

Belbin's Team Roles and Cognitive Team Roles: A study of "two perspectives"?

Abstract

This article compares the principles behind two of the Team Roles models currently used by HR professionals, that of Belbin's Team Roles, published in 1981 and Cognitive Team Roles, published in 2002. The background and principles of each model are detailed and we ask whether the two models really come from two different perspectives, or are they essentially similar and compatible models? The implications of using team role models from the perspective of both HR practitioners and team members themselves are discussed, and the article concludes with some suggestions as to how to get the most out of any team roles model that you might choose to use.

Background to Belbin's Team Roles

There can be few, if any, training and development professionals who are not au fait with Belbin's team roles model. First published in 1981, it was based on nine years of observations with teams of middle managers taking part in the General Management Course at Henley Management College. In order to identify the team roles, the original researchers began by analysing and comparing the personality characteristics and critical thinking abilities of team members, using Cattell's 16 Personality Factor (16PF) psychometric and Watson Glaser's Critical Thinking Test as their psychological information base. In his 1981 book, "Management Teams: Why They Succeed or Fail", Belbin writes that each of his team roles comprises a number of behavioural characteristics and that several dimensions of the 16PF were used within each of the roles.

Belbin and his colleagues developed the first team model that was easily accessible to individuals and teams, their original motivation being to increase the performance and success of work-based teams within organisations. At Henley, team 'performance' was measured competitively in terms of winning or losing the week-long management game that formed part of the training programme. The majority of participants were male and 'success' was fairly easily measured. Of course, high performance within real teams in real organisations is considerably more complex, particularly where non-hierarchical, multi-functional project teams exist alongside the more traditional departmental team structures, an organisational construct which didn't really exist back in 1981.

Victor Dulewicz (1995), who worked at Henley with Belbin, makes the point that the team roles are independent of job status and responsibility measures. This means that they are equally as relevant and valid to teams of supervisors, shop-floor workers and administrative staff as they are to the middle managers around whose behaviours the model was based.

Belbin's Team Roles Principles

All management development models involve principles to guide and inform their use. Belbin's five principles, taken from his 1981 book, (p.132), are firstly, that each team member contributes to achieving objectives by performing both a functional role (professional and technical knowledge) and a team role. Secondly, an optimal balance in both functional and team roles is needed, depending on the team's goals and tasks. Belbin's third principle states that team effectiveness depends on the extent to which members correctly recognise and adjust to the relative strengths within the team. The fourth principle is that a team can deploy its technical resources to best advantage only when it has the range and balance of team roles to ensure efficient team work. And finally, Belbin suggests that individual personality and mental abilities fit members for some team roles and limit their ability to play others.

Background to Cognitive Team Roles

Cognitive Team Roles was developed in 2000/1 by a small team of psychologists and training consultants. The original conceptual idea for Cognitive Team Roles came from Fiona Beddoes-Jones, the author of the cognitive profiling instrument Thinking Styles®. Dr. Jonathan Hill, a Chartered Occupational Psychologist and Julia Miller, an experienced senior manager and international consultant were the other two members of the development team. Thinking Styles was used as the psychological base for the Cognitive Team Roles model and sub-divides ten cognitive roles into a Sensory, People and Task focus. The model was then tested on real life high performing teams and 'dynamic duos' within existing successful organizations, including senior and middle management teams, business partnerships, organisational relationships of two and, in some cases, the whole organization, where the total team size numbered ten or less. This last example was an owner managed business where the whole team was mapped regardless of hierarchy.

Barbara Senior (1997) concurs with Belbin when she states that, "people are often chosen to be members of teams on the basis of their functional roles". However she goes on to add that "peoples' functional roles, though fitting them in terms of experience and expertise for the task at hand, will not necessarily help when it comes to the *process* through which a team of people makes decisions and implements them. They do not help in matters such as the way different team members approach a problem or task, the way team members interact with one another, and their style of behaviour in general". Beddoes-Jones et al. suggest that these are the 'socio-cognitive' dynamics of teamwork; that cognitive preferences for certain types of thinking style drive behaviour and that it is the thinking which comes first. In essence, Cognitive Team Roles considers functional roles to be less important than the cognitive roles and the socio-cognitive dynamics of the team. When a team's cognitive profile is mapped, it is the thinking preferences of team members that are included rather than peoples' functional roles. Although these are, of course, taken into consideration when the facilitator reviews the team as a whole and explores the dynamics within the team itself and the dynamics of the team as a whole within the organisation.

Cognitive Team Roles Principles

In contrast to the five principles of the Belbin model, the Cognitive Team Roles model has ten, although as you will see, some of them are similar to Belbin's. Firstly, Beddoes-Jones suggests that all roles are important. However, she says that some roles may be more critical to the success of a team than others at certain times in the team's life cycle. This principle is similar to Belbin's thoughts in his 1993 book, where he stresses the link between the stages of a team's project or activities and the need for different team roles to be dominant at different stages.

Secondly, Beddoes-Jones' states that Cognitive Roles will be taken on over and above the specific operational or functional tasks and responsibilities inherent within the team. This is similar to Belbin's first principle. The third Cognitive Team Roles principle is that no one role is a 'better' leadership role than any other. However, the person taking on board the Strategist role may disagree, as this is the most strategic of the Cognitive Roles and is likely to involve future planning and goal setting. The fourth principle is that, for a team to be truly effective, each team member requires a degree of flexibility within their role/s. Extremes of cognitive role preferences can be problematic where no cognitive and behavioural flexibility exists. You will possibly have met people at work who are not flexible within their thinking and who dogmatically persist in behaving in certain ways regardless of the appropriateness of their behaviour.

Fifthly, Beddoes-Jones states that, some people will take on dual or complementary roles, for example, the Logical Thinker and the Detailed Thinker are statistically quite highly correlated (taken from data in the Thinking Styles technical manual). This 'clustering' of cognitive roles may depend on the size of the team, in that the smaller the team, the more likely it is that 'clustering' will take place. This was evidenced particularly in the research carried out with partnerships and teams of two. The sixth Cognitive Team Roles principle relates to the fifth one and suggests that in some teams, more than one person will take on the same cognitive role. When this happens, these people will tend to work together, particularly where a particular task suggests that collaboration would be beneficial.

Principle seven is that people may 'move roles' i.e. swap or take on other roles over time, depending on the needs of the organisation or the team. Principle eight relates to this in that it suggests that, if too many people try to take on a certain role, i.e. they all have a strong cognitive preference for that role, the team may be thrown out of 'balance'. It will then lose its flexibility and ability to respond quickly and appropriately to changing circumstances. This echoes Belbin's original research where he found that putting a whole team of Shapers together, "always created an uproar" (Belbin, 1981, p.59). You will see from Table 2 that Belbin's Shaper role is most closely associated with the Cognitive Team Role of The Challenger. The ninth principle also relates to the 'balance' of a team and states that, if the team needs a cognitive role to be fulfilled for the team to be 'balanced', someone may take on a role that they have a low preference for.

Beddoes-Jones' tenth and final principle is that all of the roles need to be fulfilled by the team for that team to be successful. Ideally, each Cognitive Team Role should be fulfilled at the moderate preference level or above by at least one team member, and all team members should have the minimum of a moderate preference for working collaboratively with others (The Collaborator role).

The 'balance' and 'flexibility' of teams

The concept of a 'balanced' team is an interesting one. Both Belbin and Beddoes-Jones agree that teams need to be balanced. Belbin suggests that a team is balanced when team members' profiles, collectively, have all of his nine team roles represented at the 'natural' level i.e. at a score of more than 70. Within the Cognitive Team Roles model, the team is said to be balanced when overall there is a general distribution between team members of cognitive preferences at the moderate preference level or above for all of the ten roles. One of the central tenets of Belbin's theory is that the more balanced a team is the more likely it is that it will be a high performing team. In other words, there is a cause and effect relationship between team role balance and performance.

Beddoes-Jones also identifies the issue of cognitive and behavioural 'flexibility' as being critical to the success of a high performing team. However, she believes that the cognitive and behavioural flexibility of team members to move between the roles is, if anything, more important than any inherent balance or lack of balance within the team. Developing 'cognitive flexibility' means developing the ability to mentally flex your thinking strategies across those thinking styles that are not your natural preference. It will be critical for individuals, teams, managers, leaders and their organizations in the future. We predict that those teams and organisations that are cognitively and behaviourally flexible will be the most successful in the future.

What's the 'best' size for a team?

Belbin suggests that the optimal team size is five or six members. In contrast to this, Cognitive Team Roles principles suggest that a high performing team can number as few as two people just so long as between them, they fulfil all of the cognitive roles at the moderate preference level or above. Beddoes-Jones deliberately doesn't specify an optimal team size. However, research carried out with Cognitive Team Roles suggests that if a team numbers eight or more people, it tends to divide into smaller sub-teams.

Using a team role model within your team or organisation to maximum effect

It is important to understand that some teams or specific individuals within a team will not want to complete a team roles questionnaire. This is most often caused by a fear that the information will be used against them in some way, or that greater knowledge of their cognitive or behavioural styles will somehow give their colleagues 'power' over them. Much of this anxiety can be alleviated by a sympathetic facilitator, a supportive manager and the assurance of confidentiality within the team. Crucially, all team members need to know that the purpose and objectives of using a team role model are to generate beneficial understanding, encourage dialogue and create new working practices if appropriate.

Leonard and Strauss (1997), believe that, "the best way for managers to assess the thinking styles of the people they are responsible for is to use an established diagnostic instrument as an assessment tool". They were referring specifically to the MBTI, however the principle applies equally as well to team instruments such as Belbin's and Cognitive Team Roles. They go on to say that, "Managers who use such tools find that their employees accept the outcomes of the tests and use them to improve their processes and behaviours".

Of course the challenge for managers and organisations is to *actively* use the information and the insights that team role models provide to create new ways of working together and new behaviours that will improve performance. Team assessment will generate new understanding between team members, but unless this new understanding in turn generates different actions and more useful behaviours it becomes nothing more than an expensive waste of time.

In addition to this, it is important that managers take responsibility for driving through, managing and supporting changes in team behaviour rather than devolving responsibility to the facilitator. Managers also need to realise that an effective intervention will not be a 'one-off'. The most effective training and development interventions are situated within the training and development strategy for the team, department or organisation and are continually reinforced and supported by the words and actions of the manager. They need to be integrated into the projects, tasks and general work practices of the team.

Summary and Conclusion

Belbin's model is primarily behaviourally based with elements of thinking style, whereas Cognitive Team Roles is primarily a measure of cognitive style preference from which behaviours can be inferred. Does this mean that they really come from two different perspectives, or are they essentially similar and compatible models? From their psychological constructs and the principles that support each of them, it would seem that they are both compatible and similar, albeit with a different emphasis on the importance of thinking preferences as a driver of behaviour and their focus on the quality of thinking that happens within a team.

Cognitive Team Roles provides information to help people think and behave more flexibly and to improve the socio-cognitive dynamics of the team; identifying how thinking preferences influence

social behaviour. Used skillfully, Cognitive Team Roles will improve both the quality of the teamworking and the quality of the thinking that occurs within a team, issues that will be essential for those teams managing complex tasks and diverse goals in the future.

Table 1: Cognitive Team Roles and Belbin at a glance (Possible Correlations)

CTR Focus	Cognitive Team Roles	Belbin's Team Roles
Sensory	Intuitive Thinker	
People	Challenger	Shaper
People	Altruist	
People	Collaborative Thinker	Teamworker / Resource Investigator
Task	Strategist	Monitor Evaluator
Task	Creative Thinker	Plant
Task	Logical Thinker	
Task	Detailed Thinker	Completer-Finisher
Task	Driver	Implementer
Task	Troubleshooter	
		Coordinator
		Specialist

Table 2: Possible correlations between Cognitive Team Roles and Belbin's Team Roles

Cognitive Team Roles	Belbin's Team Roles
Intuitive Thinker: focuses on how they feel about a project, task, person or situation. They rely on intuition and emotion to make decisions.	
Challenger: challenges boundaries and tends to try to break the rules. May employ high-risk strategies to achieve their objectives.	Shaper: challenging, dynamic, thrives on pressure. The drive and courage to overcome obstacles.
Altruist: focuses their time and energy on looking after the other members of the team, both physically and psychologically.	
Collaborator: focuses their attention on developing relationships, networking and finding opportunities to work with others.	Teamworker: co-operative, mild, perceptive and diplomatic. Listens, builds, averts friction. Resource Investigator: extravert, enthusiastic and communicative. Explores opportunities. Develops contacts.
Strategist: tends to think strategically and in broad terms about the future. They will always have some kind of a plan.	Monitor Evaluator: sober, strategic and discerning. Sees all options. Judges accurately.
Creative Thinker: tends to juggle tasks and work things out backwards by starting from the end. They make connections and see patterns.	Plant: creative, imaginative, unorthodox. Solves difficult problems.
Logical Thinker: focuses on facts and evidence. Ordered and disciplined, they think in a logical and sequential way.	
Detailed Thinker: focuses their attention on specifics and details. They tend to be very thorough, ensuring that tasks are completed.	Completer-Finisher: painstaking, conscientious, anxious. Searches out errors and omissions. Delivers on time.
Driver: wants to be in the driving seat moving a project or task forward. Tends to focus their attention on taking action.	Implementer: disciplined, reliable, conservative and efficient. Turns ideas into practical actions.
Troubleshooter: focuses on what could go wrong and makes contingency plans. Tends to think in terms of risk management.	
	Coordinator: mature, confident, a good chairperson. Clarifies goals, promotes decision making, delegates well.
	Specialist: single-minded. Self-starting, dedicated. Provides knowledge and skills in rare supply.

Table 3: Key Points

1. Any diagnostic tool or model that encourages a focus on understanding individual team members or the team as a whole is likely to be useful with sympathetic use by a facilitator.
2. Belbin's model is primarily behaviourally based with elements of thinking style, whereas Cognitive Team Roles is primarily a measure of cognitive style preferences from which behaviours can be inferred.
3. Belbin's model was published in 1981 and has stood the test of time; Cognitive Team Roles was published 2002. Belbin's principles are still relevant today, Beddoes-Jones has written an updated and comprehensive list of principles that reflect the increased complexity of teamworking and organisational constructs which didn't exist in 1981.
4. Belbin focuses on the 'balance' of a team's composition. Beddoes-Jones, whilst readily acknowledging the importance of balance, stresses the concept of behavioural and cognitive 'flexibility'.
5. Belbin suggests that the optimal team size is five or six people. The Cognitive Team Roles model has identified that two people can make a highly effective team and that a team comprising eight or more people is likely to sub-divide.
6. Cognitive Team Roles provides information to help people think and behave more flexibly, improve the socio-cognitive dynamics of the team and, used skillfully, Cognitive Team Roles will improve the *quality* of the thinking that occurs within a team.

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References:

1. Beddoes-Jones, F., (1997) Thinking Styles – Relationship Strategies That Work! *BJA Associates Ltd.*
2. Beddoes-Jones, F., (2001) Think Smart report. www.cognitivefitness.co.uk
3. Belbin, R. M., (1981) Management Teams: Why They Succeed or Fail. *London, Heinemann*
4. Belbin, R. M., (1993) Team Roles at Work. *Oxford, Butterworth Heinemann*
5. Belbin, R. M., (1993) A reply to the Belbin Team-Role Self-Perception Inventory by Furnham, Steele and Pendleton. *Journal of Occupational and Organizational Psychology*, (66), 259-260
6. Belbin Associates, (1998) Interplace: Matching people through jobs. *Cambridge, Belbin Associates*
7. Dawson, C., Lord, P. and Pheiffer, G., (1999?) Management Team Composition: A Spurious Balance? www.solent.ac.uk
8. Dulewicz, V., (1995) A validation of Belbin's team roles from 16PF and OPQ using bosses' ratings of competence. *Journal of Occupational Psychology*, 81-98
9. Fisher, S., G., Macrosson, W. D. K., Wong, J., (1998a) Cognitive style and team role preference. *Journal of Managerial Psychology*, 13, (8) 544-557
10. Fisher, S. G., Hunter, T. A. and Macrosson, W. D. K., (1998b) The Structure of Belbin's Team Roles. *Journal of Occupational and Organizational Psychology*, (71), 283-288
11. Furnham, A., Steele, H. and Pendleton, D., (1993a) A psychometric assessment of the Belbin Team-Role Self-Perception Inventory. *Journal of Occupational and Organizational Psychology*, (66), 245-257
12. Furnham, A., Steele, H. and Pendleton, D., (1993b) A response to Dr Belbin's reply. *Journal of Occupational and Organizational Psychology*, (66), 261
13. Lawrence, S., (1974) The team road to success. *Personnel Management*, June, 28-32
14. Leonard, D. and Strauss, S., (July 1997) Putting Your Company's Whole Brain to Work. *Harvard Business Review*, 111-121
15. Scholl, R. W., Leonard, N. H. and Beauvais, L. L., (1998) An Empirical Study of Group Cognitive Style and Strategic Decision Making. *Paper presented at the Annual Meeting of the Academy of Management, USA.*
16. Senior, B., (1997) Team roles and team performance: Is there really a link? *Journal of Occupational and Organizational Psychology*, (70) 241-258