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A TERMINOLOGICAL APPROACH TO MULTI-DISCIPLINARY DOMAINS AND DISCIPLINARY AUTONOMY

Abstract

Today's society is characterised by an increasing specialisation and the emergence of new disciplines. To be able to understand and mediate the content of these areas, it is important to be able to delineate them. Within this setting this article presents the main background and results from my doctoral study (Kristiansen 2004). The study addresses the question of what constitutes a scientific discipline and when is it possible to say that a particular discipline is autonomous. Secondly, the study investigates how such disciplinary autonomy can be determined.

The tradition of borrowing concepts as found in many social sciences, results in highly multi-disciplinary subject fields. It has therefore been an aim of the study to investigate the nature of social sciences in particular, with focus on their concepts. A major aim has been to see whether methods of conceptual analysis as described in terminology theory can offer a useful means of evaluating the autonomy status of a given discipline.

The point of departure for the conceptual analysis has been terminological methods as described in among others Laurén et al. 1997, which have been developed to enable an investigation of conceptual changes in the social sciences.

1 INTRODUCTION

As stated in Sager (1990: 16), no individual or group of individuals possesses the totality of the knowledge structure of a community, which is why we divide knowledge into disciplines. This does not have to result in easily distinguishable units, but rather in overlapping subject fields. In an emerging discipline the conceptual basis is likely to be muddled and misunderstandings in communication situations may occur. Hence it would be fruitful if the relative autonomy of a discipline could be assessed.

In the social sciences there is a tradition of borrowing concepts, something which results in highly multi-disciplinary subject fields. In my doctoral thesis (Kristiansen 2004), the attempt has been to outline how the origins of one such discipline, namely organisational behaviour (also called OB in specialist texts) can be traced in other, more traditional disciplines, which I have called parent disciplines. These parent disciplines include psychology, sociology, social psychology, anthropology and political science.

OB is a relatively new branch of knowledge, and at present no common view of how it should be delineated seems to exist. In Robbins (1996) it is defined as:

> a field of study that investigates the impact that individuals, groups, and structure have on behavior within organizations, for the purpose of applying such knowledge toward improving an organization's effectiveness (ibid.: 10).

The central unit of study is behaviour, expressed by individuals acting on their own or in interaction with others in groups. The discipline studies how this behaviour influences the performance of the organisation. An organisation may be defined as a "consciously co-ordinated social unit, composed of two or more people, that functions on a relatively continuous basis to achieve a common goal or set of goals" (op. cit.: 5). The preoccupation with performance and the need to control this performance are what distinguish organisations from other forms of social arrangements.

Thematically, OB is frequently divided into four subareas, (Northcraft and Neale 1994; Robbins 1996): individual behaviour, group behaviour, organisational dynamics and organisation system. The satellite

system in Figure 1 shows 'organisational behaviour' as the parent node, surrounded by four sister nodes which correspond to the OB subareas.

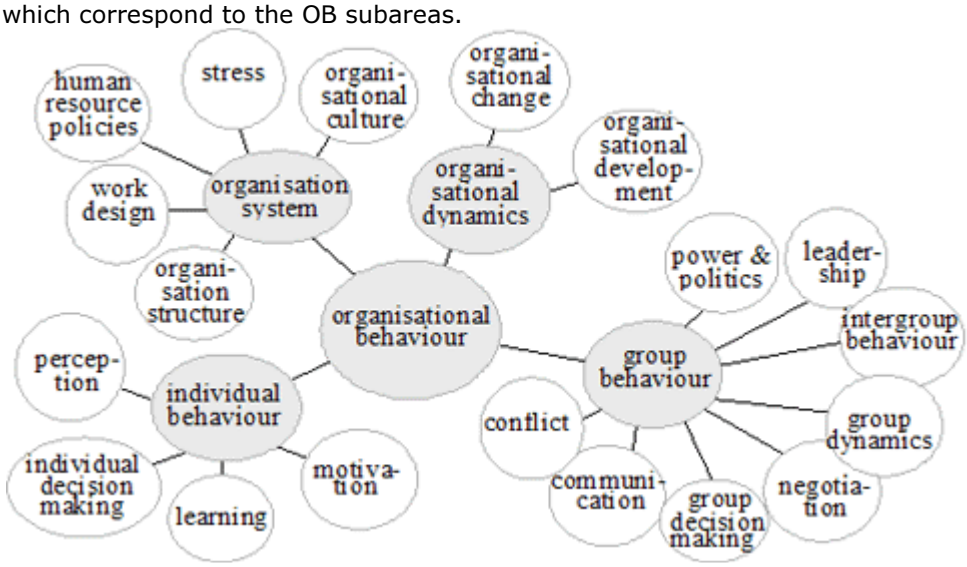

Figure 1. A satellite system of the OB subareas

The subareas of the discipline have been further subdivided into smaller areas (or subordinate concepts), here rendered as the smallest nodes. This division of OB subareas will be the point of departure for the investigation of conceptual changes in OB and the assessment of the autonomy status of OB.

Since behaviour is the most central unit of research of OB, it has been natural for OB researchers to search for the answers in theories explaining human conduct. This may explain the tendency in OB to borrow concepts from other social sciences, i.e., the parent disciplines. The fact that a discipline is considered to be a parent discipline of OB does not imply that OB has originated directly in that discipline, but that OB to a great extent has borrowed from the discipline and incorporated the borrowed concepts in its own conceptual apparatus.

All the parent disciplines belong to the group of social sciences and have thus human behaviour as the main object of their studies. However, the various parent disciplines differ in what characteristics of behaviours they study and in what settings the behaviours take place. For instance, behaviour may be studied as either individual behaviour or group behaviour. Furthermore, it is possible to study how group behaviour may influence individual behaviour. Finally, behaviour may be analysed in a political environment or a cultural context.

In my study the attempt have been to take into account these various angles from which behaviour may be viewed, including psychology, whose influence on OB may be traced back to the 1950s, followed by social psychology, sociology, anthropology and, finally, political science, which is the discipline that has most recently begun to assert its influence on OB, dating back to the 1970s.

The idea to the project emerged as a result of a terminological analysis, of motivation concepts in OB, which was the focus of my cand.merc thesis (Kristiansen 1997). When analysing OB concepts in this previous study, it soon became evident that I was dealing with a domain which was highly multi-disciplinary in nature. In fact, several disciplines seemed to have offered theories and concepts to the foundation of OB. In addition, OB appeared to be closely related to several other disciplines such as management, economics and strategy.

Within this setting, two major questions have set the frame for my study. The first one relates to the concept of disciplinary autonomy: When is it possible to say that a particular discipline is autonomous? The second question involves LSP research and in particular terminological analysis: Can a conceptual analysis of the concepts of a discipline be used as a means to assess the autonomy status of that discipline?

To find an answer to the first question of disciplinary autonomy, philosophy of science has been taken as a point of departure, in which general criteria for scientific activities as discussed by among others Kuhn (1970), have been addressed to delineate a set of characteristics typical for what Kuhn describes as the

qualitative nature of normal science. Secondly, the concept of scientific concept has been discussed to provide a basis from which to analyse conceptual changes by means of terminological methods. Thirdly, OB has been delineated in terms of the scientific foundations on which it is based, including a delimitation of its parent disciplines and their subareas. Finally, the study comprises an analysis of three central concepts which have been borrowed from the parent disciplines, namely 'motivation', 'group dynamics' and 'group decision making', including their conceptual clusters. The attempt has been to investigate whether the content of the borrowed concepts have changed compared with the content of their respective parent concepts.

In this article I will outline the overall purposes of the thesis. Next, the applied method will be presented, including a discussion of what I understand by the concept of disciplinary autonomy and the relation between the conceptual analysis and the research questions. Finally, the main results will be summed up, and some implications for future research will be presented.

2 METHODOLOGY

The study has had two overall purposes, namely to investigate when it is possible to say that a particular discipline is autonomous and, secondly, to see whether conceptual analysis as described in LSP research can be used as a means to assess the autonomy status of a given discipline. These two overall questions have different methodological implications. Whereas the first question is of a more philosophical nature, the second is of a more empirical one. The methodology developed in the study has therefore been two-fold.

2.1 How to investigate disciplinary autonomy

To anyone familiar with the social sciences and the high degree of interrelatedness that exists between the various disciplines, it should be obvious that it is difficult to find objective criteria for whether a discipline is autonomous. Hence autonomy must be seen as a relative characteristic of a discipline.

In order to analyse the autonomy status of OB, it has first been necessary to stipulate some criteria that could be used to delineate domains as disciplines and to distinguish between interrelated disciplines. To do so, I have turned to philosophy of science which has been taken as a point of departure. Based mainly on Kuhn's description of the qualitative nature of normal science (1970), it has been possible to determine a set of characteristics that should be present in a domain for it to qualify as a scholarly discipline. These criteria are of both a sociological and an epistemological nature.

In short, sociological characteristics include the existence of research groups who can be identified with a common paradigm or paradigms, associations, common communication channels, and regular events where researchers meet, such as conferences and meetings. In addition, associations, internet sites and university level courses which teach the disciplines will add to the sociology of a discipline. The sociological criteria may be described as being of an external nature since they are what can be observed by outsiders, such as e.g. web sites and journals. Disciplinary analyses based on sociological criteria are described in for instance Jakobsen (1980) and Antia (2001), in which citation analyses have been applied to investigate who cites who in marketing and terminology, respectively.

Epistemological characteristics include a separable research object, separate methods for empirical investigations, an independent theory development and a common conceptual apparatus, including terminology. A previous epistemological study which has investigated the various schools within terminology science is Laurén and Picht 1993. In their article "Vergleich der terminologischen Schulen" (1993), they conclude, among other things, that there are divergent views on how theoretical issues are solved and thus how theories are developed depending on whether the departure point is a linguistic orientation or an inter- and transdisciplinary orientation.

Based on the sociological and epistemological criteria, a working definition of 'disciplinary autonomy' has been established, which reads as follows:

> a discipline's relative independence from other related disciplines, when it comes to both "sociological" and "epistemological" disciplinary characteristics

Although investigations based on sociological criteria certainly indicate the existence of autonomous disciplines, they say little about how the knowledge presented as a discipline differs from other related disciplines, and therefore whether we in fact may argue that the discipline is autonomous. Especially when disciplines are interdisciplinary by nature, sociological investigation may not disclose to what extent a discipline present knowledge that can be considered as an autonomous whole, independent of other related disciplines, relatively speaking. To add to the confusion, identical terms may be found across disciplinary borders. Whether the terms represent the same knowledge in the related disciplines will therefore have to be investigated more closely. And this I believe can be investigated by conceptual analysis, since the concepts of a discipline will constitute the central knowledge units in that discipline.

There have been several attempts to reconstruct the scientific foundation of disciplines by means of other methods than conceptual analysis. A widely used method is citation analysis as mentioned above (see also Garfield 1979; Jakobsen and Grønhaug 1993). Such analyses may be applied to construct a historical mapping of a discipline to investigate how it is related to other disciplines and how such relations may change during a period of time. A conceptual analysis, however, will result in a description of very central epistemological characteristics of a discipline since the concepts of the discipline will constitute the core of its knowledge.

2.2 Terminological analysis

In the analysis I have focused mainly on the last epistemological criterion of a discipline, namely that a discipline should have a common conceptual apparatus, including terminology. Methods of conceptual analysis have been applied, as developed in terminology theory, to compare OB concepts with their corresponding parent concepts. This analysis will provide an answer to the second overall question of whether terminological methods can be a useful means to delineate disciplines. Such a comparison will also disclose whether any changes have taken place in the adapted OB concepts or not, and also whether new concepts have been formed. The belief has therefore been that the analysis will provide an answer to whether OB is an autonomous discipline.

Through the conceptual analysis the attempt has been to find an answer to three more specific research questions:

- What are the scientific foundations of OB?
- Which intrinsic changes have taken place in the borrowed concepts?
- Which extrinsic changes have taken place in the borrowed concepts?

By the scientific foundation I understand the parent disciplines from which OB seems to have borrowed concepts. At this stage in the analysis the various parent disciplines have been seen as concepts themselves and analysed based on how they are defined and delineated by their subject specialists. The motivation for raising this first question has been the belief that the parent disciplines have influenced OB and its subareas by lending their concepts to the discipline.

The first superordinate level of the analysis has focused on the influence the parent disciplines have had on OB when it comes to the scope and purpose of research, indicated by the first two levels in Figure 2.

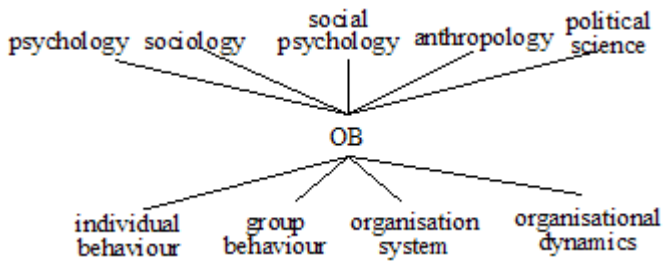

Figure 2. Superordinate and subordinate levels of analysis

The second, subordinate level of the conceptual analysis has focused on the influence the parent discipline concepts have had on the four subareas of OB, indicated by the middle and lowest level in Figure 2. This stage of the analysis has also involved an analysis of what I have described as intrinsic

changes, i.e. changes in the intensions of the concepts and any term changes that may have taken place. At this stage the selected concepts of 'motivation', 'group', 'group dynamics', and 'group decision making' have been analysed to investigate to what extent any changes in the borrowed concepts have taken place compared with their respective parent concepts. A second aspect has been to investigate what influence such changes may have had on the autonomy status of OB.

In the comparison of OB and its parent disciplines, at least three different sources of conceptual change have been investigated, namely separate concept formation, the borrowing of concepts from parent disciplines, and the production of new concepts by developing borrowed concepts. Similarly, concepts may just as well have been deleted in the process of defining the new, emerging discipline. The point of departure for the analysis has been a taxonomy of conceptual change which has been developed based on Thagard 1992 (Kristiansen 2004: 92ff)

The investigation of possible intrinsic changes has involved the testing of two hypotheses, which have turned out to be valid, although for different groups of concepts: For some subareas and concepts it seemed likely that conceptual changes have taken place in the intension of the concepts as they have been borrowed from the parent disciplines and adapted in OB. However, my pilot studies have indicated that for other concepts it might be the case that the concepts have been borrowed without significant changes being made to their intensions, i.e., most of the essential characteristics of the parent disciplines' concepts have been retained.

The third and final stage of the analysis has focused on the relations that exist between the various OB concepts compared with those of the corresponding concepts in the parent disciplines. This analysis has been motivated by the belief that conceptual changes take place in the conceptual extensions as they are borrowed from the parent disciplines and adapted in OB. The purpose of this part of the analysis has therefore been to find an answer to the third research question of whether any extrinsic changes have taken place in the borrowed concepts. The term **extrinsic changes** thus relates to changes that have taken place "outside" a concept, i.e. in the way a given concept is related to other concepts.

The choice of the terms **intrinsic** and **extrinsic** to describe the two types of conceptual change has not been made without hesitation. At first I wanted to use the terms **intensional** and **extensional**, since these are already used in terminology theory in relation to concept characteristics to distinguish between inherent characteristics and characteristics that are used to indicate conceptual relations. Consequently, relational change has also been considered instead of extrinsic changes. Since I wanted to include possible **term changes** as something that is associated closely with the concept itself, I wanted, however, to apply a term that could take this into account. The use of **intensional** would in that case have been misleading. The long tradition for dichotomies in terminology theory, i.e., classifying things into two opposed parts or subclasses has therefore led me to choose two other terms, namely **intrinsic** and **extrinsic changes**, where intrinsic includes both intensional changes and term changes.

2.3 Corpus material

In order to carry out an empirical investigation of the exchange of concepts between the parent disciplines and OB, specialist texts have been used as corpora. The corpus material has consisted of textbooks on OB and its parents disciplines aimed at students at university level. In addition, the material has been supplemented with research articles which discuss the concepts that have been analysed.

For a textbook to be useful to students who do not have a comprehensive overview of all the discussions and controversies currently taking place within the various research milieus, substantial selection and exclusion of the theories and concepts of a discipline are necessary. Thus it has been assumed in the present study that textbooks generally describe theories and relations among concepts which are no longer disputable. The conceptual descriptions given in the selected textbooks have therefore been taken as a valid delineation of the concepts in question. In contrast, specialist journals issue for instance research articles on recent developments of OB subjects and will therefore introduce new concepts that have emerged, and which are not described in the textbooks yet. Research articles thus add a dynamic dimension to the analysis since such articles very often represent new research in a field. They may also comprise controversies and areas which may be highly debated and even refuted in specialist milieus. The addition of articles has therefore been made to provide a more detailed description of concepts than what is provided in the textbooks.

In addition to the written corpora texts, discipline specialists have been consulted for a professional evaluation of the results (Kaufmann 2004, personal communication). This evaluation may be seen as representing an "extended" corpus since it has provided additional evidence which could not be immediately extracted from the written text corpus.

3 MAIN RESULTS

3.1 The scientific foundations of OB

To assess the scientific foundations of OB, the five parent disciplines – psychology, sociology, social psychology, anthropology and political science – have been delineated and compared with OB, and the subareas of the various disciplines have been investigated.

Based on the conceptual analysis, the selected parent disciplines and OB may be described as a family of disciplines, with characteristics which in many instances are very similar, both when OB and the parent disciplines are compared, but also when the parent disciplines are compared with each other. It is evident that the scope of research in the disciplines is very similar, human behaviour being one vital common characteristic. This is supported in the corpus material, for instance Northcraft and Neale (1994), in which it is argued that:

> The study of people's behavior in organizations – organizational behavior – is one of a family of scientific areas of study known as the behavioral sciences. The behavioral sciences all share both a scientific orientation and a focus on human behavior as the object of their study (ibid: 18).

The defining characteristic of OB as a discipline which focuses on 'behaviour within organisations', as opposed to for example 'any behaviour', however, indicates a special level of research for the discipline. The comparison of OB and psychology may be used as an example.

OB can be described as:

> **(1) organisational behaviour (OB)**
> A field of study that investigates the impact that individuals, groups, and structure have on behavior within organizations, for the purpose of applying such knowledge toward improving an organization's effectiveness (Robbins 1996: 10).

Based on the above, the research object of OB is human behaviour, including both individual and group behaviour, in addition to organisational structure. The overall research question is: What impact do individuals, group and structure have on behaviour in an organisation? Finally, the purpose of posing such a question is to improve the effectiveness of an organisation.

Psychology is the oldest parent discipline, usually considered to be dating back to 1879, the year that W. Wundt established the first formal psychology research laboratory (Bernstein et al. 1997: 6). However, its roots can be traced through centuries of history in philosophy and science. A common way of describing the discipline is to see it as:

> **(2) psychology (P)**
> […] the scientific study of behavior and its causes. Behavior is used in its broadest sense to include anything that a human or animal can do, including both observable behavior and inner mental and physiological processes […] The basic goals of psychological research and applications are to describe, understand (explain), predict and control (influence) behavior (Passer and Smith 2001: 36).

This involves measuring, explaining and sometimes changing the behaviour of individuals. Literally, psychology means the "study of the mind". A central issue is the relationship of mind and body, due to its derivation from philosophy and physiology. The explanation of psychology indicates that the discipline has both human and animal behaviour as its research objects. The research questions are centred round concepts such as 'learning', 'cognition', 'intelligence', 'motivation', 'emotion', 'perception' and

'personality', which are all concepts that explain individual behaviour, with the purpose of describing, understanding, predicting and controlling behaviour and mental processes (ibid.).

When comparing the scope of psychology with that of OB it has become evident that there is a strong overlap between the two disciplines. In fact, it may be argued that there is a generic relationship between them, where psychology is hierarchically above OB. The fact that the scope of psychology is much wider than that of OB, in that it includes all human beings (and even animals) and not only people in organisations, supports this view. So does the fact that the research questions of psychology are more general, and do not specify a special focus on structural influence, which OB does, as well as the characteristic "organisational structure influence" as a classifying characteristic of OB. Finally, the emphasis on goal achievement represents a delimiting characteristic of OB. However, the presence of other parent disciplines in the conceptual apparatus of OB indicates that the relationship between psychology and OB must be of a polyhierarchical nature.

Although OB and psychology have highly overlapping research interests, the purpose of OB is, nevertheless, more restricted than what is the case for psychology. Thus the scope of research is only corresponding in some areas. For instance, OB does not only study individual behaviour, but also the interaction among individuals and groups. Furthermore, its knowledge base includes theory on the whole organisation system. These areas do not seem to be very central in psychology.

As for family members, OB and the parent disciplines are not identical, and the degree of relationship varies among the disciplines. Perhaps the idea of family resemblance can be used to illustrate this (Wittgenstein 1963). Similarly to the members of a family, OB is more closely related to some than others. Based on the findings of the conceptual analysis, psychology and social psychology stand out as being the parent disciplines with which OB has the closest ties. The analysis indicates that a further analysis of the concepts found in the three disciplines will show a very close conceptual interrelationship. If describing the degree of similarity along a scale, the third most similar parent discipline is sociology. Anthropology and political science will have to be positioned further apart from OB in respect of similarity, political science being the parent discipline with least resemblance.

Furthermore, the delineation of the parent disciplines shows that psychology has mainly contributed to knowledge of individual behaviour, whereas the other disciplines have offered knowledge of group, organisational, institutional, cultural and political behaviour in OB. In other words, the parent disciplinescan be said to have contributed to the micro and macro level of analysis, respectively. This is illustrated in Figure 3 below, which indicates the conceptual links between the parent disciplines and OB.

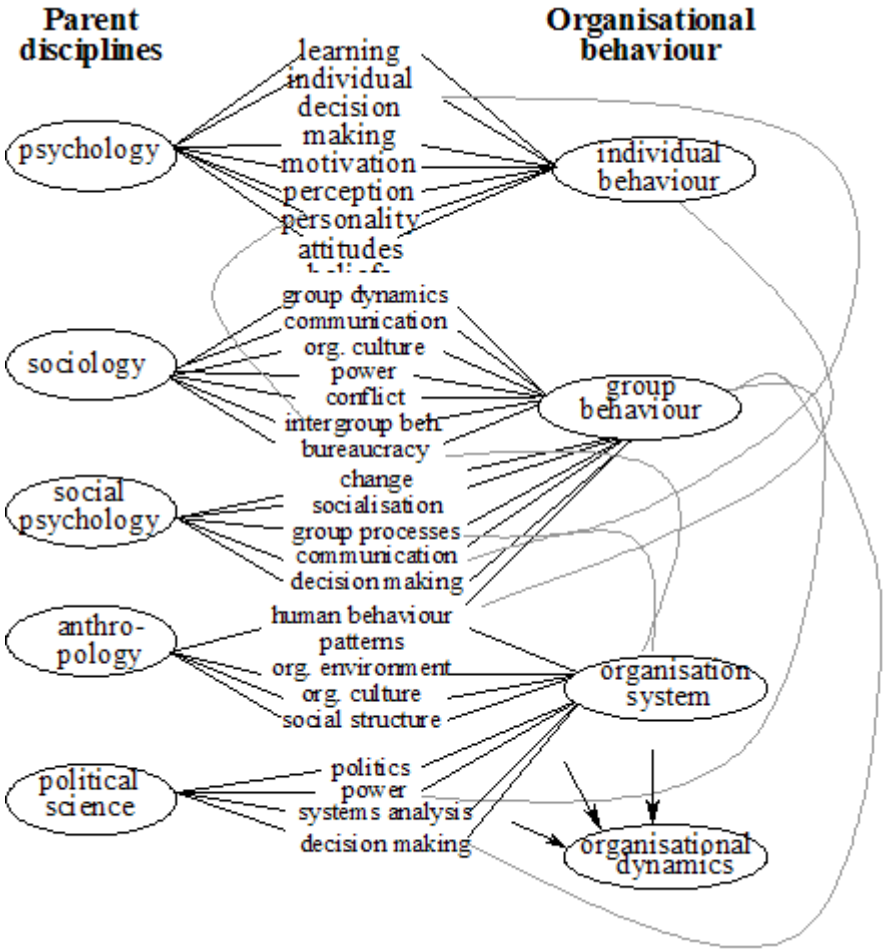

Figure 3. The interrelatedness between social sciences

The four elliptic shapes to the right-hand side in Figure 3 represent the various OB subareas. The concepts connecting the parent disciplines and the OB subareas, indicated with straight lines, are concepts which are shared between the disciplines. This survey does not, however, show all concepts which OB has borrowed, the total number is much higher. The motivation for the selection of concepts presented in the figure has been to show those which are the most relevant to OB, and which were to be analysed in the thesis. To an anthropologist, for instance, obvious relations will therefore be missing in the figure. Furthermore, the relations between the disciplines and concepts are much more complicated than indicated in the figure, which is illustrated by the curved lines. The true relationships between the disciplines and their concepts are rather of a multi-dimensional nature, which results in a complicated network of similarities overlapping and criss-crossing to use the words of Wittgenstein (ibid: 32, English version).

The analysis also shows that the parent disciplines are highly interrelated. The three concepts of 'perception', 'attitudes' and 'beliefs', for instance, are studied in psychology. These concepts are also studied indirectly in sociology and social psychology. In these two disciplines the focus will, however, be on how social factors and social groups, respectively, influence individuals. Naturally, such interdisciplinary relations complicate the analysis greatly.

To conclude, the analysis has shown that OB has at least five parent disciplines from which it has borrowed concepts, as illustrated in Figure 3. Consequently, these disciplines have influenced the OB knowledge base. Even though it is possible to outline how these parent disciplines have influenced OB, it is important to remember that few clear-cut distinctions can be made between the various traditional social sciences. Nevertheless, a number of concepts which have been borrowed can be outlined: 'motivation' and 'motivation theory', 'group dynamics' and finally 'group decision making', including the concepts of 'groupthink' and 'group polarisation'. These concepts have formed the point of departure for the investigation of the autonomous status of OB.

3.2 Intrinsic conceptual changes in OB

A common characteristic of many of the analysed concepts is that they have been borrowed from the parent disciplines with few or no changes being made to their intensions, i.e., intrinsic conceptual changes cannot be said to be a prominent characteristic of OB. The conceptual analysis has also shown that a number of concepts not found in the respective parent discipline(s), have been found in OB (Kristiansen 2004: 179, 196, 205).

Thus, the most typical characteristic of the OB concepts is that no intrinsic changes take place in the borrowed concepts. OB concepts such as 'motivation', 'intrinsic motivation', 'group', 'norm', 'role', 'group decision making' and 'group cohesiveness' all share the same, or almost the same intension as the corresponding concept in the parent discipline(s). A general conclusion is therefore that few intensional changes in the form of the addition or deletion of characteristics have been found in the OB concepts.

There is, however, one exception which is prominent in many OB concepts, and that is the additional characteristic in their intensions which positions the concepts in an organisational setting in relation to for instance organisational goals, work groups, or similar delimitations. Such changes, which can be grouped as characteristic additions, may be seen as a generic subordination of the concepts in the parent discipline(s) and not as a sign of an emerging new discipline. However, the analysis has shown that the concepts described in the OB corpus texts are related to each other in a new way and that a new conceptual system of special knowledge has emerged.

The changes that have taken place are to a great extent characteristics that reflect the scope of the various disciplines, and which are added to fit the purpose of the discipline in question. The OB concept of 'conflict', for instance, describes possible differences that may take place between "organization members", whereas the sociology concept of 'conflict' involves differences that include any argument between "individuals or groups in society" as such.

> **(3) conflict (OB)**
> Differences among the perceptions, beliefs, and goals of organization members (Northcraft and Neale 1994: 693).
> **(4) conflict (S)**
> Antagonism between individuals or groups in society (Giddens 1997:581).

In addition, the conceptual analysis has disclosed instances of characteristics being deleted from the description of OB concepts compared with the corresponding concepts in the parent disciplines.

The study has not been designed to analyse the expressions used to denote the OB concepts in any detail; nevertheless, some findings have been found during analysis. In general, the denotations of OB concepts are the same as for the corresponding parent discipline concepts. Conceptual change in the form of term change is therefore not a typical characteristic of the emergence of OB. On the contrary, the same terms are applied in several disciplines for seemingly identical concepts. However, there is a tendency to add a premodifying expression in the denotations of the OB concepts, such as ***organisational*** **decision making,** ***organisational*** **culture,** ***work*** **group,** ***work*** **role**, and ***organisational*** **behaviour**. All these terms refer to concepts which have a more general denotation in their parent disciplines, such as **culture** and **social group** in sociology, or **behaviour** in psychology.

3.3 Extrinsic conceptual changes in OB

Since many concepts are very similar in OB and the parent disciplines, the proposed disciplinary autonomy of OB may be questioned. The final stage of the conceptual analysis has therefore been to investigate whether there is anything else that distinguishes the disciplines.

According to the belief that conceptual changes take place in the extension of the borrowed concepts, the answer to this question should be sought in the conceptual structures of the disciplines, i.e., how the concepts are related to each other.

In my thesis I have discussed and outlined several types of conceptual change which have been grouped as system reorganisation (Kristiansen 2004: 95ff). System reorganisation involves a change in the

existing conceptual relations of a discipline or its subareas. The conceptual analysis has identified a number of concepts which have been reorganised in the conceptual systems. An example may be the conceptual change that has taken place in connection with the concepts of 'group polarisation', 'risky shift' and 'cautious shift' in the OB subarea of 'group decision making'.

According to Blackwell (1998: 493), social psychology research in the 1960s suggested that individual group member decisions in a potentially risky situation were, on average, less risky than the final decision of the group as a whole. This was termed the risky shift phenomenon:

> **(5) risky shift (social psychology)**
> The process by which a group's initial average position becomes riskier following group interaction (adapted from Smith and Mackie 000: 592). An early term for group polarization, coined before research indicated polarization also occurs toward conservative positions (Deaux, Dane and Wrightsman 1993: 417).

Subsequent research has indicated that the shift to risk is, in fact, a shift to extremity. Groups shift away from a neutral point beyond the average of the decisions initially favoured by individuals in the groups; in other words, shifts to caution as well as risk occur. This has resulted in the formation of two distinct concepts, i.e., 'risky shift' and 'cautious shift', where formerly only the first was recognised. The theoretical development has also resulted in the birth of a new superordinate concept, namely 'group polarisation'.

> **(6) group polarization (social psychology)**
> The process by which a group's initial average position becomes more extreme following group interaction (Smith and Mackie 2000: 592).

The intension of 'risky shift' (OB) has not changed; however, this concept only describes one of the two tendencies (i.e. 'group polarisation') that may result from group discussions.

> **(7) risky shift (OB)**
> Tendency of a group as a whole and each member to be more willing to accept greater levels of risk after a group discussion than prior to it (Northcraft and Neale 1994: 704).

The other tendency is described in the concept of 'cautious shift' (OB), which together with 'risky shift' make up the extension of the new superordinate concept of 'group polarisation' (OB).

> **(8) cautious shift (OB)**
> Tendency of a group as a whole and each member to be less willing to accept risk after a group discussion than prior to it (Northcraft and Neale 1994: 692).

The concept of 'risky shift' has therefore undergone an intrinsic change (both an intensional change and a term change), whereas 'cautious shift' has emerged as a new concept. The changes have also led to the subordination of the two concepts of 'risky shift' and 'cautious shift', as illustrated in Figure 4 below. These changes have been adopted in OB as they have become accepted knowledge in social psychology and are not changes which have taken place due to the emergence of OB.

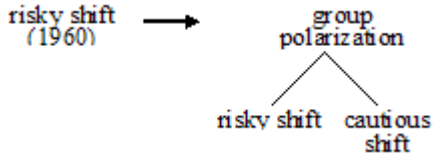

Figure 4. A simple system reorganisation - differentiation

The most prominent relational changes found in OB are the results of the disciplines having different perspectives or aims in their attempts to explain phenomena. Based on the analysis, it may therefore be concluded that a high number of concepts found in the parent disciplines have been borrowed and adapted in the conceptual structures in OB to provide answers that are relevant for an OB researcher who investigates the impact that individuals, groups, and structure have on behavior within organisations, for the purpose of applying such knowledge toward improving an organisation's effectiveness (Robbins 1996: 10).

3.4 Disciplinary autonomy in OB

The social sciences, being relatively young disciplines, are characterised by a conceptual apparatus and terminology which are not fully developed. This belief has been supported by the conceptual analysis of OB concepts. The conceptual changes in the textbook corpus show few signs of autonomous theoretical developments in OB. The investigated research articles, however, show that much current research takes place which has already led to conceptual changes and which may in future lead to further changes in OB. This will strengthen the disciplinary autonomy of OB.

Even though the epistemological characteristics of emerging disciplines are less established than those of more mature disciplines, emerging disciplines may still be relatively autonomous. The analysis has shown that this appears to be true for OB, which has developed a separate research object, discipline-specific subareas, concepts and terminology in addition to new conceptual relations and consequent subsystems.

Although the sociological characteristics of OB have not been investigated in the thesis, a number of sources of sociological evidence which indicate the existence of OB have been applied in the conceptual analysis to provide conceptual descriptions. Such sources of evidence include the corpus material as well as several web sites of discipline-related discussions. There are also a number of conference and organisation sites which show that OB communities have been established. These sources support the epistemological analysis.

Taking into account the relatively short life cycle of OB, its close relations to the group of administrative disciplines, it is difficult to see how OB will continue to develop. However, based on the criteria established in this study and the conceptual analysis which has been based on these criteria, I have concluded that OB can be described as an autonomous discipline.

3.5 Terminological methods as a means to assess disciplinary autonomy

The terminological analysis has been able to provide few absolute "truths" about the intensions and extensions of OB concepts or the concepts of the parent disciplines. However, what the analysis has done is to offer valuable insight into the interrelatedness of social sciences and their concepts. The use of terminological methods has demonstrated that concepts are relatively vaguely described in textbooks. This lies in the nature of the disciplines; however, it may also be a motivation for a subject specialist to consider whether more specific descriptions should be given to avoid confusion.

Conceptual analysis has traditionally been used to analyse concepts with their present content and in their local environment. What this study has demonstrated is how a conceptual analysis can be applied for the purpose of carrying out a comparative analysis of scientific constituents in parent disciplines. Furthermore, by allowing a time dimension in the analysis, the investigation has been able to illustrate how the application of terminological methods can be extended to include an analysis of how a discipline has developed.

The analysis has also demonstrated that concepts have a life cycle and that concepts can be analysed as dynamic elements and not only as static constructs. However, in the conceptual analysis, the actual investigation has required an analysis of concepts as static elements at a given time in the sense that it has been based on written texts published at a specific time. The dynamic aspect of the analysis has been confined to the investigation of how the concepts have developed from being concepts in the parent disciplines to being borrowed concepts in OB. This comparison has been based on the conceptual structures in the OB subareas.

In my view the analysis of conceptual relations by means of terminological methods has proven to be very useful to describe disciplines with highly overlapping concepts. This includes not only the analysis of the relationship between parent disciplines and the disciplines they lend concepts to, but also disciplines that are emerging within the same period of time and which are also highly related and interdisciplinary.

To conclude, terminological methods seem to offer a useful tool for clarifying relations and family recemblances among disciplines that are clustered together in the continuum of the scientific landscape.

3.6 Usability of the corpus material

The study has shown that the selected corpus material has rendered less information than I initially assumed. The textbooks are relatively vague in their conceptual descriptions, something which may be due to the inherent indeterminacy of the disciplines. It may, however, be questioned whether the textbooks focus enough on conceptual descriptions.

The research articles that were added to the corpus to provide a more detailed theoretical description than the textbooks, in general provided a practical, or real-life application of theoretical concepts. This made the research articles less suitable for the conceptual investigations than I first assumed. Another point is that although they may define themselves as being e.g. OB journals, it is quite clear that the point of view is often that of a social science discourse community. This raises the question of whether the borders between the disciplines are as vague as they appear from the articles, or whether the vagueness resides in the way these disciplinary borders are described in the articles. Instead of shedding a brighter light on the disciplinary autonomy of OB, the inclusion of such texts in the corpus material has rather strengthened my belief that the social sciences make up a family of highly related and overlapping disciplines of which autonomy is not a striking characteristic.

4 CONCLUSION

The conceptual analysis has given valid support for the hypothesis that several disciplines have influenced OB and its subareas by lending concepts to the discipline. Secondly, some changes in the intensions of the concepts that have been borrowed and adapted in OB have taken place; however, the analysis has shown that the majority of concepts that have been analysed have been adapted in OB without significant changes being made to their intensions. Thus, the most prominent feature of OB concepts in this respect is that conceptual changes have taken place in the extensions of the borrowed concepts, something which has resulted in new conceptual relations.

When it comes to the overall questions raised in the study, I have concluded that based on the results, OB can be described as an autonomous discipline. Secondly, terminological methods seem to offer a useful tool for clarifying relations and conceptual familiarities among interrelated disciplines. Consequently, I believe the methodology developed in the study can be a useful contribution in delineating related disciplines, something which is a challenge, for instance in the construction of terminologies, or the building of knowledge bases. In the attempt to establish knowledge bases, for instance, which are to contain terminology from several related disciplines, it has been a problem that the disciplines are highly interrelated and share many seemingly identical concepts.

A method for collecting corpus material, for instance, is to conduct searches on the internet for texts which contain some specified terms. By using the internet, terminologists are able to retrieve substantial amounts of text with relatively little effort. A challenge with this method is to decide to which discipline the concepts found in the selected texts belong. Another challenge is to assess which disciplines are actually represented in the retrieved texts. A knowledge base established according to terminological principles should take the concept of concept as a point of departure, which implies presenting the concept in its conceptual environment (i.e., with its conceptual relations explained). This will require that the various disciplines, such as OB, can be distinguished from related disciplines, such as marketing, strategy or even organisation theory.

To me, a promising point of departure seems to be to investigate the epistemological characteristics discussed in my doctoral thesis. The methodology will, obviously, not solve all problems of structuring the concepts of related disciplines since interrelatedness and multi-disciplinarity are such prominent characteristics of many disciplines. It may, nevertheless, increase the quality of the conceptual analyses.

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