# An exploratory taxonomic study of IMP Group conference papers

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## Abstract
The paper describes exploratory research into the nature of IMP conference papers with particular focus on content. A qualitative analysis of the proceedings of the 16th annual IMP conference is presented.

The results provide insights into the diversity of academic thought that fuels the development of the IMP network and allows us to begin charting the development of knowledge structures within past IMP conferences. Of particular interest are, firstly, the tentative knowledge structure that emerges, secondly, the depth of analysis that emerges from using multi dimension coding and thirdly the utility of the process of successive categorisation.

## 1. Introduction
Any researcher with a desire to understand the dynamics of business-to-business markets should be grateful for the period in the mid 1970s when the IMP group was formed. The founder members could surely not have imagined that such an informal arrangement could result in such profound contributions to academic thinking and managerial practice (both in international marketing and business-to-business marketing), a library of publications and 18 years of conferences. This paper focuses on the conferences, which, as the call for papers points out, have become

> "*the largest in the world dealing specifically with marketing issues within a business-to-business context*."

Simply by scanning the abstracts from recent IMP conferences it can be seen that a wide variety of topics, from SMEs to major automobile manufacturers, from art through paper to electronic retailing, have been the subjects of papers. The results have been produced using a similarly diverse range of research methods including case studies, nomology, action research and statistical analyses. And, from a thoroughly international perspective, research projects from the US and Europe, Thailand, the Far East and Australasia have all been reported – in fact research from the UK and US are in the minority, which results in a true international perspective.

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However, do such categories as those used above offer any insights into the nature of the papers that were written? Are there more subtle ways of attempting to map the narratives that the conference proceedings contain?

This paper follows on from the work of Gemünden (1997) and the researchers at Karlsruhe who produced an analysis of IMP conference proceedings. This work investigated a stereotype of IMP research, which was perceived to be empirical, international and holistic. His results suggested that IMP was mainly theoretical, was losing its international focus, provided a forum for holistic frameworks, focused on relationships and networks and used both case studies and statistical analysis.

Our aim was to build upon this work looking particularly at the content of the knowledge contained in the papers in more detail and to get an idea of what shape or structure it has. A secondary purpose was to pilot a new way of analysing papers or their abstracts.

The paper is structured as follows. Firstly, there is a discussion of taxonomy and an investigation of its application in both marketing and wider contexts. This is followed by a description of the research methods used. Results are then presented and their significance discussed. Finally, our conclusions are drawn and areas for further work suggested. It must be emphasized throughout, that this paper aims to provoke discussion and stimulate debate; it is not designed to provide a conclusive definition of the scope and breadth of IMP.

## 2. Taxonomy

### 2.1 Background

The object of this paper is to classify a set of complex objects i.e. abstracts of papers published in IMP conference proceedings. Classification is often regarded as the first stage in carrying out a "scientific" study. A number of objects or instances are collected and attempts are made to group them so that similar things are given the same name or label. In this process the conceptual nature of the field can begin to be understood and relationships among the concepts or labels sought.

However the process is rarely simple. Any object is likely to have a large number of attributes or dimensions that can be used to classify it. The choice of dimension clearly depends on the purpose for which the classification is being done. For example the normative goal of market segmentation might be the reason for a classification of potential customers. However classifying types of relationships might be a route to try to understand how particular organisations manage such relationships. There can be no rules that cover all circumstances.

The dimensions used in so-called qualitative taxonomic studies are nominal or ordinal in nature. In other words the objects either have a particular name ascribed to them or they do not. They are either dead or not dead, Canadian or not, multinational or not. Such characteristics mean that the normal process of creating a taxonomy is based on multiple sorting techniques. By contrast objects that have metric characteristics can be subjected to statistical techniques termed numerical taxonomy, of which more later.

Number of dimensions is also an issue. In rare cases a single dimension will emerge which serves to classify objects e.g. success or failure of an enterprise. However note that in this case, how one defines success or failure may require more than a single dimension. The point is that what emerges is unidimensional. Multidimensional classification is likely to be required in most cases when developing a taxonomy.

The crucial process in forming a taxonomy is that of clustering. Each object should be placed in a category and only that category. There should be very many fewer categories than there are either objects or dimensions. In other words in the multidimensional property space defined by the matrix of dimensions and objects there should be strong correlations between the two such that the objects appear in very restricted regions of that space. For example in a 10 objects by 5 dimensions property space, one would hope that the objects would cluster in perhaps 5 or 6 regions.

In the qualitative clustering process the objects are sorted into groups in terms of a set of dimension that are either theoretically or empirically derived. In the first case the analyst has reason to believe that the objects are likely to have certain properties, a set of categories are derived and the process is discovering how well the objects fit into those categories. In the latter case the process is inductive. The objects are sorted into clusters in terms of the similarities perceived by the analyst. In practice it is difficult to carry out the inductive process without being influenced by the nature and purpose of the analysis and by some pretheoretical notions of what the "important" dimensions are likely to be.

In quantitative or numerical taxonomy inductive taxonomies are somewhat easier to derive. The object / dimensions matrix is subjected to any one of a number of clustering algorithms which essentially search the property space for concentrations or clusters. One basis for allocation is based on minimising the within cluster variance calculated from the centroid of each possible cluster. The cluster programmes give the analyst an option of which solution to opt for. There is always a trade-off between number of clusters and a measure of the overall "goodness of fit" (Bailey (1998) p 48). Clearly if every object was its own cluster then

the homogeneity of each cluster would be at a maximum but this would tell you little about the structures in the property space. Alternatively if the whole data set was the chosen cluster then the within cluster variance would be at a maximum and again little would be learned. The compromise position is to look for a small number of clusters (for conceptual simplicity) where the decrease of within cluster variance when moving from n to n+1 clusters is relatively small.

There are a vast number of alternative techniques that can be used but the end product is a set of clusters with particular dimensional profiles. These have then to be named based upon that profile. For example Miles and Snow (1978) used the following labels for their typology of business strategies; defenders, prospectors, analysers and reactors. These labels are an attempt to capture the positions that the clusters they identified occupied in the dimensional space that they used to analyse their data.

In the Miles and Snow example the final categories are apparently unrelated. However this need not be the case. Hierarchical structures can also be deduced from theory or induced from the data. What this means is that categories can gave sub and super categories within an overall structure. Such hierarchies may be either highly significant in terms of theoretical development or essentially trivial depending on the dimension upon which the hierarchy is based.

In this study we have used qualitative sorting techniques but the conceptual process model adopted owes something to numerical taxonomy. In particular we have used multidimensional codings such that any abstract can be coded in several ways. This gives a richer and more complex picture of the nature of this particular object although one that requires somewhat more intricate analyses. In addition we have tentatively attempted to create hierarchical structures as a means of mapping the IMP knowledge field.

## 2.2 Taxonomic studies of fields of knowledge

Taxonomic studies, particularly quantitatively based, are quite common in the literatures of most academic subjects. They generally represent efforts to systematise the study of the field or, more likely, a part of the field of study. Recent examples in the management field include SMEs (McMahon (2002)), team processes (Marks et al (2002), knowledge management (Earl (2001), advanced manufacturing technology, (Johnsson (2000), science based industries (Niosi (2000)), E-commerce (Holsapple and Singh (2000), industries (Park and Kim (1999), organisational value systems (Dobni et al (2000)), manufacturing strategies (Avella et al (1998)) and critical success factors (Williams and Ramprasad (1996).

Almost every field of knowledge has an explicit or implicit, accepted or contested knowledge structure. In marketing, for example, the Journal of Marketing's classification of its published papers is widely accepted. There are also a large number of studies of many different fields of knowledge where classifications are used to investigate the nature of the paradigms. A typical example is the article by Palvia et al (1996) who did a content analysis of MIS publications to carry out a trend analysis of what they termed "issue metacategories". Twenty six such categories were generated based on a maximum of 3 key words assigned to each article. It should be noted that almost all the categories were generated a priori. Similarly studies have been conducted in MS/OR (Ormerod (1997)), human communication research (Stephen (1999)), human resource management (Looise and Paauwe (2001), feminist studies (Thompson (1999)) and manufacturing (Reisman et al (1997)). Less relevant to the field but more relevant to the research method, Saarti (2000) categorised abstracts made by library users and professionals into 4 groups; plot or theme, cultural – historical, subjective/personal and critical.

Closer to home a number of taxonomic studies have been carried out in marketing and more specifically in industrial marketing and organisational buying behaviour, in particular kinds of buying situation. One of the earliest and most influential taxonomies was the Buyclass schema devised by Robinson, Faris, and Wind (1967) and based on largely qualitative data. Lehmann and O'Shaughnessy (1974) produced an alternative taxonomy of buying decisions based on the basis of problems encountered when a product is bought. Bunn (1993), using numerical taxonomy, extended the buyclass framework in terms of the following categories; casual purchases, routine low priority, simple modified rebuy, judgmental new task, complex modified rebuy and strategic new tasks. Bunn and Liu (1996) developed a 2 x 2 matrix of four situational risk categories that they thought would influence organizational buying activities. High and low task uncertainty were crossed with high and low purchase importance. Wilson et al (2001) used a modified version of the Lehmann and O'Shaughnessy taxonomy to test a model of buyers' framing of buying problems.

Moving closer to the heartland of IMP research, a number of researchers have created taxonomies of various aspects of buyer seller relationships. For example Athaide and Stump (1999) studied new product development processes and identified, using numerical taxonomy, two clusters of firms, those that used bilateral product development and those that used unilateral product development. Nassimbeni (1998) suggested a simple, non empirically tested taxonomy of supply networks; main – subcontractors, production chains, joint ventures and regional industrial systems. Perhaps the most thoughtful and thorough of these efforts was by Cannon and Perrault (1999). They developed an extensive taxonomy of buyer – seller relationships which included the categories basic buying

and selling, bare bones, contractual transaction, custom supply, co-operative systems, collaborative, mutually adaptive and customer is king, using numerical taxonomy on a database of more than 600 relationships. One point about all of these taxonomies is that they concentrate on a rather narrow subset of organizational market phenomena. By contrast, business based taxonomies are being developed as a result of the introduction of ERP systems where data needs to be readily identified across many different databases. Taxonomies of business information provide an efficient means of achieving this end (Bryar (2001)).

The objects being investigated in our research are clearly much broader in scope than in the studies quoted above. In addition they are concerned not with the nature of organisational markets but with the narratives and research that seeks to understand those markets. There have been no systematic studies in marketing as a whole as far as we are aware. However, there is a recent study of IMP conference papers which is thorough and provides an excellent background for the current work (Gemünden (1997). The study covered the period from 1984 to 1996 and used six different sets of categories to analyse the overall situation as well as trends over the years. It should also be noted that the researchers used the full papers and not just the abstracts. The dimensions identified by Gemünden (1997) were:

- Origin of the authors of the paper
- Unit of analysis (firm, relationship, network, industry, methodological contribution).
- Theoretical contribution (methodologies, frameworks, literature reviews, themes, hypotheses)
- Empirical bases (no data, case study, quantitative description, quantitative analysis)
- Regional scope (international focus, national focus)
- Performance analyses
- IMP membership (IMP, affiliated IMP, Doctoral/colleagues, other)

Of the category sets, the country of author origin and regional scope of the study were not used in this study. But it can be seen that there were some similarities in the other areas explored.

However, unit of analysis, theoretical contribution, empirical base) and explanation of success) did cover some of the same ground. The major differences between the two studies are that in our study we focused mainly on the content of the abstracts and the knowledge that they contained and largely induced the categories rather than developing them a priori. We also used multiple codings rather than trying to place each paper exclusively in one category. Nevertheless, it is important to compare the studies and this is done where appropriate in the methods section and in the conclusions.

## 3 Research methods

The research process was both inductive and deductive. There are general themes, concepts and frameworks that anyone involved in the IMP paradigm is likely to know and use to order their knowledge base. However this is not a comprehensive, coherent and uncontested view. In terms of comprehensiveness, there were many themes that emerged from the abstract codings that did not fit into obvious IMP categories.

### 3.1 Description of the Data Source

The data source for this research was the abstracts from the proceedings of the 16th IMP conference, held in Bath, UK in September 2000. This set of data was chosen initially for pragmatic reasons; the abstracts (and papers) are available in digital (electronic) form, which makes the sharing of data much easier. Abstracts rather than full papers were also chosen for two main reasons. Firstly because circumstantial evidence suggests that academics make a number of judgements based upon abstracts, e.g. will I read this paper, will I visit this presentation, will I accept this paper provisionally? And secondly, to make the project manageable in the time frame available.

The data source[4] for this project was created by extracting all the abstracts from the CD-Rom of the conference proceedings. Each abstract was given a unique number (starting with 01) and the abstracts were numbered sequentially as they were extracted from the CD-Rom. 93 abstracts were identified; a number of papers did not include an abstract and these papers were excluded from the data source. We decided that using the whole set of abstracts for one conference was preferable to using a sample from a number of conferences. This was because a sample may not provide access to the whole body of knowledge within the field and this was contradictory to the aim of the research - to develop a taxonomy describing IMP conference proceeding abstracts. Furthermore, it represented a particular point in time, a set of circumstances and conference participants all of which can be used to understand why certain patterns emerged.

### 3.2 Using Abstracts as a Data Source

There was a wide diversity, in many dimensions, in the abstracts that were analyzed. Simplistically, this can be illustrated by the word count statistics. The average number of words in an abstract was 169; the shortest abstract was 33 words and the longest 870 words.

The research questions that have driven this paper are based upon an assumption that all the abstracts are a true reflection of the paper they are describing. In what follows the term abstract is used but is meant to

[4] A Microsoft Word 2000 document.

mean the abstract as a true summary of the paper that it is based upon. However, through the review of abstracts undertaken here, we have developed some reservations about the validity of this assumption, simply because a number of abstracts were very difficult to analyse. They did not give clear indications of what the paper was about nor what its contribution was. Very often (but not always) these were the very short abstracts or the very long abstracts. Another interesting observation was that some of the abstracts did not appear to 'match' the paper title and of course this raises questions about the validity of the coding and classification of the abstracts; it could be that the papers reveal very different analyses. This needs to be accepted as a limitation to this research. However, it also has very important implications for academics as writers; the onus is upon us to ensure that our abstracts accurately reflect the content of our papers. As might be expected there is a research literature on the comprehensibility of abstracts (Hartley (1994)).

### 3.3 Coding

Coding was performed both in a group and individually. The coding that was done individually was then discussed and confirmed either in the group or in pairs. As indicated earlier, the aim was to code the abstracts using a number of dimensions. Three abstract dimensions emerged as we discussed and coded the abstracts and included:

- Type of abstract (empirical, conceptual and prescriptive)
- Contribution of abstract (replication, articulation/ testing/ expanding existing concept, imported concept, new concept or existing framework, creation of a new model / framework, importation of a new framework and new contingency)
- Content (e.g. relationships, networks, trust etc.)

Type of abstract is a broad category that paralleled but simplified two of Gemünden's categories. For us it meant a category that wasn't covered by the content of the abstract but provided a broad indication of its nature, process and goals. It was multiple coded since it was believed that the terms empirical, conceptual and prescriptive were not mutually exclusive.

Contribution of abstract is a novel way of categorising an abstract. Underlying it is a simple model of how knowledge in a discipline is furthered. Thus the contribution is judged in how it adds to existing body of knowledge. Three key concepts are involved. The first is that of the articulation, testing or expansion of existing as opposed to the creation of new kinds of knowledge. The second is that of the importation of new knowledge from other disciplines as opposed to the creation of new knowledge ab initio. The third idea is that of concept as a basic building block of knowledge as against the combinations of concepts that we call a framework but which might also be called a model or a theory.

The content coding was by far the most complex and intense element of the analysis. Initially, it was felt that keywords could be identified from each abstract and that these could be used to define the content of the abstract. However, it soon became apparent that keywords alone were not context-specific enough to adequately describe the content of an abstract. For instance, take the example of network. Within our sample it was used in many varied contexts from individual's networks to supply chains and in association with portfolios. Also, was it a network in the core IMP tradition or was it an example of networking? Thus, we decided to develop and allocate themes, essentially phrases often taken directly from the abstract, up to a maximum of five per abstract, which described our interpretation of the abstract content. The development of these themes was conditioned by our prior understanding of what IMP is. This should not be viewed as a limitation. Given the objective of the paper, prior understanding in this case is a necessity. The themes that were developed were then grouped in to larger categories in a series of steps or levels. and eventually a partial hierarchy emerged from the data.

Coding was done initially by hand, but analysis was facilitated by the development of a Microsoft Access database which greatly speeded up the sorting and grouping of data. Data were held in a Microsoft Access table which recorded the abstract number, title and multiple coding. Queries were then used to extract relevant groupings of data. Microsoft Access was used in preference to a qualitative data analysis package such as NUDIST because the researchers believed that Access provided much more powerful data retrieval facilities and could be tailored to provide results in the format needed for this research.

## 4. Results

### 4.1 Type of abstract

**Table 1 Type of abstract**

| Type of abstract | Number | % |
|---|---|---|
| Empirical | 7 | 8 |
| Conceptual | 26 | 28 |
| Prescriptive | - | - |
| Empirical -Conceptual | 31 | 33 |
| Empirical - Prescriptive | 1 | 1 |
| Conceptual - Prescriptive | 16 | 17 |
| Empirical – Conceptual - Prescriptive | 12 | 13 |
| Total abstracts | 93 | 100 |
| Total empirical | 51 | 55 |
| Total conceptual | 85 | 91 |
| Total prescriptive | 29 | 31 |

The first point to note is that most of the abstracts (91%) offered a conceptual / theoretical analysis of some kind. This is hardly surprising given that the goal of publication is said to be advancement of understanding. What is slightly more unexpected is that only half of the abstracts contained empirical data. However this figure corresponds reasonably well with the Gemünden figure of around 45%. Perhaps it is in the nature of conference papers that they attract more thoughtful and thought provoking ideas than those concentrating on reporting research data. Around 30 % of the abstracts appeared to have a prescriptive component. Again this is greater than we would have expected since unlike many other marketing / purchasing research groups, IMP has had a reputation for being more concerned with the positive rather than the normative. However it has to be said that the coding of what was deemed to be prescriptive was rather generous and included Gemünden's category of papers that sought to link aspects of relationship and network behaviour to the performance of individual firms. In his data this category alone accounted for 10% of the papers.

### 4.2 Contribution of abstract

**Table 2 Contribution of abstract**

| Contribution | Number | % |
|---|---|---|
| Replication | 3 | 2 |
| Articulation/ testing/ expanding existing concept | 31 | 25 |
| Articulation/ testing/ expanding imported concept | 9 | 7 |
| Articulation/ testing/ expanding new concept | 9 | 7 |
| Articulation/ testing/ expanding existing framework | 20 | 16 |
| Creation of a new model / framework | 28 | 23 |
| Importation of a new framework | 7 | 6 |
| New contingency | 17 | 14 |
| Total codings | 124 | 100 |

As with other analyses the data on contribution has been multiple coded since any one paper may make a number of contributions. The single biggest group of abstracts is that which involves doing something with an existing concept like, for example, trust or atmosphere. This can be combined with the abstracts that articulate, test or expand on existing frameworks like the Interaction or Actors, Resources, Activities models. Such frameworks, in their simplest form, specify relationships among concepts. However, interestingly, the second biggest group of abstracts is that within which new frameworks are suggested. These frameworks are usually new combinations of existing concepts which is relatively easily done where the data are quantitative and the framework in the form of a mathematical model.

Marketing is said to be a discipline that routinely borrows from other social sciences. There is some evidence from these data. Some 13% of the abstracts borrow concepts and frameworks from other disciplines. One form of expansion is to try out exciting ideas in new situations. In many cases this is the main, and important, contribution of an abstract. Finally there were very few simple replications of existing work. While this is always a valuable activity it is generally not rewarded as well as work that contains elements of novelty.

### 4.3 Content

The main analysis carried out in this study could be described as focusing on the content of the papers analysed, as revealed by their abstracts. The overall aim was to create a set of categories that would allow the shape of the IMP knowledge field to be examined. This was done in 4 stages since the whole process of forming groups of similar items required quite difficult judgements about the bases for similarities.

#### 4.3.1 Theme coding

The initial coding of the abstracts led to a set of 320 individual theme codings e.g. ARA model, transition economies, around 3.5 themes per abstract. The minimum number of codings was 1 and the maximum 5. Further examples of themes are given in appendix 1.

#### 4.3.2 Level 1 category coding

The first level of coding led to the creation of 53 categories from the coded themes. These are listed in appendix 2. Examples included relationships problems, trust network dynamics and project marketing.

#### 4.3.3 Level 2 category coding

At level 2 the categories were subjected to qualitative hierarchical clustering. In other words a new category was formed that included groups of similar level 1 categories. For example activities, actors and resources were categorized under the ARA framework. The level 2 categories are given in Table 3 below together with frequency of occurrence of coded abstract themes.

The results show, not unsurprisingly, that traditional IMP concepts such as relationships and networks feature very strongly in the abstracts. The high number of instances of 'other contingencies' was not anticipated. This is simply the miscellaneous category for contingencies like project marketing, services, E-commerce and channels which illustrates how important the contingency categories are.

**Table 3 Level 2 categories**

| Level 2 categories | No of mentions |
|---|---|
| Relationship characteristics | 25 |
| ARA | 20 |
| Internationalisation | 18 |
| Other Contingencies | 17 |
| Research Process | 16 |
| IMP / Interaction | 16 |
| Network general | 15 |
| Relationship value / creation | 14 |
| TCSL model | 13 |
| Relationship Marketing/ Management | 12 |
| E-commerce | 12 |
| Network features | 10 |
| Network dynamics | 9 |
| Project marketing | 8 |
| KAM and portfolio management | 8 |
| Performance | 8 |
| Power and governance | 8 |
| Knowledge creation / innovation | 7 |
| Other theories | 6 |
| Services | 6 |
| Channels of distribution | 6 |
| Problems | 6 |
| Network marketing /SCM | 6 |
| Environment | 5 |
| Cross cultural | 4 |
| Change management | 3 |
| Network organisation | 2 |

The high number of abstracts referring to internationalization is also pertinent and confirms the necessity of the ambiguity in title of the IMP group. Internationalisation may be regarded both as a contingency and as a stream of IMP research in its own right. Research process figures high on the list and this reflects the basic tension between the case study / qualitative and quantitative research traditions. Customer value and relationship / marketing abstracts provide evidence of the importance of prescription at this conference which was not entirely obvious at the time.

### 4.3.4. Cross tabulation of abstracts by level 2 categories

Table 3 above refers to the number of coded themes in total that have been categorised under the relevant headings. However a key aspect of this analysis has been the fact that each abstract has been coded under multiple themes. As a result it is possible to examine the abstracts in terms of the combination of themes that each comprises. For example how many abstracts involve both services and relationship problems? In Table 4 below a triangular matrix of level 2 categories is shown with a count of how many abstracts involve particular combinations of categories.

First of all it should be noted that there are entries in the leading diagonal. This is because it is possible for any one abstract to have more than one theme listed under a particular category. For example themes of actor interests and resource configurations could both be categorised under ARA. This is a measure of the extent to which an abstract represents rather tightly defined issues. In practice these numbers are among the largest in the whole matrix suggesting that concentration of themes in a single 2$^{nd}$ category are high.

Apart from that it is clear that the number of occurrences of combinations of themes in abstracts are spread throughout the table with little or no concentration. For example there are only 2 x5s, 5 x 4s and 19 x3s, where this means that, for example, there are only 2 combinations of 2$^{nd}$ level categories where 5 abstracts contain themes that are coded under the two categories concerned (e.g. IMP and relationship characteristics). This suggests that abstracts are generally not patterned in terms of the themes that they incorporate. As a result it is likely that conventional numerical taxonomy would not produce very helpful analyses. It is probable that the output would be a large number of small groupings rather than 3 or 4 large ones that would be more interesting although not necessarily easy to interpret.

An alternative approach was therefore adopted. Rather than use the inductive approach of numerical taxonomy it was decided to continue with the combination of categories technique used in the previous analyses and move to 3$^{rd}$ level categorisation.

**Table 4 Triangular matrix of level 2 category combinations**

| Level 2 themes | ARA | CM | CD | CC | EC | E | IMP | I | KAM | KC | ND | NF | NG | NM | NO | OC | OT | Pe | PG | Pr | PM | RC | RM | RV | RP | S | TCSL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARA | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Change management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Channels of distribution | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cross cultural | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E-commerce | | | 1 | | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Environment | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| IMP / Interaction | 2 | | 1 | 1 | 2 | 1 | 3 | | | | | | | | | | | | | | | | | | | | |
| Internationalisation | | | | 1 | 1 | 2 | | 4 | | | | | | | | | | | | | | | | | | | |
| KAM and portfolio management | 1 | | | 1 | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Knowledge creation / innovation | 2 | | 1 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | |
| Network dynamics | 3 | | | | | | | | | 1 | 3 | | | | | | | | | | | | | | | | |
| Network features | 1 | | | 2 | | | | 3 | 2 | | 1 | 1 | | | | | | | | | | | | | | | |
| Network general | 3 | | | | | | 2 | 2 | 1 | 1 | 2 | 1 | 2 | | | | | | | | | | | | | | |
| Network marketing /SCM | | | 1 | | 3 | 1 | | | | 1 | | | | | | | | | | | | | | | | | |
| Network organisation | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| Other Contingencies | 3 | | 1 | 1 | 1 | 1 | 2 | 3 | | | 2 | 5 | 3 | | | 1 | | | | | | | | | | | |
| Other theories | | | 1 | | 1 | | | | | | | | | | | 1 | 2 | | | | | | | | | | |
| Performance | 1 | 1 | 1 | | | 1 | 1 | | | | 2 | 1 | 1 | 1 | | 2 | | | | | | | | | | | |
| Power and governance | 2 | | 1 | | | | | | | | | | | | 1 | 1 | | | 3 | | | | | | | | |
| Problems | | | | | | | | | | 1 | | | | | | 1 | 1 | | 1 | | | | | | | | |
| Project marketing | 1 | 1 | | 1 | | 1 | | | | 1 | | | | | 1 | 1 | | | 2 | 1 | 1 | | | | | | |
| Relationship characteristics | 3 | 1 | | 1 | 2 | 1 | 5 | 3 | 1 | | | 3 | 2 | 2 | | 2 | 1 | 3 | | 1 | | 4 | | | | | |
| Relationship Marketing/ Management | | 1 | | | 2 | | 1 | 1 | | | | | | 1 | | 1 | | | | | | 2 | 3 | | | | |
| Relationship value / creation | 2 | | 1 | | 1 | | 3 | | 1 | 2 | | | 3 | 1 | | 1 | | 2 | | 1 | | 4 | 1 | | | | |
| Research Process | | | | | | | | 1 | | | | | 2 | | | | | | | 1 | | | | | 4 | | |
| Services | 1 | | | | | | 2 | | | | | | | | | | 1 | | | | 1 | 2 | | | | 1 | |
| Trust, cmtmnt, satisfaction, loyalty | | | 1 | 1 | | | 2 | | 2 | | | 3 | 1 | | | 1 | | 1 | | | | 3 | 2 | 2 | | 1 | 1 |

### 4.4.3 Level three category coding

In this final process the 28, 2nd level categories were reduced to 4: relationships, networks, contingencies and a miscellaneous group. Appendix 3 gives details of which 2nd level categories were allocated to which 3rd level categories. Table 5 below is a "collapsed" version of table 4 and each cell gives the number of times a theme appears in both the category groups indicated by the row and column labels. For example in 24 cases themes in the same abstract were coded as being in network and relationship categories.

**Table 5 Triangular Matrix of Level 3 category combinations**

| | Rel | Net | Pres | Cont | Misc | Total |
|---|---|---|---|---|---|---|
| **Relationship** | 24 | | | | | 24 |
| **Network** | 24 | 21 | | | | 45 |
| **Prescriptive** | 29 | 14 | 14 | | | 57 |
| **Contingency** | 27 | 20 | 14 | 14 | | 75 |
| **Misc** | 9 | 7 | 3 | 11 | 13 | 43 |
| **Total** | 113 | 62 | 31 | 25 | 13 | 244 |

In using these categories we are deducing from our understanding of the field that these 4 categories may be conceptually useful in characterising the IMP knowledge base. If these categories represented boundaries within the field then one might expect that combinations of themes within these 3rd level categories should be greater than those between categories. In other words the leading diagonal numbers should be greater than those off diagonal. This is clearly not the case.

However this is not an acceptable comparison since the row and column totals are different. To "normalise" the comparison it is essential to compute the expected frequencies given the row and column totals using the formula expected frequency = row frequency x column frequency / total frequency. These were then subtracted from the actuals and the resulting difference table is given below.

**Table 6 Triangular difference matrix of level 3 category combinations**

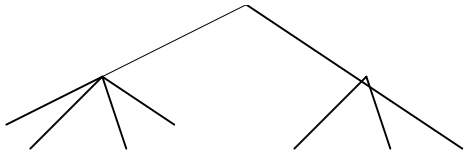
| | Rel | Net | Pres | Cont | Misc | Total |
|---|---|---|---|---|---|---|
| **Relationship** | 13 | | | | | |
| **Network** | -3 | 10 | | | | |
| **Prescriptive** | - | -7 | 7 | | | |
| **Contingency** | -10 | -4 | -2 | 6 | | |
| **Misc** | -12 | -6 | -5 | 5 | 10 | |

It is easy to see that the differences in the leading diagonals are always positive and, with one exception, the differences in the off diagonals are negative. This means that the actuals in the diagonal frequencies are higher than one would expect and therefore the within category combinations are more frequent than outside category combinations. As a result this gives us confidence that the categorisation has created groups of abstracts that tend to cluster round certain categories rather than being dispersed at random.

### 4.4.4 Level four category coding

It is tempting to continue the process and finish up with a complete hierarchy such as that suggested by figure 1 below.

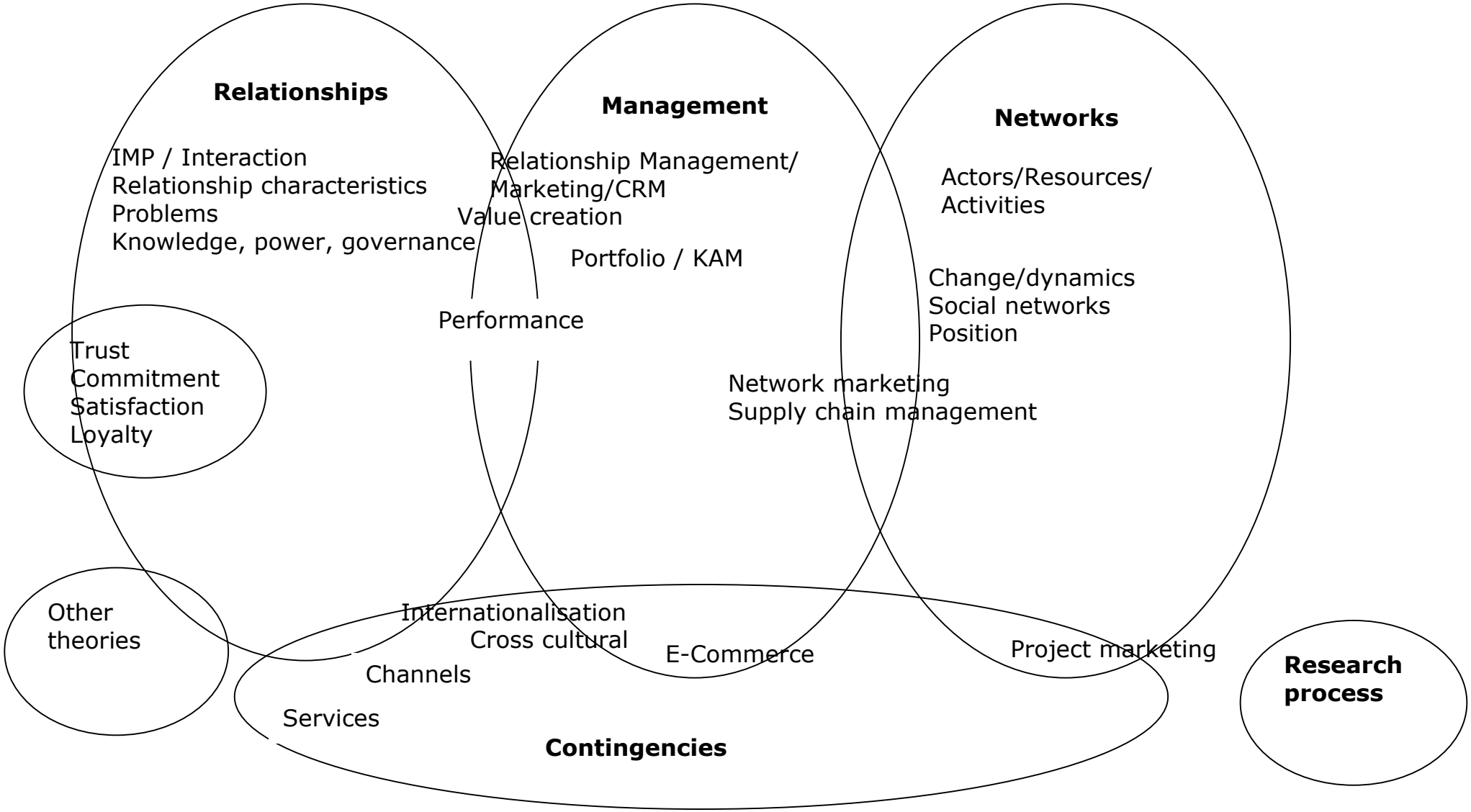
**Figure 0 Full hierarchy**



However while we are reasonably confident in being able to defend the process of hierarchical categorisation we have used up to level 3, although we recognise that there may be alternative schema, beyond that it is not clear how, for example, relationships and networks could be placed within or collapsed into a hierarchy. As a result we decided a "dimensionless" map, as in figure 2 was the best way to capture the results.

The main categories are, as already suggested, relationships, networks, management and contingencies with minor categories placed on the periphery. Level 2 categories have largely been allocated to the level 3 categories but with their positions representing the ways in which they are closer to one boundary of the category rather than another. What this map seeks to demonstrate is that there are interesting tensions between all these categories. For example the relationships / networks position isn't simply about level of analysis but also concerns the problems of emergence where it is clear that the properties of networks are an emergent and not an aggregative property of relationships. The link between the two has long been a central theoretical issue in the IMP paradigm. Similarly both relationships and networks sit uneasily with the notion of management and prescription in a way that would be unusual for mainstream marketing or purchasing. Finally contingencies are crucial in any knowledge field. The interesting question here is what constitutes the "central" modality and what, by inference, the periphery. The strong contingent fields in the IMP programme are internationalization, project marketing and increasingly services and E-commerce.

**Figure 1 A tentative map of the IMP knowledge field**



## 5. Conclusions

In terms of the research processes we are convinced that the dual techniques of multiple coding of narratives and successive categorisation are useful ways of trying to characterise a body of knowledge. In the former case there is clearly a trade-off between the number of themes that should be used to capture the basic nature of an abstract or paper. Too many and the analysis becomes intractable. Too few and the danger is that very different narratives will be placed in the same category.

Successive categorisation was useful because it meant that we were not forced to make hard choices at one stage. What became apparent as that while there were clearly categories that formed mini hierarchies within the whole tree structure, it was not always obvious at what levels they should be combined or else allowed to remain as separate entities. This is something we would be more attentive to in any future research.

The combination of inductive and deduction also proved helpful. The main induction occurred at the first level since here we were forced to place plain language phrases into categories that were partly deduced (e.g. actor) and partly induced (relationship problems). At higher levels the categories were largely deduced.

The main result was a tentative map of the IMP knowledge field as revealed by one set of conference abstracts. Generalising from this limited sample is clearly problematic. However what should be emphasised is that we aren't saying any one abstract can be unequivocally placed in a single position on this map. What we are suggesting is that it can be characterised by its linked (network?) positions.

The major bones of contention we suspect will be the use of the contingencies and prescription categories. The first implies that we consider whether situations might call for quite different concepts and frameworks as we would argue has happened for the IMP group vis a vis traditional FMCG marketing. The second raises important issues about what the goals of our (individual not group) research should be.

However we would suggest that the purpose of the research is to stimulate reflection and debate and certainly not to prescribe. We do not advocate that we should, as once suggested at a previous IMP conference, get our act together and develop an agreed uniform set of definitions / categories and a common framework so that we could improve our productivity. In fact we were nervous that even these few tentative thoughts might begin to tramline the way members of the IMP community thought about our knowledge field. Nervous that is until we remembered that the conditions for inclusion in this group are a well developed sense of scepticism and an anarchistic streak. Long may they remain.

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## Appendix 1 – Examples of Themes

| | | | |
|---|---|---|---|
| activities | hybrid network organizations | network value creation | service characteristics |
| actor bonds | ideas | networks | social networks |
| actors-activities-resources model | IMP literature | new vs old customers | strategy |
| agricultural cross cultural | individuals' networks | norms, routines and role expectations | supply chain management |
| atmosphere | information technology | norms | supply chain management |
| bank | innovation | paper industry | supply chain management |
| business norms - | insurance brokers | partnership choice | switching and exiting relationships |
| client services | interaction approach evaluation | path dependence | system power in relationships |
| collaborative innovation | interaction patterns | perceived atmosphere | transaction cost analysis theory |
| competition | interaction structure as process | project marketing | transfer of ownership |
| conflict | internationalisation | project marketing | trust definition and measurement |
| co-ordination of activities | internationalization processes | projects | trust |
| cross cultural analysis | joint value creation processes | relational effects | Uppsala model |
| culture | joint value creation | relationship atmosphere | |
| customer loyalty | market segmentation | relationship dissolution | |
| customer relationship value | methodology process | relationship marketing | |
| discontinuous demand | methodology | relationship marketing | |
| Disintermediation | misunderstanding in relationships | relationship orientation | |
| E-commerce | network competence | relationship portfolios | |
| entrepreneurial capability | network connections | relationship transparency | |
| environmental change | network dynamics | relationship value | |
| e-supply networks | network entry | research communities | |
| E-trading hubs | network layers | researcher perceptions | |
| evolution of relationship resources | network management | resource acquisition and use | |
| Fast trust | network organization | satisfaction | |
| firm life cycle | network position | self organising | |
| hierarchy | | | |

Appendix 2 Category Codes

| Relationships | IMP / Interaction | Relationships - general |
|---|---|---|
| | | IMP model |
| | | Interaction |
| | | |
| | Relationship characteristics | Relationships Characteristics |
| | | Relationship Process |
| | | Relationship Form |
| | | |
| | Problems | Relationship problems |
| | | |
| | Knowledge creation / innovation | Knowledge creation / innovation |
| | | |
| | Power and governance | Power in relationships |
| | | Governance mechanism |
| | | |
| | TCCCC model | Trust |
| | | Commitment |
| | | Customer satisfaction |
| | | Customer loyalty |
| | | |
| Performance | Performance | Performance |
| | | |
| Rel Mgt | Relationship Marketing/ Management | Relationship marketing |
| | | CRM |
| | | |
| | Relationship value / creation | Joint value creation |
| | | Relationship value |
| | | Competitive advantage |
| | | |
| | Change management | |
| | | |
| | KAM and portfolio management | Customer portfolio |
| | | Global account managers |
| | | |

| | | |
|---|---|---|
| Network | Network general | Network |
| | ARA | ARA |
| | | Actor bonds |
| | | Resources |
| | | Resource dependencies |
| | | Activities |
| | | |
| | Network dynamics | Network dynamics |
| | | |
| | Network features | Individuals' networks |
| | | Network position |
| | | Connectedness |
| | | |
| | Network organisation | Network organization |
| | | |
| Network Mktg | Network marketing /SCM | Network marketing |
| | | Supply chain management |
| | | |
| Internationalisation | | International joint ventures |
| | | Internationalization processes |
| | | |
| Research Process | Research Process | Methodology |
| | | Sociology of knowledge |
| | | |
| Contingency | Project marketing | |
| | Services | |
| | E-commerce | |
| | Channels of distribution | |
| | Cross cultural | |
| | Other Contingencies | |
| | | |
| Environment | Environment | Environmental change |
| | | Future trends |
| | | |
| Other theories | Other theories | Transaction cost theory |
| | | Relationship as legal contract |

**Appendix 3 Reducing 2nd Level Categories to 3rd level Categories**

| | |
|---|---|
| Relationship | Relationship characteristics |
| | IMP/interaction |
| | Trust, commitment, satisfaction, loyalty |
| | Power & governance |
| | Knowledge creation/innovation |
| | Problems |
| Network | ARA |
| | Network dynamics |
| | Network general |
| | Network features |
| | Network organization |
| Prescriptive | KAM and portfolio management |
| | Change management |
| | Relationship value/creation |
| | Relationship marketing/management |
| | Performance |
| | Network marketing/SCM |
| Contingency | Cross cultural |
| | Channels of distribution |
| | E-commerce |
| | Services |
| | Project marketing |
| | Other contingencies |
| Miscellaneous | Environment |
| | Research process |
| | Internationalisation |
| | Other theories |