

## Effects of Interdependence and Social Interaction-Based Person-Team Fit

David J. Glew

Department of Management, The University of North Carolina Wilmington, 601 South College Road, Wilmington, NC 28403, USA; E-Mail: glewd@uncw.edu; Tel.: +1-910-962-3072; Fax: +1-910-962-2116

Received: 29 November 2011; in revised form: 24 December 2011 / Accepted: 8 January 2012 /

Published: 16 January 2012

---

**Abstract:** The match between employees and their vocations, jobs and organizations has been the focus of the majority of past person-environment fit research. The compatibility between individuals and their work team environments is a more recently recognized, but much less studied, type of fit. Person-team fit is conceptualized here along two fundamental dimensions of team environments: interdependence and social interaction. Results from a study involving 209 cross-functional team members indicate that person-team fit has an impact on satisfaction, commitment, trust and performance.

**Keywords:** person-team fit; work teams; interdependence

---

### 1. Introduction

Work teams are a familiar feature of modern organizations and their prevalence has grown in recent years. For example, the proportion of Fortune 1000 firms using self-managing teams rose from twenty-eight percent in 1988 to sixty-five percent in 2005 [1]. As teams become increasingly common, understanding how employees operate within these environments becomes increasingly important. One potentially useful framework for studying the interplay between employees and team environments is person-environment fit. This research framework has an extensive history with origins in Lewin's [2] proposition that human behavior is a function of the person and of the environment. Debate over whether the person or the environment has a stronger effect on behavior evolved into an

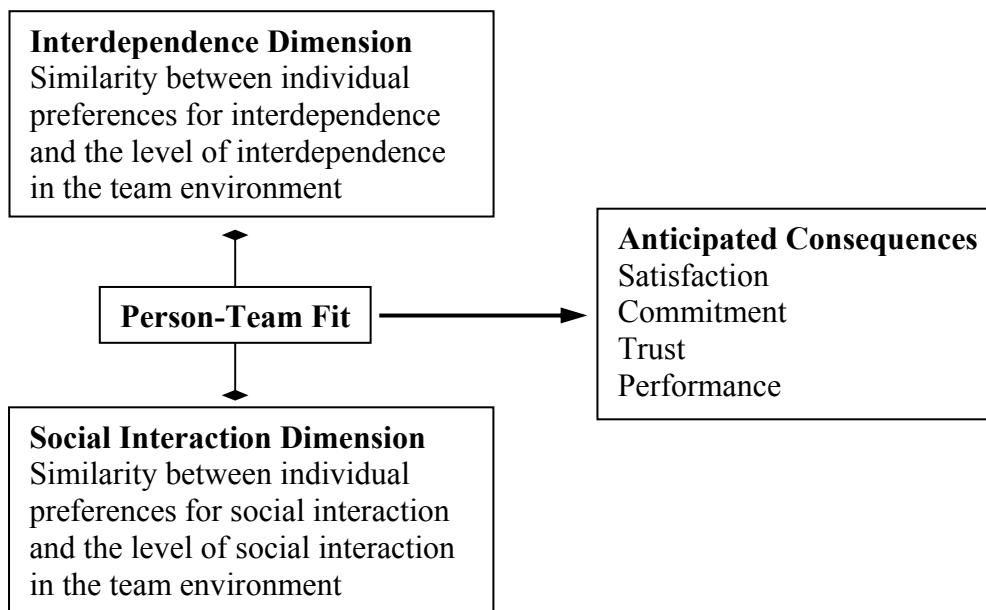
interactionist perspective in which person and environment factors are seen as simultaneous, combined influences (e.g., [3]).

Person-environment fit can be defined as “the compatibility between an individual and a particular work environment that occurs when their characteristics are well matched” [4]. Historically, research based on this approach progressed by considering the match between individuals and five aspects of the environment: 1. the vocation (e.g., [5,6]); 2. the job (e.g., [7]); 3. the organization (e.g., [8]); 4. other individuals, most commonly the supervisor (e.g., [9]); and 5. the work group or team (e.g., [10]). Despite the growing importance of teams in organizations, relatively little research has focused on this latter form of fit [4]. Studies that have assessed fit in teams have selected a varied set of team characteristics as the basis of fit, including the personality profile of existing team members [11]; goals of the constituency (*i.e.*, job classification or hierarchical level; [12]); values of co-workers [13]; perceived goals of other team members [14]; cognitive ability requirements of the team task [15]; the team climate [16]; and the group culture [17]. The current study extends our understanding of fit by focusing on two fundamental dimensions of the environment that are common to all teams: interdependence and social interaction.

## 2. Conceptualizing Person-Team Fit

Two basic processes occur within team environments: 1. those that refer directly to the completion of the team’s task, and 2. those that relate primarily to the social interactions that occur within the team. Some prior research on person-team fit reflects these processes. For example, Hollenbeck [18] argued that structural attributes of the team, such as the degree of interdependence in the team (*i.e.*, a process inherently related to task completion) will influence the relationship between individual characteristics and key outcomes. In addition, Werbel and Johnson [10] suggested that the beliefs and values that shape critical interpersonal interactions in teams will have a critical effect on person-team fit. The conceptualization of person-team fit adopted here includes both of these basic processes: Interdependence and social interactions. The dual nature of this view of fit is similar to that taken by DeRue and Morgeson [19] who simultaneously examined person-role fit (*i.e.*, fit dealing with the team task) and values-based fit (*i.e.*, fit dealing with the social interactions among team members). It is also consistent with enduring perspectives of team effectiveness that include both task and social criteria (e.g., [20]). It is distinct, however, in that the emphasis is on interdependence and social interaction itself, not on another aspect of the team environment that reflects these processes.

One additional distinction that should be noted is between *ability-demand fit* and the form of fit studied here: *Need-supply fit*. Ability-demand fit is the match between an individual’s knowledge, skills and abilities and the requirements of the environment, whereas need-supply fit refers to the alignment of personal needs and the fulfillment of those needs by the environment (e.g., [21]). Across past person-environment fit research, the term “needs” has been applied variously to preferences, personality characteristics, values and individual wants. The present conceptualization of fit as the match between individual preferences for and environmental levels of interdependence and social interaction is illustrated in Figure 1. These two basic dimensions of person-team fit are now described in more detail.

**Figure 1.** A model of person-team fit.

### 2.1. Interdependence in Team Environments

Interdependence has long been deemed the key feature of work performed by teams (e.g., [22]). Interdependence is broadly defined as “the extent to which the organization’s task requires its members to work with one another” ([23], p. 156). Commonly, tasks characterized by higher levels of technological interdependence (*i.e.*, interdependence inherent in the actual process of transforming inputs to output; [24]) are treated more like “teamwork” and less like individual work. At least three other forms of interdependence are also important in team settings. *Goal interdependence* and *feedback interdependence* refer to the interconnections among group members as they pursue group rather than individual goals, and the degree to which the group receives feedback which reflects its performance as a whole [22]. Shea and Guzzo [25] also propose *outcome interdependence*, which refers to the extent to which performance-contingent consequences, such as rewards, are shared by group members, as a fourth form of work interdependence.

Interdependence has not been completely overlooked in prior studies of fit (e.g., [15,26]). However, it has not served as the basis for a direct comparison between team members and their environment. The form of person-team fit proposed here is based on the needs an individual brings to the team environment and the extent to which those needs are satisfied in that context. Of particular interest are individual preferences regarding interdependence. The better the match between a team member’s preferences for task, goal, feedback and outcome interdependence, and the levels of interdependence present in his or her team environment, the better the person-team fit.

### 2.2. Social Interaction in Team Environments

In contrast to the relatively few forms of interdependence discussed above, social interactions in teams can be described along numerous dimensions. For example, social interactions may be based on work-based relationships, friendships or common interests. In addition, such interactions may vary due

to status differences, physical proximity, frequency and duration. Given the multifaceted nature of the team's social environment, one approach to outlining this environment is to do so in terms of the person, as suggested by Schneider [27]. This can be done by considering several well-known individual characteristics related to social interactions. Three such characteristics are included here.

The first individual characteristic related to social interactions is collectivism. Wagner defines *individualism-collectivism* as “an analytical dimension that captures the relative importance individuals accord to personal interests and to shared pursuits” ([28], p. 153). Individualists tend to look after themselves and ignore group interests if they are in conflict with personal desires. In contrast, collectivists are said to place the demands and interests of the group over their own. Similar to a team member's fit with interdependence described above, fit with collectivism refers to the match between individual preferences along this dimension and the nature of the team environment in these same terms.

A second construct that reflects preferences individuals have regarding social interactions is *need for affiliation*. Sometimes referred to as the affiliation motive, need for affiliation is concerned with the desire to establish and maintain positive interpersonal relationships with others [29]. Individuals with high need for affiliation enjoy being with other people, accept people readily, make efforts to have friends, and prefer to perform work with other people (e.g., [30]). A third related construct is termed *sociability*. Sociability is defined as “a tendency to affiliate with others and to prefer being with others to remaining alone” [31]. Team members who exhibit high levels of sociability will favor greater levels of personal interaction within the team.

Person-environment fit research based on individual social characteristics, such as personality or values, is more common than comparable research based on interdependence. However, in these studies fit is usually described as the match between the person's characteristic (e.g., his or her personality) and the prevalence of that same characteristic in the environment (e.g., the personality of other team members). In contrast, under the current approach fit refers to the match between the person's preferences due to the characteristic and the capacity of the environment to support these preferences. For example, person-team fit based on social interactions will depend on whether a team member who wants to engage in interpersonal relationships in the team is presented with such opportunities.

### 3. Consequences of Person-Team Fit

Researchers have studied a wide range of individual consequences across each of the different forms of person-environment fit [4]. One of the more commonly reported effects is a positive impact on individual satisfaction. This outcome is consistent with causal models of satisfaction in which met personal needs are predicted to produce positive emotional states [32]. Team members whose preferences for interdependence and social interaction match the levels of these attributes in their environment are likely to be more satisfied than team members whose preferences are incompatible with their environment. A mismatch of preferences and environmental characteristics means a desired level of interdependence or social interaction is either left unfulfilled or is exceeded. Either scenario is expected to leave the team member unsatisfied. However, satisfaction is a complex phenomenon and person-team fit is not expected to influence each of its numerous facets. Since attitudes are best predicted by factors at the same level of specificity [33] the relevant target of satisfaction due to

person-team fit is the team itself. In particular, better fit is expected to result in higher member satisfaction working in and belonging to the team. Thus,

*Hypothesis 1: Person-team fit will be positively related to satisfaction in the team.*

Commitment refers to an individual's identification with and involvement in a particular social unit [34]. It is manifest in an acceptance of goals and values, a willingness to exert effort, and a desire to maintain membership. Commitment to the team is comparable to commitment to the organization, except the target of the attitude is the team within the larger organization. Research has shown that other forms of person-environment fit have a positive effect on commitment. For instance, O'Reilly, Chatman and Caldwell [35] found that person-organization fit predicted organizational commitment.

Person-team fit is expected to have a similar positive impact on commitment to the team for several reasons. Perhaps the most obvious reason is that team members' desires to remain in the team will increase the more their preferences for interdependence and social interaction match the level of these attributes in the environment. Similarly, when good fit occurs, team members experience greater compatibility with their environment and may in turn identify more strongly with the team.

One additional means by which person-team fit is expected to strengthen commitment is through task interdependence. Morris and Steers [36] found that task interdependence itself was positively related to organizational commitment since it increased employees' awareness of the importance of their own contributions. The assertion here is that the positive impact of interdependence will be even greater when team members' preferred levels of interdependence match those in their environments. By similar reasoning, social interaction alone is likely to increase ties among team members, but these ties are expected to be even more robust given good person-team fit.

*Hypothesis 2: Person-team fit will be positively related to commitment to the team.*

Trust is sometimes defined as a characteristic of social systems that facilitates interpersonal interactions (e.g., [37]). Trust has also been viewed as "a willingness to be vulnerable to the actions of another party" ([38], p. 712) and is often cited as "a hallmark of effective relationships" ([39], p. 445). One mechanism by which person-team fit is expected to positively influence trust is through a reduction of conflict [40]—a key factor that erodes relationships and destroys trust. In contrast, fit has been shown to increase the level of prosocial behaviors [41]—actions that can be the building blocks of trust. The alignment of personal preferences for and existing team levels of interdependence and social interaction may also act to reduce uncertainty about the competence of other team members and may lower defenses that inhibit the development of trust.

*Hypothesis 3: Person-team fit will be positively related to trust in the team.*

Chatman [42] asserts that individuals tend to choose and perform best in situations with which they are most compatible. Although performance is more likely to be associated with ability-demand fit [7] performance effects have also been found for non-ability forms of fit (e.g., [43,14,44]). Team members whose preferences for interdependence and social interaction are met in their environment have at least two advantages over those whose preferences are not met. First, in a process similar to dissonance reduction, mismatched team members are likely to expend cognitive and emotional energy to manage

the difference between what they want their environment to be and what it actually is. In contrast, these resources are available to well-matched team members in their task-related efforts. Second, mismatched team members may feel the need to go outside their team environments to satisfy their preferences. This is more likely the case for team members with insufficient opportunities for social interaction than it is for those with unmet interdependence preferences, as raising the level of interdependence may require engaging in additional work. Time spent away from the team is time that cannot be devoted to task completion. Thus the prediction,

*Hypothesis 4: Person-team fit will be positively related to individual performance.*

#### 4. Method

This study was conducted at the headquarters of a large technology-based engineering and construction firm. The organization was structured along projects, and lead teams comprised of representatives from all the various functional areas in the company were formed to oversee the projects. The work of the project lead teams as a whole encompassed virtually all aspects of designing and constructing manufacturing facilities, making the members' work complex and inherently interdependent. Participants in the study were asked to describe the nature of their project lead teams by selecting from three alternative statements [45]. Nearly 90 percent of subjects described their teams either as "*a group of members working together as a single team*," or "*two or more subgroups of coworkers*." Only 11.4 percent indicated their team was "*a collection of individuals doing their own work*."

##### 4.1. Sample

A total of 243 questionnaires were completed by project lead team members. Given the company's policy, the researcher was not allowed to identify employees. In addition, questions regarding demographic attributes carried a required label of "optional." The final number of usable responses was 209. Within this sample, 184 respondents reported their sex; 11 percent were female. No differences between the mean responses of men and women were observed. Of the 181 employees reporting education, 40.7 percent had an undergraduate degree, 12 percent had a bachelor's degree plus some graduate school, and 26.8 percent had a master's degree or higher. Employees reported being with the organization for an average of 12.8 years ( $n = 183$ ); in their current jobs for an average of 6.1 years ( $n = 166$ ); and members of their current teams for an average of 2.5 years ( $n = 209$ ).

##### 4.2. Measures

Twelve survey items related to interdependence (task, goal, feedback and reward; three items each) came from Campion *et al.* [45], Bretz and Judge [46] and Wageman [47]. Nine items related to social interaction (collectivism, need for affiliation and sociability) came from Cheek and Buss [31], Edwards [48], Jackson [49], Pearce and Gregersen [50] and Wageman [47]. The items taken from these existing scales measured either the person *or* the environment, but not both. Person-environment fit scholars emphasize the need to measure the person and environment along commensurate, or identical, dimensions. Caplan [51] asserts the failure to use commensurate scales prohibits direct and

explicit comparisons between the environment and the person, and seriously undermines the estimation of the interaction between person and environmental variables. This weakness, in turn, reduces the ability to reliably predict consequences of fit. In short, commensurate measurement is required for adequate tests of fit [7]. To ensure commensurate measurement of the person *and* the environment, a parallel set of similarly worded items was created. For example, the item “I do very few activities on my job that are not related to the goals of my team” was selected from Campion *et al.*’s [45] Work Group Characteristics Measure as an assessment of employees’ *perceptions* of goal interdependence in their team environments. The new item “I prefer that most of my activities be related to team goals rather than to individual goals” was then created as a commensurate measure of employees’ *preferences* for goal interdependence. In sum, twelve pairs of items assessed preferences for and perceptions of interdependence, and nine pairs of items assessed preferences for and perceptions of social interaction.

Two items were used to gauge employees’ general satisfaction in their team environment (“Overall, I am very satisfied working on this team,” and “In general, I am very satisfied being a member of this team”;  $\alpha = 0.91$ ). Commitment to the team ( $\alpha = 0.76$ ) was measured with three items from O’Reilly and Chatman [41] that assessed pride in membership and ownership in the team. Trust in the team was measured with three items from Mayer and Davis [52] that tapped comfort in letting other team members take responsibility for critical work as well as confidence in their knowledge and skill levels. Three additional items measured trust, ability to rely on other team members and comfort in depending on them to complete the team’s work. The internal reliability of these six items taken together was robust ( $\alpha = 0.87$ ). Employees reported perceptions of their own performance by answering three items measuring efficiency, effectiveness, and general performance (“I am very efficient at getting things done quickly,” “I am very effective at getting things done” and “I think I perform my job very well”;  $\alpha = 0.74$ ).

## 5. Results

Since various new items were included in the survey as measures of individual preferences or environmental characteristics, a factor analysis was conducted to identify the structure of the data. To facilitate commensurate measurement and interpretation of the factors, interdependence and social interaction items were examined separately, as were preferences and environmental characteristics. As a first step in the factor analysis, the anti-image correlation matrix was examined for items demonstrating a low measure of sampling adequacy (MSA; [53,54]). As is common, items with an MSA of less than 0.60 were deleted from further analysis [55,56]. Next, a principal components analysis was performed, allowing all factors with an eigenvalue of 1.00 or greater to be extracted. This number of factors was then compared to the number of factors suggested by a scree plot. In subsequent steps, maximum likelihood extractions with orthogonal (varimax) and oblique (direct oblimin) rotations were performed. In these latter steps, the results of extractions in which the number of factors was constrained to the number suggested by the scree plot were compared to the results of the unconstrained extractions.

Only items that loaded positively on a factor above .40 were retained in the analysis. Interpretation of the resulting factors is relatively straightforward. The first factor from the analysis of the

preferences for interdependence represents several related attitudes towards individual, independent work. For example, the items loading on that factor require subjects to indicate preferences for receiving individual feedback, setting and pursuing individual goals, and having all the information necessary to complete a job alone (*i.e.*, task independence). Only two items loaded on the second factor reflecting preferences for interdependence, thus this factor was not included in the regression analysis.

Since only select items reflecting team members' preferences were retained in the analysis described above, only items measuring the corresponding aspects of the environment would be relevant in the ultimate calculation of person-team fit. For example, if an item that asks employees how much they prefer interdependent tasks were retained, a commensurate item that assesses the prevalence of interdependent tasks in their work environments would also be included. However, the selection of the corresponding items would be more appropriately performed objectively through a factor analysis than by simple adopting the relevant items. Such an analysis revealed a structure in the environmental measures that was commensurate to the individual preferences. In other words, factor 1 of the environmental items and factor 1 of the individual preference items capture the same content dimensions.

A similar analysis of the social interaction items was conducted, and a two-factor solution also emerged. Again, the analysis revealed a commensurate structure for both the preference and the environmental items. Factor 1 of the social interaction items reflects preferences for working with other people. Factor 2 represents a broader desire to engage in social interactions, but not specifically at work. For this reason, only the work-related factors of the social interaction items (preferences and perceptions of the team environment) were retained in the analysis. The final factor structures of the survey items used to reflect preferences for and environmental levels of interdependence and social interaction are presented in Appendix A and Appendix B.

To incorporate the results of the factor analysis in tests of the hypotheses, the mean of the items loading on each factor was calculated. The Cronbach's alpha internal reliabilities of the preferences for interdependence, assessment of interdependence in the team environment, preferences for social interaction, and assessment of social interaction in the team environment were 0.70, 0.72, 0.84 and 0.75 respectively. Descriptive statistics for all the variables included in the study are displayed in Table 1.

The hypotheses were tested using hierarchical linear regression analyses. In this approach team tenure was entered in step one as a control variable. No *a priori* hypotheses were made regarding the effects of team tenure, but it was included to control for its potential influence on the dependent variables. For instance, long-tenured employees have been shown to report higher levels of satisfaction [57].

In step two, the preference and environment measures were added, and in step three the interactions between the preference and the environment measures were included. To reduce the problems of multicollinearity in the analysis, the variables were first centered, as recommended by Aiken and West [58]. The interaction terms represent the fit between individual preferences and the fulfillment of those preferences in the team environment. This approach to measuring fit is consistent with prior research reported by Kristof [8], Venkatraman [59], and others. In this regard, the hypotheses received

support when one or more of the interaction terms were significant. This procedure was followed to test each of the fit hypotheses in the study. The results of these tests are shown in Table 2 and Table 3.

Interdependence based fit was significantly related to satisfaction in the team ( $t = 2.28, p < 0.05$ ) but social interaction based fit was not, providing partial support for hypothesis 1. Social interaction based fit was significantly related to commitment to the team ( $t = 2.72, p < 0.01$ ), trust ( $t = 3.45, p < 0.01$ ) and self-rated performance ( $t = 3.21, p < 0.01$ ); interdependence based fit was not significantly related to these outcomes, providing partial support of hypotheses 2, 3 and 4.

**Table 1.** Means, standard deviations and correlations.

	Mean	SD	1	2	3	4	5	6	7	8	9	10
<i>Dependent Variables</i>												
1. Satisfaction in the team	3.97	.70										
2. Commitment to the team	3.78	.64	.72**									
3. Trust in the team	3.99	.53	.66**	.64**								
4. Self-rated performance	4.10	.50	.26**	.32**	.20**							
<i>Preferences and Environment</i>												
5. Pref. for interdependence	3.14	.50	.12	.27**	.21**	.00						
6. Interdependence environ.	3.28	.53	.28**	.40**	.23**	.10	.40**					
7. Pref. for social interaction	3.94	.63	.19**	.34**	.34**	.08	.56**	.29**				
8. Social interaction environ.	3.88	.55	.20**	.38**	.35**	.12	.45**	.55**	.62**			
<i>Interaction Terms</i>												
9. Interaction 5 x 6	10.43	2.85	.25**	.41**	.27**	.07	.84**	.82**	.51**	.59**		
10. Interaction 7 x 8	15.50	4.04	.24**	.42**	.41**	.14*	.57**	.47**	.91**	.88**	.62**	
<i>Control Variable</i>												
11. Team Tenure	2.51	3.56	.16*	.27**	.16*	.08	.08	.14*	.05	.08	.14*	.08

N = 209

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 2.** Results of hierarchical moderated regression analyses: satisfaction in the team and commitment to the team.

Independent Variable	DV = Satisfaction in the Team (H1)			DV = Commitment to the Team (H2)		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Team tenure	.16*	.12	.12	.27**	.21**	.20**
Interdependence preferences		-.09	-.12		-.01	-.01
Interdependence environment		.26**	.25**		.26**	.23**
Social interaction preferences		.17	.18		.19*	.22*
Social interaction environment		-.01	.02		.12	.16
Interdependence interaction term				.16*		.04
Social Interaction interaction term				.08		.18**
$\Delta R^2$	.03	.09	.04	.07	.19	.03
$\Delta F$	5.51*	5.00**	4.18*	16.06**	13.33**	4.73**
Adjusted $R^2$	.02	.09	.12	.07	.25	.27

**Table 3.** Results of hierarchical moderated regression analyses: team trust and self-rated performance.

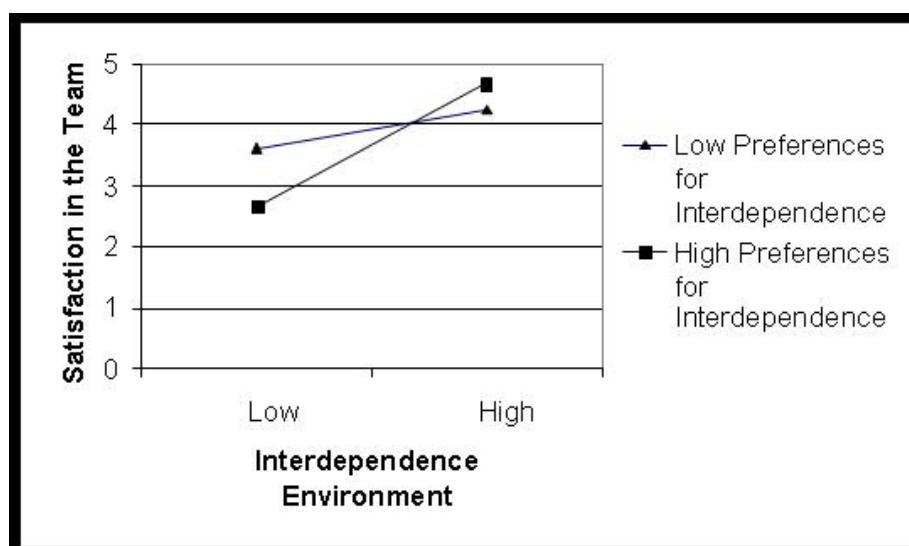
Independent Variable	DV = Team Trust (H3)			DV = Self-rated Performance (H4)		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Team tenure	.16*	.13	.11	.08	.07	.05
Interdependence preferences		-.03	-.02		-.11	-.13
Social interaction preferences		.05	.02		.06	.02
Interdependence environment		.21*	.25**		.06	.10
Social interaction environment		.20*	.25**		.10	.16
Interdependence interaction term			.01			.12
Social Interaction interaction term			.24**			.23**
$\Delta R^2$	.03	.14	.05	.01	.02	.08
$\Delta F$	5.36*	8.53**	6.63**	1.33	1.16	8.51**
Adjusted $R^2$	.02	.15	.19	.00	.01	.07

N = 209, \* p &lt; .05, \*\* p &lt; .01

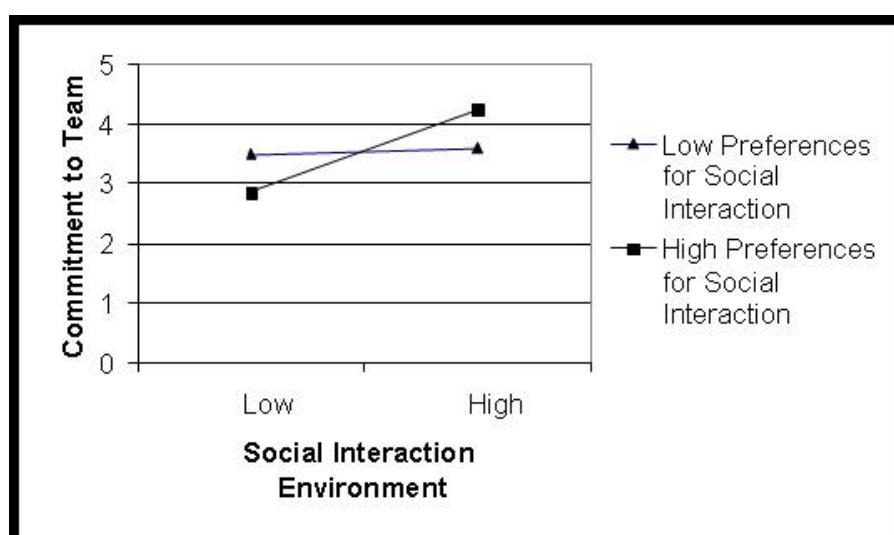
Standardized betas are provided

Figures 2 through 5 illustrate the nature of these significant interaction effects (due to space limitations only the results of one regression analysis is shown). The graphs (based on the mean plus or minus one standard deviation) show that subjects with high preferences for interdependence (or social interaction) are more satisfied, are more committed, experience more trust and rate their own performance at a higher level in environments characterized by high interdependence (or social interaction) than they are or do in environments characterized by low levels of these characteristics. This is in contrast to the line depicting subjects with low preferences for interdependence (or social interaction).

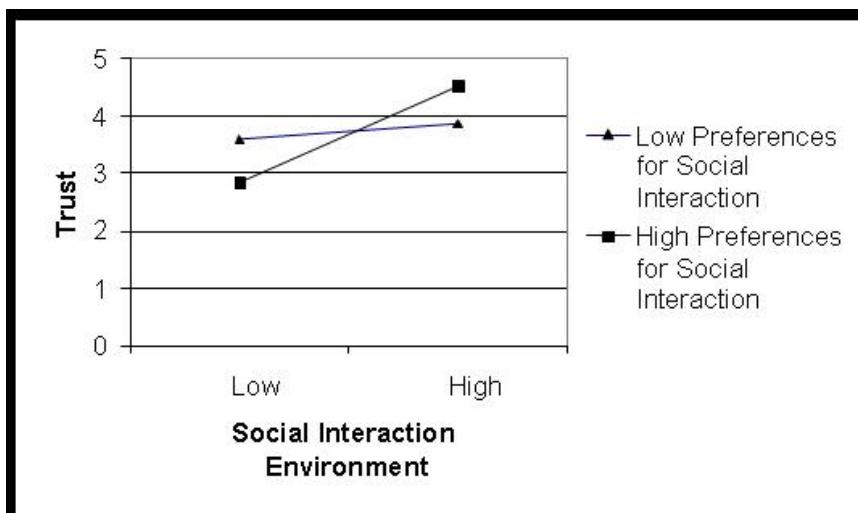
**Figure 2.** The interactive effect of preferences for interdependence and the interdependence environment on satisfaction in the team.



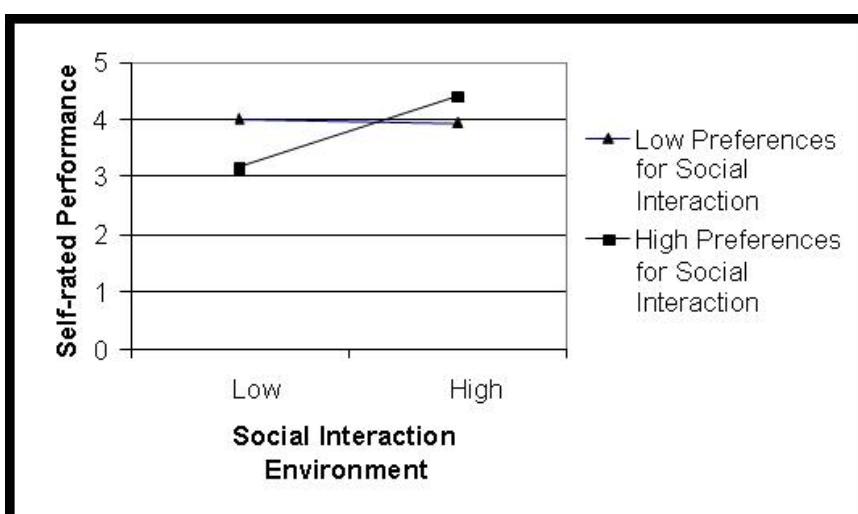
**Figure 3.** The interactive effect of preferences for social interaction and the social interaction environment on commitment to the team.



**Figure 4.** The interactive effect of preferences for social interaction and the social interaction environment on trust.



**Figure 5.** The interactive effect of preferences for social interaction and the social interaction environment on self-rated performance.



## 6. Discussion

Team environments combine both the interpersonal nature of the working unit (*i.e.*, social interaction) and the way the work itself is performed (*i.e.*, interdependence). Person-team fit was defined here as the match between a team member's personal preferences for these characteristics and their corresponding levels in the team environment. The results of this study demonstrate that this form of fit has an impact on important individual outcomes. Fit based on interdependence influenced satisfaction and fit based on social interaction affected commitment, trust and performance.

This study adds to a small, but growing body of literature on fit in groups and teams. The basic findings here are consistent with the widely-shared conclusion of person-environment fit research: Good fit leads to positive outcomes. The current study extends this work, however, by emphasizing the fundamental nature of two processes in the team environment rather than the aggregate characteristics of other team members or attributes of the environment that simply reflected these processes.

Compared to past conceptualizations of person-team or person-group fit, this focus on the core attributes of team environments may suggest a more elemental form of fit—one that potentially exists separately from fit with other individuals or even with a particular team. Certainly every team is unique in one way or another, but a person's fit with the generic qualities of interdependence and social interaction—which are inherent to some degree in essentially all teams—may transcend a specific work unit. In this sense, fit with these common qualities of teams might be referred to as person-*teamwork* fit.

Although fit with interdependence and fit with social interaction were assessed simultaneously in this study, this is not to imply that preferences regarding these attributes are inherently related. An individual may have strong preferences for one or the other, for both or for neither. The separate nature of these two characteristics becomes even more obvious when considering such fit from an ability-demand perspective—skill at performing interdependent work does not necessarily imply skill at engaging in social interaction (or vice versa). Nonetheless, individuals who fit best in teams will be those who demonstrate compatibility with interdependence and social interaction, on a need-supply and an ability-demand basis.

### 6.1. Strengths and Limitations

In this study, commensurate measures of the person and the environment were adopted. According to some scholars, commensurate measurement is a requirement (e.g., [60]). This approach has the advantage of allowing a more precise examination of fit since the person and the environment are measured in the same terms. However, the development of commensurate scales is not without its challenges. For example, commensurate measures often come with lower scale reliabilities. In the present study the internal consistency of the scale measuring the interdependence environment came close to the conventional cutoff of 0.70. This limitation is evident other studies as well. For instance, Puccio *et al.* [61] created commensurate scales based on well-established measures, but these displayed alpha coefficients between 0.59 and 0.79. Meyer *et al.* [60] developed fifteen commensurate measures with reliabilities between 0.62 and 0.85, with nearly half exhibiting alpha coefficients below 0.70. Similarly, Sutton and Griffin [62] developed commensurate measures related to psychological contracts that displayed reliabilities between 0.49 and 0.86. Low reliability can reduce the magnitude of correlations, but it can not cause them to be spuriously high [63], so these results may be understated due to the commensurate scales used.

The sample of employees who participated in this study included well educated, experienced members of intact, cross-functional teams. The authentic nature of these work teams support the generalizability of the findings reported here to teams with similar characteristics. However, this strength is tempered by the target organization's restriction on data collection to the administration of a single survey which limited data to self-reported perceptions. Ideally, external measures of some of the variables, in particular performance (e.g., productivity, supervisor and peer ratings), would have been obtained. Common method variance [64] may have been a factor, but Harman's one-factor test was conducted, and the items did not load on a single factor. This result does not completely rule out the possibility of common method variance, but subjects had little or no motivation to misrepresent their answers. Furthermore, fit calculated indirectly from separate assessments of the person and the

environment, as adopted in this study, is less prone to common method bias than fit measured by a person's direct assessment of the compatibility between the person and the environment [5]. An indirect measure of fit avoids confounding person and environment characteristics and makes interpretation less ambiguous [7].

### 6.2. Implications for Future Research

Person-group fit has been shown to be separate from other forms of fit (such as person-organization and person-job fit) and have independent effects on key outcomes [65,17,44]. As such, the continued study of this form of fit is merited. In the current research, two main dimensions of fit were assessed using a relatively modest array of measures. This investigation, of course, did not fully capture the rich intricacy of person-team fit. In future research, fit can be conceptualized in new ways and additional facets of the person and the environment can be examined. In addition, different outcomes can be assessed; in particular, outcomes unique to group settings, such as team development, group decision making, group norms, and conflict within and between teams. Moreover, much remains to be learned about ability-demand and supplementary forms of person-team fit.

Another area that deserves additional research attention is fit among multiple levels of analysis. Hollenbeck *et al.* [15] found that the fit between the team and its environment (*i.e.*, external fit) is important in addition to the fit between the team and its own members (*i.e.*, internal fit). Others have shown that individual fit with team-level attributes has important consequences (e.g., [66]). Since teams are associated with the characteristics of individual members singly (e.g., a member's personal values), those aggregated from individual members (e.g., the mean levels of a personality trait), those of the team itself (e.g., the team's autonomy to self-manage), and those of the team's external environment (e.g., collaboration with other teams), a wide variety of multilevel issues can be explored.

Additional possibilities for future research come from the numerous types of teams employed in today's organizations. For example, fit may have a different meaning and impact in traditional, face-to-face teams than it does in virtual teams [67]. Many teams form and disband quickly, and others are characterized by high turnover, which raises questions regarding the development and duration of fit. It is important to note that as presented here, fit has been linked only to positive outcomes. Levels of fit that lead to excessive homogeneity in teams can result in negative consequences as well, such as the inability to adapt and change [68]. The current research has extended our understanding of fit in teams, but undoubtedly, myriad questions are yet to be addressed.

### 6.3. Implications for Leaders and Managers

Organizations are increasingly moving away from an exclusive focus on individual job performance towards an emphasis on team-based efforts [69]. This change places a higher proportion of employees in team settings and makes an understanding of how employees fit in teams even more important. At the same time, matching people with their environments continues to be a challenge for employers [70]. As shown here, this match can affect factors that are critical to effective team leadership and management, such as satisfaction, trust, commitment, and performance.

The research presented here results in two basic implications that are intended to help leaders and managers. The first is to consider potential person-team fit when making human resource management

decisions. Potential fit could be assessed as part of the recruiting and selection process for new members of the organization, as well as when selecting members for teams from existing employees. Fit could also be re-assessed periodically at critical points, such as before a team begins a new project.

The second implication of this research is to consider fit as part of the job design process. Similar to personality and values, the individual preferences regarding team environments described in this research are expected to be fairly stable and difficult to change. In the instance of poor person-team fit, these relatively set individual characteristics leave managers with the choice of replacing a team member or adjusting the environment to better suit his or her needs. Multiple roles exist within teams and these differ in their levels of interdependence and social interaction. Altering responsibilities within the team may enhance the match between employees and their perceived roles (*i.e.*, person-role fit, [19]) and create improved outcomes.

Either of these approaches—selecting suitable team members or creating suitable team environments—requires a sound understanding of the person *and* the environment, and should be approached cautiously. Changing one without an accurate sense of the other is unlikely to improve fit. Leaders and managers who take a careful, strategic approach to improving fit may create competitive advantages for their firms [71].

## Acknowledgements

This research was funded in part by a doctoral dissertation grant from the Harvey Wilson/Society for Human Resource Management Foundation. The author expresses special thanks to Ricky W. Griffin for his valuable assistance in the initial stages of this research.

## References

1. O'Toole, J.; Lawler III, E.E. *The New American Workplace*; Palgrave Macmillan: New York, NY, USA, 2006.
2. Lewin, K. *Dynamic Theory of Personality*; McGraw-Hill: New York, NY, USA, 1935.
3. Schneider, B. Interactional psychology and organizational behavior. In *Research in Organizational Behavior*; Staw, B.M., Cummings, L.L., Eds.; JAI Press: Greenwich, CT, USA, 1983; Volume 5, pp. 1-31.
4. Kristof-Brown, A.L.; Zimmerman, R.D.; Johnson, E.C. Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Pers. Psychol.* **2005**, *58*, 281-342.
5. French, J.R.P.; Rogers, Jr., W.; Cobb, S. Adjustment as person-environment fit. In *Coping and Adaptation*; Coelho, G.V., Hamburg, D.A., Adams, J.E., Eds.; Basic Books: New York, NY, USA, 1974; pp. 316-333.
6. Holland, J.L. *Making Vocational Choices: A Theory of Careers*; Prentice-Hall: Englewood Cliffs, NJ, USA, 1985.
7. Edwards, J.R. Person-job fit: A conceptual integration, literature review, and methodological critique. In *International Review of Industrial and Organizational Psychology*; Cooper, C.L., Robertson, I.T., Eds.; John Wiley & Sons Ltd: New York, NY, USA, 1991; Volume 6, pp. 283-357.

8. Kristof, A.L. Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Pers. Psychol.* **1996**, *49*, 1-49.
9. Witt, L.A. Enhancing goal congruence: A solution to organizational politics. *J. Appl. Psychol.* **1998**, *83*, 666-674.
10. Werbel, J.D.; Johnson, D.J. The use of person-group fit for employment selection: A missing link in person-environment fit. *Hum. Resour. Manage.* **2001**, *40*, 227-240.
11. Ferris, G.R.; Youngblood, S.A.; Yates, V.L. Personality, training performance, and withdrawal: A test of the person-group fit hypothesis for organizational newcomers. *J. Vocat. Behav.* **1985**, *27*, 377-388.
12. Vancouver, J.B.; Millsap, R.E.; Peters, P.A. Multilevel analysis of organizational goal congruence. *J. Appl. Psychol.* **1994**, *79*, 666-679.
13. Adkins, C.L.; Ravlin, E.C.; Meglino, B.M. Value congruence between co-workers and its relationship to work outcomes. *Group Organ. Manage.* **1996**, *21*, 439-460.
14. Kristof-Brown, A.L.; Stevens, C.K. Goal congruence in project teams: Does the fit between members' personal mastery and performance goals matter? *J. Appl. Psychol.* **2001**, *86*, 1083-1095.
15. Hollenbeck, J.R.; Moon, H.; Ellis, A.P.J.; West, B.J.; Ilgen, D.R.; Sheppard, L.; Porter, C.O.L.H.; Wagner, J.A., III. Structural contingency theory and individual differences: Examination of external and internal person-team fit. *J. Appl. Psychol.* **2002**, *87*, 599-606.
16. Burch, G.St.J.; Anderson, N. Measuring person-team fit: Development and validation of the team selection inventory. *J. Manage. Psychol.* **2004**, *19*, 406-426.
17. Adkins, B.; Caldwell, D. Firm or subgroup culture: Where does fitting in matter most? *J. Organ. Behav.* **2004**, *25*, 969-978.
18. Hollenbeck, J.R. A structural approach to external and internal person-team fit. *Appl. Psychol. Int. Rev.* **2000**, *49*, 534-549.
19. DeRue, D.S.; Morgeson, F.P. Stability and change in person-team and person-role fit over time: The effects of growth satisfaction, performance, and general self-efficacy. *J. Appl. Psychol.* **2007**, *92*, 1242-1253.
20. Hackman, J.R. The design of work teams. In *Handbook of Organizational Behavior*; Lorsch, J.W., Compiler; Prentice-Hall, Inc.: Englewood Cliffs, NJ, USA, 1987.
21. Conway, T.L.; Vickers, R.R.; French, J.R.P., Jr. An application of person-environment fit theory: Perceived *versus* desired control. *J. Soc. Issues* **1992**, *48*, 95-107.
22. Saavedra, R.; Early, P.C.; Van Dyne, L. Complex interdependence in task-performing groups. *J. Appl. Psychol.* **1993**, *78*, 61-72.
23. Cheng, J.L.C. Interdependence and coordination in organizations: A role-system analysis. *Acad. Manage. J.* **1983**, *26*, 156-162.
24. Thompson, J.D. *Organizations in Action*; McGraw-Hill: New York, NY, USA, 1967.
25. Shea, G.P.; Guzzo, R.A. Groups as human resources. In *Research in Personnel and Human Resources Management*; Rowland, K., Ferris, G., Eds.; JAI Press: Greenwich, CT, USA, 1987; Volume 5, pp. 323-356.
26. Van Vijfeijken, H.; Kleingeld, A.; Van Tuijl, H.; Algera, J.A.; Thierry, H. Interdependence and fit in team performance management. *Pers. Rev.* **2006**, *35*, 98-117.

27. Schneider, B. E = f(P,B): The road to a radical approach to person-environment fit. *J. Vocat. Behav.* **1987**, *31*, 222-230.
28. Wagner, J.A. Studies of individualism-collectivism: Concept and measure. *Group Organ. Stud.* **1995**, *11*, 280-303.
29. McClelland, D.C. *Human Motivation*; Scott Foresman: Glenview, IL, USA, 1985.
30. Steers, R.M.; Braunstein, D.N. A behaviorally-based measure of manifest needs in work settings. *J. Vocat. Behav.* **1976**, *9*, 251-266.
31. Cheek, J.M.; Buss, A.H. Shyness and sociability. *J. Pers. Soc. Psychol.* **1981**, *41*, 330-339.
32. Locke, E.A. The nature and causes of job satisfaction. In *Handbook of Industrial and Organizational Psychology*; Dunnette, M., Eds.; Rand McNally: Chicago, IL, USA, 1976; pp. 1297-1350.
33. Fishbein, M.; Ajzen, I. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*; Addison-Wesley: Reading, MA, USA, 1975.
34. Mowday, R.; Steers, R.; Porter, L. *Organizational Linkages: The Psychology of Commitment, Absenteeism, and Turnover*; Academic Press: New York, NY, USA, 1979.
35. O'Reilly, C.A., III.; Chatman, J.; Caldwell, D.F. People and organizational culture: A profile comparison approach to assessing person-organization fit. *Acad. Manage. J.* **1991**, *34*, 487-516.
36. Morris, J.H.; Steers, R.M. Structural influences in organizational commitment. *J. Vocat. Behav.* **1980**, *17*, 50-57.
37. Lewis, J.; Weigert, A. Trust as a social reality. *Soc. Forces* **1985**, *63*, 967-985.
38. Mayer, R.C.; Davis, J.H.; Schoorman, F.D. An integrative model of organizational trust. *Acad. Manage. Rev.* **1995**, *20*, 709-734.
39. Dirks, K.T. The effects of interpersonal trust on work group performance. *J. Appl. Psychol.* **1999**, *84*, 445-455.
40. Ravlin, E.C.; Ritchie, C.M. Perceived and actual organizational fit: Multiple influences on attitudes. *J. Manage. Issues* **2006**, *18*, 175-192.
41. O'Reilly, C.A., III.; Chatman, J. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization of prosocial behavior. *J. Appl. Psychol.* **1986**, *71*, 492-499.
42. Chatman, J.A. Improving interactional organizational research: A model of person-organization fit. *Acad. Manage. Rev.* **1989**, *14*, 333-349.
43. Goodman, S.A.; Svyantek, D.J. Person-organization fit and contextual performance: Do shared values matter? *J. Vocat. Behav.* **1999**, *55*, 254-275.
44. Elfenbein, H.A.; O'Reilly III, C.A. Fitting in: The effects of relational demography and person-culture fit on group process and performance. *Group Organ. Manage.* **2007**, *32*, 109-142.
45. Campion, M.A.; Papper, E.M.; Medsker, G.J. Relations between work group characteristics and effectiveness: A replication and extension. *Pers. Psychol.* **1996**, *49*, 429-452.
46. Bretz, R.D.; Judge, T.A. Person-organization fit and the theory of work adjustment: Implications for satisfaction, tenure, and career success. *J. Vocat. Behav.* **1994**, *44*, 32-54.
47. Wageman, R. Interdependence and group effectiveness. *Admin. Sci. Quart.* **1995**, *40*, 145-180.
48. Edwards, A.L. *Edwards Personal Preference Schedule*; The Psychological Corporation: New York, NY, USA, 1953.

49. Jackson, D.N. *Personality Research Form Manual*; Research Psychologists Press, Inc.: Foshen, NY, USA, 1974.
50. Pearce, J.L.; Gregersen, H.B. Task interdependence and extrarole behavior: A test of the mediating effects of felt responsibility. *J. Appl. Psychol.* **1991**, *76*, 838-844.
51. Caplan, R.D. Person-environment fit theory and organizations: Commensurate dimensions, time perspectives, and mechanisms. *J. Vocat. Behav.* **1987**, *31*, 248-267.
52. Mayer, R.C.; Davis, J.H. The effect of the performance appraisal system on trust for management: A field quasi-experiment. *J. Appl. Psychol.* **1999**, *84*, 123-136.
53. Kaiser, H.F. An index of factorial simplicity. *Psychometrika* **1974**, *39*, 31-36.
54. Stewart, D.W. The application and misapplication of factor analysis in marketing research. *J. Marketing Res.* **1981**, *18*, 51-62.
55. Kivimaki, M.; Kuk, G.; Elovainio, M.; Thomson, L.; Kalliomaki-Levanto, T.; Heikkila, A. The Team Climate Inventory (TCI)—Four or five factors? Testing the structure of TCI in samples of low and high complexity jobs. *J. Occup. Organ. Psych.* **1997**, *70*, 375-390.
56. Mishra, D.P.; Heide, J.B.; Cort, S.G. Information asymmetry and levels of agency relationships. *J. Marketing Res.* **1998**, *35*, 277-296.
57. Bedeian, A.G.; Ferris, G.R.; Kacmar, K.M. Age, tenure, and job satisfaction: A tale of two perspectives. *J. Vocat. Behav.* **1992**, *40*, 33-48.
58. Aiken, L.S.; West, S.G. *Multiple Regression: Testing and Interpreting Interactions*; Sage: Newbury Park, CA, USA, 1991.
59. Venkatraman, N. The concept of fit in strategy research: Toward verbal and statistical correspondence. *Acad. Manage. Rev.* **1989**, *14*, 423-444.
60. Meyer, J.P.; Irving, P.G.; Allen, N.J. Examination of the combined effects of work values and early work experiences on organizational commitment. *J. Organ. Behav.* **1998**, *19*, 29-52.
61. Puccio, G.J.; Talbot, R.J.; Joniak, A.J. Person-environment fit: Examining the use of commensurate scales. *Psychol. Rep.* **1995**, *76*, 931-938.
62. Sutton, G.; Griffin, M.A. Integrating expectations, experiences, and psychological contract violations: A longitudinal study of new professionals. *J. Occup. Organ. Psych.* **2004**, *77*, 493-514.
63. Cohen, J.; Cohen, P. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, 2nd ed.; Lawrence Erlbaum Associates: Hillsdale, NJ, USA, 1983.
64. Podsakoff, P.M.; Organ, D.W. Self-reports in organizational research: Problems and prospects. *J. Manage.* **1986**, *12*, 531-544.
65. Kristof-Brown, A.L.; Colbert, A.E.; Jansen, K.J. A policy-capturing study of the simultaneous effects of fit with jobs, groups and organizations. *J. Appl. Psychol.* **2002**, *87*, 985-993.
66. Molleman, E.; Nauta, A.; Jehn, K.A. Person-job fit applied to teamwork: A multilevel approach. *Small Gr. Res.* **2004**, *35*, 515-539.
67. Shin, Y. A person-environment fit model for virtual organizations. *J. Manage.* **2004**, *30*, 725-743.
68. Schneider, B.; Goldstein, H.W.; Smith, D.B. The ASA framework: An update. *Pers. Psychol.* **1995**, *48*, 747-773.
69. Gully, S.M.; Incalcaterra, K.A.; Joshi, A.; Beaubie, J.M. A meta-analysis of team-efficacy, potency, and performance: Interdependence and level of analysis as moderators of observed relationships. *J. Appl. Psychol.* **2002**, *87*, 819-832.

70. Kalleberg, A.L. The mismatched worker: When people don't fit their jobs. *Acad. Manage. Perspect.* **2008**, *22*, 24-40.
71. Werbel, J.D.; DeMarie, S.M. Aligning strategic human resource management and person-environment fit. *Hum. Resour. Manage. R.* **2005**, *15*, 247-262.

## Appendix A

### Factor Loadings of Commensurate Interdependence Items

<i>Preferences for Interdependence</i>		<i>Interdependence Environment</i>	
I prefer that feedback about how well I am doing my job come primarily from information about how well the entire team is doing.	.45	Feedback about how well I am doing my job comes primarily from information about how well the entire team is doing.	.46
I prefer that most of my activities be related to team goals rather than to individual goals.	.51	I do very few activities on my job that are <i>not</i> related to the goals of my team.	.40
I like my performance evaluation to reflect my own performance, <i>not</i> my team's performance. (reverse scored)	.47	My performance evaluation is <i>not</i> influenced by how well my team performs. (reverse scored)	.63
I like my work goals to come directly from the goals of my team.	.53	In my work, individual goals are considered more important than team goals. (reverse scored)	.39
I like work where everyone must do his or her part to finish the job.	.43	My work is not done until everyone in my team has done his or her part.	.49
I like the rewards I receive from my job (for example, pay, promotion, etc.) to be based on my individual performance, <i>not</i> the team's performance. (reverse scored)	.42	The rewards I receive from my job (for example, pay, promotion, etc.) are based on my individual performance, not the team's performance. (reverse scored)	.43
To me, individual goals are more important than team goals. (reverse scored)	.40	My work goals come directly from the goals of my team.	.47

## Appendix B

### Factor Loadings of Commensurate Social Interdependence Items

<i>Preferences for Social Interaction</i>		<i>Social Interaction Environment</i>	
To me, working with a team is better than working alone.	.89	In my job, working with a team is considered better than working alone.	.63
I prefer to work with others in a team rather than working alone.	.79	I do my work with others in the team rather than working alone.	.71
Given the choice, I would rather do a job where I can work alone than do a job where I have to work with others in a team. (reverse scored)	.67	I can do my job in this team alone rather than working with other team members. (reverse scored)	.66
I prefer a job that allows me to work closely with other people.	.60	I work closely with other people on my job.	.62

© 2012 by Chantal Blouin; licensee MDPI, Basel, Switzerland. This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).