

# The Mediating Role of the Sense of Relatedness and Task Cohesion in the Relation between Psychological Power Distance and Efficiency of a Working Team

Laurent Auzoult

Department HSE, University of Franche-Comté, Besançon, France  
Email: [laurent.auzoult@univ-fcomte.fr](mailto:laurent.auzoult@univ-fcomte.fr)

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Understanding of the effectiveness of work-teams is a major issue in the business world, where they are expected to facilitate developing individual skills and increasing organizations' efficiency. Eighty-three engineers working in teams have responded to a questionnaire devised to measure perceptual power distances, the sense of relatedness, cohesion measured by integration around the task, and teams' effectiveness. Results reveal that "task cohesion" and sense of relatedness mediate the relationship between power distance and perceived effectiveness. These results are related with those observed in the context of the self-determination theory and presented in order to highlight their practical implications.

*Keywords:* Power Distance; Team Effectiveness; Self-Determination Theory; Autonomy

## Introduction

Along with potency (Jordan, Feild & Armenakis, 2002), cohesion is presented as a key determinant of work-teams' effectiveness (Evans & Dion, 1991; Cohen & Bailey, 1997; Webber & Donahue, 2001), though this psychological construct does not always turn out to be as unambiguous as one would like (Friedkin, 2004). Initially, cohesion reflects all forces encouraging a group's members to stick together (Festinger, 1950). Cohesion has gradually been broken up into several dimensions that refer to interpersonal attractiveness and individual or collective commitment to the task. "Task cohesion" seems to be a better predictor of effectiveness than social cohesion (Mullen & Cooper, 1994).

"Task cohesion" refers to team-members' perceived spirit of unity around the activity, i.e. to the quality of cooperation within the team. Cooperation quality could account for a sense of relatedness (Lavigne, Vallerand, & Crevier-Braud, 2011), which reflects a sense of acceptance, i.e. the feeling of being understood and accepted by others, as well as a sense of intimacy, i.e. feeling one is emotionally attached to colleagues. As regards running a work-team, we can assume that the stronger the sense of relatedness among teammates (i.e. their feeling close to—and understood by—others), the more satisfactory the perceived quality of cooperation. A study by Deardorff Bell and Belohlav (2011) highlights the impact of relationships quality (sharing ideas and communications quality) on performance. In this case, cohesion might be expected to mediate the relationship between the sense of relatedness and perceptions about the team's effectiveness.

From a broader perspective, cohesion mediates the effects of psychosocial factors referring to the team's organizational environment (Gladstein, 1984), the quality of individual interac-

tions (Mesmer-Magnus & DeChurch, 2009) or to wage-earners' characteristic features (Campion, Papper & Medsker, 1996). Sharing common values has been put forward to account for work-teams' effectiveness (Ashkanasy & O'Connor, 1997; Stinglhamber, Bentein, & Vandenberghe, 2004). Schaubroeck, Lam and Cha (2007) and Earley (1999) have shown a relationship between power distance values, which refer to the degree of inequality employees consider as normal (Hofstede, 2001), and work-teams' performance. Specifically, it has been shown that the higher power-distance values are (i.e. when employees consider inequality as normal), the better the team's performance turns out to be. Power distances may also be considered as psychological distances (Mulder, 1977), i.e. a degree of perceived inequality within a power structure. Psychological distances are related with psychological values. In this case, the more individuals can express strong power values, the closer to their line manager they perceptually get, while distancing themselves from the organization's shop floor (Auzoult, 2012). As for psychological power distances vis-à-vis the team leader, reducing psychological power distances should increase the team's perceived effectiveness.

The power equalization effect, i.e. the relation between performance and reduction of status and power, has already been highlighted at organizational level (Abdel-Halim, 1980) but never in work team level. In this study, we examine the mediating role of a sense of relatedness and cohesion between power distance and work-teams' effectiveness. We rely on observations made about training engineers working in teams on industrial projects. Studies involving teams during training-periods highlight processes similar to those seen in professional or sports organizations (Lent, Schmidt, & Schmidt, 2006; Hsu, Ya-Ling Chen, Chiu, & Ju, 2007; Lira, Ripoll, Peiró, & González, 2007).

We expect “task cohesion” to mediate the relationship between psychological power distance and the team’s effectiveness (Hypothesis 1); and the feeling of social acceptance to mediate the relationship between psychological power distances and “task cohesion” (Hypothesis 2).

## Method

### Participants and Procedure

Eighty-three students (12 females, 71 males,  $M = 22$  years,  $SD = 8$  months) from the same engineering school were put together in teams and participated to the study. Teams were formed around industrial- or R & D-related projects, over a 30-week period. After four months of operation, students were asked to fill in a questionnaire presented as meant to identify their team’s operating modalities

### Measures

**Power distance.** Each team member expressed his sense of leadership and power, using five-point scales from seven items ( $\alpha = .81$ ) referring to the importance of their work for the project, to its contribution to conflict resolution, to the collective success or to communications quality. Individual power distance corresponded to the difference between the team-leader’s score and each teammate’s (Auzoult & Abdellaoui, 2011).

**Cohesion.** “Task cohesion” was measured using five-point scales from 12 items ( $\alpha = .78$ ) about mutual agreement on objectives (clarity, commitment and agreement), the means implemented to achieve the project (agreement on roles and working methods) or team management (conflicts management, mutually supportive behaviour).

**Sense of relatedness.** The sense of relatedness was measured using the “feeling of relatedness” scale (Richer & Vallerand, 1998), while the sub-dimensions of intimacy and acceptance had been separated beforehand.

**Work-team’s effectiveness.** An overall indicator of the team’s effectiveness was drawn from three dimensions proposed by Beaudin & Savoie (1995) to measure work-teams’ effectiveness (group life quality, durability and performance). Respondents had to deal with 9 items ( $\alpha = .78$ ) on five-point scales.

## Results

Reducing distances can be associated with a rise in the degree of acceptance ( $r = -.42, p < .001$ ) or intimacy ( $r = -.43, p < .001$ ) and an increase in “task cohesion” ( $r = -.33, p < .01$ ) or in perceived effectiveness ( $r = -.35, p < .001$ ). Enhanced the task cohesion is associated with the team’s perceived effectiveness ( $r = .73, p < .001$ ) as well as with a heightened sense of acceptance ( $r = .64, p < .001$ ) or of intimacy ( $r = .60, p < .001$ ).

We conducted a hierarchical linear regression analysis (Table 1) by introducing power distance in the first step, the two sub-dimensions of relatedness in the second one and, in the third step, “task cohesion”. The dependent variable was “level of perceived work-team’s effectiveness”.

Power distance alone can account for 11% ( $R^2 = .11, F(1,82) = 11.27, p < .001$ ) of the variance related to work-team’s effectiveness. In the second step, the addition of two relatedness sub-dimensions can explain 26% ( $\Delta R^2$ ) of additional variance ( $R^2 = .37, F(3,82) = 16.77, p < .001$ ). In this case, acceptance alone contributes significantly to justify effectiveness. It can

**Table 1.**

Hierarchical regression analysis of team-effectiveness from its antecedents.

	Step 1	Step 2	Step 3
	$\beta$ Student’test <sup>a</sup>	$\beta$ Student’test	$\beta$ Student’test
Power distance	-.35 $t = -3.36^*$	-.09 $t = -.92$	-.06 $t = -.80$
Acceptation		.38 $t = 2.49^*$	.13 $t = .97$
Intimacy		.23 $t = 1.51$	.09 $t = .71$
Task cohesion			.57 $t = 5.90^{**}$
Constant	25.49 <sup>**</sup>	17.72 <sup>**</sup>	7.82 <sup>*</sup>

Note: a. <sup>\*</sup> $p < .01$ , <sup>\*\*</sup> $p < .001$ .

therefore be concluded that power distances account for the sense of relatedness through acceptance but not for intimacy among team members. In the third step, adding “task cohesion” justifies 19% ( $\Delta R^2$ ) of additional variance ( $R^2 = .56, F(4,82) = 26.65, p < .001$ ). All these relationships lead one to conclude that “task cohesion” mediates the relationship between psychological power distance and team’s effectiveness (Hypothesis 1 is verified) and that acceptance plays a mediating role between power distance and “task cohesion” (Hypothesis 2 is verified).

## Discussion

The results of this study show that the reduction of perceptual power distances between teammates and their team-leader emphasizes “individual feeling of acceptance” within the team, “task cohesion” and “team’s perceived effectiveness”.

The sense of relatedness proves to be a determinant factor of participation, motivation and individual well-being at work (Deci, Connell & Ryan, 1989; Gagné & Deci, 2005). Our results lead to the conclusion that “sense of relatedness” also impacts the collective level, in this case the team’s cohesion and effectiveness. This can be paralleled with the effects observed about the need for autonomy and competence in the context of the self-determination theory (Ryan & Deci, 1999; Chirkov, Ryan, & Sheldon, 2011). Indeed, Cabrera Collins and Salgado (2006) have observed that “satisfaction of the need for autonomy” led to greater motivation to share knowledge within the work-group. Morrison (2006) noted that “satisfaction of the need for autonomy” was associated with enhanced pro-social behaviour. These different results may suggest that developing intrinsic motivation linked to “needs for autonomy” and “need for relatedness” might be expected to lead to collective regulations along the lines of strengthening ties at work and, incidentally, to collective efficiency as well.

Finally, perceptual power distances are likely to account for the regulations operating within work-teams. Unlike values, perceptual power distances are directly related to organisations’ formal aspects, such as “type of hierarchical structure” (Ng, 1980) or unequal power resources (Raven, 1992). Our results therefore suggest possible practical implications, since any formal element reflecting proximity among teammates and their leadership makes it possible to *a priori* reduce psychological power distances.

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