The structure of Belbin’s team roles

S. G. Fisher, T. A. Hunter and W. D. K. Macrosson*

University of Strathclyde, Glasgow G4 0LN, Scotland

Belbin’s original management team model requires the presence of eight individuals, each of whom shows a facility for a particular role. Because many teams in industry have fewer than eight members, the issue of secondary team roles is important. A study was undertaken of data collected from UK managers (N = 1796) which showed that team roles fall into two general categories and which we labelled ‘task’ and ‘relationship’. These categories, which reveal the likely secondary team role for any given individual, were also shown to predict the degree of harmony and productiveness of dyads within a given team.

Belbin’s management team model in its earlier form (Belbin, 1981) described the ideal team as a group of individuals who could fulfil the eight, and later (Belbin, 1993), nine team roles which he had identified. He also suggested (Belbin, 1981, pp. 116) that ‘a team of six ... was found ... to be the most suitable for enabling a management team to tackle a complex problem’, a proposal which implied that some team members would need to operate in more than one role. How difficult it might be for team members to operate in more than one role was addressed by Belbin (1981, p. 115) when he reported that he had ‘observed that most competent managers seem to be able to function well in both a primary and secondary team role’. A question arising from this observation is ‘Do any sets of management team roles frequently occur together, and, if so, does this indicate some underlying construct which, perhaps, could be identified?’ Belbin (1981, p. 140) gave some pointers on this issue when he stated that the ‘shaper’ and ‘team worker’ were an ‘unlikely ... combination’, but implied that ‘chairman’ and ‘team worker’, ‘plant’ and ‘monitor evaluator’, and ‘team worker’ and ‘company worker’ were combinations which would, probably, be found together. His pointers were few and tentative, but we suspected that some basic principle does exist which unifies the team role model, and that such a principle could be identified. Should this generality be isolated it would enable practitioners to make better predictions as to the likely secondary team roles their team members may adopt.

Method

The data used for this study was generously made available to the authors by a test publishing house (see Acknowledgements) and has been described in greater detail elsewhere (Bartram, 1992). The

*Requests for reprints should be addressed to Professor W. D. K. Macrosson, Faculty of Business, University of Strathclyde, 100 Cathedral Street, Glasgow G4 0LN, Scotland.
Table 1. Optimally scaled disparities for Belbin team roles

<table>
<thead>
<tr>
<th></th>
<th>CH</th>
<th>TW</th>
<th>CW</th>
<th>RI</th>
<th>PL</th>
<th>ME</th>
<th>CF</th>
</tr>
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<tr>
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<tr>
<td>TW</td>
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<td>1.8</td>
<td></td>
<td>2.7</td>
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</tr>
<tr>
<td>CW</td>
<td>1.6</td>
<td>2.1</td>
<td>2.6</td>
<td>2.6</td>
<td>2.9</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>RI</td>
<td>2.6</td>
<td>2.8</td>
<td>2.9</td>
<td>3.8</td>
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<td>2.3</td>
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<td>PL</td>
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<td>2.9</td>
<td>2.3</td>
<td>3.8</td>
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<tr>
<td>ME</td>
<td>3.0</td>
<td>3.1</td>
<td>2.4</td>
<td>4.1</td>
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<td>2.8</td>
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</tbody>
</table>

Key. CH = Chairman; TW = team worker; CW = company worker; RI = resource investigator; PL = plant; ME = monitor evaluator; CF = completer finisher; SH = shaper.

Subjects comprised 1441 (age \( M = 37.5, \ SD = 11.4, \ N = 1108 \)) male and 355 female managers (age \( M = 33.29, \ SD = 12.9, \ N = 245 \)) who all completed Cattell’s 16PF Personality Questionnaire (Form A) which was then used to give Belbin team role profiles using standard procedures (Dulewicz, 1995; Fisher & Macrosson, 1995; Life, 1993; Mottram, 1988). Classical multidimensional scaling (one matrix, Euclidian model), using SPSS for Windows, Release 6.0 (Norusis, 1993), was performed on the team role ten scores to calculate the dissimilarities between the Belbin team roles. One-, two- and three-dimensional solutions were calculated along with the respective measures (Young’s S-stress and RSQ values) of goodness of fit.

Results

In the classical multidimensional scaling procedure the three-dimensional model was judged to provide the best fit (stress = 0.07; RSQ = 0.97). A scatter plot of linear fit of the Euclidean distance model confirmed the appropriateness of the three-dimensional solution for the data. The optimally scaled disparities which show the minimum distances between the team roles are given in Table 1. To help visualize the distances between the team roles, a three-dimensional representation, shown in Fig. 1, was drawn using AUTOCAD 12. The viewing direction along the (111) plane, selected in Fig. 1 for displaying the disparities, highlights the two groupings into which the team roles fall.

Discussion

Groupings

The result of the multidimensional scaling analysis indicated that there were two major groupings underlying the Belbin (1981) team role model. The first of these clustered the roles of chairman, team worker, resource investigator and company worker together and, based on Belbin’s descriptions of the roles, appeared to us to have a common dimension of ‘relationship’. Chairman, team worker and resource investigator are good communicators, the chairman knowing how to use the team’s
combined human resources, the team worker having a strong interest in people, and the resource investigator developing wide networks of external contacts. Somewhat more difficult to envisage as a 'relationship' team role was that of company worker. Fortunately, Belbin (1981) described the company worker as an individual who not only did or arranged things, but also, in behavioural terms, worked for the company rather than in pursuit of self-interest. Such individuals (Belbin, 1981, p. 66) 'accept and look for goals in work which become, as it were, part of the moral order'. This acceptance of a moral order we interpreted as likely to signify a respect for other people, and their values and aims, in the workplace; in other words, interpersonal relationships are more important to the company worker than might appear at first
inspection. Furthermore, Belbin (1993, p. 66) describes the company worker as working, ‘well with a broad cross-section of people’, thus supporting the ‘relationship’ bias emerging in our multidimensional scaling analysis.

The second of the groupings which clustered plant, monitor evaluator, completer finisher and shaper together, appeared to us as having a common ‘task’ dimension. Thus, the clever, individualistic and solitary plant who produces ideas and suggestions fills a role which releases the team from its impasse and allows its work to proceed; similarly, the serious, disinterested monitor evaluator who specializes in evaluating alternate courses of action is especially useful when the team is facing crucial decisions. The two other roles in this grouping are concerned with getting results and achieving team output; the completer finisher who attends to the details of the team’s product, painstakingly ensuring that it is finished and perfect in every respect, and the shaper who galvanizes the team into goal-directed activity. Although not defined by Belbin as ‘task’ as distinct from ‘social’ leadership, it is fairly clear from Belbin’s (1981) comparisons of shapers and chairmen that in discharging their respective duties the requirements of the task take precedence in the mind of the shapers, whereas the need to fit the task to the personality is the dominating theme in the perceptions of chairmen.

Pairings

The grouping of the team roles into ‘relationship’ and ‘task’ reflects the pairings Belbin initially suggested. In the manner of ‘particles and anti-particles in the realm of physics’, Belbin (1981) described the roles of chairman and shaper as complementary and counterbalancing, the former unifying but the latter challenging and driving the team. In a like manner he described the plant and resource investigator, the former sitting in a corner engaged in deeply cerebral activity, the latter going out exploring. Our data confirm these assignments. However, in a further elaboration of the idea of pairing of team roles Belbin (1981, p. 123) linked, through his idea of complementarity and counterbalancing effect, the roles of company worker with completer finisher, chairman with shaper, plant with monitor evaluator, and resource investigator with team worker in a $4 \times 2$ typology. We are less comfortable with this latter proposition, our data indicating that only three out of the four pairs described by Belbin appear to be complementary and counterbalancing, the pairing of the roles of plant with monitor evaluator being the exception. In this regard it is interesting to note the findings of Dulewicz (1995), whose factor analytical data appears to provide little support for Belbin’s $4 \times 2$ typology.

The interaction and relationship between one team role and another has also been explicated by Belbin (1993) when he described the typical dynamic between two individuals who have different team role characteristics. Almost the entirety of these interpersonal relationships described by Belbin could be broadly predicted by applying the following simple rule of thumb: ‘Dyads whose team roles both fall into the “relationship” category are likely to interact harmoniously but not particularly productively; those whose team roles both fall into the “task” category are likely to interact neither harmoniously nor particularly productively; and those whose team
roles fall into one of each category are likely to interact both harmoniously and productively.'

Power and affiliation

Our results also appear to be in accord with those of earlier workers such as Wiggins (1979, 1982) who, in his review of circumplex models of interpersonal behaviour, concluded that all interpersonal behaviour can be understood in terms of two latent variables: affiliation and dominance. We suggest that these variables, which have been previously identified in industrial teams by Fisher, Macrosson & Walker (1995), emerge in the groupings of Belbin team roles described in this paper; affiliation and dominance appear to have parallels in the 'relationship' and 'task' groupings proposed in this paper. Even at the more detailed level, the eight subgroups identified by Wiggins appear to have parallels with the Belbin team roles. Thus, Wiggins' 'gregarious—extroverted, warm—agreeable, unassuming—ingenious and lazy—submissive', which could be grouped together under the label 'relationship', may be associated with, respectively, the chairman, team worker, resource investigator and company worker roles. Again, Wiggins' 'aloof—introverted, cold—quarrelsome, arrogant—calculating and ambitious—dominant', which could be grouped together under the label 'task', may be associated with, respectively, the plant, monitor evaluator, completer finisher and shaper roles. We were struck by the closeness of these parallels.

Conclusion

Two generalities may be drawn from this study: firstly, it is likely that, for a given individual, the secondary role of a 'task' type of person will not be a 'relationship' role but a 'task' role; neither will a 'relationship' type of person be likely to adopt a 'task' secondary team role. Secondly, the degree of harmony and productiveness of a dyad may be forecast in terms of the task—relationship construct using the rule of thumb described in this paper.

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References


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