Predicting a Team's Behaviour by Using Belbin's Team Role Self Perception Inventory

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Human Resource Management Dissertation

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Abstract

This dissertation assesses the validity of Dr R. Meredith Belbin's famous team role self perception inventory (BTRSPI). After giving a review of previous research on teamworking and the BTRSPI, it attemps to link the BTRSPI profile of a real decision making team to the team's behaviour when conducting their normal work in their genuine environment.

It was found that more often than not, individual team members' behaviour is in accordance with their BTRSPI profile.

The study carries relevance to both human resource management and the general discussion of the BTRSPI as the BTRSPI is the most widely used measurement by management when composing teams and when assessing team performance.

This research contributes to the BTRSPI validity discussion as it links the BTRSPI to the behaviour of a real team in their genuine organisational setting.

Contents

Chapter 1

Introduction

Teamworking is becoming increasingly important these days. According to a UK survey, it is one of the essential skills for entering the world of management (Fisher, Macrosson & Sharp, 1996: 61). Therefore, it has become increasingly desirable for management to be able to predict team performance, that is, how others perceive the team output (Huczynski & Buchanan, 2001: 399), and to know how to compose a team that functions well and gives the desired output.

In this connection, the Belbin team role self perception inventory (BTRSPI) has been the centre of much attention. It attempts to give the one taking the test a description of what kind of team role he or she has by simply calculating the scores of a self perception questionnaire.

The BTRSPI has been widely adopted by management because of its simplicity and intuitive appeal. Therefore, it has been subject to a massive discussion of its validity because of its wide spread usage. Much research have been conducted on the BTRSPI; what kind of team roles UK managers tend to have, gender differences within the BTRSPI profiles and if there is a link between the BTRSPI and what kind of university career people choose.

More interestingly is the research conducted to link the BTRSPI to the actual performance of a team, that is, how well a team functions, how fast they find an answer to a given problem, and the quality of that answer. However, most of these studies have been conducted on artificial teams, that is, teams that are not real teams outside the study. This is bad as it takes away the dimension of in-group relationships formed over time and the implications of team decisions on their organisation and on the team's inner workings.

The topic this dissertation therefore wants to address is how well the BTRSPI scores of a real decision making team corresponds to the actual behaviour of the team in their genuine setting.

The study was carried out on an executive board of the student organisation at the University of Stirling. The board members were to take the BTRSPI and were observed in their board meetings in addition to being interviewed about their previous and current organisational experience. The results from the two first methods were then compared to see if there was a clear link between them, or if unexplainable discrepancies occurred to a great extent.

It was found that the BTRSPI carried a respectable validity. In more than half (67%) of the team members' interactions in the board meetings could be directly linked to the characteristics of their Belbin team roles. However, there were a significant number of incidents (32%) that were true opposites of the behaviour to be expected according to the executives' BTRSPI profiles.

The findings have relevance to the discussion of the validity of BTRSPI as it is the first linkage made (to the author's knowledge) between the BTRSPI

scores and the behaviour of a real team in their real setting. Also, the study should be interesting to human resource managers as they often have the organisational responsibility to build and assess teamworking (Zucchi & Edwards, 2000).

1.1 How the dissertation is organised

This dissertation consists of five chapters in addition to this introductory chapter. The next chapter will give a review of the current literature on Belbin, teamworking and in particular; decision making in teams. The chapter will give a presentation of the different perspectives of previous authors and present empirical findings of their research that are relevant to the area of the dissertation. These will include the ones that will be questioned or challenged in this dissertation. The chapter will then go on to draw some pieces of criticism of previous authors' assumptions, perspectives and arguments.

The following chapter will present the methodology used in the research. It will give a detailed explanation of the research objectives and a rationale for the research strategy chosen to tackle the research objectives. The chapter will then describe the key concepts of the research and how these are defined and measured. It will go on to present the theories and hypothesis set before the research was conducted. A detailed outline of the methods used and the reasoning behind them will then follow. The chapter will be rounded off with a discussion of problems or difficulties encountered when planning and conducting this dissertation research, together with suggestions of further research.

Chapter four will present the results from the dissertation research. Chap-

ter five will give a discussion of the key findigs and compare them with the dissertation research objective and previous research. The chapter will then go on to discuss the implications of the findings for human resource management and the SUSA executive board. The chapter will end off with suggestions on how future research may be developed with reference to this one.

The concluding chapter of the dissertation will give a summary of the dissertation topic, the research conducted, the findings and conclusions that can be drawn upon these results in relation to the BTRSPI in general and the dissertation question itself.

Chapter 2

Literature Review

2.1 Introduction

The aims of this literature review is to give a summary of what have previously been done by other authors that have relevance to this dissertation topic. This chapter will first give a presentation of the Belbin's team role self perception inventory as this theory plays a key part in the dissertation. It will then go on to discuss both the different theoretical perspectives of previous authors and also present the main empirical findings of their research.

The text will then explain how this research fits in with the greater perspective by pointing out criticisms and shortcomings of previous authors' work and how this dissertation research can contribute to the topic. The chapter will then present the team used for the research and conclude with the reasons for how the research itself was structured.

2.2 Key theoretical and empirical issues

The key issues involved naturally include Dr R. Meredith Belbin's theories on the composition of teams. His model of how to construct a team that has

the right balance of different skills needed is one of the empirical cornerstones of this dissertation.

In that connection the BTRSPI is of uttermost importance as it is the physical connection to his theories in most research done to test the validity of his team role theory.

Other key theoretical issues involved includes groupthink. Teams tend to make decisions that are not optimal when considering the amount of knowledge and experience the teams holds. However, due to the human nature and the exposure to internal group processes, irrational decisions do occur (Hogg & Hains, 1998; Brown, 2000a).

The research also deals with social pressure to conform to the group norm. People in general do not want to be unpopular, and deviants are liked less than the other team members and is therefore desirable to avoid. Also, deviates are exposed to a greater pressure from the rest of the group. A person with unpopular views is addressed far more often than the ones with the general viewpoint. In order to avoid this, people tend to conform to the group norm (Brown, 2000a: 141-142)

2.3 Why the topic is important and to whom

Teamworking with discretion for decision making is becoming increasingly important in the workplace. Therefore it is of great interest for management, to be able to predict how a team will function as decision makers.

The BTRSPI was included in Belbin (1981) as an appendix. It is a test that finds the team role of the one taking the test, as described in Belbin (1981) and Belbin (1993b). This inventory is widely used by management, to

measure team performance, to train teams, to compose effective teams and to track problems in teamworking in the company (Fowler, 1995: 41).

Since the BTRSPI is so much used by management, it carries a responsibility for being accurate (Furnham, Steele & Pendleton, 1993: 261). Also, it is important to find in what kind of ways it is applicable and in what areas it is not. This dissertation contributes to the discussion of the applicability of the BTRSPI in a setting of a decision making team. The topic is important to all levels of management that are in some way connected with teams. This is especially evident in departments responsible for composing and training teams. Often this is the company's human resource management department (Zucchi & Edwards, 2000).

2.4 Belbin's team role self perception inventory

In 1981, Dr R. Meredith Belbin published his book "Management Teams - Why They Succeed or Fail". He identifies eight different team roles that have to be present in order to make a balanced and effective team. The team does not necessarily have to consist of at least eight members, on the contrary Belbin strongly argues that the groups of six is the sacred number for small groups (Belbin, 1981: 115-7). Nevertheless, the different roles have to be present in the team members. A team member can hold several roles, contributing to a balanced team. Each of the roles has its strengths and "allowable" weaknesses. Belbin also describes what other team roles the individual roles function well together with and what combinations of roles may pose conflicts (Belbin, 1981).

The "chairman" (CH) is the first of Belbin's team roles. Persons fitting this role tend to be calm, self confident and controlled leaders. They are to guide and control the other team members in the teamwork situation. Chairmen have a strong sense of objectiveness and thus welcome all potential contributors in the team.

While the "chairman" does not have any "allowable weaknesses", as Belbin labels them, the "shaper" (SH) is impatient, provocative and may be irritated during the team meetings. They tend to be highly stung and are demanding, coercing and confrontational leaders that wants to push the others in the team to excel. The shaper has a strong drive, is dynamic and has the courage to overcome obstacles.

A close relative to the "shaper" is the "plant" (PL) who is the typical innovator and problem solver. This is the team member that is typically the new idea inventor. Plants are individualistic, serious and unorthodox. Their genius, imagination, intellect and knowledge are their strong sides, whereas their "allowable weaknesses" are that they ignore the practical implications of the team's problems and have a strong personal relation to their ideas.

The "resource investigator" (RI) is the team's contact person for external sources of information. Resource investigators have great communication skills, are enthusiastic, extrovert and are eager to explore new alternatives and respond to new challenges. However, they are liable to lose interest after the initial fascination has passed.

The fifth team role is the "monitor-evaluator" (ME) and is the person who analyses and evaluates the proposed solutions and choices in the team. They tend to be sober, prudent without any emotions related to the teamwork

tasks. Therefore, monitor-evaluators have clear judgement, discretion and can be seen both as cynical and sceptic. The negative aspect or the monitor-evaluator role is that they lack inspiration and do not have the ability to motivate others.

The "company worker" (CW) is the person in the team that implements the plans agreed in the team meetings. The person is conservative, and can be counted on to carry out all his/her duties. The company-worker has great organising skills, is hard working with great self discipline and has good portion of practical common sense. On the other hand, the person does not have flexibility or responsitiveness to unproven ideas.

The least surprising Belbin team role is the "team worker" (TW). The team worker facilitates the core team functions and is the mediator within the team. This person is socially skilled, mild and sensitive to the other team members' feelings and is able to respond to whatever the team is presenting and promotes team spirit. However, the person lacks resolve in times of crisis.

The eighth and last of Belbin's original team roles is the "completer-finisher" (CF) who keeps focus on details and deadlines. Therefore, the person is typically painstaking, orderly, conscientious and anxious. As the role name implies, the person has a great capacity for following it all through and keeping attention to detail all the way to the very end of the project. As a natural consequence of this, or labelled as a "natural weakness" by Belbin, the completer-finisher has a tendency to worry about minor details and is reluctant to "let go" (Henry & Stevens, 1999: 243).

A ninth role, the "specialist", was added by Belbin in 1993. This role is described as a single-minded person that is dedicated to his area of expertise

and the topics discussed in the team related to this area. The person gives the team valuable and rare skills and knowledge. However, the person may dwell too long on technicalities and the overall contribution to the team is narrow (Belbin, 1993b).

As an appendix in Belbin (1981), an inventory was supplied, the BTRSPI, which could be used as a guidance for finding these team roles described in the book. Due to copyright, the inventory could not be included in the dissertation.

The BTRSPI is one, if not *the* most used measure of team role preferences in the UK (Balderson & Broderick, 1996: 33). Its wide usage is both due to its simplicity of use; the participants can do the test without any special arrangements or observation, and its intuitive appeal to the one interpreting the results (Fisher, Macrosson & Sharp, 1996: 66).

However, the inventory was never meant to be a full psychometric test on its own, as pointed out by Belbin in the debate of the validity of BTR-SPI (Belbin, 1993a: 259-260). Nevertheless, its wide spread usage by management is unquestionable (Balderson & Broderick, 1996: 33) and proof has been produced by several authors, e.g. Fisher, Hunter & Macrosson (2002), Fisher, Macrosson & Wong (1998), Swailes & McIntyre-Bhatty (2002), Watkins & Gibson-Sweet (1997), Shi & Tang (1997) and Sommerville & Dalziel (1998), to confirm its validity.

2.5 Theoretical perspectives of previous authors

This section will give a summary of the main areas of research related to the BTRSPI and decision making in teams. It will first present some of the different perspectives held by researchers on teamworking in organisations, as this was the starting point for this dissertation. The text will then describe some of the work done on gender and teamworking. It will then go on to summarise what has been done with linking Belbin to teamworking in organisations before presenting the major theoretical perspectives of previous authors in assessing the validity of the BTRSPI, which is where this dissertation research fits in.

2.5.1 Teamworking in the organisation

Teamworking has been subject for a tremendous amount of research and is still a popular and yet not thoroughly explored area of management studies. Salas, Burke & Cannon-Bowers (2000) assessed what teamworking really is and reviewed the different efforts made in the management literature to defined what it is. Among other things, they found that decision making is one of the core skills in teamworking (Salas, Burke & Cannon-Bowers, 2000: 343).

Another element that several authors conclude related to teamworking, is the importance of clearly defined team roles, as found in Delbridge, Lowe & Oliver (2000) and Glover (2002b).

Another skill that is found by researchers to be of the highest importance, is human relation skills, as described by Partington & Harris (1999). The

authors researched the implementation of teamworking in the car industry. In addition to measure the success of implementing teamworking in the industry, they found evidence for the need of teamwork training. They emphasise that getting successful teamworking is not as easy as just putting people together and expecting them to function as teams.

One popular perspective of authors, e.g. Findlay, McKinlay, Marks & Thompson (2000), is to look at a company or an industry at large, and assess the impacts of teamworking on the the environment as a whole. Bacon & Blyton (2000) looked at the iron and steel industry and investigated how teamworking had change the way work was conducted. They concluded that workers' positive experience and also company performance increase were dependent on management's objective for introducing teamworking.

Glassop (2002) researched the success of implementing teamworking in Australian industry. She found that the introduction of teamworking in the workplace can be successful [1], but that it depends on the type of work. Not all jobs are compatible with teamworking. Indeed, as with any implementation of work and organisation design, teamworking is more appropriate to some settings than others (Mueller, Procter & Buchanan, 2000: 1412). Other writers argue that "it is entirely possible to force a team-based form of work design on to a process with non compatible characteristic", however it is concluded that work designs should reflect the feature of the production process (Sprigg, Jackson & Parker, 2000: 1538).

Sprigg, Jackson & Parker (2000) did similar research on employees in

[1] In this connection, success is measured at two levels; company level (increased labour productivity and a flatter management structure) and employee level (decreased labour turnover) A more generic definition of the success of a team is how others perceive the team output (Huczynski & Buchanan, 2001: 399).

wire mills and looked at the success of teamwork implementation. Coradetti (1994) supports this group of researchers claiming that teamworking is not a fast fix and that organisations must give teamworking a chance in relation to time and resources.

The success of teamworking in the workplace is also explored by Clark, Amundson & Cardy (2002) who interviewed members of cross functional teams in large multi site companies on the progress of this new element (teamworking) of the work organisation. The focus of these authors was the learning outcomes of both the organisation and the employees themselves.

Grint (1991) researched the positive impact of implementing nursing teams. It was found that the communication became more effective, and it was concluded that teamwork can provide better primary care. In this connection, decision making was one of the successes found of implementing teamworking.

The increasing usage of teamworking in the health service is further confirmed by Howard (1997) who states that many hospitals are modifying their whole organisational structure to embrace teams.

Research on the effectiveness of management teams was conducted by de Jong, Bouhuys & Barnhoorn (1999) where the aim was to find a positive link between extraversion and conscientiousness to self-efficacy for participating in teams and attraction to the team.

Another perspective on team composition is taken by Chrispeels, Castillo & Brown (2000) who looked at the composition of school leadership teams, where they had different members of the groups, including students and parents in addition to school staff. The study also studied the impact of team

member training in group processes.

Hollenbeck, Ilgen, LePine, Colquitt & Hedlund (1998) researched the importance of feedback to a team for ensuring team performance. A similar study was conducted on a university hospital by Hyrkäs & Appelqvist-Schmidlechner (2003). They found that supervision improved the decision making in the teams.

Knights & McCabe (2000) wanted to explore the impact of teamworking for employees in the automobile industry. The authors argue that because there is no single form of teamworking, there is no single experience of what teamworking means to an employee. One interesting finding here, was that some employees, whilst being committed to teamworking, were actually aware of that it required from them a psychological change.

Leonard, Scholl & Kowalski (1999) tried to find the correlation between the four most used schemes for measuring the cognitive styles of decision making. They found that even though there is a lot of overlapping in their theory, there were few strong, inter-relationships between them.

2.5.2 Gender and teamworking

Another perspective of research on teamworking is the element of gender differences in teams. LePine, Hollenbeck, Ilgen, Colquitt & Aleksander Ellis (2002) looked at how the gender composition of a group influenced the decision making in the team. Performing traditionally masculine tasks, they found that the team decisions grew more and more aggressive as the percentage of male team members increased.

The gender composition is also noted by Belbin himself, who argues that

men and women and different problem solving preferences, which again will influence the team decision making process (Glover, 2002a: 41).

Sommerville & Dalziel (1998) explored the linkage between team role preferences and the kind of study selected by students and if there is a difference between male and female students. The majority of males were implementers (25%) or co-ordinators (23%), whereas the majority of women were team workers (45%). Also, the majority of business and occupational therapy students were team workers (24% and 50% respectively) (Sommerville & Dalziel, 1998: 170).

2.5.3 Belbin in the organisation

More interestingly, in connection with this dissertation, is the linkage to Belbin's team roles and decision making in teams, such as in Balderson & Broderick (1996) who did research on both public and private sector organisations. They searched for a pattern in team role preferences and the choice of occupations.

The Belbin team roles have been applied to UK managers and Fisher, Hunter & Macrosson (2000) found that the distribution of team roles in UK managers were mostly co-ordinators and resource investigators, whereas there were few completers, monitor evaluators, plants and shapers.

The same authors also wanted to prove that Belbin's team role theory also could be applied to non managers also, as much of previous research have greatly focused on Belbin's team roles in a managerial setting. The participants were from different public organisations, such as councils and the National Health Service (NHS). They argued that the decision making

process is equal at higher as well as lower levels in the organisation (Fisher, Hunter & Macrosson, 2002: 20).

Other perspectives of Belbin can be found in the research conducted by Fisher & Macrosson (1995). They wanted to find out if there was a link between a person's upbringing and the team role preference later in life. The authors did find a link from a person's family environment during childhood and the preferred team role later in life. However, as the authors point out, the research had two drawbacks; the data collected was from self perception reports and two; the participants were students and not real managers.

Henry & Stevens (1999) used software engineering students to conclude that teams with Belbin's leader roles performed better than the ones without these roles present.

Shi & Tang (1997) wanted to prove that managers' team role preferences were dependent on the task environment in which they worked. They argued that an organisation's culture and nature will influence the values and preferences of its managers. The authors found a clear link between team role preferences and the different environmental dimensions defined in an organisation.

2.5.4 The validity of Belbin

A lot of the research related to Belbin, is to test its validity, and it is here this dissertation has its primary focus.

One of the reasons for the massive amount of research and criticism on the validity of the BTRSPI is because of its wide usage by management in the industry. Due to its extensive usage, it carries a responsibility of being a

valid model (Furnham, Steele & Pendleton, 1993: 261).

There has been a number of research conducted on the validity of Belbin that suggests that the inventory is invalid. Jackson (2002) compared Belbin's BTRSPI with Honey and Mumford's learning styles questionnaire. The question asked was which one best predicted the team's performance. However, in this research, the writer did not find the BTRSPI predictive.

Macrosson & Hemphill (2001) studied the darker side of team roles, and found that the the "allowable weaknesses" that Belbin describes regarding the different team roles may not be so "allowable" after all as they can damage the health of the team itself.

According to Partington & Harris (1999), one of the few pieces of research that has used real teams as research participants has been conducted by Senior & Swailes (1998). Senior & Swailes (1998) compared the results from the BTRSPI and another tool of Belbin, the "Observer's Assessment Sheet", on members of 11 different management teams. They found positive correlations between the two tests for only five of the nine team roles. The authors warn that one should not emphasise self perception tests too much when selecting and employing people (Senior & Swailes, 1998: 1-7).

A lot of research have found evidence for validity of the BTRSPI. Evidence has been presented that suggests that the Belbin team role model has validity when it comes to predicting more powerful and involved team members (Fisher, Macrosson & Semple, 2001: 586). Fisher, Macrosson & Sharp (1996) also wanted to add weight to the validity of the BTRSPI, by comparing the scores of Cattel's 16PF personality questionnaire. They found evidence of the usefulness of the BTRSPI, although the importance of using other

measures in addition to the BTRSPI when predicting team performance was emphasised (Fisher, Macrosson & Sharp, 1996: 67). This conclusion was also reached by Fisher, Macrosson & Wong (1998).

Partington & Harris (1999) found support for Belbin when it comes to the presence or absence of some individual roles. The balance of the team did give a negative or positive effect on performance. However, the study also found that the duplication of roles is not necessarily bad in itself, it depends on what kind of role it is (Partington & Harris, 1999: 703). This argument is supported by Prichard & Stanton (1999) who explored the performance difference between teams with a balanced composition of team roles, and teams with several or no shapers. Using the shaper role as the deviant was not a coincidence as the shaper is described as the most disruptive person in the group. The authors found that teams with a balance of roles performed, as claimed by Belbin, better than unballanced teams (Prichard & Stanton, 1999: 654).

Swailes & McIntyre-Bhatty (2002) reinterpreted a sample of 5003 scores of the BTRSPI and found that the internal consistency was much better than previous research have suggested (Swailes & McIntyre-Bhatty, 2002: 529-533).

It is also found that BTRSPI can be useful when identifying strengths and weaknesses in a team that is to solve a task, allowing tasks to be allocated based on competence (Watkins & Gibson-Sweet, 1997: 105). The authors observed a group of seven undergraduate consultancy project team members studying in their final year of business, working with a real client and a genuine business problem.

2.6 Summary of main empirical findings of previous research

Naturally, Belbin (1981) and Belbin (1993b) are very important to this dissertation research as they represent the framework for the dissertation topic.

The research by Senior & Swailes (1998) is in some ways the closest thing the dissertation's research. However, the study is not relevant to mine in that it only tries to link the scores of Belbin's "Observer's Assessment Sheet" and Belbin's team role self perception inventory and not to predict or explain the actual behaviour of the team.

A very interesting finding is that Belbin's "allowable weaknesses" of the different team roles may in fact not be "allowable" as they can damage the core health of the team spirit, which again can affect the decision making (Macrosson & Hemphill, 2001: 362).

The research of Fisher, Macrosson & Semple (2001) is very interesting and important for this dissertation as it found good evidence for the validity of BTRSPI. The research concluded that the BTRSPI is useful for predicting powerful and involved team members.

In this connection, research that questions the validity of Belbin, such as Jackson (2002), are of importance to this dissertation topic.

Another main empirical finding is that of Partington & Harris (1999) who found differences in team performance when some of the team roles were absent. The study also found that the duplication of roles is not necessarily negative as it depends on the role in question.

Thus, the study answered a question by posing another question. Therefore the findings of Prichard & Stanton (1999) are very interesting as they

suggest that an imbalance of shapers can affect the team to a great extent. This argument is one of the elements this dissertation assesses when trying to link the BTRSPI scores with the observation of the SUSA exec board.

2.7 Criticisms of other writers' assumptions, perspectives and arguments

There has been a lot of research related to the BTRSPI. However, the research encountered in my readings have had one of the following weaknesses described below.

The first of this dissertation's main criticisms is that a lot of the research conducted have been solely based on the self perception inventory without anything else to back it up. Other writers have chosen other inventories or schemes to test the validity of Belbin. However, they still do not have any real life observation to compare them with.

Some writers again have an observation of the participants that took the BTRSPI, however this is conducted by either the team members' peers or more than one independent observer. The drawback of this, is that what one person perceives as a certain kind of behaviour may not correspond to another's.

Another criticism, is that the research itself has either been conducted on real life teams where there has been no observation of their actual behaviour in an authentic team situation, e.g. Grint (1991). Some research do address this problem, but does so by putting the team in an unfamiliar setting and by doing so removes some of the authenticity of the research.

Other research do have the team in their normal organisational environ-

ment, but compose the team out of people that do not normally work in a team. The drawback of this is that decisions in the team will not have any effect outside the research arena and the team members may behave differently compared to a real team as a consequence of this.

The last and most significant criticism is that in research were the authors do link the BTRSPI with observation of a team's behaviour, the research participants are not real decision makers from an organisation. It seems that the use of university undergraduate students is the primary source of research participants in the field of group processes and decision making in teams. This drawback is sometimes mentioned by the authors themselves, e.g. Fisher & Macrosson (1995: 14) and Leonard, Scholl & Kowalski (1999: 419).

The honourable exception to this criticism is Senior & Swailes (1998). However, in this research the observation was done by peer review and not by an objective third part. Personal emotions or other organisational elements such as the positions the members hold could therefore get in the way of an objective observation.

2.8 SUSA

The team that was the focus of the dissertation research was the Stirling University Student Association (SUSA). The board consists of 11 members, four of them are full time, paid employees. These four members of the board have votes at the different university boards and committees.

The cases discussed on the SUSA executives board meetings have direct impact on how the whole SUSA organisation is run, including student ac-

commodation, child care, medical services, campus events, the student bar, the student disco and miscellaneous campaigns on campus. Also, the board meetings give the different representatives that are responsible for the different parts of the SUSA organisation the opinions to bring forward to the university committee and council meetings, including the university academic council and the university court.

The great advantage of doing the research on the SUSA executives board was that this is a real decision making team. Each executive board operates for at least a year and the decisions made in the meetings have real impact on the SUSA organisation and on all students at the university.

2.9 Concluding summary

As far as what has been covered in this literature review, there has been no attempt to link the scores from BTRSPI with observation of the very team of participants in their natural environment conducting their normal work as decision makers. Therefore, this is what this dissertation will address.

The dissertation research started with getting a Belbin profile of the team. The executive board had therefore to take the BTRSPI. The team was then observed under their weekly meetings over a two month period to see if there was any correlation between the BTRSPI scores and the team's behaviour. The BTRSPI test was conducted anonymously so that the persons behind the different scores were unknown during the observation. Also, interviews were made with all team members to get a experience and general background of each of them, in order to get a greater understanding of how the team worked.

By using the combination of the elements mentioned above, this dissertation tries to give a new flavour to the research done on the validity of the BTRSPI as it tries to see if there is correlation between the BTRSPI scores and the actual behaviour of a team when doing their genuine job in their genuine organisational context.

Also, it was interesting to see how the role of the deviant was played, if it was the same persons that were deviants and if it was possible to see a forming of smaller groups within the team. As noted e.g. in Hogg & Hains (1998), team members that share friendship outside the team setting may follow the same pattern inside the group setting. Therefore, another objective of the research was to see if there were any "allies" in the team that could be predicted from the Belbin team roles as he described roles that worked well together and roles that did not.

The research therefore wanted to answer the question:

> **Is it possible to predict the behaviour of a decision making team from the team role profile given by Belbin's team role self perception test?**

Chapter 3

Research design and methodology

3.1 Research strategy

The research strategy chosen for this dissertation was selected from the perspective that it is necessary to get in-depth knowledge of the team. A thorough understanding of both the team members and the organisation which they operate within are fundamental in order to meet the research objective; to see if the team's BTRSPI profile can predict the behaviour of the board members in their meetings.

For this reason, the dissertation research is of a qualitative nature. A qualitative approach makes it possible to gain a thorough understanding of the group processes and team role profiles of the executive board. Furthermore, it makes the research more manageable in terms of coordination of interviews, questionnaires and observing the team meetings. When observing team meetings it is important to have the right meta data about the team fresh in mind. Hence, what the members have said in their interviews and the team's BTRSPI profile must all be clear to the observer before entering

the team meetings for conducting the observation.

Under other circumstances, it could have been desirable to observe multiple teams, in order to get a broader fondation to draw dissertation conclusions on. This would solve one of the drawbacks of basing research on only one group. This is that the group may not be representable for the kind of group it is. Exceptions do occur, and it may happen that this one team is the exception to the rule. However, due to the the complexity of coordinating interviews, BTRSPI questionnaires and observing multiple teams without confusing the scores and observation transcripts between different teams, it was decided to base the research on one team only.

As outlined in chapter 2, this research wants to address the gap in previous research done on BTRSPI and team behaviour. To accomplish this task, the team needed to be a real one and not just one composed for the occasion, which has been the norm in previous research on this topic.

Furthermore, the team had to be observed in their genuine organisational environment, conducting their normal job as decision makers. This was important as previous research have been done on real teams, but in these cases, the teams have not been in their organisational setting when doing the experiment of decision making. In the research conducted with teams in their normal work environment they have been set to do other team tasks than the ones they normally would do, thus the team work has not been truly authentic.

To get such a team for the dissertation research, the president of the Stirling University Student Association (SUSA) was contacted asking if it was possible to use the SUSA executives board as the research group. This

was approved by all the SUSA board executives and access was granted to attended all of the SUSA executive board meetings during the spring semester 2003.

3.2 Methods

Three methods were used in the research. The first method had obviously to be observation of the team as this was fundamental in order to answer the research question. For the same reason, it was necessary for the team members to take the BTRSPI, which was the second method used. In order to get more background knowledge about the team members and thus being able to get a profile of the executives, an interview with each board member was conducted as the third and last method.

3.2.1 The Belbin team role self perception inventory

The most fundamental element needed for this dissertation research apart from the team itself, is the BTRSPI. The BTRSPI material consists of three parts; the inventory itself, the analysis sheet for getting the results from the tests, and a thorough description of the different Belbin team roles.

In order to obtain the Belbin inventory, an appointment was made with the director at the University of Stirling Career Advisor's office. He was helpful both with providing the necessary material for the BTRSPI and training in how to conduct and analyse the test.

The theory of Belbin's team roles is described in detail in section 2.4, so the text will now instead go on to give an account of how the BTRSPI itself is conducted. It should be noted that the BTRSPI does not test the

ninth team role, the "specialist". This is due to the fact that it was first added to the Belbin team role model in Belbin (1993b) and the BTRSPI was published, without any later revisions, in Belbin (1981).

The inventory can be completed without any supervision necessary. Each participant is given a questionnaire that they are to complete. The BTRSPI consists of seven sections which each have a statement about teamworking. The participant can choose between eight sentences that best match their self perceived behaviour in the team situation described. For each of these seven sections the participant is to distribute ten points among eight options. The participant may put all ten points on one answer, or distribute them among multiple options.

The test is finished when the participant is finished distributing his/her points to the different sections and it is then ready for analysis. The key used for analysing the BTRSPI is called the "Self-perception inventory analysis sheet" (SPIAS) and was published together with the BTRSPI in Belbin (1981).

A problem that had to be solved before doing the observation of the team meetings was to not let the scores of the BTRSPI influence the observation. It is easy to let the results from the team members' BTRSPI influence the observation of the team meetings as one could unconsciously attribute people strengths and weaknesses according to their BTRSPI profile. To solve this problem, the BTRSPI was coordinated by the SUSA welfare officer, Helen Batty. This was possible because the conduction of the BTRSPI does not need any supervision, something which is one of its strengths and reasons behind its popularity among UK managers (Balderson & Broderick, 1996: 33).

The SUSA welfare officer handled both the distribution and collection of the BTRSPI to the executive board members. When returning the finished tests to the observer, a number indicated the different participants on the BTRSPI test as the corresponding names were written elsewhere only known to the SUSA welfare officer.

This way, the team's BTRSPI profile was known when doing the observation and at the same time, the individual board members' profiles were kept anonymous until all observation was finished. When the scores from the BTRSPI should be compared to the individual team members' behaviour in the meetings, a key with the identities of the BTRSPI participants was given by the SUSA welfare officer. This key held the names corresponding to the numbers on the BTRSPI tests that the observer had gotten during before the observation period and it was then possible to compare the board members' Belbin profile with their behaviour in the team meetings.

3.2.2 The observation

The observation of the meetings was done by logging as much as possible of what was said and expressed during the meetings. Ultimately, it would have been desirable to video tape the meetings. However, this was rejected as this required further approval by SUSA and it was also potentially violating with the SUSA constitution.

The recording of what happened during the meetings followed a scheme with a paper with a physical illustration of where the different members were seated.

This way it could be commented on how the different groupings (if any)

were situated in relation to each other and how people voted as a consequence of the seating in the room. It was interesting to see if members with opposing opinions had a placement in the room that resembled the opposition.

The SUSA executive meetings were conducted as normal meetings are, around a big table where no one had fixed seating. The observer sat himself in such a way that that he could see as much as possible of what was going on during the meeting, including the body language of all members of the executive board during the meetings.

When a person said something or used body language, it was noted down with a counting number. This way, it was possible to backtrack the meetings by following the running numbers back and forth between the different team members. Furthermore, at the beginning of the notes, the current topic was noted, so that it was easier to interpreting the meeting transcript afterwards.

After each meeting, the transcript with the notes were entered into the computer and all members got all their meeting interactions listed under their name. This way, it was easier to do statistic analysis later when assessing the degree to what it was possible to predict the team members' behaviour from the BTRSPI scores.

An example of the finished transcript for one board member could look like the listing below. Each board member would have a similar block on the meeting transcript, giving a structured log of the meeting discussions. [1]:

```
John:
5)  Orderly fashion presents a new case
    (wage increase for elderly).
```

[1]This transcript is only an example. Out of consideration of SUSA the different meeting transcripts are kept confidential.

```
7)  Harder against Josh, faster
11) Quite intense, defending
28) Feels *strongly* for the case. Emphasises once again.
    Wants to prevent damage on SUSA.
```

In this example, we can read that that the first interaction in the meeting by John, was as the fifth speaker in the meeting, because "5)" is the first item on the list of John's interactions. John presented a new topic for discussion. For understanding the next interaction in the meeting, it is necessary to look at what is written under point number six on the meeting transcript. This will probably be under Josh's notes, as we can see that John went hard on Josh and started to intensify his speech at this point of time in the meeting (item "7)"). Again, after some other executives have spoken, John continues intensively to defend his case. Lastly, as the 28^{th} speaker, after a lot of other members of the board have given input to the case, John again claims his case, this time with very strong emphasis.

By reading the meeting transcript and following the numbers, it is possible to follow get an adequate picture of how the meetings were conducted.

3.2.3 The interview

During the two month observation period, the SUSA executive board members were interviewed about their own experience in organisational work, decision making training, team training, how they saw the group and who they were sociable with in the team. The question sheet used during the interviews is included in Appendix A. The interview helped creating a greater

picture of the team than would otherwise have been given through only the BTRSPI and the observations. As mentioned earlier, the observation period was only for a short period of time and the interviews helped categorising the observed behaviour in the meetings were only exceptions to the norm or if they corresponded to the person's normal tendencies.

By interviewing the executive board members, it was possible to get a broader picture of how the team used to behave (according to its members) and team-up in topics of conflict within the group. The background knowledge on these issues within the group would otherwise taken a whole year of observation to obtain.

By building a better picture of the group, the interviews also helped to give more substance to the team in terms of its validity as a serious organisational board. Although not very likely, it could be the case that the board was not very operative or active as a decision making team at the top of the SUSA organisation. If this were the case, it would have been very hard for the board to camouflage this because of the interviews were done with all the different board members individually.

If the board had been a not serious one, it would have showed through the interviews as the range of questions were broad enough to get a measure of the scope and operation of the SUSA executive board. Therefore, the interviews gave proof of the validity of the SUSA executive board as a real decision making team.

Furthermore, the interviews gave a profile of the team members, which can be viewed in Appendix B. The profile gave useful background information about the board before going into the meetings for conducting the

observation. Knowing some background history about the team and its members made it easier to relate to what was going on in the board meetings.

The drawback of this data from the interviews, is, of course, that it was not objectively gathered information, but given subjectively from the different executives. Because of this, not too much emphasis was put on these emotions when doing the analysis, they merely formed a basis for understanding the group.

The interviews were done in an office where no one else could hear what was said. This way, the interviewee could speak more freely than otherwise if the interview was conducted in an open room were some of the other members of the team were present. This also made it easier for the interviewee to give an account inter-personal relationships and conflicts that might be present in the group. The questions were about the person's previous experience related to organisational work and especially instances were there was a similar setting of a decision making team. Furthermore, the interview contained questions about decision making training, team building and organisational training. These first part of questions were to give an understanding of the interviewee's experience in decision making in an organisational setting.

The second part of the interview was to map the person's opinion about the team. He/she was asked how it worked in general, if it as a group had received training on how to conduct meetings and team work. Questions were then given about topics and decisions the team had dealt with the last year that the interviewee thought were particularly important, well handled and that were badly handled. The person was to explain why it went well or bad and how the team as decision makers handled the particular case.

Lastly, the interviewees were asked to give any thoughts on possible improvement of the team if they had more training and if they were to change any procedures in order to make the team meetings more effective.

3.3 Implementation problems and difficulties

The initial plan was to do the research at Opera Software ASA, a middle sized computer firm making that is the biggest competitor to Microsoft on the web browser market. Unfortunately, this was not feasible.

It was also attempted to cooperate with the Department of Psychology at the University of Stirling. This department has an interesting course unit where they do observation of teams, how they behave and what kind of roles the different team members take. These teams could have been used for the dissertation research. Unfortunately, the unit in which these team observations occur only runs in the autumn semester and was therefore not an option.

The team interviews also caused some problems. The initial plan was to have three interviews with each member. One interview before starting the observation period, one in the middle of the observation period and a last interview after all the executive board meetings were finished. However, this was not possible because of the board members' schedules and hence availability. It was therefore sensible to have one interview with each board member that could be taken any time over the three months of interaction with SUSA. This way, people could take the interview whenever it suited them best.

The greatest problem of the dissertation research was perhaps multitask-

ing. The SUSA executives had meetings during the semester and not in the summer. Therefore, the research had to be done while following my own units and submitting my course work. This was at times a tremendous workload and it is something that is not recommended for future research.

Chapter 4

Results

This chapter will first present the results of two of the methods, namely the interviews and the BTRSPI. The findings when linking the BTRSPI scores with the observation of the team's behaviour in the board meetings will then be presented, before assessing the significance of these findings.

4.1 The SUSA executive BTRSPI profile

The first element of the dissertation research was the BTRSPI. The eight different Belbin team roles tested in the inventory are: Implementer (I), Completer (C), Shaper (SH), Plant (PL), Resource Investigator (RI), Monitor-Evaluator (ME), Teamworker (TW) and Completer-Finisher (CF) (Belbin, 1981).

The numbers in the first vertical column corresponds to the different SUSA executive board members taking the test. The letters on the top of the head row correspond to the different Belbin team roles, as described in section 2.4. Thus, "I" is short for "Implementer", "C" stands for "Completer", "SH" is "Shaper" and so on. By reading each row, it is possible to get the BTRSPI profile of each participant.

For example, row two in this table, starting with "1", is the Belbin profile of participant number one on the executive board. This person has, as most participants have, values for all team roles. That means that the person has some of the qualities of the different team roles. Even so, there are three scores that stick out, namely the scores for "Implementer", "Teamworker" and "Completer-Finisher". These scores are the most interesting as they represent the person's team roles according to the Belbin team role model. To highlight this, the highest scores are given bold face to make it easier to spot the different team roles on the SUSA executive board.

If a participant has one score that sticks out, i.e. has significantly higher score than the other values, the person fits perfectly with one of Belbin's team roles. However, it is common that a person has two roles, or even three roles, that he or she falls into, such as in this example.

This phenomenon that a person falls into several team roles is nevertheless in accordance with Belbin's team role model. Belbin argues that a team does not have to consist of eight members in order to have all the eight team roles present. A person can hold several team roles contributing to a balanced team (Belbin, 1981).

#	I	C	SH	PL	RI	ME	TW	CF
1	**14**	6	4	6	8	7	**12**	**13**
2	7	8	-	11	15	-	**27**	2
3	3	7	12	7	**25**	8	4	2
4*	7	-	**15**	-	4	**17**	5	12
5*	9	11	**16**	2	4	7	5	6
6	5.65	10.05	**13.25**	**13.5**	9.55	8.5	6.3	3.2
7*	13	12	13	1	2	2	14	13
8	6	**16**	8	3	8	13	10	6
9	11	5	11	7	**13**	11	6	6
10	**14**	10	5	7	6	5	**13**	10
11*	**10**	7	**11**	7	8	8	2	7
12	6	5	11	7	**16**	6	19	-

*) Did not answer section I on the BTRSPI. The total scores are therefore lower than the other totals.

Table 4.1: The SUSA executives' BTRSPI profile

4.2 Interviews

A lot of the board members had previous experience with organisation work at the university, either as members on the University Council or as executives on the SUSA board. However, additional organisational experience was scarce and there were only a few significant exceptions.

Thus, training in organisational work and decision making in teams were usually limited to the course provided by the National Union of Students to the SUSA executives at the start of each university year.

Most interviewees replied that they thought the executive board worked well as a team and that they had very well defined formal roles within the group, which the other members respected. This clearly separation of roles helped the group process, as described by Brown (2000a).

For the most part, board members thought their contribution to the meet-

ings was satisfactory, although some executives replied that they could have done a lot more as board members.

However, it was the question "would the team would work better if they had more training" that created the biggest gap in the answers. The interviewees gave answers from both ends of the scale, from "definitely yes" to "absolutely not".

More unison were the interviewees when it came to the need of new procedures to the board meetings. Only a few suggestions came up and no one were essential for the effectiveness of the team meetings.

The interviews also gave hints of groups within the group and the social relationships between the different team members. There was a general tendency that the team members' behaviour in the board meetings could be linked to what was described by the members themselves during the interviews. However, because of the biased nature of the interviews, nothing could be concluded from them.

Nevertheless, the interviews confirmed that the team of SUSA executives itself was a genuine decision making team that had true influence on the organisation it operates within. This was the primary objective of the interviews.

4.3 Findings

There was a general tendency that the team members' behaviour in the board meetings could be linked directly to their Belbin team role profile.

Approximately two thirds of the interactions in the meeting room could be explained by either the characteristics of a team role, the role's strengths,

or its weaknesses. Furthermore, it was interesting to see how people took opposing stands in cases and how well this related to Belbin's description of "potential conflicts" and who the team roles "relates well with". It was found that the BTRSPI drew a believable picture of how the team members would "team up" in topics of dispute.

Chapter 5

Discussion

5.1 Summary of key findings

It is very interesting to look at the BTRSPI scores for the SUSA executive board. The team appears to be balanced with all of Belbin's team roles present. However, there are for example four shapers in the team, something which according to Prichard & Stanton (1999) can be disruptive and lead to conflict in the team.

Indeed, this could be observed in the meeting room where the discussions could be very emotional at times. Despite of this fact, the team seemed to handle this disruption reasonably well and it was not an unbearable number of conflicts during the meetings. A little tension is positive and should be seen as something constructive as long as ideas and not personalities are the sources of conflict (Glover, 2002b). Therefore, it would be an exaggeration to say that the number of shapers ruined the team dynamics of the SUSA executive board.

In most cases the Belbin profile of the team worked well to explain who teamed up in arguments. It was a clear tendency that team roles that "related well together" according to Belbin did cooperate well together in the meeting

room.

The deviation in accuracy of the Belbin scores was for the most part related to individual behaviour and not how individuals related to each other. For example, it was found that participants that according to themselves where both a shaper and a plant, were totally silent during meetings, something which is a clear contradiction to the Belbin theory. On the other hand, when it came to the in-group relationships, such as who worked well together and who were natural deviates, the Belbin scores did well to predict a team's behaviour. Thus, if only the results of what team members related well together and who did not during the executive board meetings were to be counted, the BTRSPI accuracy would get a higher score. However, as the research was set out to measure how well the BTRSPI could predict the behaviour of the the team members during their meetings, the BTRSPI accuracy was "only" 67%.

5.2 Significance of findings

The findings have significance to the discussion of the validity of the BTRSPI, especially in connection with the applicability of the inventory to decision making teams in an organisational context. This research supports the study of Fisher, Hunter & Macrosson (2002) who concluded that the BTRSPI is suitable for non-managers also.

The point to which this study has the greatest significance, is the use of a real team in a real setting as comparator to the BTRSPI profile of the team. There has been very few attempts to do this as pointed out by Partington & Harris (1999). A rare exception to this fact is the research conducted by

Senior & Swailes (1998). This research by Senior & Swailes (1998) differs from this dissertation because the authors did not do the observation themselves. The study was conducted by peer review and carries the drawback that the observation may be influenced by personal opinions about the work colleagues. For this reason, the observation is better conducted by a third party who does not have any relation to the team and can thus be more objective, as was the case in the dissertation research.

The dissertation confirms what Jackson (2002: 11) and Prichard & Stanton (1999: 652) concluded; a balanced team with the presence of all the different team roles has a positive increase in performance. This was also confirmed by the members of the SUSA executive board through the interviews. All members of the board believed that the team performed well as a decision making body. Furthermore, the list of accomplished tasks throughout the year is impressive enough to reach the conclusion that the executive board worked well as a decision making team. In addition to this, the observation of the executive board a number of meetings gave proof of that the team does function well and represented a balanced decision making team.

The dissertation research question (*Is it possible to predict the behaviour of a decision making team from the team role profile given by Belbin's team role self perception test?*) was given a positive answer from this research. In more than two thirds (67%) of the cases, the BTRSPI predicted the behaviour of the team members.

All the same, it could be argued that this is not a definite answer. First of all because the positive proportion was "only" 2/3. Some critics would argue that one third (32%) of the the data claim otherwise is a big enough

proportion to answer "no" to the dissertation question.

The answer to the high inaccuracy of the BTRSPI may lie in the self perception nature of the inventory. As it is conducted by the participants themselves, it is possible that some participants do not have the ability to be objective enough to fill out the BTRSPI with the right amount of self criticism.

From a different perspective, the dissertation findings support the likes of Fisher, Macrosson & Sharp (1996) and Fisher, Macrosson & Wong (1998) who suggest that although the BTRSPI does carry weight, it should not be used as the only measure of team composition, team success or team building. The observation of the SUSA executives revealed inadequacies in the BTRSPI by discovering contradicting behaviour by some team members in the board meetings. Therefore, although the observation did find proof of validity for the BTRSPI, it also found the opposite, proving that an additional measure like itself is need in order to get a picture of a team's profile.

Nevertheless, it is important to view this research in the light of the fact that the research period was not long enough to conclude anything certain, although a clear tendency could be found. The executive board should have been followed for a year in order to get a broader basis for data analysis. Furthermore, more interviews at different stages with the team members would be preferable. As mentioned in section 3.3, this was not doable in this research.

All the same, it is safe to argue that this research does give evidence of the validity of the BTRSPI as also concluded by the research of e.g. Fisher, Hunter & Macrosson (2002), Fisher, Macrosson & Wong (1998), Swailes &

McIntyre-Bhatty (2002), Watkins & Gibson-Sweet (1997), Shi & Tang (1997) and Sommerville & Dalziel (1998).

5.3 Implications of findings for human resource management and SUSA

Human resource management (HRM) is a concept with a wide range of elements, often dependent on what the firm allows the human resource manager to be, therefore HRM can be both "soft", "hard" and everything in between (Taylor & Ramsay, 1998; Hallier & Leopold, 1996). "Soft" HRM relates to an HRM strategy where management wants to develop the human assets in the company and at the same time ensure a high degree of commitment from the employees through emphasis on communication, motivation and leadership. "Hard" HRM on the other hand, relates to a strategy which focuses on the size and cost of the employees, through an emphasise on rationality, strategy and business needs (Storey, cited in Hallier & Leopold (1996: 47-48)).

In addition to the soft-hard spectrum, HRM consists of a number of other building blocks, such as; employee law, company culture, national culture, industrial relations, interview technique, motivation theory, industrial democracy, quality circles and team building (Huczynski & Buchanan, 2001; Robbins, 1998; Hyman & Mason, 1995).

Therefore, teamworking is a central part of human resource management (Zucchi & Edwards, 2000) and the BTRSPI is a central part of management's toolbox to measure team composition and effectiveness (Partington & Harris, 1999: 697). A useful discussion and extensive range of research on

the validity of BTRSPI is therefore important. This dissertation is a contribution to this discussion as it gives a new attribute to the previous research by linking the BTRSPI to the behaviour of a real decision making team in a real, organisational setting.

For the team that has been the focus of this research, the SUSA executive board, this dissertation can be useful reading as well, especially when looking at the self perception aspect of the test. Some of the participants on the board had so strong deviation from their BTRSPI scores and their actual behaviour in the meetings that two questions could be raised; were the participants in question totally honest when assessing their own role as a team members, and if yes, why do they not behave in accordance to their team roles? Is there anything in the meeting procedures that prevents them from acting as their true selves, or is there any other team members that obstruct them from being contributing members of the executive board?

These questions may give valuable answers that, when assessed, can help improve an already well working decision making team of SUSA executive board members.

5.4 Recommendations for future research

The primary recommendations for people wanted to explore further along this topic, is to use more time. Naturally, since this was "only" a MSc dissertation, the time available for data collection was limited. In order to get a greater foundation and greater insight knowledge, it would be desirable to follow the executives their whole year of operation and not only for two months.

People may alter their behaviour after the topic discussed. In this sample, each member has their own area of expertise, e.g. entertainment, and will naturally be more engaged in discussions relating to their field. By following the team through a whole year, one would get a better rounded picture of the team's effectiveness as decision makers as the behavioural patterns would be more evident to the observer.

Another point to consider about following the executives through a whole year is related to the nature of this kind of team. As SUSA is an organisation for students, it is likely that the demands and pressure will vary on the executives through the year in accordance with the university cycle. Moreover, the motivation may be greater among the team members at the start of their period than in the end of the second semester. However, it is important to stress that most members of the executive board had been on it for several years and had by that gained valuable experience in organisational work and team decision making.

Nevertheless, it was possible to pick up a general trend in the board meetings from the time available for the dissertation data collection.

Chapter 6

Conclusions

The central topic of this dissertation has been the validity of the Belbin team role self perception inventory (BTRSPI). It contributes to the vast discussion of the validity and applicability of the BTRSPI by observing a real decision making team and linking this to the team's BTRSPI profile.

The current literature on teamworking and Belbin's team role self perception inventory has grown to be quite extensive. Even so, when going through the different research projects, it appeared evident that little research has been done on real teams in connection with the Belbin inventory.

The main themes that run through the previous research fall into three categories. The first is to look at one industry or company at large and assess the impact that teamworking has on the nature of work; on labour turnover, worker output, absenteeism and job satisfaction. Another perspective is to map the tendencies of what kind of BTRSPI profile different groups of people have, such as what kind of BTRSPI profile managers or law students tend to have. The last category of research is to explore the BTRSPI and team behaviour. However, this is for the most part done on student teams, solely composed for the research projects. This has the effect that what goes on in

the teams will not have consequences afterwards, hence an important aspect of teamwork is lost, namely the social relationships. People do not want to be unpopular with people they have to work with on a daily basis. When the teamwork is only for a short time period and/or with a task that does not affect their daily routine, such as in much of the research mentioned, people tend to be more forgivable and act in a more rational manner than they otherwise would have in a real setting.

This dissertation focused on how one decision making team behaved in their genuine environment. The team chosen was the executive of the Student Association at the University of Stirling (SUSA). By comparing their behaviour in the meeting room with their BTRSPI profile it was found that indeed a lot could be explained by the characteristics of their Belbin profiles. Two aspects of the Belbin roles were emphasised, the characteristics of the different team roles (with strengths and weaknesses) and who the different roles would relate well with. By following each interaction of team meetings over a number of meetings, it seemed clear that it was possible to predict a great proportion of the team member behaviour in the meeting room. Or phrased differently, it was possible to anticipate the different team roles from observation in two thirds of the cases.

Even so, there are some aspects to consider when assessing the significance of these results. First of all could the data basis for the research be broader as the time for conducting the observation was limited because the board meetings were during the semester and not during the summer. Secondly, it is important to note that since one third (32%) of what happened in the meeting room was not predicted by the Belbin inventory, but on the contrary

were total opposite behaviour of what was ascribed to the particular team role, it can be argued that the BTRSPI is not the definite answer.

This theme brings us to the conclusions of this dissertation. Firstly, this dissertation supports Fisher, Hunter & Macrosson (2002) who argued that the BTRSPI is applicable to non manager teams also. The second conclusion is that the inventory carries adequate validity and by that the dissertation supports the likes of Watkins & Gibson-Sweet (1997). Nonetheless, perhaps the most important outcome of this dissertation is that it is important to remember that the BTRSPI should not be used as the only way of assessing team composition and performance, as also concluded by Fisher, Macrosson & Sharp (1996).

Therefore, this dissertation supports what Belbin (1993a) himself argued; the BTRSPI was never meant to be a self standing psychometric test. The Belbin team role self perception test is absolutely a worthwhile tool to use by management when assessing a team's composition and possible performance, as long as it is supplemented with additional measures.

Appendix A

The interview

These are the questions used for the interviews with the SUSA executive board members. The questions are open ended in that the interviewee can elaborate to the extent he or she wishes.

Questions about the interviewee

- What is your previous experience in this kind of organisational work?
- Have you had any training in teamworking?

Questions about the team

- How do you think the SUSA executive board works?
- Do you have/gotten any guidelines for meetings/teamworking?
- How do you contribute to the team?
- Can you give give a listing of the most important cases last year, that the board has dealt with?
- Can you give examples of any crucial decision that the team has dealt with where you worked well and dealt with the issue successfully?
  - What was it that worked well in that particular case?
- Can you give an example of something that did not work so well?
  - What was it that went wrong?

  - Why did it go wrong?

In hindsight

- Would the team have been more effective if they had more training in teamworking or decision making?
- Would you recommend other practices for future generation of executive board members?
- Do you have suggestions for other meeting procedures, or how the SUSA as an organisation work?

Appendix B

Interviewees' profile

There was 6 male and 5 female members on the executive board. It should be noted that one additional exec was present as this person was to be on the executive board next year, but stepped in already this semester. All the members of the board was between the age of 20 and 24.

All executives get training from the National Union of Students. This is a weekend course in which they learn how to run a meetings, team building, how to be an executive officer, specifics about the SUSA organisation and practical exercises as they would occur in the real meetings.

#	Relevant experience	Sex
1	Five years on the SUSA council, two years as an executive	M
2	—	F
3	Fourth year on exec. Organisational experience from school	M
4	Clubs and societies at schools, including political debates.	M
5	Third year of SUSA involvement. School councils & committees	F
6	Second year on exec.	F
7	—	F
8	—	M
9	—	M
10	Third year on exec. Youth work.	F
11	Third year on exec	M
12	Prefect at primary school.	M

In the "Sex" column, "M" is male and "F" is female.

Appendix C

Meetings attended

It should be noted that meetings in April and May were moved around in order to meet other university arrangements such as meetings and exams, thus the frequency of meetings in May. The last meeting of the year was May the 15^{th}.

- 18^{th} of February 2003
- 24^{th} of April 2003
- 1^{st} of May 2003
- 6^{th} of May 2003
- 8^{th} of May 2003
- 13^{th} of May 2003
- 15^{th} of May 2003

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