Hope for the future, ingroup threat and perceived legitimacy in three healthcare professional groups

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Abstract. *Background and aims of the work:* All societies are organised as hierarchies based on prestige or status. Similarly, healthcare organizations (as well as many other types of organization) are composed by professional hierarchies in which some professional groups are powerful and higher in status and other groups are powerless and lower in status. This research investigated the effects of social status and hope for future group advancement on perceptions of social identity threat and legitimacy of social stratification. Physicians (the dominant professional group), nurses and healthcare operators (the dominated professional groups) were led to believe that professional stratification would change in the future, but that the nature of the change was unforeseeable. *Method:* A quantitative study was conducted, proposing to the participants an instrument consisting of a series of validated questionnaires for the measurement of: group status, Ingroup threat, hope for future ingroup improvement, legitimacy of the professional hierarchy and Check for status differences. *Results:* The results indicate that in the context of social instability, the dominant group perceived greater ingroup threat than the dominated groups. Hope for future advancement was negatively associated with perception of ingroup threat, regardless of group membership. Perception of ingroup threat was negatively associated with the perceived legitimacy of social stratification. Finally, perceived threat mediated the relationship between group status and perceived legitimacy. These results support social identity theory's contention that the legitimacy of social stratification is linked to social identity needs such as avoidance of ingroup threat.

Key words: social identity, hope for improvement, ingroup threat, legitimacy, stability

Spes, ultima Dea
[Hope, the last Goddess]

Introduction

All societies are organised as hierarchies based on prestige or status. Similarly, healthcare organizations (as well as many other types of organization) are composed by professional hierarchies in which some professional groups are powerful and higher in status (i.e., physicians) and other groups are powerless and lower in status (i.e., healthcare operators) (1). The maintenance of these hierarchies is linked to the legitimacy of status differences among the groups: a legitimate difference is more likely to be resistant to change (2). Legitimacy has also profound impact on interprofessional collaboration given that collaboration is more likely to be effective when professionals perceive that professional differences are fair and just (3). As stressed by McNamara (4), legitimacy is "important for developing a context for successful collaboration" (p. 127). This means that from a psychosocial point of view the

extent to which social and professional stratification is perceived as legitimate by advantaged and disadvantaged groups is a critical question.

Legitimacy of Social Stratification: A Social Identity Approach

The legitimacy of status difference has been at the core of social identity theory (SIT) since it was introduced (5). SIT posits that people prefer to belong to high-status groups that are positively evaluated with respect to other groups because allows them to achieve and maintain a positive social identity and hence high self-esteem. High-status group members are expected to be motivated to maintain their dominant position, whereas low-status group members are expected to be motivated to try to improve their negative social identity. Moreover, SIT specifies that intergroup behaviour of both dominant and dominated groups depend on the legitimacy and stability of status differences and the permeability of group boundaries. Here we deal only with the legitimacy and stability of status differences. Where social stratification is perceived as legitimate and stable, it is expected that neither low- nor high-status groups will dispute the existing social hierarchy. In fact, high-status group members' social identity is not threatened, whereas members of dominated groups are expected to manage their threatened social identity in ways that do not dispute the social hierarchy (i.e. social creativity strategies) (6, 7). Where, instead, social stratification is perceived as illegitimate and unstable, low-status groups are more likely to contest the hierarchy overtly and to challenge the dominant position of higher status groups. High-status groups are expected to experience social identity threat and to try to protect their social position (6).

There is a wide range of evidence in favour of the assumptions of SIT, but in most of this research the legitimacy and stability of social stratification are treated as moderators of intergroup behaviours such as intergroup discrimination, prejudice and perceived ingroup threat (8). Unfortunately, the foundations of the perception of legitimacy of social stratification and the factors which may change that perception have been largely neglected in SIT research. Moreover, legitimacy and stability have generally been treated as

orthogonal variables and researchers have neglected the possibility that stability could affect the perceived legitimacy of a social hierarchy. Recently, however, these issues have begun to be explored and there is some evidence that, in line with SIT, the perception of legitimacy of status difference may be affected by group interests such as the desire to maintain group's social advantage and avoid social identity threat (9-11). More precisely, it has been suggested that high- and low-status groups are motivated respectively to legitimise and delegitimise the existing social stratification, in order to manage existing or future social identity threat. Legitimacy of a social hierarchy favours dominant groups as it allows them to maintain their positive difference from dominated groups and thus avoid social identity threat. A related suggestion is that high- and low-status groups' perceptions of the legitimacy of a social hierarchy should depend on its stability. Instability of the social hierarchy poses a threat to the social identity of members of high-status groups, who may feel that they risk losing their social advantage (12, 13). In contrast members of low-status groups may perceive social instability as an opportunity and foresee the possibility of improving their position and hence regard the unstable hierarchy as more legitimate (9, 12).

Actually, the relationship between instability and the legitimacy of social stratification may be more complex. Groups often do not know where instability will lead, for example, members of the dominant group might believe that instability would result in them losing their advantages and hence perceive the instability as a social identity threat. Alternatively, they might believe that instability will increase their social advantage by lowering the status of dominated groups and hence not feel threatened by it. Similarly, members of dominated groups might see instability as an opportunity to increase their social status (not a threat) or as a route to continued or increased social disadvantage (increased threat). Thus, hope for future advancement may affect the extent to which group members perceive instability as a threat to their social identity independently from group status. The concept of hope for future advancement has recently been linked to legitimacy of social stratification by Owuamalam and collaborators (10), who demonstrated that low-status

groups' justification of the system was related to their belief that instability would lead to an increase in their group's social status.

Aims and Hypotheses

The aim of this research was to investigate how social identity processes affect the perceived legitimacy of professional hierarchies amongst members of dominant and dominated groups. We tried to merge the classical social identity approach with the recent suggestion from Owuamalam and collaborators (10), using a real professional hierarchy and inducing participants to believe that the social hierarchy would change unpredictably in the near future. As indicated in Figure 1, we expected that in the context of instability of social stratification, group members' perceptions of ingroup threat would depend on ingroup status and hope for future advancement. More precisely, perception of ingroup threat would be higher for the higher status groups that have to most to lose from an unstable social hierarchy (hypothesis 1). Moreover, we expected that ingroup threat would be negatively related to the group members' expectation to improve their social position, i.e. their hope for future improvement (hypothesis 2). A further expectation was that perception of ingroup threat would be negatively related to perceptions of the legitimacy and fairness of the hierarchy (hypothesis 3). Finally, we expected to find an indirect effect of status on legitimacy, mediated by ingroup threat (hypothesis 4).

Method

Participants

After having requested authorization from the General Direction in a randomized, non-stratified manner, the names of health professionals were extracted. Seventy-one professionals agreed to participate in the study, and were therefore enrolled in this study: 26 physicians, 25 nurses and 20 healthcare operators (mean age=40.27 years, SD=6.81, 53% men, three participants did not report their gender). 21 professionals (30%) worked in medicine care unit, 11 (15%) worked in Ger-

Table 1. Characteristics of participants according to their profession

	Physicians	Nurses	Healthcare operators
Age			
M	42.46	39.08	38.90
SD	4.02	7.42	8.35
Gender			
Men	22	7	7
Women	2	18	12
Care Unit			
Medicine	4	8	9
Geriatric/Rehabilitation	5	3	3
Surgery	10	3	7
Critical care	7	11	1

iatric/Rehabilitation care unit, 20 (28%) worked in surgery care unit and 19 (27%) worked in critical care unit. Table 1 reports characteristics of participants according to their profession. As one can see, professional groups appeared to be not equivalent for gender composition ($\chi^2(2)$=22.67, p<.001) as physicians were more likely to be men than both nurses and healthcare operators.

Procedure

Phase 1: Cover story. The experimenter met participants in a quiet room equipped with a portable computer, and all instructions were delivered via computer. Participants were told that the research involved collecting opinions about health professions and provided consent to participation before the experimental procedure began.

Phase 2: Measuring status of profession. After explanation, participants' belief about status of professional groups were collected.

Phase 3: Induction of instability belief. Participants were presented with a bogus newspaper article which explained that the government was considering changing organisational norms in the healthcare system. The article stressed that experts on healthcare policy believed that these changes would have a profound effect on relations between the healthcare professions, but that it was still unclear how relations between physicians, nurses and healthcare operators would evolve.

Phase 4: Collection of measures. After the bogus article, manipulation check items and other relevant measures were collected.

Phase 5: Debriefing. At the end of the experiment participants learned that the story they had read was fictitious and bore no relation to government policy. Participants were then invited to express again their consent to use collected data.

Measures

Group status. In order to assure realism, we considered real professional groups as an indicator of status differences. In fact, within the healthcare system physicians are the highest status group, followed by nurses and then healthcare operators (1).

Ingroup threat. Four items taken from the Primary Appraisal of Identity Threat scale (14) measured ingroup threat (i.e. "I experienced the situation described in the article as a threat to my group" and "In the article, I had the feeling that the members of my group, including myself, were totally depreciated"). Participants indicated their agreement with each statement using a six-point Likert-type scale (1=*definitely disagree*; 6=*definitely agree*). Reliability was good (Cronbach's α=.99).

Hope for future ingroup improvement. Participants were asked to indicate, based on the article, whether the status of physicians, nurses and healthcare operators would improve, worsen or remain the same in the future using an 11-point Likert scale (-5=much worse; 0=the same; 5=much better). To calculate relative ingroup improvement the mean of the outgroup ratings was subtracted from individuals' ingroup ratings, thus negative scores indicate a belief that the status of one's ingroup would worsen relative to the outgroups.

Legitimacy of the professional hierarchy. Participants were asked to indicate the extent to which they believed that the differences between a) nurses and physicians, b) nurses and healthcare operators and c) healthcare operators and physicians would be fair if the changes described in the article were implemented using a ten-point Likert-type scale (1=completely unfair; 10=completely fair). Reliability was good (α=.87).

Check for status differences. Participants were asked to rate the prestige of physicians, nurses and healthcare operators on a six-point Likert-type scale (1 = low status; 6=high status).

Plan of analysis

The perception of status differences among professionals was checked with a 3 (rater's profession) x 3 (rated profession) mixed-model ANOVA with rater's profession as the between-subjects factor. Associations among considered variables were preliminarily investigated with zero-order Pearson product-moment correlation coefficient. Hypotheses were then tested through a path analysis approach with maximum likelihood estimation and robust standard error was used. Status was dummy-coded using two dummy variables, with physician (the highest status group) as the reference category. The first dummy variable (D1) distinguished between nurses (coded 1) and physicians (coded 0), whilst the second dummy variable (D2) distinguished between healthcare operators (coded 1) and physicians. Given that groups differed in hope for future improvement ($F(2,68)=29.03$, $p<.001$, $\eta_p^2=.46$, $M_{physicians}=-1.35$, $M_{nurses}=1.26$, $M_{healthcare\ operators}=-0.40$), hope for future improvement scores were centered within professional groups in order to avoid to confound effects.

Results

Checking for Perceived Status Differences

There was an effect of rated profession ($F(2,136)=716.83$, $p<.001$, $\eta_p^2=.91$) indicating that physicians were rated higher (all post hoc tests $p<.001$) in status ($M=5.32$, $SD=0.47$) than both nurses ($M=4.06$, $SD=0.33$) and healthcare operators ($M=2.70$, $SD=0.60$). This effect was independent of rater's profession ($F(4,136)=0.31$, $p=.87$, $\eta_p^2=.01$), indicating that all participants recognised that physicians were higher in status than nurses and healthcare operators.

Hypothesis Testing

Table 2 shows zero-order correlations and descriptive statistics for continuous variables. Perceived legitimacy was negatively correlated with ingroup threat and positively correlated with hope for improve-

Table 2. Zero-order correlations and descriptive statistics of measured variables

	M	SD	Ingroup threat	Hope for improvement (group centered)
Perceived legitimacy	5.53	1.08	-.45**	.53**
Ingroup threat	3.17	1.61	-	-.64**
Hope for improvement (group centered)	0.00	1.21		-

** p < .001. N = 71

ment. In turn, hope for improvement was negatively correlated with ingroup threat[1].

The path analysis[2] indicated that, consistent with hypothesis 1, physicians perceived a greater ingroup threat than both nurses (b=-1.95, SE=0.21, Z=-9.16, p<.001) and healthcare operators (b=-1.62, SE=0.29, Z=-5.57, p<.001). In line with hypothesis 2, perception of ingroup threat decreased as hope for future improvement increased (b=-0.84, SE=0.09, Z=-9.94, p<.001). Perception of ingroup threat was, in turn, negatively related to perceived legitimacy of social hierarchy (b=-0.34, SE=0.08, Z=-4.08, p<.001). Finally, as expected,

the relationships between both D1 and D2 and perceived legitimacy were mediated by perception of ingroup threat (D1: b=0.66, SE=0.18, Z=3.68, p<.001, 95% CI=0.31-1.02; D2: b=0.55, SE=0.16, Z=3.39, p=.001, 95% CI=0.23-0.87). The two mediation effects were similar (χ^2(1)=1.23, p=.27). Neither D1 (b=-0.07, SE=0.24, Z=-0.28, p=.78) nor D2 (b=-0.53, SE=0.46, Z=-1.15, p=.25) directly affected perceived legitimacy when threat was taken into account. The model in Figure 1 without dotted lines had satisfactory fit (χ^2(5)=9.07, p=0.11, CFI=0.95, RMSEA=.107, p=.14, 90%CI=0.000-.196).
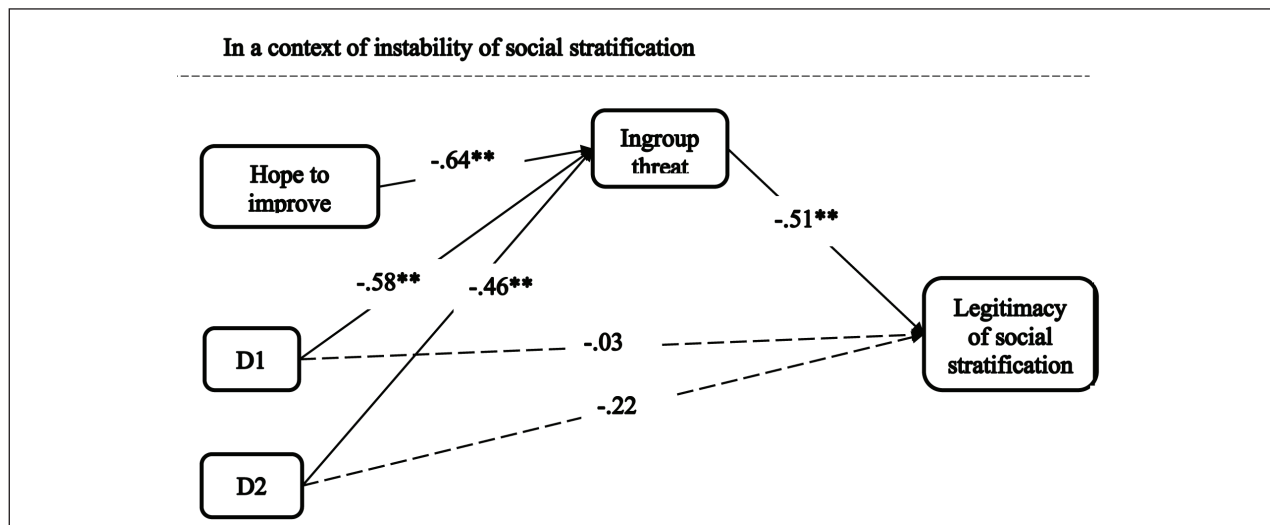

Figure 1. The research model and estimations from path analysis. **p<.01; N=71
Standardized coefficients are reported. Model fit without dotted line: χ^2(5)=9.07, p=0.11, CFI=0.95, RMSEA=.107, p=.140, 90%CI=0.00÷.196.

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[1] We also considered the interaction between status and hope of future advancement in order to take into account the conditional effects of these two variables. Also in this case, hope for future improvement scores were centered within professional groups given that the interaction was of interest. After centering, the interaction with hope was computed for each dummy variable. There was no interaction between hope of improvement and D2 (b=0.27, SE=0.47, Z=0.57, p=.57) and a marginal interaction between hope of improvement and D1 (b=0.37, SE=0.19, Z=1.96, p=.05), but no omnibus interaction between status and hope for future improvement (χ^2(1)=1.30, p=.25). There was thus no evidence of an interaction between group status and hope for future improvement; this issue is not discussed further in this paper.

[2] Given that professions were not equivalent for gender, we analysed also a model with gender as covariate. Results were virtually unchanged. Thus, we do not consider further gender in order to maintain as many participants as possible.

Discussion

The research presented here looked at how social identity processes affect the perceived legitimacy of a social hierarchy. We induced members of different real-life groups to believe that the existing group differences in status would change in future in an unforeseeable way. The results indicated that, in the context of unstable stratification, members of the dominant group perceived their ingroup's status to be under greater threat than did the two lower status groups. This is consistent with SIT and previous evidence showing that dominant groups are more sensitive to ingroup threat than dominated groups, because they have more symbolic and material resources to lose (15). The results also indicated that, independently of group status, hope for future improvement has a strong effect on perceived ingroup threat: the greater participants' belief that their ingroup would benefit from instability the less threatened they felt by the instability. This is a novel result, as hope for future advancement has rarely been investigated in studies of intergroup relations. It is only recently that Owuamalam and collaborators (10) demonstrated that hope for future group advancement mediated the relationship between instability and perceived legitimacy of a hierarchy amongst members of low-status groups. Our results corroborate and extend Owuamalam and collaborators' evidence (10), showing that hope for improvement works independently of group status. More importantly, our findings indicate that perceived legitimacy of social stratification is directly and indirectly related to perceived threat to the ingroup. Firstly, the higher the ingroup threat, the lower the perceived legitimacy, which suggests - in line with SIT- that the perceived legitimacy of status differences may be dependent on group interests: a condition which threatens a particular social identity is less likely to be perceived as legitimate and fair by that group (9). Secondly, ingroup threat mediated the relationship between group status and perceived legitimacy.

The cross-sectional design, limited sample size and reliance on self-report data are shortcomings that limit the generalisability of these results and mean that they cannot be use as the basis for causal inferences; nevertheless these results are novel and suggest that

perceptions of the legitimacy of status differences are affected by group interests and desire to protect social identity or meet social identity needs.

Practical implications

In a time of profound organizational changes in healthcare organization, interprofessional relations appear to be of crucial importance in order to efficaciously manage the transition from old to new professional arrangements. Perceived legitimacy of interprofessional differences, in terms of status, decisional power and autonomy, is a key aspect that may help professional groups to cooperate. Present findings suggest that a situation of uncertainty about the future of the professional ingroup is detrimental for interprofessional relations. Indeed, uncertainty appears to increase threat perception and fear, especially for dominant professions (i.e., physicians), that in turn negatively affect perceived legitimacy of differences among professionals. In sum, avoiding uncertainty and threat appear to be beneficial for the management of organizational changes, increasing perception of legitimacy and fairness and thus reducing barriers to interprofessional collaboration. Healthcare managers should take expecial care in explaining how and why organizational changes will affect professional groups and the way in which professional will interact one to another.

Conclusion

These findings contribute to understanding of the foundations of the legitimacy of social stratifications in the eyes of dominant and dominated groups. The results support and extend the SIT account of the legitimacy of social hierarchies and the relationship between their legitimacy and stability. The results suggest that instability may affect relative legitimacy in the eyes of dominant and dominated groups, via its impact on members' hopes for future improvement in ingroup status and their perceptions of social identity threat.

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