

# CHANGE AND INNOVATION IN ORGANIZATIONS: Change-oriented Leadership Outcomes in Team Effectiveness



**Angel Barrsa** & Francisco Gil  
*Complutense University of Madrid*



**Ramon Rico**  
*Autònoma University of Madrid*



**Carlos M. Alcover**  
*Rey Juan Carlos University*

3121 Oral Session  
INDUSTRIAL / ORGANIZATIONAL PSYCHOLOGY  
MEETING ROOM 17A  
17.30-18.30

**XXVIII International Congress of  
PSYCHOLOGY**  
Beijing, China, August 8-13, 2004

**CHANGE AND INNOVATION IN ORGANIZATIONS:  
Change-oriented Leadership Outcomes in Team Effectiveness**

*Aim*

**MODEL**



Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



**XXVIII International Congress of  
PSYCHOLOGY**  
Beijing, China, August 8-13, 2004

*Teams form the basic functional unit of practically any organization. In the current situation of technological and environmental change, increasing globalization, and emerging opportunities derived from the new information and communication technologies (Shamir, 1999) the design of organizations has necessarily become more complex, requiring greater horizontal development. In this light, team-based organizational structures are an important part of the solution (Devine et al., 1999; Mohrman, Cohen & Mohrman, 1995).*

*Practically all organizations, including healthcare institutions (Heinemann & Zeiss, 2002; Poole & Real, 2003), use teams in one way or another and their effectiveness therefore depends on appropriate design and the proper functioning of work units and teams (Guzzo & Dickson, 1996).*

*One variable that is believed fundamental, and which is the subject of an extensive literature in its own right, is leadership. Even so, only a few models (Avolio et al., 1996; Gladstein, 1984; Kozlowski et al., 1996; Stewart & Barrick, 2002) explicitly take leadership into account as a determining factor in team results.*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## CHANGE-ORIENTED LEADERSHIP

*Nevertheless, leadership (or the lack of it) has been identified as a key variable for the functioning of teams and one of the main reasons for the success or failure with which team-based work systems are implemented (Katzenbach, 1997). The literature on leadership is based on the classical bi-factorial models, although more recently it has incorporated the “new paradigms” of charismatic and transformational leadership, among others.*

*The recently developed three-dimensional leadership model (Yukl, 2003; Yukl, Gordon & Taber, 2002) identifies three major categories, adding change to the classical bi-factorial models (task and relationship focused leadership). By proposing the incorporation of the category of change, the tri-dimensional model allows the integration of the two major traditions of management and leadership theory, which have normally stood apart, each having its own literature. Rather than seeking to establish distinctions between managers and leaders, the two can be explained jointly using the same processes and models (Yukl, 2002)*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## CHANGE-ORIENTED LEADERSHIP (2)

*The transformational and charismatic leadership theories (Bass, 1985; Conger & Kanungo, 1988; House, 1977) refer to certain kinds of change-oriented behavior, and there is considerable evidence that such patterns are related are linked to effective leadership, as shown in the meta-analysis carried out by Lowe, Kroeck & Sivasubramaniam (1996)*

*The three-dimensional model is compatible with the transformational and charismatic leadership theories, although its aim is in fact to explain leadership processes at a different conceptual level of analysis. This model seeks to describe the influence of leaders on organizational processes (rather than on the motivation and perceptions of subordinates), analyze contingent (as opposed to universal) aspects of effective leadership, and highlight the importance of leadership processes (instead of focusing on a leader figure). It also represents an effort to identify the behavior patterns that make up each category in such away that each type of behavior is observable; is potentially applicable to leaders of all kinds in organizations; is fundamentally relevant to the category in question; and is based on prior theory and research.*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## TEAM CLIMATE OF INNOVATION

*Team climate have been defined as “shared perceptions” referring to the nearby work group, which is to say the “permanent or semi-permanent team to which subjects are assigned, with which they identify and with which they interact on a regular basis in order to carry out work-related tasks” (Anderson & West, 1998)*

*Evaluation using the TCI (Team Climate Inventory) takes as its starting point the four factor theory applied to innovation: a) vision (or objectives); b) participative safety (or participation); c) task orientation; and d) support for innovation, defined as “expectation, approval and critical support for efforts to introduce new and better ways of doing things within the work environment” (West, 1990). Of these four factors, support for innovation has been confirmed as the most consistent predictor in external evaluations of team innovations (Burningham & West, 1995).*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## **LEADERSHIP AND TEAM CLIMATE OF INNOVATION**

*Although leadership and climate are two variables that are implicitly interlinked in research, theoretical development and empirical research remains thin on the ground. In the early theories and research, leadership is proposed as an organizational factor affecting perceptions of climate.*

*In the classic study by Lewin, Lippitt & White (1939), it was observed that varying leadership styles (authoritarian, democratic and laissez faire) induced experimentally influenced perceptions of climate and the behavioral responses of subjects.*

*In response to this study Litwin & Stringer (1968) created organizations run by leaders exhibiting different styles (bureaucratic, cooperative and productivity-oriented), again confirming the existence of differentiated perceptions depending on the management style.*

*Later, Kozlowski & Doherty (1989) were to find that the interaction between the leader and the subordinate had a significant impact on perceptions of climate*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



*The sample comprises 318 participants, who are members of 78 healthcare teams at different public hospitals throughout Spain (Madrid, Barcelona, Malaga, La Corunna, Seville and Cadiz). Eleven teams were discarded because we did not receive an appropriate number of responses from members (teams with a response rate of below 30% of total members) or because they lacked at least two external measures of effectiveness.*

*The final sample was thus formed by 67 teams. In all cases, the organizations were formally designed around work units (teams)*

*The size of the work teams ranged from 3 to 24 members, with an average per team of 10.6 (SD = 5.33). The response rate obtained was 68.4%.*

*Males comprise 34.6 % of the sample, and the remainder are females. The average age of subjects was 41.4 years (SD = 8.65)*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



*Because this study was performed at the level of the team, having collected questionnaires at the level of the individual, it was necessary first to aggregate data in order to obtain the team construct.*

*ICC (intra-class correlation) index provides an indication of the extent to which the perceptions of group members are shared or, to be exact, it compares the inter-group with the intra-group variance (Chan, 1998; Kenny & LaVoie, 1985). The higher the ICC index, the greater the variance at the individual level attributable to the relevant team.*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## ***MEASUREMENT: CHANGE-ORIENTED LEADERSHIP***

*Behavior associated with change-oriented leadership is evaluated using an unpublished questionnaire designed by Yukl on the basis of earlier inventories (Yukl, Gordon & Taber, 2002). The original questionnaire comprises three scales: task, relationships and change-oriented leadership.*

*Earlier studies have demonstrated that the psychometric characteristics of the questionnaire are appropriate (Yukl, Gordon & Taber, 2002; Gil, Ares & Barrasa, 2003).*

The last of the three scales (change leadership) contains 5 sub-scales with 4 items each. These are **supervision of the environment** (e.g.: The leader “keeps abreast of the activities and products of competing institutions”) = 0.90; **encouragement of innovative thinking** (e.g. The leader “encourages people to reassess traditional strategies and practices”) = 0.66; **explanation of the need for change** (e.g. The leader “provides arguments to urge the need for change”) = 0.95; **anticipation of change** (e.g. The leader “describes the proposed change with enthusiasm and conviction”) = 0.93; and **personal assumption of risk** (e.g. The leader “assumes personal risks in firm defense of the need for major change”) = 0.96.

The response emphasizes magnitude rather than frequency (1 = not at all, 5 = to a great extent, with the option of “don’t know” or “not applicable”). An aggregate measure was obtained at the team level with a rate of intra-team homogeneity ICC = 0.60.

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## MEASUREMENT: TEAM CLIMATE OF INNOVATION

*We used the TCI (Team Climate Inventory) designed by Anderson & West (1994). The inventory contains 38 items ( $\alpha = 0.96$ ; ICC = 0.55) with 5-point Likert responses (1 = disagree completely, 5 = completely agree) grouped into 4 factors*

*Scale of innovation (8 items. E.g.: “Is the team open to and ready for change?”) = 0.82, ICC = 0.53. This inventory (Anderson & West, 1998) has been used in a number of studies and adaptations with differing samples.*

*These include research in the following countries: Sweden (Agrell & Gustafson, 1994), Finland (Kivimäki et al., 1997; Kivimäki & Eloviano, 1999), Germany (Brodbeck & Maier, 2001) and Portugal (Curren et al., 2001). Results confirm the good psychometric properties of the scale.*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## MEASUREMENT: TEAM EFFECTIVENESS

*Team effectiveness was assessed via external supervisors and managers with appropriate knowledge, each team being scored as a unit.*

*Scale used by Ancona and Caldwell (1992) was applied. This comprises 5 dimensions for effectiveness scored through 5 items (team effectiveness, quality of technical innovations, compliance with deadlines, budget compliance and conflict resolution skills) in the opinion of managers, with  $\alpha = 0.83$ .*

*Each dimension was scored using a 5-point Likert scale (1 = disagree completely, 5 = completely agree). Between two and three evaluations were obtained from various supervisors and managers with a good knowledge of the team (in the absence of at least two such evaluations teams were discarded), resulting in an inter-judge coefficient of 0.74*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## ***MEASUREMENT: CONTROL VARIABLES***

*Control measures employed were*

*team size (a score was assigned to the number of team members based on data provided by the pertinent department) with an average of 10.6 (SD = 5.33),*

*and tenure or member seniority (a score was assigned to the time each member had formed part of the team based on individual responses, as a result of which we obtained an aggregate measure for each team at the group level with ICC = 0.59) with an average of 9.6 (SD = 5.49).*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## ***PROCEDURE***

*We contacted the human resources departments at each center to apply for their assistance. We also held meetings with the HR managers and the supervisors, officers and managers responsible for the various work units concerned to explain the objectives of the project and the procedure we intended to follow.*

*Team members were invited to participate voluntarily by completing an individual and anonymous questionnaire.*

*External supervisors and managers were also asked to complete a specific questionnaire, again individually and anonymously, to score group effectiveness.*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid

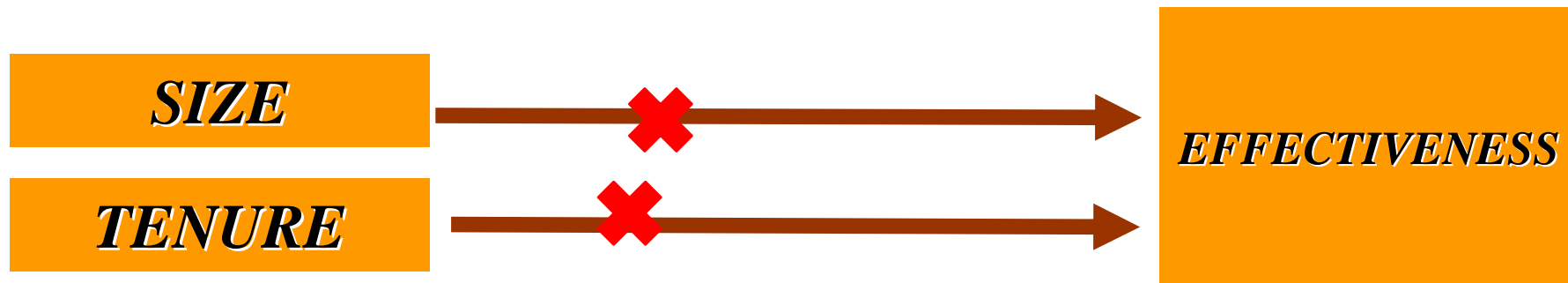


Carlos M. Alcover  
Rey Juan Carlos University



**CHANGE AND INNOVATION IN ORGANIZATIONS:  
Change-oriented Leadership Outcomes in Team Effectiveness**

***RESULTS (1)***



Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



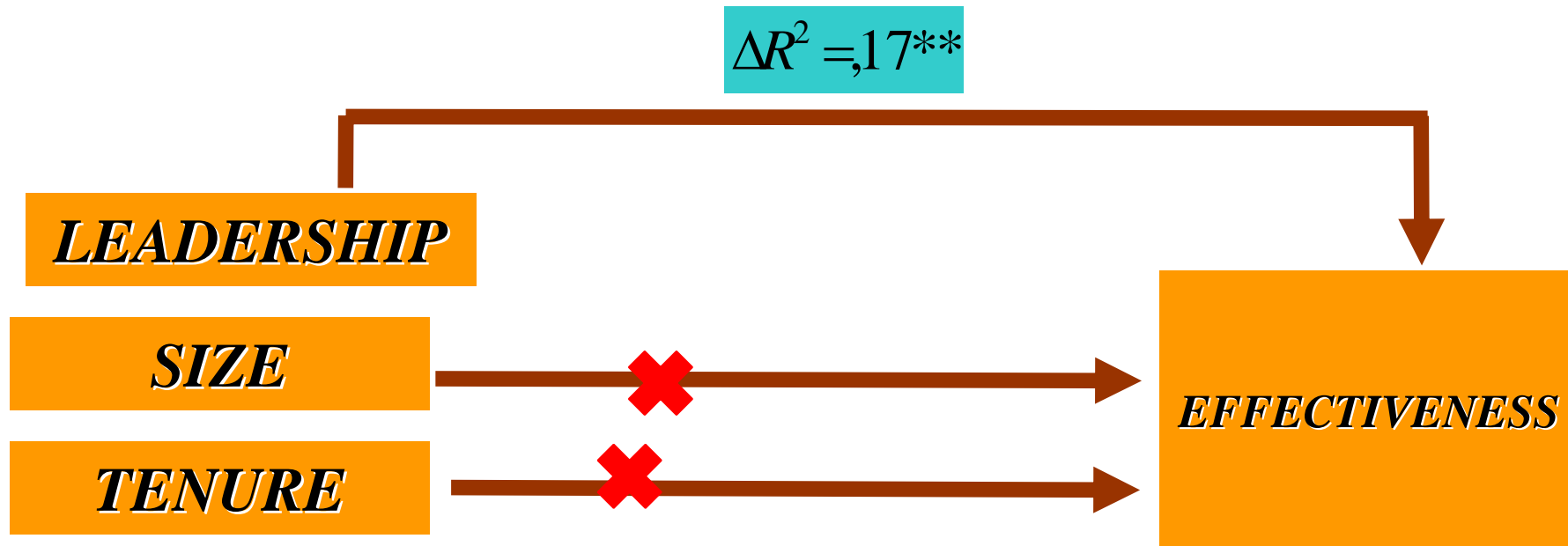
Carlos M. Alcover  
Rey Juan Carlos University



**XXVIII International Congress of  
PSYCHOLOGY**  
Beijing, China, August 8-13, 2004

**CHANGE AND INNOVATION IN ORGANIZATIONS:  
Change-oriented Leadership Outcomes in Team Effectiveness**

**RESULTS (2)**



Angel Barrsa & Francisco Gil  
Complutense University of Madrid

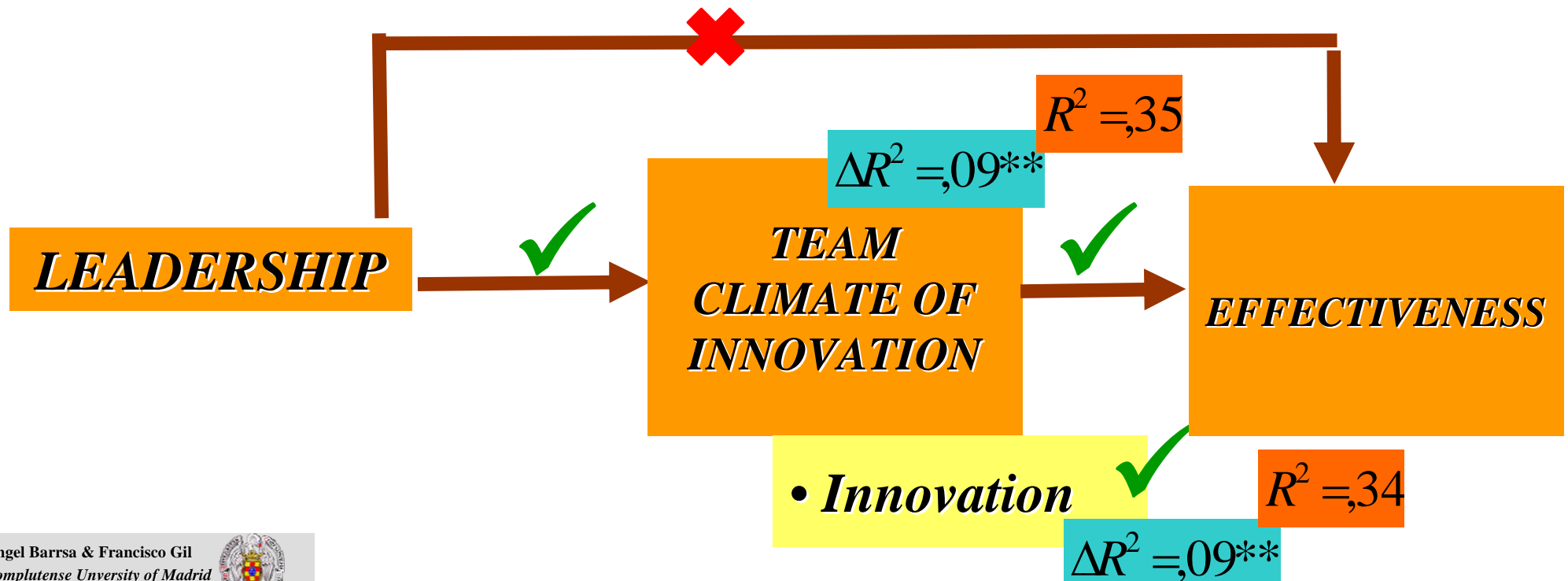


Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University





• *Innovation* ✓

## CONCLUSIONS

*In general, our results offer considerable empirical support for the proposed model, underlining the importance given to the variables selected in the literature. However, they also qualify the relationships and links established between these variables. Our results also provide support for the treatment of team climate (which evaluates important group processes) as a mediating variable*

*Our findings also have important applied implications. In the first place, given that the actions and strategies implemented by the change-oriented leader are mediated and moderated by other variables, it would be advisable to identify and, where necessary, modify such variables before embarking on such actions, which may at times give rise to considerable resistance*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



## CONCLUSIONS (2)

*It would also be of interest to use samples differentiated by service within the healthcare field, including both public and private institutions, and from other sectors. It would also be interesting to fill out this correlative and cross-level study by carrying out experimental research to establish the direction of causality, as well as longitudinal work to explore the possible influence of team development over time.*

*Our findings also invite research to explore the conditions under which change-oriented leadership, insofar as it represents a strategic issue, will have the greatest impact, analyzing the environment, external relations and so on, as well as the moderating role of leadership between these variables and climate, as proposed by West and Hirst (2003).*

Angel Barrsa & Francisco Gil  
Complutense University of Madrid



Ramon Rico  
Autonoma University of Madrid



Carlos M. Alcover  
Rey Juan Carlos University



# CHANGE AND INNOVATION IN ORGANIZATIONS: Change-oriented Leadership Outcomes in Team Effectiveness



Angel Barrsa & Francisco Gil  
*Complutense University of Madrid*



Ramon Rico  
*Autònoma University of Madrid*



Carlos M. Alcover  
*Rey Juan Carlos University*

[abarrasa@psi.ucm.es](mailto:abarrasa@psi.ucm.es)

3121 Oral Session  
INDUSTRIAL / ORGANIZATIONAL PSYCHOLOGY  
MEETING ROOM 17A  
17.30-18.30

XXVIII International Congress of  
**PSYCHOLOGY**  
Beijing, China, August 8-13, 2004