.09*
x_{13} DPSURG	-0.13 **-0.08** *0.45*	-0.67 **-0.36** *0.00*
x_{14} DPMEDI	-0.16 **-0.10** 0.34	-0.59 **-0.35** 0.00
x_{15} DPNEVR	-0.26 **-0.07** *0.30*	-0.38 **-0.09** *0.15*

	FCPSDEP	FCPSPRF
FCDPBEL	-0.08 **-0.10** *0.14*	0.01 **0.02** *0.79*
FCDPETH	0.04 **0.06** *0.30*	0.01 **0.01** *0.88*
FCDPEFFQ	-0.11 **-0.14** *0.10*	0.01 **0.01** *0.88*
y_9 DPBUDG	-0.02 **-0.03** *0.59*	0.00 **0.00** *0.98*
FCPFBEL1	0.01 **0.01** *0.86*	0.01 **0.01** *0.89*
FCPFBEL2	0.05 **0.06** *0.30*	0.02 **0.02** *0.74*
FCPFETH	-0.03 **-0.04** *0.57*	0.02 **0.02** *0.80*
FCPFEFFQ	0.07 **0.09** *0.26*	-0.06 **-0.06** *0.42*
y_{10} PFBUDG	0.03 **0.06** *0.33*	0.01 **0.02** *0.77*

x_{16}	-0.38	-0.66
DPOTOR	**-0.08**	**-0.13**
	0.18	*0.03*
FCDPLEAD	-0.02	0.01
	-0.03	**0.01**
	0.63	*0.86*
FCCFL	-0.08	0.02
	-0.11	**0.02**
	0.06	*0.72*
x_{25}	0.06	0.14
GENDER	**0.04**	**0.09**
	0.57	*0.20*
x_{27}	0.00	0.00
EDUYEA	**-0.01**	**0.03**
	0.89	*0.72*
x_{36}	0.00	0.02
DEPYEA	**0.03**	**0.13**
	0.70	*0.09*
x_{37}	0.01	0.02
ODPYEA	**0.07**	**0.09**
	0.26	*0.15*
x_{41}	0.01	0.00
NOTHSP	**0.04**	**0.00**
	0.63	*0.95*
x_{42}	-0.09	0.13
SATYDP	**-0.07**	**0.08**
	0.31	*0.18*
x_{43} OTTYDP	-0.04	0.21
	-0.03	**0.13**
	0.65	*0.02*
Constant	0.15	
	0.80	
R^2	0.08	
N		

x_1 PHSECO: Dummy variable for senior consultant (*overlege*) x_2 PHREGI: Dummy variable for registrar (*assistentlege*) x_4 HSSMAL Dummy variable for hospital with less than 500 employees x_5 HSMEDI Dummy variable for hospitals with 500 - 1000 employees x_6 HSLARG Dummy variable for hospital with 1000 - 1500 employees x_7 HSVLAR Dummy variable for hospital with 1500 employees or more x_8 HSUNSP Dummy variable for university/special hospitals x_{10} DPANES: Dummy variable for anesthesia departments x_{11} DPPEDI Dummy variable for children departments x_{12} DPGYNE: Dummy variable for gynecology departments x_{13} DPSURG Dummy variable for surgical departments x_{14} DPMEDI Dummy variable for medical departments x_{15} DPNEVR Dummy variable for neurological departments x_{16} DPOTOR Dummy variable for department of otorhinolaryngology ear/nose/throat diseases **Reference categories for dummy variables:** For x_1 - x_2: Nurses, for x_4 - x_8: Psychiatric hospitals, for x_{10} - x_{16}: Department of psychiatry FCDPLEAD: Factor score variable for Integrating hospital leadership FCCFL: Factor score variable for conflicts. x_{25} GENDER Gender

(1=Female 2=Male) x_{27} **EDUYEA** Year for completed first education x_{36} **DEPYEA** Years of practice in this department x_{37} **ODPYEA** Years of practice in other departments at the same hospital x_{41} **NOTHSP** Number of other hospitals at which practiced x_{42} **SATYDP** Year of practice at the same type of departments at other hospitals x_{43} **OTTYDP** Year of practice at other types of departments at other hospitals

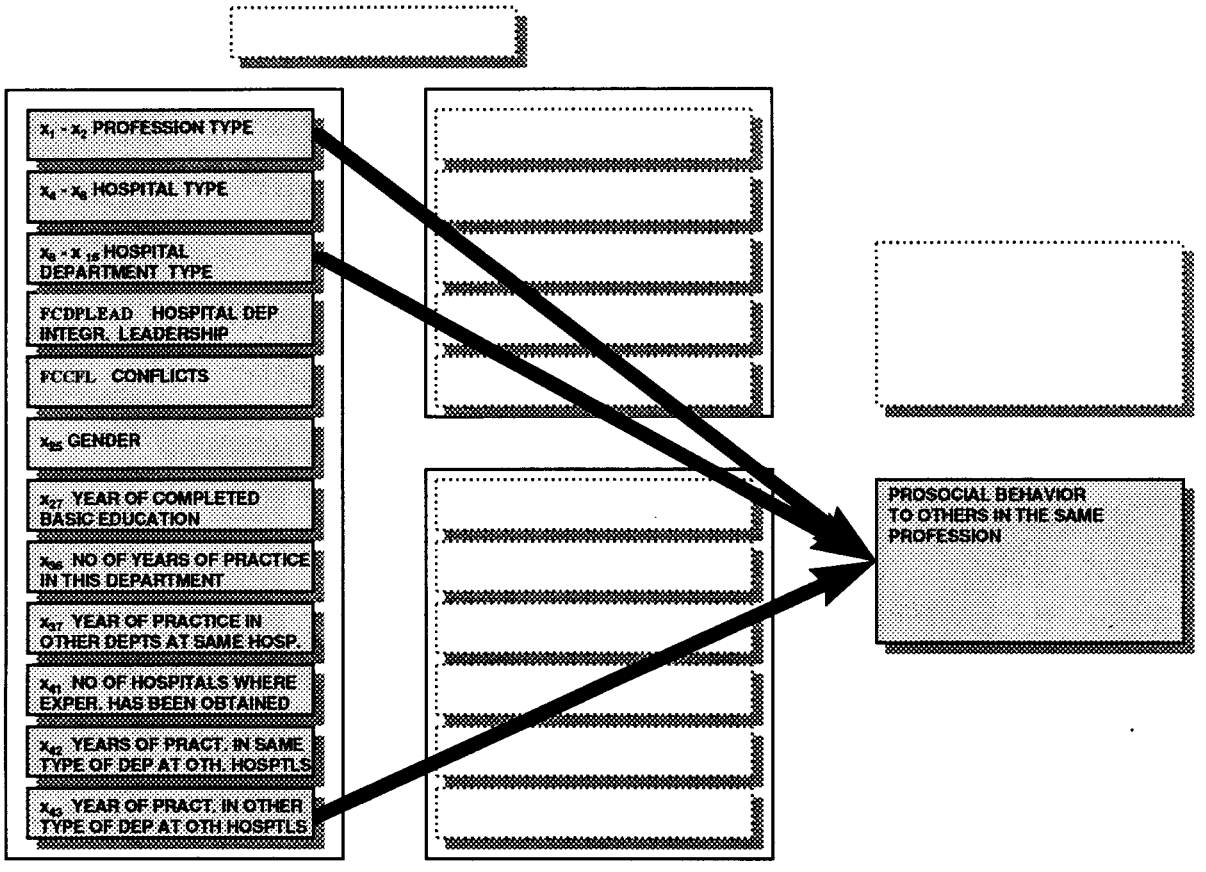
The explained variances are only slightly different (0.08/0.06 and 0.20/0.19) between this analysis and the first one. The intermediate variables - social identifications in this analysis, also contribute only marginally to explain the direction of prosocial behavior, thus confirming the results of the second multiple regression analysis and the hypothesis testing above.

For the prosocial behavior towards other persons in the same department, the independent/control variables have only limited impact: R^2=0.06, and no significant associations are found. On the other hand there are some effects on prosocial behavior towards profession ingroup members. These can be summed up to an explained variance of 0.19. The profession category variables x_1 **PHSECO** and x_2 **PHREGI** play a substantial role (betacoeffisients 0.28 and 0.18). This is the same results as described in table x above. The hospital department leadership variable has no significant effect, neither have the demographic variables except for x_{43} **OTTYDP** - year of practice in other types of departments at other hospitals. Hospital type has no significant impact, while there are some differences between hospital department types.

In the tables above, the results from 3 various multiple regression analyses are presented. The conclusions from these analyses are that 1) there are *some* significant associations between the explanatory variables and the intermediate variables, namely social identifications, 2) there are *no* significant associations between the intermediate variables and the outcome variables, namely direction of prosocial behavior and 3) there are *some* significant associations between the explanatory variables and the outcome variables, namely direction of prosocial behavior, as far as such behavior towards profession ingroup members is concerned. For prosocial behavior towards departments, on the other hand, there are no such effect.

These results indicate that the interpretation of the dimensionality of the social identifications becomes an issue of modest importance. More energy should be devoted to the interpretation of the modified model of the study, based on the above presented multiple regression results:

Figure 8.10 - Modified model



The significant associations are illustrated by arrows. Notice that *no* significant effects on the prosocial behavior to departments variable are found. For prosocial behavior to professions, profession type, hospital department type and practice in other departments at other hospitals are the explanatory variables with significant effects. For hospital department type the effects are predominantly differences between departments of psychiatry and other departments, mirroring that there normally are more employees with other occupations than doctors and nurses in psychiatric departments than in departments for somatic diseases. The most striking result demonstrated in this modified model is the great many associations not found to be significant, including variables that *did* have impact in the social identification dimensions such as integrating hospital department leadership and conflicts.

Summary

The social identifications with departments and professions are found to be modest. The mean scores of the identifications are quite differentiated, also for some pairs of questions, i.e. the same wording on the department and the profession items. Prosocial behavior is dominantly directed to department ingroup members. Within departments, double ingroup members are the most common beneficiaries. There are some

differences between doctors and nurses as to direction of prosocial behavior; a hierarchical pattern is found. There are distinct differences between doctors and nurses for several social identification dimensions. Integrating hospital department leadership and conflicts play some role while the effects from the other explanatory and control variables. There are no effects from the social identification dimensions to the direction of prosocial behavior variables. These results are discussed in the next chapter which summarizes and discusses the present study.

Summary and conclusions 9

This chapter has three sections. In the first one, the results of the study are summed up and discussed in seven points, including the theoretical and managerial implications. The strengths and limitations of the study are described in the second section while the theoretical approach of the study is discussed in the last section

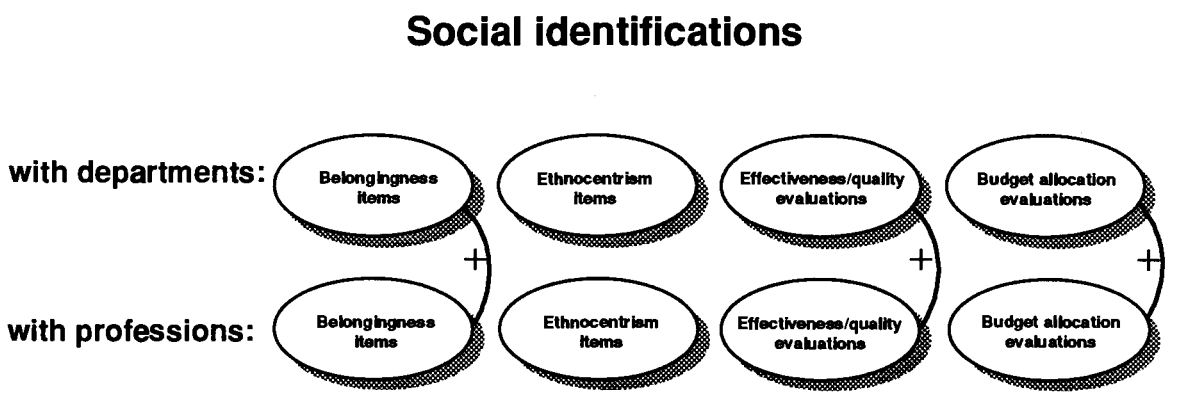
Summary and discussion of results

Measurement of intermediate variables.

The *first* point to be considered is the *measurement* of the social identifications i.e. the *validity* of the measures used for estimating the intergroup relations. In this study, such relations are conceptualized as *social identifications*. The operationalizations of these variables are described in chapter 5. There are *three* approaches to this issue: *First*, some *general belongingness* items are developed by Mael and Tetrick (1992) and Mael and Ashforth (1992). *Second*, items are derived from the predicted *ingroup bias* consequences of social identification, e.g. ethnocentrism - "The we are better than them-phenomenon". *Finally,* the way in which people allocate resources (discriminate between groups) is used as measure of social identification. In the present study the two first alternatives are used: The general items from the Tetrick/Mael/Ashforth-tradition are

translated and adjusted and items for the hospital context of the study are developed. In the logic of this study, the resource allocation alternative is regarded as an behavioral outcome of social identifications, rather than a measure of them. The social identification measures reported in Mael and Tetrick (1992) and Mael and Ashforth (1992), are not used in known studies of *crosscutting* memberships in organizational groups. In this study, on the other hand, this crosscutting identification phenomenon is explicitly examined. In order to discern with which of the groups the respondents had strongest identifications, most of the social identification items were given equal wordings. Thus, the groups in question were changed e.g. from "this department" to the profession in question. For instance y_1 DPSUCC: "I feel this department's success as my success" and y_{13} PFSUCC: "I feel other physicians' success as my success". The findings of the study, however, indicate some doubts whether this strategy succeeded: The measurement analysis reveals that there are *low* intercorrelations between the diverse item types measuring social identifications to departments and professions respectively. Further, there are *substantial* correlations between item types irrespective of whether the question is about department or profession. This finding can be illustrated in this way:

Figure 9.1 - Correlations of social identification measures



Notice that there are no indicators of positive correlation between the items within the department and the profession rows. On the other hand, the mean item scores on these pairs of items may vary substantially. This result may be interpreted in many ways, in chapter 6 several alternatives are discussed. The research design of this study was not chosen to discern which of these alternatives is the correct one. Further research in the SIT/SCT tradition should address this crucial question towards a more complete item battery for the measurement of social identifications.

Interpretation of the measurement analysis results

The measurement problems notwithstanding, the *second* issue is the *interpretation of the substantials of the measurement analysis results.* The above mentioned operationalizations are made on the assumption that an individual doctor or nurse identify with their department and their profession in *many* ways: He or she experiences

more or less belonging to these groups, e.g. by feeling that these groups' successes are their successes. Further, he or she may exaggerate the importance, difficulty and seriousness of their groups' work compared with other groups (ethnocentrism). Obviously, *all* groups can not be better than the other ones, therefore such evaluations indicate some ingroup bias. The doctor/nurse may also be overly satisfied with the effectiveness and/or the quality of the work their group perform, and they may experience dissatisfaction with budget allocations to their groups. All these perceptions are used as indicators of the doctors' and nurses' identifications with their groups. The main finding in the measurement analysis is that these diverse expressions of group identification *vary independently,* the social identifications are multidimensional: The individual doctor and nurse may well express belonging to these groups, *without* being convinced of the importance, difficulty and seriousness of the work they are performing, and being or not being impressed by the effectiveness and the quality of the work done. Finally, they may be or not be satisfied with the budget allocation to their groups. *All combinations are possible,* a heterogeneous pattern emerges with complex and nuanced perceptions, not making up any rigid structure. The doctors and nurses seem to have cognitive complexity (Ben-Ari, Kedem and Levy-Weiner, 1992).

This finding is theoretically interesting: Up to now social identifications have been regarded as unidimensional constructs. When they turn out to be multifaceted, a stability/situational analysis similar to the developing of the framework in chapter 2 might be useful: Several dimensions are found to co-exist at the *stable* level. At the *situational* level, on the other hand, the identifications may not necessarily be the same ones at the same time for all the persons involved. Rather, intricate within-person and between-person patterns as to the relations between stable and situational identifications may be found. For one person, for instance, the belonging dimension may be the salient one, while for another person the ethnocentrism dimension is triggered in that situation. In further research these relations should be examined. If all the dimensions are not found to be present at the situational level at the same time, this approach may contribute to explaining that situations are perceived differently. A better understanding of this pervasive phenomenon; how and why people differ as to their perceptions of intergroup situations would be insight of major managerial importance, much daily trouble in organizations is due to such perceptual discrepancies.

Magnitude of the social identifications.

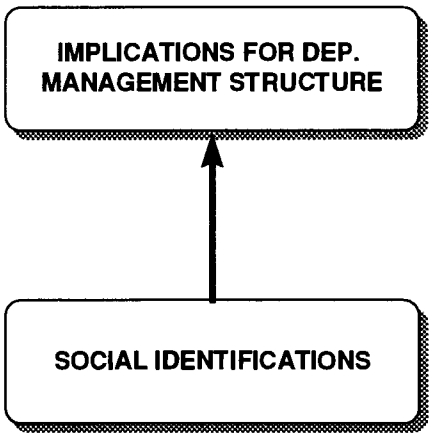
The *third* point is the *magnitude* of the social identifications. High scores on the social identification items indicate *intense* intergroup relations. In this study they are quite *modest*: Of 26 items, 16 have positive scores thereof 12 with higher scores than 0.5 on the -2 to +2/-3 to +3 scales. This does not convincingly confirm that there are intense intergroup relations neither between hospital departments nor between professions. Further, the mean scores are rather *differentiated.* On some items of the same type and wording, for instance, the scores are quite different, e.g. y_1 DPSUCC: I feel this department's success as my success has a mean score of 0.60 while for y_{13} PFSUCC: I feel other physicians' success as my success the mean score is -0.50. These differences show up in both

directions, on some pairs of items the department scores are higher than for professions and for others the relationship is the reversed.

Thus, the social identifications are multidimensional, they are modest as to magnitude and they have differentiated mean scores. These results have *managerial implications* as to the role of the hospital departments. There are two main issues in this question: 1) is it possible or appropriate to regard and utilize the hospital departments as the basic units in the hospital organizations, e.g. in accounting? The social identification structure may be an important premise for answering this question: In one alternative the hospital employees strongly and unequivocally identify with their professions rather than with their departments. I so, a complete and consistent implementation of an organization design in which the clinical departments were the basic units, would probably turn out to be a difficult task. In such a situation the disintegrating power within the departments would most likely be so strong that this structure would be resisted or a decoupling between the *formal* organizational design and the *real* functioning of the departments would occur. On the other hand, stronger social identifications with departments than those with professions would be an encouragement for such organizing. 2) if the departments are of *any* significance as basic units in accounting etc., they have some management structure. The formal design of this structure has been a hot topic in the Norwegian health care sector debate for many years. Nurses prefer a two-manager-model in which the head senior consultant and the nurse manager comprise the department's management. Doctors, on the other hand, insist that the head senior consultant alone shall be in charge. There are no unequivocal links from the social identifications among doctors and nurses to the choice of formal hospital department management design. If the intergroup relations between professions are hostile, this would not necessarily imply which of the options to choose: The two-manager alternative might then result in even more tension between the groups because each of them had their leaders. A one-manager model, on the other hand, would probably not be a better choice under such circumstances with tension between the professions. The problem for that manager would be to the combination of being a leader for the group of which he or she *is* a member *and* for the group he or she *is not.* By tense or hostile relations such a combination would be challenging. If alternatively the social identifications with departments were stronger than those with professions, the formal hospital management design would probably not matter, either: Then both options probably would have worked *well.* The conclusion at this point, then, is the rather trivial one, that it is more difficult to find and to implement good management solutions when the relationships between the professions are tense than when they are more friendly.

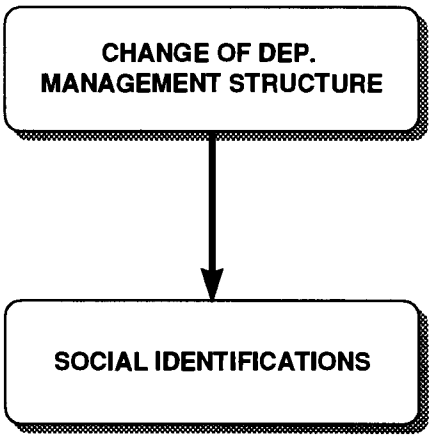
So far, the implications for the department management model of the social identifications are considered:

Figure 9.2 - Social identifications - implications for department management structure



Below, the reversed analysis is made:

Figure 9.3 - Impacts of change of department management structure on social identifications



Analyzed in the framework of stable and situational identifications developed in chapter 2, the situational identifications with departments or with professions may be affected by *change* of the formal hospital department management model, with potential for making the interprofessional relations more tense. Whether the moderate social identifications found in this study are encouragement for or warning against such changes can not be unequivocally determined. From the reasoning above, the conclusions emerge that 1) the degree to which hospital departments may be real basic units in hospitals is dependent on the social identification pattern among the hospital employees. Intense profession intergroup relations may limit this degree. The moderate identifications with professions found in this study are an encouragement for rather than a warning against using the hospital department level as basic units rather intensively. To ignore the professional dimension completely by going too far in that direction, may be troublesome, however. 2) social identifications probably are of minor importance for the

choice between the two-manager and the one-manager hospital department model but 3) there is a risk that social identifications might be strengthened by *changing* the department management model. Finally, the above analysis is a partial one, restricted to the implications of social identifications. The degree to which the departments should be basic units in hospitals and which formal management they should have, depend on many other factors than what can be found in an analysis of social identifications.

Relationships between the independent/control variables and the intermediate variables

The *fourth* point is the relationships between the independent/control variables and the intermediate variables. Because of the multidimensionality of the social identification concept, hypothesis testing in this study became correspondingly complex. Totally, 11 factor score and direct item variables were included in the regression analyses as intermediate variables, see chapter 6 and 7 in which the inclusion of variables in the analyses is described. Below these results are summed up:

The *profession type* variable has major impacts on the social identification dimensions. It was concluded above that the social identifications in hospitals are quite messy. The way in which they are messy, however, vary according to the profession type. It is one of the most distinct findings in the study that there are substantial differences between doctors and nurses as to the scores on the social identifications items. It was hyphotesized that doctors have *weaker* identifications to *departments* than nurses and the other way round for identifications to professions: That doctors have *stronger* identifications to *profession* than nurses. The first one of these hypotheses was most consistently confirmed; the effect was found on *several* of the department dimensions. For the second hypothesis, however, the *strongest* effect to one of the dimensions (in this case ethnocentrism) was found: Doctors are much more sure of the importance, difficulty and the seriousness of their work than nurses are.

As hypothesized, there are by and large positive associations between *the integrating hospital department leadership* variable and social identifications with departments. There are also indications of negative associations between this variable and identifications with professions. The cross-sectional research design of this study makes it impossible to discern anything about the causal direction of this effect. It may be that positive social identifications with departments *produce* higher degree of integrating hospital department leadership. The social identifications may impact the employees' *perceptions* of their leaders. It may even be that social identifications within a department influence the *recruitment* of managers to that department. These qualifications notwithstanding, this finding is theoretically interesting in the "does management matter?"- debate: Which, if any, impacts has management on organizational variables?, e.g. Thomas (1993). This result is a modest support for further leadership development on the

department level. A more distinct managerial implication is not appropriate because of the qualifications as to causal direction and because no associations between the identifications and behavior are demonstrated, see below.

The same qualifications as to causal direction as in the previous point must be taken into considerations for *conflicts.* The conflict level variable strengthen the ethnocentrism dimension of identifications both with departments and with professions. Conflicts, thus, are positively associated with the "we are better than them" - perception. Further, conflicts decrease the belonging and the evaluation of effectiveness and quality social identification dimensions. This pattern emerges both for departments and for professions. Finally, there are positive associations between conflicts and dissatisfaction with budget allocation evaluations.

There is an almost lacking effect of *hospital type* variable and a modest effect of *hospital department* type variable on the social identifications. These results are interesting and surprising. In chapter 3, major differences between hospital types are described. In public discussions these differences are often believed to impact the everyday life in hospitals substantially, e.g. in praising the qualities of small and local hospitals while maintaining that larger hospitals are too fragmented etc., e.g. Gjernes (1995). The result that the social identifications are not affected by this control variable may be interpreted as an indicator of the major significance of the basic work processes in hospitals, diagnosing, treatment and caring. These processes may be so similar across hospitals and departments that differences between hospitals do not show up., partly due to the fact that doctors and nurses have learnt to practise their work, not in the individual department or hospital, but at the colleges or universities at which they received their education. Between hospital department types there are substantial differences as to size, type of tasks etc. Departments of internal medicine, for example, regularly are large departments with tasks quite different from that in departments of anesthesiology. Further, departments of otorhinolaryngology regularly are much smaller than departments of internal medicine and surgery. By and large, hospitals are organized with very similar types of departments. The potential for different subcultures between these types therefore is substantial. At least the doctors in such departments have often practised at the same type of department at other hospitals, and learned the culture in that type of department. The finding that the cognitive/perceptual variables social identifications do not vary across the department types is surprising. The basic work explanation, which was made for hospitals, see above, may be an important one for this finding as well.

The lacking impacts are the most predominant impression of *gender* and the *demographic* variables as well. Similar to the hospital and the hospital department type variables, this is an interesting and surprising finding: Only two of the 11 social identification dimensions are significantly influenced by genderWhile the hospital type and hospital department type variables tell about

the *present* work setting, the respondents' past work experiences are mapped by the demographic variables. Such past work also turns out to have very limited impact on the social identifications. Time for completed basic education play some role on one of the belonging to profession dimensions.

Pattern of direction of prosocial behavior

The *fifth* point is the pattern of direction of prosocial behavior. There is a major difference between own department and other departments as to the amount of prosocial behavior; the main arena for helpful and supportive behavior is the departments in which the doctors and nurses have their work. This finding is supported by the other measures of prosocial behavior. Within the departments the profession dimension play a major role; the prosocial behavior is directed much more to profession colleagues than to individuals in other professions. The further analyses of this variable are found below.

Associations between the intermediate variables and the outcome variables

The *sixth* point is the lacking associations between the intermediate variables and the outcome variables. *None* of the 9 social identification dimensions explain *anything* of the variability in the direction of prosocial behavior. In chapter 2 of this dissertation the results of previous empirical intergroup research are described: There is a limited number of studies examining the associations between social identifications and behavioral outcomes, most of them are experimental (Tajfel, Billig, Bundy and Flament, 1971, Brewer and Kramer, 1984, Kramer and Brewer, 1986). The only known real-life study at this point is that of Mael and Ashforth (1992). Even if, in the collective action case of the Brewer and Kramer experiments, the results are somewhat mixed, the main findings in previous studies are that there *are* positive associations between 1) manipulation of salience of identity and/or social identifications and 2) behavior such as cooperation, willingness to contribute etc. In the minimal group experiment (Tajfel, Billig, Bundy and Flament, 1971), the discrimination in favor of ingroup instead of other relevant considerations was manifest. In the Brewer and Kramer experiments, the willingness to cooperate increased by enhanced social identifications. The Mael and Ashforth (1992) study demonstrated that the contributions to the college were positively associated with the social identifications. It is worth noticing that in the experiments, the social identifications measured by cognitive items did not necessarily increase, it is the effect of the *salience manipulation* that is reported. By and large, the results of the present study differ from those of previous studies in the SIT/SCT research tradition. There are several possible interpretations for this discrepancy:

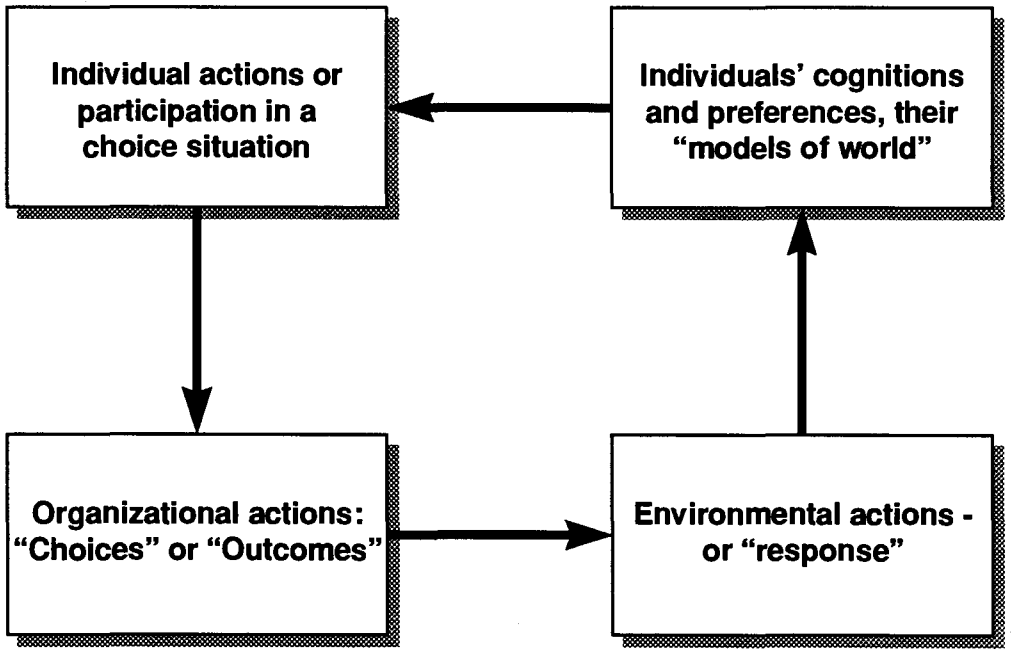
First, the discrepancy may be a result of the measurement of the intermediate and/or the outcome variables. If the measures are not valid, the lacking associations between the variables in the study may not be properly interpreted as a disconfirmation of the hypotheses. As far as the intermediate variable is

concerned, this issue is discussed above. As to the operationalizations of prosocial behavior, the method to ask the respondents to give information about the beneficiaries in the tables in the questionnaire, is one among many possible approaches to measure this rather broad behavioral construct. Other kinds of questions might have given other results, see below.

The fact that *no* social identification dimensions have *any* impact on the direction of prosocial behavior, may be interpreted as an indication that there really are no such effects. Therefore, not only measurement evaluations, but also substantial explanations must be taken into consideration, beginning with some *general* reasoning. Subsequently, more context-specific explanations for the discrepancy are given.

The *second* interpretation is the general phenomenon of relationships and lacking relationships between cognitive/perceptual variables and behavioral variables may be of help here. In their now classic article, "Organizational choice under ambiguity", March and Olsen (1976) develop what they call "The complete cycle of choice":

Figure 9.4 - The complete cycle of choice - From March and Olsen (1976)



March and Olsen posit that the links indicated by the arrows may be loose couplings. It is the upper horizontal arrow that is the interesting one for the discussion here. This loose coupling, March and Olsen suggest, may be " -- the possibility that there may be attitudes and beliefs without behavioral implications, that there may be behavior without any basis in individual preferences, and that

there may be an interplay between behavior and the definition (and redefinition) of "self-interest" (page 15).

The *third* approach to be mentioned here is the "espoused theories - theories in use" - concept (Argyris, 1982). It is also based on the link or lack of link between cognitive/perceptual variables and behavior Espoused theories are what people write and talk about. The theories-in-use, on the other hand, are those actually used. Argyris posits that whenever people are dealing with nonprogrammed, difficult, and threatening situations, they do not act congruently with their espoused theories (page 85). In the case of this study, the espoused theories would be some derivatives of the social identifications, or the other way round, the replies to the questionnaire items are in some way or other linked to the respondent's espoused theories. Further, the behavior reported in the questionnaire tables may in this framework be expressions of the theories-in-use. The critical point here is Argyris' position that the discrepancy between the two theories is dependent on nonprogrammed, difficult, and threatening situations. That is probably not the situation here. For the gap between espoused theories and theories-in-use idea to be a useful one for interpreting the results of this study, it must be possible to use Argyris' analysis in more normal situations than those described above.

The *fourth* alternative is that some sort of incentive structure overrules the cognitions and perceptions. This is the basic economic principle; people will adapt to the explicit and implicit rewards in the organization and thus suppress cognitions and perceptions e.g. categorization processes. In such cases the links between cognitions and behavior is broken.

The *fifth* interpretation is that the link between the social identifications and the predicted behavior is broken because of the work routines in the hospitals. These routines may be so tight that it does not matter what the doctors' and nurses' cognitions or perceptions are, the work processes force them into a behavioral patterns. In this interpretation, the work situation for the doctors and nurses has similarities with the assembly line.

The *sixth* interpretation differs from the preceding one by explaining behavioral conformity, not by objective factors such as the assembly line, but by behavioral norms. This stream of explanations have many theoretical variations, not to be thoroughly described here. The organizational culture approach, e.g. Schein (1985), institutionalization analysis, e.g. Scott (1995) are important contributions to this type of reasoning about compliance in organizations

In the *seventh* alternative for explaining the discrepancy between the results of this study and those of previous studies, the hospital employees *have* options for

discretionary behavior. The prosocial behavior examined in this study, however, is the daily routine behavior, not explicit dilemmas such as choosing between *two* option e.g. A or B. This focus on the daily routine behavior in this study is in accordance with the examination of *stable* identifications. An investigation of more explicit dilemmas would have been in accordance with the studying of *situational* social identifications. The daily routine behavior, however, also is a dilemma problem, while in a different form than choosing between A or B (e.g. when A is an ingroup/ingroup member and B is an ingroup/outgroup member). In the daily routine work at a hospital, the choice situation as to prosocial behavior seldom will be *that* sort of an either-or choice. Rather, each situation will be a choice between either saying *yes* or saying *no* to an explicit or implicit request for help and support. This is the *temporal sorting* phenomenon (March 1994:199) the simple fact that when individuals attend to some things, they do not attend to others. When they have said yes to one person, they have implicitly denied being helpful to someone else. The aggregate of these sequential yes' and no's will probably be that some group is favored at the expense of others without any intentions of obtaining that result: It is not likely that these sequential decisions to behave prosocially is predicted by the social identifications. The decision to say yes or no probably will be experienced as a demand *from the situation*, rather than to distribute prosocial behavior between persons even if saying yes in one situation may be an implicit no to someone else. This interpretation of the lacking associations indicate that the way in which the respondents in this study were asked the direction of prosocial behavior question had major implications for the results: If the situational aspects of the social identifications had been examined and the choice had been between members of different groups, other results may have appeared. Probably, however, is the method used here a more appropriate one than decision dilemma questions because it mirrors characteristics of the daily work situation better.

At first sight the associations between the social identifications and the direction of prosocial behavior might be considered as obvious and nearly tautological. For the finding that these associations were *not* found, several interpretations have been given above. None of these interpretations can be ruled out as being without relevance. Neither is the research design able to distinguish between the alternatives as to which is the most probable one. The fact that no associations were found has to be examined thoroughly in further research. The *measurement* issues, both as to social identifications and for prosocial behavior have to be considered, and *critical tests* of the SIT/SCT predictions should be made to find when the apparently obvious associations *are* present and when they *are not*. The discrepancy between the results of previous studies and those from this study, suggests that these associations might be found under some conditions while not in all situations. The interesting point is to explore what these conditions are.

There are substantial managerial implications of the lacking associations between social identifications and prosocial behavior. First and foremost, it is not sufficient

to manipulate social identifications if changed behavior is wanted. On one hand this finding is somewhat discouraging: There is a long tradition for optimism as to trying to achieve organizational goals by remedies such as organizational development etc., methods in which the change of individuals' reasoning etc. is a significant part. The findings of this study question such efforts. On the other hand, when the stable behavioral pattern is not affected by social identifications, this is an indication that the daily work routines are quite robust, protected against interruptions from such things as social identifications of the people involved. The results of the present study suggest that even the often-mentioned tensions between professions may play a less dominant role for behavior than what is normally assumed. To achieve changed behavior in hospitals, thus, one must change the daily work routines. Whether changed behavior is wanted or necessary, on the other hand, is an issue of evaluation of present performance. If that is not considered to be satisfying, the work routines must be changed *directly*, not by means of manipulating the social identifications.

Direct effects of the explanatory/control variables on the outcome variables

The *seventh* point is the *direct* effects of the explanatory/control variables. In this analysis the assumptions of the research model are relaxed. In the model, all the effects from the independent/control variables were assumed to go through the intermediate variables - the social identifications. This is a rather strong restriction; even if there were considerable effects from the intermediate to the outcome variables, the direct effects from the independent/control variables might have *added* to the explained variance. In this study there are *no* effects from the intermediate to the outcome variables. The analysis of the direct relationships from the independent/control variables to the outcome variables, then becomes the *main* focus of the study. For prosocial behavior to departments no significant effects are found. For prosocial behavior to professions two variables turn out to be of significance: First, profession type; there are significant differences between doctors and nurses. The main pattern is a hierarchical one: Doctors direct more prosocial behavior to nurses than the other way round. Further, nurses are more helpful and supportive towards persons in other occupations than doctors do. The other significant variable is the hospital department type variable which has high scores, predominantly reflect the differences between psychiatric and other departments: This has probably to do with the fact that there are more other employees than doctors and nurses in psychiatric departments than in other ones. Interestingly, no direct effects are found of the hospital department integrating leadership variable and conflicts, for which associations *were* found for social identifications. The results of the analysis of these direct effects adds to the above conclusions that the social identifications have no impacts on the behavioral variables: There are differences between the two professions studied, mainly a hierarchial pattern is found. In addition to the work routines, the education seem to be a major explanad for behavior. Managerially this result is an interesting one suggesting that changing the professional educations may be an option if changed behavior is to be achieved. On this point as well, the basic question about the

evaluation of the present situation arises: If this evaluation turns out to be positive, then changing the professional educations is not necessary.

Strengths and limitations

In this section the strengths and the limitations of the present study are discussed. What turned out be the impacts of the choices made in the initial phases of the research process, by formulating the research questions, the developing of the model and research design?

Organizational level

The respondents in this study are doctors and nurses without formal management responsibilities; it is not the leaders, but those who are led, that are focused. The study focuses on the people that do the main tasks in the hospitals, diagnosing, treatment and caring, i.e. what Mintzberg (1979) has labeled *the operating core*. Mintzberg maintains that this is the key part of the professional bureaucracy organization configuration. The intergroup relations within the operating core are important. Both the department and the profession dimension are of major importance, both in their own right and because of the taken-for-granted-nes of this importance. The profession dimension, by its very nature, encompasses people not only within the focal organization but in a multitude of other organizations as well. Thus, the work in the health care sector is done with low degree of supervising and high degree of work performance according to professional (and not organizational) procedures. The processes on *this* organizational level are important. This is a major strength of this study. In spite of the great significance of this organizational level, the operating core has not been overly focused in organization studies of professional organizations. Not *all* aspects of the intergroup relations on this organizational level are included in the study, however, e.g. those in which the hospital department managers are the primary actors.

Within the operating core, the department level, not the ward unit is included in the study. This is done because this choice is most congruent both with the theoretical and the managerial interest of this study. It is possible, however, that there are differences between identifications with departments and ward units. Nurses may have feel stronger belonging to the more near-by ward unit than with the more distant department level.

Professions included in the study

Only doctors and nurses are included in the study, leaving the borders to other occupations such as auxiliary nurses, pshysioterapists etc. unexamined. The main reason for not including other professions than doctors and nurses was that only these

professions are represented in *all* hospital departments. This allows for large-scale comparisons. The conclusions of the study is thereby strengthened by obtaining a high number of cases from the two profession groups, This is sufficient to examine the crosscutting issue raised. These occupations are important both as to number of employees and as to centrality of their work in hospitals. There are, however, other important interprofessional relations that might be taken into consideration such as those between nurses and auxiliary nurses, the doctors' positions in these relations, and the relations between large professions with long tradition (such as doctors and nurses) and smaller professions with more recent appearance in the health care sector. Neither are subgroups of professions examined. It is possible that doctors for instance, have stronger identifications with their speciality groups e. g. anesthesiologists, than with doctor generally. To investigate this level would have weakened the study's ability to answer the main questions.

Stable/situational identifications

This study is primarily focused on stable, not situational identifications. This is what Turner et. al. (1987:53) call the cognitive component of attitudes. The study contributes to answering the question which according to Turner has been little examined, namely the internalization of "preprogrammed" ingroup/outgroup categorizations. The evaluation of this focus on stable instead of situational identifications depends on the *existence* of some such stable patterns. The data collected in this study give no direct answer to this question. However, it is highly improbable that the groups in question, departments and professions, should not imprint the employees with any stable pattern of identifications. Further, the identifications to organizational subunits and to professions do not seem to be discordant (Allen et. al. 1983). If they were, they would have been *uncorrelated* on all dimensions. In this study nearly the opposite is demonstrated, there are substantial positive correlations between items measuring social identification with departments and with professions. A framework for analyzing this aspect of intergroup relations is developed in this study, thus adding to the knowledge of the intriguing question of how different group memberships are related to each other, and the temporal relations between them. Rather than regarding the relationships between memberships as a constant, in this framework the relationships between stable and situational identifications are assumed to vary according to their relative importance and whether they are in harmony or at odds with each others. The combination of identifications of relatively equal importance and identifications that their being at odds with each others, while not investigated in the empirical study here, is the most interesting one, both theoretically and managerially. The framework here offers an explanation of behaviors that otherwise are difficult to explain (double standards, apparent hypocrisy and selective forgetting, Ashforth and Mael, 1989:35). Such apparent unexplainable behavior causes much trouble and uncertainty in organizations, probably even more in organizations with highly autonomous employees as is the case for hospitals.

Independent/control variables

The independent variables are of very different types, thus incorporating individual-level, department-level and hospital-level variables. On the one hand, this is a characteristic of organizational studies, reflecting the nature of the discipline, which is to integrate several levels into the analysis. On the other hand, by using independent variables of different kinds, one must thoroughly consider the risk of using variables that are logically contradictory e.g. by their logic of explanation. Even if the variables in this study are of different types, neither of them are in any sense contradictory. Nor was it possible *beforehand* to assess which of them, if any, should be excluded because of lacking impacts on the intermediate or the outcome variables. Other variables could have been included in the analysis; but the same is true for such potentials: The assessment of their explanatory power would not have been possible in advance.

Definition of prosocial behavior

A broad definition of prosocial behavior is used in the study encompassing all helpful and supportive behavior. Alternatively, the respondents could have been posed decision dilemmas, thus forcing them to choose between the two groups in the study, see above. A such approach would have been in accordance with studying the *situational* aspects of social identifications. The broad definition chosen, emphasizing the everyday life in hospitals on the other hand, is in accordance with the above mentioned choice of studying the *stable* identifications. As a first step of examining these questions this broad conceptualization of prosocial behavior was a good choice. The results, however, indicate that further research should differentiate between aspects of prosocial behavior.

Research design

Among the research design questions, the decision to collect data by mailed questionnaires was the most consequential one. This study encompasses a great number of respondents, hospitals and hospital departments. The response rate, however, is quite modest, 44.0 per cent. In comparison with other mailed questionnaire studies and especially considering the fact that the questionnaire was rather complicated, this a good result. The absolute level, however, is not high enough to be sure that the results are representative for the whole population. The representative question, thus is a crucial one. Alternatively, telephone interviews might have been used for collecting the data. Probably a higher response rate would then have been obtained, but, within the resource frame at disposal, a much lower number of cases would most likely have been achieved. In this trade-off considerations, the mailed questionnaire alternative was chosen. The comparisons between hospitals with a particularly high response rate and the other ones and between the respondents that did receive the fax

reminder and those who did not, do not represent any warning against regarding the results as representative.

Discussion of theoretical approach

At the end of the dissertation, it is appropriate to question the conceptualization of the intergroup relations phenomenon. In the present mainstream theoretical approach of intergroup relations - SIT/SCT, *social identification* is the central concept. In this dissertation no delineation between these theories is made. The theories are very similar to each other; the differences between them are of minor significance for this study. While in SIT self-esteem is the primary motivational factor, the approach of both SIT and even more of SCT, is predominantly cognitive: Categorization implies depersonalization which in turn has cognitive (ingroup bias) and behavioral (discrimination) consequences. The intensity of the intergroup relations, further, is conceptualized by social identifications. For empirical investigations these identifications are measured by some general belonging items and ingroup bias items. This static model is the theoretical basis for this study, and the assumptions for the measurements. The theories have recently been elaborated by Hogg and Abrams (1993): "Towards a single-process uncertainty-reduction model of social motivation in groups". To reduce subjective uncertainty by perceived intragroup consensus and agreement is here assumed to be the basic social motivation. The crucial question, however, is whether this approach and its basic mechanisms, developed from the "empty room" of Tajfel's minimal group experiments, are the only ones or only important ones for explaining intergroup relations. If not, the intergroup relations analysis offered by SIT/SCT is not complete. it has to be *replaced* or *supplemented* by other approaches. This study is strictly limited to the SIT/SCT approach. Some of its rather confusing findings may be due to such limitations in the basic assumptions of the theoretical approach. The main contribution of the SIT/SCT approach is that it has demonstrated that distinct intergroup behavior is fully possible even *in the absence of* real conflict issues etc.

In *all* real-life situations, however, such categorization processes are intertwined with *other* types of processes of which *three* are to mentioned briefly here: The *first* one is *real conflict* processes, the theoretical approach in reaction to which the SIT/SCT research tradition emerged. Sherif (1966) probably *over*estimated the impacts of the real opposing interests. By focusing only on the cognitive processes, SIT/SCT probably have *under*estimated the real opposing interest processes. Hardly anybody would deny that convergence or divergence of real interests influence intergroup relations, normally from hostile relations in the case of real opposing interests to more harmonic ones in the case of convergence of interests. The *second* type of such processes is the *historical* and *institutional* context of the intergroup relations. Analysis of historical and contextual processes is an important approach to the study of professions, e.g. Perkin (1989) and Abbott (1992). Such processes probably are important explanations for the institutional processes, e.g. Scott, 1995 that unfold in all organizations. Taken-for-granted-ness perceptions are one prominent example of such processes, in this case perceptions about ingroups and outgroups. The *third* type of such processes is the psychoanalytic

approach, interpreting the unconscious life, e.g. Diamond (1993). This is not a common source of insight in organizational studies. For the study of intergroup relations, however, it may be an important one. Diamond (page 151) describes an instance of intergroup relations in this way:

> "Emotional and cognitive splitting of group images in which each group viewed the other as all-bad and themselves as all-good occurred. These distorted perceptions and concomitant action, I would conjecture, were due to emotional need of people in both sections to project hostile feelings somewhere acceptable: outside the unit -------through the act of *projective identification*, one's bad feelings may become tolerable when viewed as belonging to another person or subject such as members of other divisional unit in the case of the agency".

The same phenomenon as studied in this dissertation, here is explained in quite another way. This is a major challenge of the *measurement* of the social identifications, too. While in the SIT/SCT approach, high scores on the items are indications of strong identifications, the psychoanalytical perspective may explain moderate scores as indicators of a comfortable relaxed attitude and style, not being overly interested in comparisons with others. One would hesitate to interpret such moderate scores as *low* social identifications.

Fully to account for real-life intergroup processes, all these approaches probably have contributions. The main issue is the intertwining of the processes described. By making attempts to integrate the approaches, some basic problems occur: *First*, the aggregations problem, the inherent characteristic and challenge of organizational research to integrate various levels of analysis. *Second*, such integrations of theoretical perspectives may be quite messy because of different and contradictory logics of explanation. While each of the perspectives may be somewhat sparse in their explanations, attempts to combine them may be troublesome, too. In addition to be interesting in their own right, the results of this study calls for thoroughly theoretical work to give more complete descriptions and explanations for what happens in the relations between groups in organizations.

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Appendix A

Questionnaire items

For many of the questions there were differences between the physician and the nurse questionnaires. In such cases the questions to physicians *are quoted in the list below with an asterisk (*) indicating that "the opposite" questions were posed to the nurses. Some questions were posed to doctors* or *nurses. These are indicated by (doctors) or (nurses) in parantheses. The items are given labels x_n, for explanatory/control variables y_n for intermediate variables and z_n for outcome variables. Each item is also given a 6 letter abbreviation. These notations are used in the other chapters of this dissertation.*

Notations: **Descriptions:**

Wording in the questionnaires: In English with normal types. *In Norwegian in italics*

Independent variables/control variables:

Profession type: Two versions of the questionnaire were used - one for doctors and one for nurses. The list below is the doctor version. Additionaly, the questionnaires were coded as to doctor categories. Thus 3 groups emerged:

x_1 PHSECO	Dummy variable for senior consultant (*overlege*)
x_2 PHREGI	Dummy variable for registrar (*assistentlege*)
x_3 NURSE	Dummy variable for nurse

Hospital type: The questionnaires were coded as to specific hospitals. The hospitals were then categorized into 6 groups:

x_4 HSSMAL	Dummy variable for hospital with less than 500 employees
x_5 HSMEDI	Dummy variable for hospital with 500 - 1000 employees
x_6 HSLARG	Dummy variable for hospital with 1000 - 1500 employees

x_7 HSVLAR	Dummy variable for hospital with more than 1500 employees
x_8 HSUNSP	Dummy variable for university/special hospital
x_9 HSPSYC	Dummy variable for psychiatric hospitals

Hospital departments type:
The questionnaires were coded as to the departments of each hospital. The departments were then categorized into 8 groups:

x_{10} DPANES	Dummy variable for department of anesthesiology
x_{11} DPPEDI	Dummy variable for department of pediatrics
x_{12} DPGYNE	Dummy variable for department of gynecology
x_{13} DPSURG	Dummy variable for department of surgery
x_{14} DPMEDI	Dummy variable for department of internal medicin
x_{15} DPNEVR	Dummy variable for department of nevrology
x_{16} DPOTOR	Dummy variable for department of otorhinolaryngology (ear/nose/throat diseases)
x_{17} DPPSYC	Dummy variable for department psychiatry

Hospital department leadership: The below listed items were used in the questionnaires to the hospital department managers as well

x_{18} DPHSCO	Reversed:	The head senior consultant is more a representative for the doctors than a manager for the entire department *Avdelingsoverlegen er mer en representant for legene enn en leder for hele avdelingen*
x_{19} DPLNUR	Reversed:	The nurse manager is more a representative for the nurses than a manager for the entire department *Oversykepleier er mer en representant for sykepleierne enn en leder for hele avdelingen*
x_{20} MANONE		The head senior consultant and the nurse manager act like one joined management towards the physicians and the nurses in the department *Avdelingsoverlege og oversykepleier fremstår som èn samlet ledelse overfor legene og sykepleierne i avdelingen*

x_{21} MANCOP	The cooperation between the head senior consultant and the nurse manager in our department is excellent *Samarbeidet mellom avdelingsoverlege og oversykepleier ved vår avdeling er meget godt*

Hospital and hospital department conflicts:
The below listed items were used in the questionnaires to the hospital department managers as well

x_{22} CFLDEP	There is a high conflict level between the clinical departments at this hospital *Konfliktnivået mellom de kliniske avdelingene ved dette sykehuset er høyt*
x_{23} CFLPRF	There is a high conflict level between physicians and nurses at this hospital *Konfliktnivået mellom leger og sykepleiere ved dette sykehuset er høyt*
x_{24} CFLPDP	There is a high conflict level between physicians and nurses in this department *Konfliktnivået mellom leger og sykepleiere ved denne avdelingen er høyt*

Respondents age, gender and other demographic charasterictics:

x_{25} GENDER	Gender (1=Female 2=Male)
x_{26} AGE	Age (Three groups - ascending)
x_{27} EDUYEA	Year of completed basic education
x_{28} SPNMID	Dummy variable for special education as midwife (nurses)
x_{29} SPNPSY	Dummy variable for psychiatric special education (nurses)
x_{30} SPNANE	Dummy variable for anesthesiology special education (nurses)
x_{31} SPNINT	Dummy variable for intensive care special education (nurses)
x_{32} SPNTHE	Dummy variable for theatre nurse special education
x_{33} SPNPED	Dummy variable for pediatrics special education (nurses)
x_{34} SPNONC	Dummy variable for oncology special education (nurses)
x_{35} SPNSEV	Dummy variable for more than one special education (nurses)
x_{36} DEPYEA	Years of practice in present department
x_{37} ODPYEA	Number of years of practice in other departments at the same hospital

x_{38} KWKBED	Dummy variable for present work in ordinary (bed) department (nurses)
x_{39} KWKPOL	Dummy variable for present policlinical work (nurses)
x_{40} KDWK3	Dummy variable for present other types of work (nurses)
x_{41} NOTHSP	Number of hospitals where experience has been obtained
x_{42} SATYDP	Years of practice in the same type of department at other hospitals
x_{43} OTTYDP	Years of practice in other types of departments at other hospitals
x_{44} PRIVPR	Number of years of private practice (doctors)
x_{45} MUNIPR	Number of years of municipality practice (doctors)
x_{46} INSTIT	Number of years of practice in institutions (nurses)
x_{47} HOMEBA	Number of years of home based practice (nurses)
x_{48} OTHPRA	Number of years of other practices
x_{49} YHSENC	Number of years practice as head senior consultant (*avdelingsoverlege*) (physicians)
x_{50} YNUMAN	Number of years as nurse manager (oversykepleier)
x_{51} YDPNUR	Number of years as department nurse (avdelingssykepleier)
x_{52} OTHMAN	Number of years as other practices of management
x_{53} UNION	Number of years as unionist
x_{54} COUNSP	Number of years as leader of the local council for doctors
x_{55} COUNSN	Number of years as leader of the local council for nurses

Successes/failures - Unusual events and their attributions - Open-ended questions on the basis of which content analysis have been done. Scores made up by answers on the below questions:

x_{56} UNEVDP	To what degree has the event anything to do with the respondent's department?
x_{57} UNEVPF	To what degree has the event anything to do with the respondent's profession?
x_{58} ATTRDP	To what degree has the respondent explained the event by action in his/her department (in contrast to external action)?

x_{59} ATTRPF	To what degree has the respondent explained the event by action in his/her profession (in contrast to external action)

Intermediate variables - social identifications Social identifications with organizational subunits

y_1 DPSUCC	I feel this department's success as my success *Jeg opplever det slik at denne avdelings suksess er min suksess*
y_2 DPCOMP	When listening to something positive about this department, I take it as a personal compliment *Når jeg hører noe positivt om denne avdelingen, føler jeg det som kompliment også til meg*
y_3 DPBELO	Belonging to this department is an important aspect of my identity *Tilhørighet til denne avdelingen er en viktig del av min identitet*
y_4 DPCONT	I want to stay in this department *Jeg ønsker å fortsette i denne avdelingen*
y_5 DPCRIT	When someone criticizes this department, it feels like a personal insult *Når noen kritiserer denne avdelingen, føler jeg det som et personlig angrep*
y_6 DPTHIN	I am very interested in what other people think about my department *Jeg er svært interessert i hva andre tenker om min avdeling*
y_7 DPIMPO	This department has more important tasks than (most) other departments *Denne avdelingen har viktigere oppgaver enn (de fleste) andre sykehusavdelinger*
y_8 DPDIFF	The tasks of this department are more difficult than those of (most) other departments *Arbeidsoppgavene ved denne avdelingen er vanskeligere enn ved (de fleste) andre sykehusavdelinger*
y_9 DPBUDG	Budget allocations to this department have been distinctly insufficient in recent years at this hospital *Denne avdelingen har i de siste årene fått spesielt dårlig uttelling ved budsjett-fordelingen ved dette sykehuset*
y_{10} DPEFFE	I regard the effectiveness of work at this department as .... *Jeg anser at effektiviteten av det arbeid som denne avdelingen utfører er ....*

y_{11} DPQUAL	I regard the quality of work at this department as ....
	Jeg anser at kvaliteten på det arbeid som denne avdelingen utfører er .....
y_{12} DPHETE	The employees in this department are very heterogenous
	Ansatte i denne avdelingen er en meget heterogen /uensartet gruppe

Social identifications with professions

y_{13} PFSUCC *	I feel other physicians' success as my success
	Jeg opplever det slik at andre legers suksess er min suksess
y_{14} PFPOSI *	When listening to something positive about physicians, it is felt as a personal compliment
	Når jeg hører noe positivt om andre leger, føler jeg det som et kompliment også til meg
y_{15} PFBELO *	Belonging to the occupation of physician is an important aspect of my identity
	Tilhørighet til legeyrket er en viktig del av min identitet
y_{16} PFCHAN	I consider changing to another occupation than the job of a physician
	Jeg kan tenke meg å skifte til et annet yrke enn legeyrket (reversed)
y_{17} PFCRIT *	When someone criticizes physicians, it feels like a personal insult
	Når noen kritiserer leger, føler jeg det som et personlig angrep
y_{18} PFTHIN *	I am very interested in what other people think about physicians
	Jeg er svært interessert i hva andre tenker om leger
y_{19} PFBUDG *	Budget allocations to physicians have been distinctly insufficient in recent years at this hospital
	Legene har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset
y_{20} PFIMPO*	Physicians have more important tasks than nurses
	Leger har viktigere oppgaver enn sykepleiere
y_{21} PFDIFF *	The tasks of physicians are more difficult than those of nurses
	Leger har vanskeligere arbeidsoppgaver enn sykepleiere

y_{22} PFSERI *	Physicians take their work more seriously than nurses do *Leger tar yrket sitt mer alvorlig enn det sykepleiere gjør*
y_{23} PFEFFE *	I regard the effectiveness of physicians' work as .... *Jeg anser at effektiviteten av det arbeid som leger er ....*
y_{24} PFQUAL*	I regard the quality of physicians' work as .... *Jeg anser at kvaliteten på det arbeid som leger utfører er ....*
y_{25} PFHETE *	Physicians are very heterogenous *Leger er en meget heterogen/uensartet yrkesgruppe*
y_{26} OPFHET *	Nurses are very heterogenous *Sykepleiere er en meget heterogen/uensartet yrkesgruppe*

Outcome variable - direction of prosocial behavior

Tables in which the respondents were asked to fill in some characteristsics of the up to 10/8 persons to which they (most often) had given help or support during the last 6 months in job-related matters and private matters respectively
Numbers of help/support given
Target person's professional group
Target person's department status (the same as or other than the respondent's)
Target person's gender and age group
The below mentioned variables are computed:

z_1 AMJPRS	Number of persons towards whom the respondents had given help and support in job-related matters
z_2 AMPPRS	Number of persons towards whom the respondents had given help and support in private matters
z_3 JPRSDP	Computed relative number of persons in the same organizational subunit to whom the respondents had given help and support in job-related matters
z_4 PPRSDP	Computed relative number of persons in the same organizational subunit to whom the respondents had given help and support in private matters
z_5 JPRSPF	Computed relative number of persons in the same profession to whom the respondents had given help and support in job-related matters
z_6 PPRSPF	Computed relative number of persons in the same profession to whom the respondents had given help and support in private matters

Contact pattern:

z_7 COOPOD	How often, approximately, do you contact other physicians in other departments at this hospital? *Anslagsvis hvor ofte tar du kontakt med leger ved andre avdelinger ved dette sykehuset?*
z_8 COAPOD	How often, approximately, do you contact nurses in other departments at this hospital? *Anslagsvis hvor ofte tar du kontakt med sykepleiere ved andre avdelinger ved dette sykehuset?*
z_9 COOPOH	How often, approximately, do you contact physicians outside this hospital? *Anslagsvis hvor ofte tar du kontakt med leger utenfor dette sykehuset?*
z_{10} COAPOH	How often, approximately, do you contact nurses outside this hospital? *Anslagsvis hvor ofte tar du kontakt med sykepleiere utenfor dette sykehuset?*
z_{11} BCOPOD	How often, approximately, do physicians in other departments at this hospital contact you? *Anslagsvis hvor ofte tar leger ved andre avdelinger ved dette sykehuset kontakt med deg?*
z_{12} BCAPOD	How often, approximately, do nurses in other departments at this hospital contact you? *Anslagsvis hvor ofte tar sykepleiere ved andre avdelinger ved dette sykehuset kontakt med deg?*
z_{13} BCOPOH	How often, approximately, do physicians outside this hospital contact you? *Anslagsvis hvor ofte tar leger utenfor dette sykehuset kontakt med deg?*
z_{14} BCAPOH	How often, approximately, do nurses outside this hospital contact you? *Anslagsvis hvor ofte tar sykepleiere utenfor dette sykehuset kontakt med deg?*

Group representative and colleague

z_{15} REPPRF	I am publicly a good representative for physicians *Jeg er utad en god representant for leger*

z_{16}
COLPRF

I am a good colleague towards physicians irrespective of what type of medical work they are doing

Jeg er en god kollega overfor leger uavhengig av hvilken type legearbeid de utfører

z_{17}
REPDEP

I am publicly a good representative for my department

Jeg er utad en god representant for min avdeling

z_{18}
COLDEP

I am a good colleague towards the others in this department irrespective of what occupations they have

Jeg er en god kollega overfor de andre ved denne avdelingen uavhengig av hvilket yrke de har

Giving advice to other persons

z_{19}
ADOPSD

Giving advice, support and help to other physicians in this department is part of my daily work

Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til andre leger i denne avdelingen

z_{20}
ADAPSD

Giving advice, support and help nurses in this department is part of my daily work

Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i denne avdelingen

z_{21}
ADOPAD

Giving advice, support and help to other physicians in other departments at this hospital is part of my daily work

Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til leger i andre avdelinger ved dette sykehuset

z_{22}
ADAPAD

Giving advice, support and help to nurses in other departments at this hospital is part of my daily work

Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i andre avdelinger ved dette sykehuset

Putting in a good word for somebody

z_{23}
GWOPSD

I occasionally put in a good word for physicians in this department

Det hender at jeg overfor leder(e) legger inn et godt ord om andre leger i denne avdelingen

z_{24} GWAPSD	I occasionally put in a good word for nurses in this department *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i denne avdelingen*
z_{25} GWOPAD	I occasionally put in a good word for physicians in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for leger i andre avdelinger ved dette sykehuset*
z_{26} GWAPAD	I occasionally put in a good word for nurses in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i andre avdelinger ved dette sykehuset*

Giving priority to other things than effectiveness

z_{27} GPOPSD	I occasionally give priority to a physician in this department before considerations of effectiveness *Det hender at jeg lar hensynet til en annen lege i denne avdelingen gå foran effektivitetshensyn*
z_{28} GPAPSD	I occasionally give priority to a nurse in this department before considerations of effectiveness *Det hender at jeg lar hensynet til en sykepleier i denne avdelingen gå foran effektivitetshensyn*
z_{29} GPOPAD	I occasionally give priority to a physician in other departments at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en lege i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn*
z_{30} GPAPAD	I occasionally give priority to a nurse in other departments at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en sykepleier i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn*

Appendix B

Descriptive statistics

		Variable	Mean	Std Dev	Minimum	Maximum	Kurtosis	Skew-ness	N
	x_{18} DPHSCO	Reversed: The head senior consultant more is a representative for the doctors than a manager for the entire department *Avdelingsoverlegen er mer en representant for legene enn en leder for hele avdelingen*	0,13	1,34	-2	2	-1,41	-0,20	911
	x_{19} DPLNUR	Reversed: The nurse manager more is a representative for the nurses than a manager for the entire department *Oversykepleier er mer en representant for sykepleierne enn en leder for hele avdelingen*	-0,07	1,32	-2	2	-1,46	-0,01	910
	x_{20} MANONE	The head senior consultant and the nurse manager acts like one joined management towards the physicians in the department *Avdelingsoverlege og oversykepleier fremstår som èn samlet ledelse overfor legene og sykepleierne i avdelingen*	-0,17	1,25	-2	2	-1,38	0,19	909
	x_{21} MANCOP	The cooperation between the head senior consultant and the nurse manager in our department is excellent *Samarbeidet mellom avdelingsoverlege og oversykepleier ved vår avdeling er meget godt*	0,34	1,20	-2	2	-1,10	-0,49	888
	x_{22} CFLDEP	There is a high conflict level between the clinical departments at this hospital *Konfliktnivået mellom de kliniske avdelingene ved dette sykehuset er høyt*	-0,82	0,98	-2	2	1,29	1,33	905
	x_{23} CFLPRF	There is a high conflict level between physicians and nurses at this hospital *Konfliktnivået mellom leger og sykepleiere ved dette sykehuset er høyt*	-0,89	0,92	-2	2	1,55	1,34	912

	x_{24} CFLPDP	There is a high conflict between physicians and nurses at this hospital *Konfliktnivået mellom leger og sykepleiere ved denne avdelingen er høyt*	-1,13	0,90	-2	2	2,31	1,48	912
	y_1 DPSUCC	I feel this department's success as my success *Jeg opplever det slik at denne avdelings suksess er min suksess*	0,60	1,12	-2	2	-0,28	-0,90	908
	y_2 DPCOMP	When listening to something positive about this department, I take it as a personal compliment *Når jeg hører noe positivt om denne avdelingen, føler jeg det som kompliment også til meg*	1,05	0,80	-2	2	2,57	-1,40	914
	y_3 DPBELO	Belonging to this department is an important aspect of my identity *Tilhørighet til denne avdelingen er en viktig del av min identitet*	0,53	1,21	-2	2	-0,87	-0,63	914
	y_4 DPCONT	I want to stay in this department *Jeg ønsker å fortsette i denne avdelingen*	0,97	1,07	-2	2	0,84	-1,25	907
	y_5 DPCRIT	When someone criticizes this department, it feels like a personal insult *Når noen kritiserer denne avdelingen, føler jeg det som et personlig angrep*	-0,32	1,15	-2	2	-1,23	0,40	916
	y_6 DPTHIN	I am very interested in what other people think about my department *Jeg er svært interessert i hva andre tenker om min avdeling*	0,39	1,12	-2	2	-1,23	-0,41	913
	y_7 DPIMPO	This department has more important tasks than (most) other departments *Denne avdelingen har viktigere oppgaver enn (de fleste) andre sykehusavdelinger*	-0,55	1,17	-2	2	-0,41	0,86	916
	y_8 DPDIFF	The tasks of this department are more difficult than those of (most) other departments *Arbeidsoppgavene ved denne avdelingen er vanskeligere enn ved (de fleste) andre sykehusavdelinger*	-0,45	1,20	-2	2	-0,83	0,66	911

	y_9 DPBUDG	Budget allocations to this department have been distinctly insufficient in recent years at this hospital *Denne avdelingen har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset*	-0,09	1,23	-2	2	-1,35	0,37	897
	y_{10} DPEFFE Scale -3 - +3	I regard the effectiveness of work at this department as .... *Jeg anser at effektiviteten av det arbeid som denne avdelingen utfører er ....*	1,43	1,22	-3	3	1,90	-1,25	913
	y_{11} DPQUAL Scale -3 - +3	I regard the quality of work at this department as .... *Jeg anser at kvaliteten på det arbeid som denne avdelingen utfører er .....*	1,58	1,03	-3	3	2,81	-1,28	912
	y_{12} DPHETE	The employees in this department are very heterogenous *Ansatte i denne avdelingen er en meget heterogen /uensartet gruppe*	0,45	1,22	-2	2	-1,14	-0,46	908
	y_{13} PFSUCC*	I feel other physicians' success as my success *Jeg opplever det slik at andre legers suksess er min suksess*	-0,50	1,09	-2	2	-0,76	0,69	909
	y_{14} PFPOSI*	When listening to something positive about physicians, it is felt as a personal compliment *Når jeg hører noe positivt om andre leger, føler jeg det som et kompliment også til meg*	-0,26	1,13	-2	2	-1,27	0,41	912
	y_{15} PFBELO*	Belonging to the occupation of physician is an important aspect of my identity *Tilhørighet til legeyrket er en viktig del av min identitet*	0,79	1,09	-2	2	0,02	-0,98	908
	y_{16} PFCHAN*	I consider changing to another occupation than the job of a physician *Jeg kan tenke meg å skifte til et annet yrke enn legeyrket (reversed)*	0,94	1,19	-2	2	-0,08	-1,05	911
	y_{17} PFCRIT*	When someone criticizes physicians, it feels like a personal insult *Når noen kritiserer leger, føler jeg det som et personlig angrep*	-0,34	1,17	-2	2	-1,11	0,48	916
	y_{18} PFTHIN*	I am very interested in what other people think about physicians *Jeg er svært interessert i hva andre tenker om leger*	0,07	1,18	-2	2	-1,46	-0,04	907

	y_{19} PFBUDG*	Budget allocations to physicians have been distinctly insufficient in recent years at this hospital *Legene har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset*	0,61	1,21	-2	2	-1,18	-0,49	897
	y_{20} PFIMPO*	Physicians have more important tasks than nurses *Leger har viktigere oppgaver enn sykepleiere*	-0,31	1,25	-2	2	-1,06	0,55	905
	y_{21} PFDIFF*	The tasks of physicians are more difficult than those of nurses *Leger har vanskeligere arbeidsoppgaver enn sykepleiere*	0,11	1,39	-2	2	-1,50	0,03	914
	y_{22} PFSERI*	Physicians take their work more seriously than nurses do *Leger tar yrket sitt mer alvorlig enn det sykepleiere gjør*	-0,50	1,20	-2	2	-0,61	0,78	910
	y_{23} PFEFFE* Scale -3 - +3	I regard the effectiveness of physicians' work as .... *Jeg anser at effektiviteten av det arbeid som leger er ....*	1,60	1,12	-3	3	3,11	-1,46	913
	y_{24} PFQUAL Scale -3 - +3	I regard the quality of physicians' work as .... *Jeg anser at kvaliteten på det arbeid som leger utfører er ....*	1,69	0,97	-3	3	3,49	-1,35	913
	y_{25} PFHETE*	Physicians are very heterogenous *Leger er en meget heterogen/uensartet yrkesgruppe*	0,54	1,18	-2	2	-0,95	-0,58	904
	y_{26} OPFHET*	Nurses are very heterogenous *Sykepleiere er en meget heterogen/uensartet yrkesgruppe*	0,41	1,21	-2	2	-1,13	-0,46	910
	z_7 COOPOD	How often, approximately, do you contact other physicians in other departments at this hospital? *Anslagsvis hvor ofte tar du kontakt med leger ved andre avdelinger ved dette sykehuset?*	1,85	0,89	1	5	0,55	1,02	914
	z_8 COAPOD	How often, approximately, do you contact nurses in other departments at this hospital? *Anslagsvis hvor ofte tar du kontakt med sykepleiere ved andre avdelinger ved dette sykehuset?*	2,69	1,12	1	5	-1,01	0,20	912
	z_9 COOPOH	How often, approximately, do you contact physicians outside this hospital? *Anslagsvis hvor ofte tar du kontakt med leger utenfor dette sykehuset?*	2,85	0,98	1	5	-0,77	0,25	915

	z_{10} COAPOH	How often, approximately, do you contact nurses outside this hospital? *Anslagsvis hvor ofte tar du kontakt med sykepleiere utenfor dette sykehuset?*	4,04	0,82	1	5	1,14	-0,93	912
	z_{11} BCOPOD	How often, approximately, do physicians in other departments at this hospital contact you? *Anslagsvis hvor ofte tar leger ved andre avdelinger ved dette sykehuset kontakt med deg?*	2,03	0,93	1	5	0,10	0,80	915
	z_{12} BCAPOD	How often, approximately, do nurses in other departments at this hospital contact you? *Anslagsvis hvor ofte tar sykepleiere ved andre avdelinger ved dette sykehuset kontakt med deg?*	2,98	1,20	1	5	-1,09	-0,01	912
	z_{13} BCOPOH	How often, approximately, do physicians outside this hospital contact you? *Anslagsvis hvor ofte tar leger utenfor dette sykehuset kontakt med deg?*	2,81	1,08	1	5	-0,89	0,16	910
	z_{14} BCAPOH	How often, approximately, do nurses outside this hospital contact you? *Anslagsvis hvor ofte tar sykepleiere utenfor dette sykehuset kontakt med deg*	4,02	0,91	1	5	0,59	-0,91	912
	z_{15} REPPRF	I am publicly a good representative for physicians *Jeg er utad en god representant for leger*	1,13	0,67	-2	2	5,72	-1,60	904
	z_{16} COLPRF	I am a good colleague towards physicians irrespective of what type of medical work they are doing *Jeg er en god kollega overfor leger uavhengig av hvilken type legearbeid de utfører*	1,12	0,68	-2	2	4,54	-1,47	906
	z_{17} REPDEP	I am publicly a good representative for my department *Jeg er utad en god representant for min avdeling*	1,19	0,63	-2	2	5,67	-1,38	904
	z_{18} COLDEP	I am a good colleague towards the others in this department irrespective of what occupations they have *Jeg er en god kollega overfor de andre ved denne avdelingen uavhengig av hvilket yrke de har*	1,22	0,54	-2	2	6,04	-0,90	909

	z_{19} ADOPSD	Giving advice, support and help to other physicians in this department is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til andre leger i denne avdelingen*	0,96	1	-2	2	0,79	-1,18	908
	z_{20} ADAPSD	Giving advice, support and help nurses in this department is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i denne avdelingen*	0,65	1,13	-2	2	-0,32	-0,86	911
	z_{21} ADOPAD	Giving advice, support and help to other physicians in other departments at this hospital is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til leger i andre avdelinger ved dette sykehuset*	-0,12	1,25	-2	2	-1,41	0,13	907
	z_{22} ADAPAD	Giving advice, support and help to nurses in other departments at this hospital is part of my daily work *Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i andre avdelinger ved dette sykehuset*	-0,75	1,15	-2	2	-0,34	0,87	914
	z_{23} GWOPSD	I occasionally put in a good word for physicians in this department *Det hender at jeg overfor leder(e) legger inn et godt ord om andre leger i denne avdelingen*	0,89	0,82	-2	2	3,25	-1,69	906
	z_{24} GWAPSD	I occasionally put in a good word for nurses in this department *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i denne avdelingen*	0,69	0,97	-2	2	0,63	-1,20	902
	z_{25} GWOPAD	I occasionally put in a good word for physicians in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for leger i andre avdelinger ved dette sykehuset*	0,12	1,20	-2	2	-1,35	-0,31	905
	z_{26} GWAPAD	I occasionally put in a good word for nurses in other departments at this hospital *Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i andre avdelinger ved dette sykehuset*	-0,39	1,19	-2	2	-1,25	0,37	899

	z_{27} GPOPSD	I occasionally give priority to a physician in this department before considerations of effectiveness *Det hender at jeg lar hensynet til en annen lege i denne avdelingen gå foran effektivitetshensyn*	0,63	1	-2	2	0,05	-1,03	899
	z_{28} GPAPSD	I occasionally give priority to a nurse in this department before considerations of effectiveness *Det hender at jeg lar hensynet til en sykepleier i denne avdelingen gå foran effektivitetshensyn*	0,38	1,10	-2	2	-0,89	-0,68	899
	z_{29} GPOPAD	I occasionally give priority to a physician in other departments at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en lege i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn*	-0,30	1,16	-2	2	-1,38	0,26	890
	z_{30} GPAPAD	I occasionally give priority to a nurse in other departments at this hospital before considerations of effectiveness *Det hender at jeg lar hensynet til en sykepleier i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn*	-0,52	1,15	-2	2	-1,02	0,54	894

Appendix C

Introduction letter

Information sheet

Questionnaire for doctors

Questionnaire for nurses

N o r g e s H a n d e l s h ø y s k o l e

Norwegian School of Economics and Business Administration

Doktorgradsarbeid om sykehusansattes identifikasjoner til profesjoner og sykehusavdelinger

Undertegnede* er igang med å gjennomføre et doktorgradsarbeid ved Norges Handelshøyskole, Institutt for organisasjonsfag, Bergen med lokal arbeidsplass ved Høgskolen i Agder i Kristiansand.

Utfra sosialpsykologisk teori om forhold *innenfor* og *mellom* grupper undersøkes noen viktige forhold i sykehusorganisasjoner: Hvor sterke *identifikasjoner* har medarbeiderne til henholdsvis de profesjoner de tilhører og til de avdelinger der de har sitt arbeid og hvilke virkninger har disse identifikasjonene for disse medarbeidernes *atferd*?

Studien omfatter leger og sykepleiere i andre stillinger enn avdelingsoverleger, oversykepleiere og avdelingssykepleiere. Dette er viktig i organisasjoner med mange og selvstendige medarbeidere. De resultater som fremkommer, vil gi innblikk i prosesser innenfor sykehusavdelinger og vil være nyttige bl.a. når det gjelder hvordan ledelse i sykehus kan og bør organiseres og for hvordan ledelse bør utøves: Identifikasjoner og atferd blant medarbeiderne er en premiss for hva slags ledelse som er mulig og hensiktsmessig.

Det er oppnevnt en komitè for doktoravhandlingen. Denne består av

professor Tom Colbjørnsen, Norges Handelshøyskole, Bergen
professor Ole Berg, Senter for helseadministrasjon, Oslo
førsteamanuensis Jørn Rognes, Norges Handelshøyskole, Bergen

*Jeg er 49 år, utdannet siviløkonom ved Norges Handelshøyskole i 1968. Jeg har mangeårig erfaring fra sykehusadministrasjon (Eg sykehus og Vest-Agder Sentralsykehus, Kristiansand), er ansatt ved Agderforskning fra 1990, gjennomførte høyere avdelings studium (organisasjonsfag) ved Norges Handelshøyskole i tiden 1991 - 1993 og er nå i doktorgradsprogrammet samme sted.

ADRESSE/*Address*
Helleveien 30
N-5035 Bergen-Sandviken

TELEFON/*Telephone*
(+47) 55 95 90 00

TELEFAX/*Telefax*
(+47) 55 25 83 83

BANKKONTO/*Bank account*
3624 07 26755

POSTGIRO/*Postal giro account*
0808 37 20000

Det er etablert kontakt med Legekårsundersøkelsen v/prosjektleder Olav G. Aasland som gir uttrykk for at min avhandling knytter an til noen av Legekårsundersøkelsens studier, og at det vil være av stor interesse å få gjennomført denne undersøkelsen. Tilsvarende er det tatt kontakt med Norsk Sykepleierforbund som også uttrykker interesse for at studien gjennomføres. Undersøkelsen er godkjent av Datatilsynet.

Etter forespørsel til ledelsen har jeg fått anledning til å gjennomføre datainnsamling også ved det sykehus der du er ansatt. På grunnlag av navnelister sendes et spørreskjema til et tilfeldig utvalg leger og sykepleiere, bl.a i den avdeling der du er ansatt som avdelingssykepleier. Skjemaet er utprøvd gjennom en pilot/test-undersøkelse ved ett av sykehusene i landet. Jeg regner med at det vil ta 30 - 45 minutter å fylle ut det spørreskjemaet som sendes til legene og sykepleierne.

Hensikten med dette brevet er for det første å orientere deg om at noen av dine medarbeidere i disse dager får det nevnte spørreskjemaet tilsendt. Videre vil jeg be om at du svarer på noen få spørsmål som fremgår av det vedlagte spørreskjemaet, utarbeidet for avdelingssykepleierne i de avdelinger som inngår i undersøkelsen.

De spørsmål som dette doktorgradsprosjektet tar opp er viktige for

- å få bedre innsikt i identifikasjoner og atferd hos sykehusansatte
- å skape kunnskapsgrunnlag for organisering og utøvelse av ledelse i sykehus

Ved å svare på spørsmålene i det vedlagte spørreskjemaet bidrar du til slik innsikt og kunnskap.

For ytterligere å gjøre det mer interessant å delta i undersøkelsen, vil de som returnerer spørreskjemaet, delta i et lotteri med følgende gevinster:

1.	**Week-end-reise med fly for 2 personer med hotell-opphold til valgfritt sted i Norge (begrenset til Midt-Norge fra Sør- og Nord-Norge)**
2. - 5.	**Grafiske blad fra Norske Grafikere i Oslo, valgfritt med verdi inntil kr. 1 000.-**
6. - 20.	**Kong Haakon konfekt 1 kg.**

Dessuten vil alle de som avgir svar, få tilsendt en kortversjon av avhandlingen når den foreligger. Hverken avhandlingen eller denne kortversjonen vil inneholde noen opplysninger om enkelt-personer, enkelt-avdelinger eller enkelt-sykehus.

Spørreskjemaet i utfylt stand bes sendt i vedlagte forhåndsfrankerte svarkonvolutt snarest mulig og senest

tirsdag 6. juni 1995

På forhånd takk for hjelpen!

For videre opplysninger om undersøkelsen kan jeg kontaktes på nedenstående telefonnummer.

Kristiansand, 19. mai 1995

Med vennlig hilsen

Helge Hernes

Tlf. 38 07 96 05 eller 38 02 50 55
Fax 38 02 50 90

.....

skriv ditt navn og tilknytning til avdeling og sykehus her

Hvis dette arket i utfylt stand blir returnert sammen med spørreskjemaet kan det

1. *blant de som har returnert spørreskjemaet foretas loddtrekning av gevinstene (week-end-opphold for 2 personer, grafikk m.v.).*

2. *foretas utsendelse av kortversjonen av avhandlingen når den foreligger*

3. *unngås at det blir gjennomført purringer til personer som allerede har svart på spørsmålene.*

Arket vil av instituttsekretariatet ved Norges Handelshøyskole i Bergen bli fjernet før svarene på spørsmålene blir lagt inn på datafil.

Ingen opplysninger fra de enkelte skjemaer, om enkelt-personer, enkelt-avdelinger eller om enkelt-sykehus vil bli rapportert i avhandlingen eller på annen måte.

N o r g e s H a n d e l s h ø y s k o l e

Norwegian School of Economics and Business Administration

NHH

SPØRRESKJEMA

vedr.

SYKEHUSANSATTES IDENTIFIKASJONER OG ATFERD

doktorgradsarbeid ved Institutt for Organisasjonsfag

Flere spørsmål i skjemaet henviser til den *avdeling* du er ansatt ved. Det menes da den avdeling *som fremgår av adresseetiketten på konvolutten til deg*. Tenk på *denne* avdelingen og *alle* de yrkesgrupper som har sitt arbeid der når du svarer på spørsmålene om avdeling.

Spesielt ang. gyn/føde-avdelinger:

Fordi denne undersøkelsen omfatter mange typer sykehusavdelinger, brukes sykepleier, avdelingssykepleier og oversykepleier der jordmor, avdelingsjordmor og overjordmor ville ha passet bedre. Det er imidlertid *sykepleierne* som profesjon (og som jordmødre ansees å være en del av) undersøkelsen dreier seg om. Svarene bes avgitt i forhold til dette.

Du blir nedenfor presentert for endel påstander som vi ber deg ta stilling til ved å avmerke et kryss på hver linje for de alternativer som passer best.

Sett et kryss på hver linje	-2 Helt uenig	-1 uenig	+1 enig	+2 Helt enig
Jeg opplever det slik at denne avdelingens suksess er min suksess				
Ansatte i denne avdelingen er en meget heterogen/uensartet gruppe				
Når jeg hører noe positivt om denne avdelingen, føler jeg det som et kompliment også til meg				
Tilhørighet til denne avdelingen er en viktig del av min identitet				
Jeg ønsker å fortsette i denne avdelingen				
Denne avdelingen har viktigere oppgaver enn (de fleste) andre sykehusavdelinger				
Arbeidsoppgavene ved denne avdelingen er vanskeligere enn ved (de fleste) andre sykehusavdelinger				
Når noen kritiserer denne avdelingen, føler jeg det som et personlig angrep				
Jeg er svært interessert i hva andre tenker om min avdeling				
Avdelingsoverlegen er mer en representant for legene enn en leder for *hele* avdelingen				
Oversykepleier er mer en representant for sykepleierne enn en leder for *hele* avdelingen				
Avdelingsoverlege og oversykepleier fremstår som èn samlet ledelse overfor legene og sykepleierne i avdelingen				
Samarbeidet mellom avdelingsoverlege og oversykepleier ved vår avdeling er meget godt				
Legene har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset				
Denne avdelingen har de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset.				
Når noen kritiserer leger, føler jeg det som et personlig angrep				
Leger har vanskeligere arbeidsoppgaver enn sykepleiere				
Leger tar yrket sitt mer alvorlig enn det sykepleiere gjør.				

Sett et kryss på hver linje	-2 Helt uenig	-1 uenig	+1 enig	+2 Helt enig
Sykepleiere er en meget heterogen/uensartet yrkesgruppe				
Jeg opplever det slik at andre legers suksess er min suksess				
Leger er en meget heterogen/uensartet yrkesgruppe				
Jeg er svært interessert i hva andre tenker om leger				
Leger har viktigere oppgaver enn sykepleiere				
Når jeg hører noe positivt om andre leger, føler jeg det som et kompliment også til meg				
Jeg kan tenke meg å skifte til et annet yrke enn legeyrket				
Tilhørighet til legeyrket er en viktig del av min identitet				
Konfliktnivået mellom de kliniske avdelingene ved dette sykehuset er høyt				
Konfliktnivået mellom leger og sykepleiere ved dette sykehuset er høyt				
Konfliktnivået mellom leger og sykepleiere ved denne avdelingen er høyt				

De følgende spørsmålene dreier seg om **effektiviteten** av og **kvaliteten** på det arbeid som utføres av henholdsvis leger og i din avdeling.
Du skal legge **din** *vurdering av hva som er effektivt og hva som er god kvalitet til grunn for vurderingene.*

Jeg anser at ..... *Sett ett kryss på hver linje - du kan for hver linje velge mellom alle 6 svaralternativene*	-3 meget util-freds-stillende	-2	-1 util-fredsstil ende	+1 tilfreds-stillende	+2	+3 meget tilfreds-stillende
effektiviteten av det arbeid som leger utfører er ...						
effektiviteten av det arbeid som denne avdelingen utfører er ...						
kvaliteten på det arbeid som leger utfører er ...						
kvaliteten på det arbeid som denne avdelingen utfører er ...						

Viktige/uvanlige hendelser

Har det i din arbeidssituasjon skjedd noe viktig eller uvanlig den siste tiden?

Spørsmålet dreier seg f.eks. om det blant leger (generelt, ikke bare begrenset til dette sykehuset) eller i din avdeling har hendt noe som har gjort inntrykk på deg.

Gi stikkordsmessig uttrykk for hva som hendte og knytt eventuelt dine kommentarer til dette - f.eks. om hva du mener kan være årsaken til det som skjedde.

Hvis du mener at det *ikke* har skjedd noe spesielt viktig eller uvanlig den siste tiden, kan du la rubrikken nedenfor stå åpen.

Sosiale relasjoner med andre ansatte ved sykehuset.

De neste spørsmålene i spørreskjemaet dreier seg om dine sosiale relasjoner med andre ansatte ved sykehuset.

Til hvor mange ansatte ved dette sykehuset har du i løpet av de siste 6 månedene gitt hjelp, støtte og/eller oppmuntring i *deres* jobbmessige forhold?

Angi antallet personer her:

Spørsmålet omfatter **all slags** *hjelp, støtte og oppmuntring om jobbmessige (altså ikke private) forhold - f.eks.*

- *støtte i vanskelige situasjoner/avgjørelser*
- *oppmuntring i travle og stressende perioder*
- *råd og veiledning om faglige eller andre jobbmessige forhold*
- *å snakke med og høre på når andre har vanskeligheter i arbeidet osv.*

Vi er ikke interessert i hvem disse personene er, men i deres yrke, avdelingstilknytning, kjønn og alder. Vennligst fyll ut i tabellen nedenfor.

Hvis du har satt et tall som er høyere enn 10 i rubrikken ovenfor, er vi interessert i de 10 som du i denne perioden flest ganger har gitt hjelp, støtte og oppmuntring om jobbmessige forhold.

Angi initialer el. lign. (slik at du holder personene fra hverandre). Lag disse identifikasjonene slik at vi ikke kan gjenkjenne navnene eller bruk et eget ark for å holde personene fra hverandre		**Antall ganger du i løpet av de siste 6 månedene har gitt hjelp, støtte og/eller oppmuntring i jobbmessige forhold:** Skriv **A** for 1-3 ganger **B** for 4-7 ganger **C** for flere enn 7 ganger	**Yrkesgruppe:** Skriv **L** for leger **S** for sykepleiere **A** for annen yrkesgruppe	**Avdeling:** Skriv **S** for samme avdeling som du har ditt arbeid **A** for annen avdeling enn der du har ditt arbeid	**Personens kjønn:** Skriv **K** for kvinne **M** for mann	**Personens alder:** Skriv **A** for 20-34 år **B** for 35-49 år **C** for 50 år eller eldre
	Person 1					
	Person 2					
	Person 3					

	Person 4					
	Person 5					
	Person 6					
	Person 7					
	Person 8					
	Person 9					
	Person 10					

Til hvor mange ansatte ved dette sykehuset har du i løpet av de siste 6 månedene gitt hjelp, støtte og/eller oppmuntring i *deres* private forhold?

Spørsmålet omfatter all slags *hjelp, støtte og oppmuntring om private (altså ikke jobbmessige) forhold*

Angi antallet personer her:

Vi er ikke interessert i hvem disse personene er, men i deres yrke, avdelingstilknytning, kjønn og alder. Vennligst fyll ut i tabellen nedenfor.

Hvis du har satt et tall som er høyere enn 8 i rubrikken ovenfor, er vi interessert i de 8 som du i denne perioden flest ganger har gitt hjelp, støtte og/eller oppmuntring i private forhold.

Angi initialer el. lign. (slik at du holder personene fra hverandre). Lag disse identifikasjonene slik at vi ikke kan gjenkjenne navnene eller bruk et eget ark for å holde personene fra hverandre		**Antall ganger du i løpet av de siste 6 månedene har gitt hjelp, støtte og/eller oppmuntring i private forhold:** Skriv A for 1-3 ganger B for 4-7 ganger C for flere enn 7 ganger	**Yrkesgruppe:** Skriv L for leger S for sykepleiere A for annen yrkesgruppe	**Avdeling:** Skriv S for samme avdeling som du har ditt arbeid A for annen avdeling enn der du har ditt arbeid	**Personens kjønn:** Skriv K for kvinne M for mann	**Personens alder:** Skriv A for 20-34 år B for 35-49 år C for 50 år eller eldre
	Person 1					
	Person 2					
	Person 3					
	Person 4					
	Person 5					
	Person 6					
	Person 7					
	Person 8					

De neste spørsmålene dreier seg om hvor ofte du *tar kontakt* og hvor ofte du *blir kontaktet* av forskjellige grupper:

Sett et kryss på hver linje for det alternativ som passer best	**Daglig**	**Ukentlig**	**Måned-lig**	**Sjeld-nere**	**Aldri**
Du tar kontakt:					
Anslagsvis hvor ofte tar du kontakt med leger ved andre avdelinger ved dette sykehuset?					
Anslagsvis hvor ofte tar du kontakt med sykepleiere ved andre avdelinger ved dette sykehuset?					
Anslagsvis hvor ofte tar du kontakt med leger utenfor dette sykehuset?					
Anslagsvis hvor ofte tar du kontakt med sykepleiere utenfor dette sykehuset?					
Du blir kontaktet:					
Anslagsvis hvor ofte tar leger ved andre avdelinger ved dette sykehuset kontakt med deg?					
Anslagsvis hvor ofte tar sykepleiere ved andre avdelinger ved dette sykehuset kontakt med deg?					
Anslagsvis hvor ofte tar leger utenfor dette sykehuset kontakt med deg?					
Anslagsvis hvor ofte tar sykepleiere utenfor dette sykehuset kontakt med deg?					

Også påstandene nedenfor ber vi deg ta stilling til ved å avmerke et kryss på hver linje for de alternativene som passer best

Sett et kryss på hver linje	**-2 Helt uenig**	**-1 uenig**	**+1 enig**	**+2 Helt enig**
Jeg er utad en god representant for leger				
Jeg er en god kollega overfor leger uavhengig av hvilken type legearbeid de utfører				
Jeg er utad en god representant for min avdeling				

Sett et kryss på hver linje	-2 Helt uenig	-1 uenig	+1 enig	+2 Helt enig
Jeg er en god kollega overfor de andre ved denne avdelingen uavhengig av hvilket yrke de har				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til andre leger i denne avdelingen				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i denne avdelingen				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til leger i andre avdelinger ved dette sykehuset				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i andre avdelinger ved dette sykehuset				
Det hender at jeg overfor leder(e) legger inn et godt ord om andre leger i denne avdelingen				
Det hender at jeg overfor ledere(e) legger inn et godt ord for sykepleiere i denne avdelingen				
Det hender at jeg overfor leder(e) legger inn et godt ord for leger i andre avdelinger ved dette sykehuset				
Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i andre avdelinger ved dette sykehuset.				
Det hender at jeg lar hensynet til en annen lege i denne avdelingen gå foran effektivitetshensyn				
Det hender at jeg lar hensynet til en sykepleier i denne avdelingen gå foran effektivitetshensyn				
Det hender at jeg lar hensynet til en lege i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn				
Det hender at jeg lar hensynet til en sykepleier i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn				

De følgende spørsmålene dreier seg om din tjeneste som lege fram til nå:

1.	**Avsluttet medisinsk grunnutdanning** *Sett årstall:*	

2.	**Tjeneste ved det sykehuset der du nå er ansatt:**	År:
	Hvor lenge har du arbeidet ved den avdelingen der du nå har ditt arbeid? *Oppgi antall år:*	
	Hvor lenge har du eventuelt arbeidet ved *andre* avdelinger ved dette sykehuset? *Oppgi antall år:*	

3.	**Tjeneste ved annet/andre sykehus enn der du nå er ansatt:**		
	Hvor mange andre sykehus har du hatt arbeid ved? *Oppgi antall:*		
	Har du ved andre sykehus hatt arbeid ved **samme type** avdeling medisinsk, kirurgisk osv.) som der du nå har ditt arbeid? *Sett kryss i den rubrikken som passer:*		**Ja**
			Nei

	Har du ved andre sykehus hatt arbeid ved **andre typer** avdeling (medisinsk, kirurgisk osv.) enn der du nå har ditt arbeid: *Sett kryss i den rubrikken som passer:*		**Ja**
			Nei

4.	**Tjeneste som lege utenfor sykehus:** *Oppgi antall år:*	År:
	Privatpraksis:	
	I kommunehelsetjenesten:	
	Annet - spesifisèr:	

5.	**Ledererfaring:** *Oppgi antall år:*	År:
	Avdelingsoverlege:	
	Formann i legeråd:	
	Tillitsvalgt:	
	Andre lederoppgaver *i* ditt arbeid eller *avledet av* ditt arbeid - spesifisèr:	

Sett kryss i de rubrikker nedenfor som passer:

Kjønn:		Kvinne
		Mann

Alder:		20-34 år
		35 - 49 år
		50 år eller eldre

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Norges Handelshøyskole

Norwegian School of Economics and Business Administration

NHH

SPØRRESKJEMA

vedr.

SYKEHUSANSATTES IDENTIFIKASJONER OG ATFERD

doktorgradsarbeid ved Institutt for Organisasjonsfag

Flere spørsmål i skjemaet henviser til den *avdeling* du er ansatt ved. Det menes da den avdeling *som fremgår av adresseetiketten på konvolutten til deg*. Tenk på *denne* avdelingen og *alle* de yrkesgrupper som har sitt arbeid der når du svarer på spørsmålene om avdeling.

Spesielt ang. gyn/føde-avdelinger:

Fordi denne undersøkelsen omfatter mange typer sykehusavdelinger, brukes sykepleier, avdelingssykepleier og oversykepleier der jordmor, avdelingsjordmor og overjordmor ville ha passet bedre. Det er imidlertid *sykepleierne* som profesjon (og som jordmødre ansees å være en del av) undersøkelsen dreier seg om. Svarene bes avgitt i forhold til dette.

Du blir nedenfor presentert for endel påstander som vi ber deg ta stilling til ved å avmerke et kryss på hver linje for de alternativer som passer best.

Sett et kryss på hver linje	-2 Helt uenig	-1 uenig	+1 enig	+2 Helt enig
Jeg opplever det slik at denne avdelingens suksess er min suksess				
Ansatte i denne avdelingen er en meget heterogen/uensartet gruppe				
Når jeg hører noe positivt om denne avdelingen, føler jeg det som et kompliment også til meg				
Tilhørighet til denne avdelingen er en viktig del av min identitet				
Jeg ønsker å fortsette i denne avdelingen				
Denne avdelingen har viktigere oppgaver enn (de fleste) andre sykehusavdelinger				
Arbeidsoppgavene ved denne avdelingen er vanskeligere enn ved (de fleste) andre sykehusavdelinger				
Når noen kritiserer denne avdelingen, føler jeg det som et personlig angrep				
Jeg er svært interessert i hva andre tenker om min avdeling				
Avdelingsoverlegen er mer en representant for legene enn en leder for *hele* avdelingen				
Oversykepleier er mer en representant for sykepleierne enn en leder for *hele* avdelingen				
Avdelingsoverlege og oversykepleier fremstår som èn samlet ledelse overfor legene og sykepleierne i avdelingen				
Samarbeidet mellom avdelingsoverlege og oversykepleier ved vår avdeling er meget godt				
Sykepleierne har i de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset				
Denne avdelingen har de siste årene fått spesielt dårlig uttelling ved budsjettfordelingen ved dette sykehuset.				
Når noen kritiserer sykepleiere, føler jeg det som et personlig angrep				
Sykepleiere har vanskeligere arbeids-oppgaver enn leger				
Sykepleiere tar yrket sitt mer alvorlig enn det leger gjør				

Sett et kryss på hver linje	-2 Helt uenig	-1 uenig	+1 enig	+2 Helt enig
Leger er en meget heterogen/uensartet yrkesgruppe				
Jeg opplever det slik at andre sykepleieres suksess er min suksess				
Sykepleiere er en meget heterogen/uensartet yrkesgruppe				
Jeg er svært interessert i hva andre tenker om sykepleiere				
Sykepleiere har viktigere oppgaver enn leger				
Når jeg hører noe positivt om andre sykepleiere, føler jeg det som et kompliment også til meg				
Jeg kan tenke meg å skifte til et annet yrke enn sykepleieryrket				
Tilhørighet til sykepleieryrket er en viktig del av min identitet				
Konfliktnivået mellom de kliniske avdelingene ved dette sykehuset er høyt				
Konfliktnivået mellom sykepleiere og leger ved dette sykehuset er høyt				
Konfliktnivået mellom sykepleiere og leger ved denne avdelingen er høyt				

De følgende spørsmålene dreier seg om **effektiviteten** av og **kvaliteten** på det arbeid som utføres av henholdsvis sykepleiere og i din avdeling.
Du skal legge **din** *vurdering av hva som er effektivt og hva som er god kvalitet til grunn for vurderingene.*

Jeg anser at ..... *Sett ett kryss på hver linje - du kan for hver linje velge mellom alle 6 svaralternativene*	-3 meget util-freds-stillende	-2	-1 util-fredsstill ende	+1 tilfreds-stillende	+2	+3 meget tilfreds-stillende
effektiviteten av det arbeid som sykepleiere utfører er ...						
effektiviteten av det arbeid som denne avdelingen utfører er ...						
kvaliteten på det arbeid som sykepleiere utfører er ...						
kvaliteten på det arbeid som denne avdelingen utfører er ...						

Viktige/uvanlige hendelser

Har det i din arbeidssituasjon skjedd noe viktig eller uvanlig den siste tiden?

Spørsmålet dreier seg f.eks. om det blant sykepleiere (generelt, ikke bare begrenset til dette sykehuset) eller i din avdeling har hendt noe som har gjort inntrykk på deg.

Gi stikkordsmessig uttrykk for hva som hendte og knytt eventuelt dine kommentarer til dette - f.eks. om hva du mener kan være årsaken til det som skjedde.

Hvis du mener at det *ikke* har skjedd noe spesielt viktig eller uvanlig den siste tiden, kan du la rubrikken nedenfor stå åpen.

Sosiale relasjoner med andre ansatte ved sykehuset.

De neste spørsmålene i spørreskjemaet dreier seg om dine sosiale relasjoner med andre ansatte ved sykehuset.

Til hvor mange ansatte ved dette sykehuset har du i løpet av de siste 6 månedene gitt hjelp, støtte og/eller oppmuntring i *deres* jobbmessige forhold?

Angi antallet personer her:

Spørsmålet omfatter **all slags** *hjelp, støtte og oppmuntring om jobbmessige (altså ikke private) forhold - f.eks.*

- *støtte i vanskelige situasjoner/avgjørelser*
- *oppmuntring i travle og stressende perioder*
- *råd og veiledning om faglige eller andre jobbmessige forhold*
- *å snakke med og høre på når andre har vanskeligheter i arbeidet osv.*

Vi er ikke interessert i hvem disse personene er, men i deres yrke, avdelingstilknytning, kjønn og alder. Vennligst fyll ut i tabellen nedenfor.

Hvis du har satt et tall som er høyere enn 10 i rubrikken ovenfor, er vi interessert i de 10 som du i denne perioden flest ganger har gitt hjelp, støtte og oppmuntring om jobbmessige forhold.

Angi initialer el. lign. (slik at du holder personene fra hverandre). Lag disse identifikasjonene slik at vi ikke kan gjenkjenne navnene eller bruk et eget ark for å holde personene fra hverandre		**Antall ganger du i løpet av de siste 6 månedene har gitt hjelp, støtte og/eller oppmuntring i jobbmessige forhold:** Skriv **A** for 1-3 ganger **B** for 4-7 ganger **C** for flere enn 7 ganger	**Yrkesgruppe:** Skriv **S** for sykepleiere **L** for leger **A** for annen yrkesgruppe	**Avdeling:** Skriv **S** for samme avdeling som du har ditt arbeid **A** for annen avdeling enn der du har ditt arbeid	**Personens kjønn:** Skriv **K** for kvinne **M** for mann	**Personens alder:** Skriv **A** for 20-34 år **B** for 35-49 år **C** for 50 år eller eldre
	Person 1					
	Person 2					
	Person 3					

	Person 4					
	Person 5					
	Person 6					
	Person 7					
	Person 8					
	Person 9					
	Person 10					

Til hvor mange ansatte ved dette sykehuset har du i løpet av de siste 6 månedene gitt hjelp, støtte og/eller oppmuntring i *deres* private forhold?

Spørsmålet omfatter all slags *hjelp, støtte og oppmuntring om private (altså ikke jobbmessige) forhold*

Angi antallet personer her:

Vi er ikke interessert i hvem disse personene er, men i deres yrke, avdelingstilknytning, kjønn og alder. Vennligst fyll ut i tabellen nedenfor.

Hvis du har satt et tall som er høyere enn 8 i rubrikken ovenfor, er vi interessert i de 8 som du i denne perioden flest ganger har gitt hjelp, støtte og/eller oppmuntring i private forhold.

Angi initialer el. lign. (slik at du holder personene fra hverandre). Lag disse identifikasjonene slik at vi ikke kan gjenkjenne navnene eller bruk et eget ark for å holde personene fra hverandre		**Antall ganger du i løpet av de siste 6 månedene har gitt hjelp, støtte og/eller oppmuntring i private forhold:** Skriv **A** for 1-3 ganger **B** for 4-7 ganger **C** for flere enn 7 ganger	**Yrkesgruppe:** Skriv **S** for sykepleiere **L** for leger **A** for annen yrkesgruppe	**Avdeling:** Skriv **S** for samme avdeling som du har ditt arbeid **A** for annen avdeling enn der du har ditt arbeid	**Personens kjønn:** Skriv **K** for kvinne **M** for mann	**Personens alder:** Skriv **A** for 20-34 år **B** for 35-49 år **C** for 50 år eller eldre
	Person 1					
	Person 2					
	Person 3					
	Person 4					
	Person 5					
	Person 6					
	Person 7					
	Person 8					

De neste spørsmålene dreier seg om hvor ofte du *tar kontakt* og hvor ofte du *blir kontaktet* av forskjellige grupper:

Sett et kryss på hver linje for det alternativ som passer best	**Daglig**	**Ukentlig**	**Måned-lig**	**Sjeld-nere**	**Aldri**
Du tar kontakt:					
Anslagsvis hvor ofte tar du kontakt med sykepleiere ved andre avdelinger ved dette sykehuset?					
Anslagsvis hvor ofte tar du kontakt med leger ved andre avdelinger ved dette sykehuset?					
Anslagsvis hvor ofte tar du kontakt med sykepleiere utenfor dette sykehuset?					
Anslagsvis hvor ofte tar du kontakt med leger utenfor dette sykehuset?					
Du blir kontaktet:					
Anslagsvis hvor ofte tar sykepleiere ved andre avdelinger ved dette sykehuset kontakt med deg?					
Anslagsvis hvor ofte tar leger ved andre avdelinger ved dette sykehuset kontakt med deg?					
Anslagsvis hvor ofte tar sykepleiere utenfor dette sykehuset kontakt med deg?					
Anslagsvis hvor ofte tar leger utenfor dette sykehuset kontakt med deg?					

Også påstandene nedenfor ber vi deg ta stilling til ved å avmerke et kryss på hver linje for de alternativene som passer best

Sett et kryss på hver linje	**-2 Helt uenig**	**-1 uenig**	**+1 enig**	**+2 Helt enig**
Jeg er utad en god representant for sykepleiere				
Jeg er en god kollega overfor sykepleiere uavhengig av hvilken type sykepleierarbeid de utfører				
Jeg er utad en god representant for min avdeling				

Sett et kryss på hver linje	-2 Helt uenig	-1 uenig	+1 enig	+2 Helt enig
Jeg er en god kollega overfor de andre ved denne avdelingen uavhengig av hvilket yrke de har				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til andre sykepleiere i denne avdelingen				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til leger i denne avdelingen				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til sykepleiere i andre avdelinger ved dette sykehuset				
Det er en del av mitt daglige arbeid å gi råd, støtte og hjelp til leger i andre avdelinger ved dette sykehuset				
Det hender at jeg overfor leder(e) legger inn et godt ord om andre sykepleiere i denne avdelingen				
Det hender at jeg overfor ledere(e) legger inn et godt ord for leger i denne avdelingen				
Det hender at jeg overfor leder(e) legger inn et godt ord for sykepleiere i andre avdelinger ved dette sykehuset				
Det hender at jeg overfor leder(e) legger inn et godt ord for leger i andre avdelinger ved dette sykehuset.				
Det hender at jeg lar hensynet til en annen sykepleier i denne avdelingen gå foran effektivitetshensyn				
Det hender at jeg lar hensynet til en lege i denne avdelingen gå foran effektivitets-hensyn				
Det hender at jeg lar hensynet til en sykepleier i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn				
Det hender at jeg lar hensynet til en lege i en annen avdeling ved dette sykehuset gå foran effektivitetshensyn				

De følgende spørsmålene dreier seg om din tjeneste som sykepleier fram til nå:

1.	**Avsluttet grunnutdanning som sykepleier:** *Sett årstall:*	

2.	**Tjeneste ved det sykehuset der du nå er ansatt:**	År:
	Hvor lenge har du arbeidet ved den avdelingen der du nå har ditt arbeid? *Oppgi antall år:*	
	Hvor lenge har du eventuelt arbeidet ved *andre* avdelinger ved dette sykehuset? *Oppgi antall år:*	

	Består ditt arbeid nå av? *Sett kryss ved det alternativ som passer:*		Arbeid ved sengepost
			Arbeid ved poliklinikk
			Annet - spesifiser:

	Angi i rubrikken til høyre eventuell spesialutdanning som sykepleier:	

3.	**Tjeneste ved annet/andre sykehus enn der du nå er ansatt:**		
	Hvor mange andre sykehus har du hatt arbeid ved? *Oppgi antall:*		
	Har du ved andre sykehus hatt arbeid ved **samme type** avdeling medisinsk, kirurgisk osv.) som der du nå har ditt arbeid? *Sett kryss i den rubrikken som passer:*		**Ja**
			Nei

	Har du ved andre sykehus hatt arbeid ved **andre typer** avdeling (medisinsk, kirurgisk osv.) enn der du nå har ditt arbeid: *Sett kryss i den rubrikken som passer:*		**Ja**
			Nei

4.	**Tjeneste som sykepleier utenfor sykehus:** *Oppgi antall år:*	År:
	Ved sykehjem el. lign:	
	I åpen omsorg:	
	Annet - spesifisèr:	

5.	**Ledererfaring:** *Oppgi antall år:*	År:
	Avdelingssykepleier:	
	Oversykepleier:	
	Formann i sykepleieråd:	
	Tillitsvalgt:	
	Andre lederoppgaver *i* ditt arbeid eller *avledet av* ditt arbeid - spesifisèr:	

Sett kryss i de rubrikker nedenfor som passer:

Kjønn:		Kvinne
		Mann

Alder:		20-34 år
		35 - 49 år
		50 år eller eldre

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