

A Critical Evaluation of Competitive Intelligence and Insight Management Practice

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**A thesis submitted in partial fulfilment of the requirements of
De Montfort University for the degree of Doctor of Philosophy**

May 2011

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ABSTRACT

This thesis forms part of a PhD by Publication based on the research and scholarly work of Sheila Wright. It explores her contribution to the field of Competitive Intelligence & Insight Management (CI&IM) made through ten articles published between 2002 and 2010. The research projects that involved the collection of primary data were carried out within a qualitative research methodology using a semi-structured interview or case study method and typically adopting a pragmatic paradigm.

Through this work, it has been possible to present a best-practice framework for CI&IM. Similarly, it has been possible to develop an operational framework for CI&IM, which identifies the inter-connectivity of the CI&IM tasks as well as the organisational influencing factors which can aid or hinder successful implementation. As well as engaging in a critical evaluation of current CI&IM practice the thesis indicates how the articles offer solutions which can aid the delivery of improved performance to practitioners as well as academics who teach and research the subject. The thesis also identifies the place of CI&IM in the business discipline and draws attention to the cross-boundary, inter-disciplinary nature of its reach.

The development of bibliometric software and citation identification programmes has enabled the inclusion of a citation analysis for each article which also identifies the context within which that citation was made. This is presented as supporting evidence for the contribution to knowledge and value of the body of work. Through this mechanism it has also been possible, not only to identify the frequency with which the articles have been cited, but more importantly, the impact and contribution this has had on scholars who have subsequently used the output and frameworks as a basis for their own research.

ACKNOWLEDGEMENTS

This thesis would not have been possible without the encouragement of some but more importantly the invaluable guidance and advice given unselfishly by others.

The first person to suggest that I should consider a PhD by Published Works was David Pickton, who as my Head of Department has consistently given his full support to my research interests and career progression. He has been a constant advocate of my efforts and I have been very fortunate indeed to have had him as my mentor for nearly 20 years. I would never have considered embarking on this work without first seeking his guidance, and his contribution as one of my supervisors has been crucial.

The implicit support and confidence placed in my work, and my ability to write this thesis, by Professor Martyn Denscombe has also been critical to its completion. His considerable experience and ability to remain focused on the task in hand has been essential, despite the many tangential directions which I, in my ignorance, thought might have been a good idea at the time. For this, and much more, he has my enduring thanks.

My thanks go also to all my co-authors, but especially to Dr Craig Fleisher, with whom I have had, and still enjoy, a productive working relationship. We have many future projects planned.

My heartfelt thanks also go to the one person in my life who for nearly 30 years has been my emotional and intellectual rock, the person without whom I would never have been able to get past the “*we can solve this with Calculus*” stage of the early years. I am not quite sure there was any expectation that my efforts would end up quite this way but it is evidence that anything is possible if you want it badly enough.

Finally, my thoughts are with my parents, now both sadly deceased, who would have been bursting with pride at the thought of their little girl becoming a Doctor of Philosophy. My mother, who had to bear the embarrassment of being told by my careers teacher that “*she won't come to much*” would have especially enjoyed the graduation ceremony.

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ARTICLES COMPRISING THE BODY OF WORK

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1. Wright, S., Pickton, D.W. & Callow, J. (2002), 'Competitive Intelligence in UK Firms: A Typology', *Marketing Intelligence and Planning*, Vol 20, No 6, pp 349-360
2. Wright, S., Badr, A., Weiss, A. & Pickton, D.W. (2004), 'Competitive Intelligence Through UK Eyes', *Journal of Competitive Intelligence and Management*, Vol 2, No 2, pp 68-87
3. Wright, S. & Calof, J.L. (2006), 'The Quest for Competitive, Business and Marketing Intelligence: A Country Comparison of Current Practice', *European Journal of Marketing*, Vol 40, No 5/6, pp 453-465
4. Badr, A., Madden, E. & Wright, S. (2006), 'The Contribution of CI to the Strategic Decision Making Process: Empirical Study of the European Pharmaceutical Industry', *Journal of Competitive Intelligence and Management*, Vol 3, No 4, pp 15-35
5. Fleisher, C.S., Wright, S. & Tindale, R. (2007), 'Bibliography and Assessment of Key Intelligence Scholarship: Part 4 (2003-2006)', *Journal of Competitive Intelligence and Management*, Vol 4, No 3, pp 32-92
6. Fleisher, C.S., Wright, S. & Allard, H.T. (2008), 'The Role of Insight Teams in Integrating Diverse Marketing Information Management Techniques', *European Journal of Marketing*, Vol 42, No 7/8, pp 836-851
7. Calof, J.L. & Wright, S. (2008), 'Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective', *European Journal of Marketing*, Vol 42, No 7/8, pp 717-730
8. Fleisher, C.S. & Wright, S. (2009), 'Examining Differences in Competitive Intelligence Practice: China, Japan and the West', *Thunderbird International Business Review*, Vol 51, No 3, pp 249-261
9. Wright, S., Eid, E.R. & Fleisher, C.S. (2009), 'Competitive Intelligence in Practice: Empirical Evidence from the UK Retail Banking Sector', *Journal of Marketing Management*, Vol 25, No 9/10, pp 941-964
10. Fleisher, C.S. & Wright, S. (2010), 'Competitive Intelligence Analysis Failure: Diagnosing Individual Level Causes and Implementing Organisational Level Remedies', *Journal of Strategic Marketing*, Vol 18, No 7, pp 553-572

INTELLECTUAL OWNERSHIP AND COLLABORATIVE WORK

STATEMENTS FROM PRINCIPAL CO-AUTHORS

Dr Craig Fleisher

Dr Jonathan Calof

Dr Ahmad Badr



October 20, 2010

Vice Chancellor
De Montfort University
Leicester
LE1 9BH
United Kingdom

Subject: PhD by Published Works Candidate, Sheila Wright, Student Number: P09053675

Dear Sir,

I have been asked to comment on the role Sheila Wright played in the co-authored articles which she is submitting to your institution as part of her PhD thesis. I am pleased to do this as five of these refereed publications were done in collaboration and partnership with me and/or others. As such, I have a unique vantage point on which to express my observations of her efforts and the nature of the range of contributions she made.

Prior to offering specific observations about her contributions, I should briefly provide you some idea of my own background and expertise for offering my comments. I am a tenured, full professor at the College of Coastal Georgia, one of the 35 public institutions of higher education in the State of Georgia, USA. I have held two endowed research chairs and was responsible in one of these roles for helping sixty-plus tenure and tenure-track business faculty members succeed in their scholarly roles. I have served over fifteen years on various promotion and tenure (P&T) committees at four universities (i.e., CCGA, Windsor, Wilfrid Laurier, New Brunswick), chairing these in four separate iterations. Over the last dozen or so years I have provided assessments for tenure committees for over 60 individuals at 18 universities around the globe.

My own academic background is in the management subject area, with specific expertise being in the strategic management, international business and marketing, and entrepreneurship areas. My own authored works have been cited over 700 times (*Google Scholar*, 2010). I average about 35 citations/year for my published scholarship, which is comparable to many chaired professors at similar international institutions. I am, obviously, a continuing scholarly colleague of Ms. Wright and am disclosing that fact at the outset. I have received no compensation or promise thereof to perform this comment and am otherwise at arm's-length relative to objectively assessing Ms. Wright's performance. As such, I hope that my assessment of Ms. Wright's work is both informed and objective.

My first observation is that Ms. Wright was a valuable co-author in four of the papers (*Journal of Competitive Intelligence & Marketing - JCIM*, 2007; *European Journal of Marketing - EJM*, 2008; *Journal of Strategic Marketing- forthcoming JSM*, 2011; *Thunderbird International Business Review - TIBR*, 2009) and the lead author in the fifth (*Journal of Marketing Management - JMM*, 2009). Each of these papers went through a minimum of two reviews and additional edits, with most of them having gone through and received the additional benefit of additional reviews from arms-length referees. The refereed, scholarly outlets that these papers were published in are well-thought of in both international and European circles (*EJM*, *JMM*, *JSM*) as near top-level refereed marketing venues (i.e., typically 3 out of 4 stars), in international circles as one of the better refereed international journals in business (*TIBR*), while the last is published in the top ones in its niche (*JCIM*).

My second observation is that Ms. Wright was a material and significant contributor in the case of all five of these articles. In some cases, she was the primary conceptualiser (*JMM*, 2009), while in others the main data acquirer/gatherer or organiser (*JCIM*, 2007). In several, she assisted her co-authors in developing the paper from the idea stage up to its eventual published outcome (*EJM*, 2008; *JMM*, 2009). In all cases, she took on lead roles in writing, revising or editing. In no cases did she merely ride others' coattails or just attach her name to the final product without having offered substantive contributions. None of these papers would have ended up at the level of quality at which they were published or in the quality of outlets they did without her contributions.

Third, although I didn't serve as a co-author or co-researcher with her, I am familiar with several of the other published papers Ms Wright has written as they fall within fields in which I have subject matter expertise. Her 2002 paper w/ D. Pickton and J. Callow in the refereed journal *Marketing Intelligence and Planning* has already demonstrated good acceptance and has been cited over 30 times by other scholars, averaging nearly 4 cites/year according to Google Scholar as of late 2010. Her 2006 paper with Calof which was published in the *European Journal of Marketing* shows an even higher level of annual citations (> 4) already, indicative that other scholars are finding her work of value in their own and are building upon it. As such, there is no shortage of empirical evidence that Ms. Wright's scholarship has already had an impact, and there are signs that this will increase with the obvious quality and quantity of her recent work.

My final observation is that Ms. Wright has demonstrated through these projects that she fully understands and is able to make a high level of contribution to the entire range of a multi-year, complex research project, from the earliest stages of idea generation to the final stages of revisions and resubmissions through eventual publication. Although I recognize she lacks the doctoral qualification that she is currently pursuing, her level of demonstrated competence in performing these roles within the research process goes well beyond many of the individuals I have previously worked with who already hold their terminal qualifications and have gone on to achieve national or even, in some cases, international levels of scholarly recognition for their work.

Please don't hesitate to contact me if I may be of any further assistance to you in this matter. I can be reached at the coordinates below my signature should you wish to reach me. I wish you all the best in your consideration process.

I provide this opinion on the understanding that it will remain confidential, to the extent permitted by law, to those individuals or committees concerned with considering the awarding of the PhD at De Montfort University and that it will not be used for any other purpose.

Sincerely,



Dr. Craig S. Fleisher, Dean and Professor of Management
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October 2010
Vice Chancellor
De Montfort University
Leicester
LE1 9BH
United Kingdom

Subject: PhD Published Works Candidate, Sheila Wright, Student Number: P09053675

I have had the pleasure to work with Sheila Wright on numerous academic endeavors including conference papers, special issue editing, research projects and academic articles. The objective of this letter is to provide context for her contribution on two of our more prominent articles that appeared in the *European Journal of Marketing*:

“The Quest for Competitive, Business and Marketing Intelligence: A Country Comparison of Current Practice”, *European Journal of Marketing*, Vol 40, No 5/6, pp 453-465, 2006 and

“Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective”, *European Journal of Marketing*, Vol 42, No 7/8, pp 717-730, 2008.

In both cases, the manner in which we worked on the articles was consistent. The first article (Quest for Competitive Intelligence) was amongst the first articles in a quality academic marketing journal – a coup for the intelligence field. The paper sought to examine how competitive intelligence was practiced in various countries. There were two levels of research that went into this article:

- 1) Examining country intelligence practices in various countries
- 2) Comparing and contrasting those practices.

It was Sheila Wright who developed the core methodology for comparing the practices in various countries. This comparative framework arising from her earlier work served as a defining tool for a meta-analysis of existing studies. As well, the principal comparison was done between a study that was done in Canada (done by me) and one done in the UK (by Sheila Wright) and elsewhere in Europe (coordinated by Sheila Wright). In this regard, she was responsible for bringing in 2/3rds of the research results. Finally, Sheila Wright was responsible for writing up both the UK and European results.

Sheila has developed a very unique model for looking at stages of evolution in intelligence practice. This original contribution was integral in this article and in setting the framework for the analysis. As such, for this particular article her contribution was instrumental in making the article

publishable. With Sheila writing up the UK and European studies and the analytical section, it was up to me to write the Canadian results and in using her analytical model, I also wrote up the comparison section. Sheila Wright then took the paper back and made substantive edits on it. I am not that strong in my written skills and the paper therefore benefited enormously from her capability. She had final say in what was written in this article and thus was also substantially responsible for the intellectual and methodological content of the article.

The second article, Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective, similarly benefited from our unique partnership approach. This article was a review of the field and an analysis of the articles appearing in a special issue of European Journal of Marketing. To say this article would not have occurred without her is an understatement. It was Sheila Wright who got the European Journal of Marketing to agree to have a special issue on competitive intelligence. Her strong academic reputation and respect in the field was directly responsible for this being the first special issue of any reputable journal devoted to the topic of competitive intelligence. As we did in the article described above, we each focused independently on those areas of the article that matched our skills. For Sheila Wright this resulted in her conducting a critical analysis of the articles in the journal and for me it involved a scan of the intelligence literature for the literature review. Once my section was written, it was Sheila Wright again who was responsible for the editing and bringing the sections together. This article would not have been published without her input and similar to the first article, each of our intellectual contributions was done independently. There is no question that Sheila Wright's contribution was substantial and valuable intellectually. Her analysis of the papers served as an important review of where the literature in the competitive field was going towards.

In summary, I have been fortunate to have two articles co-authored with Sheila Wright, published in a high quality European marketing journal. In both cases, she made significant intellectual, author and editing contribution. It is because of her strong research and writing skill set that I seek out further opportunities in conducting research and writing articles with her.

Should you have any questions about this letter, please do not hesitate to contact me at calof@telfer.uottawa.ca.

Regards



Jonathan Calof, BA, MBA, PhD.
Associate Professor: Telfer School of Management, University of Ottawa
Fellow: Strategic and Competitive Intelligence Professionals
Recipient of Lifetime Achievement Award (Competitive Intelligence) Frost and Sullivan
Honorary Professor: Yunnan Normal University



مجموعة جامعة أبوظبي للمعارف
Abu Dhabi University Knowledge Group

October 2010

Vice Chancellor
De Montfort University
Leicester
LE1 9BH

Dear Sir,

Subject: PhD by Published Works Candidate, Sheila Wright, Student Number: P09053675

It is my pleasure to write this letter in support of Sheila Wright as she seeks to achieve her PhD by published works. While I have worked with Sheila over many years, we worked specifically on an article for the *Journal of Competitive Intelligence & Management* entitled "The Contribution of CI to the Strategic Decision Making Process: Empirical Study of the European Pharmaceutical Industry"

As leading supervisor, Sheila played a pivotal role in the development of this article from its initial concepts through to actual publication. In terms of specific tasks, Sheila was active in helping to develop and refine the research hypothesis, identifying and reviewing the target sample for research, providing valuable feedback during questionnaire development and data collection processes as well as reviewing the final data analysis and subsequent conclusions and managerial implications.

As the article neared publication, her skills as a published author were evident as she advised on the content, language and overall style of the article, especially in relation to how we presented the data analysis and managerial implications in a clear and useable way. Her contribution to the success of this article was invaluable as she provided a constant source of support and advice to her co-authors.

From a personal point of view, this article and all her other bodies of work are testament to Sheila's hard work, dedication and expertise in her field. I am a past pupil of Sheila and I am indebted to her knowledge and passion for CI and Marketing Strategy. She has profoundly influenced my career and the careers of many other students over the years.

I am therefore proud and privileged to support her as she seeks to achieve her PhD by published works. If I can be of any further assistance, please do not hesitate to contact me.

Yours sincerely,

Dr. Ahmad Badr

Director: Abu Dhabi University Knowledge Group

E-mail: ahmed.badr@adu.ac.ae

FROM KNOWLEDGE TO SUCCESS

SECTION 1

Introduction

This thesis presents a total of 10 previously published articles which offer a critical evaluation of Competitive Intelligence and Insight Management (CI&IM) practice. These cover a variety of studies, in different industries and in different geographical locations.

In so doing, a number of claims are made, namely:

- ▶ The body of work is embodied within the context of CI&IM and the cross-boundary, inter-disciplinary nature of its practice (outlined in Section 2).
- ▶ The body of work represents a substantial, continuous and coherent contribution to the CI&IM literature (outlined in Section 3 and Section 6).
- ▶ The body of work has been cited by scholars and used in the development of their own research projects (outlined in Appendix 1).
- ▶ The articles (presented in Appendix 2) demonstrate a thorough knowledge of the relevant literature, including a critical investigation and evaluation of the topic (outlined in Section 4).
- ▶ All articles have been published in Journals which meet the standards of the RAE/REF.
- ▶ The methodological stance, paradigm selection and methods chosen are appropriate, with identification and discussion of the challenges inherent within those choices (outlined in Section 5).
- ▶ The body of work constitutes an independent and original contribution to knowledge (outlined in Section 6).
- ▶ CI&IM as a field of study offers not only considerable opportunity for future research in its own right, but the scope for engagement with scholars from complementary disciplines (outlined in Section 7).

As a consequence, the body of work is deemed suitable for submission and consideration for the award of PhD by Published Works.

SECTION 2

The Context of Competitive Intelligence and Insight Management (CI & IM) within the Business Discipline

Historical Context

The rich heritage of Competitive Intelligence (CI) has been uniquely documented by Juhari & Stephens (2006) and can be traced back over 5,000 years (Prescott, 1999; Qingjiu & Prescott, 2000; Chen *et al*, 2010). One of the more frequently cited sources is the work of Sun Tzu who, some 2400 years ago, wrote *'The Art of War'*, a seminal text which provided a detailed description of how to develop intelligence for military applications (Tzu, 1988). Frederick the Great (b. 1712) who ruled as King of Prussia from 1740 until his death in 1786 is commonly attributed as saying *"It is pardonable to be defeated, but never to be surprised"*. It is the avoidance of surprise that Competitive Intelligence seeks to address. There is a danger that *"CI is too frequently limited to competitor intelligence which focuses on identifying, monitoring and under-standing specific current competitors"* (Frates & Sharp, 2005, p. 18). The point is well made and this is one of the key reasons that the name has evolved to become 'Competitive Intelligence & Insight Management' (CI&IM) which reflects a broader strategic orientation and use, rather than simple collection, of information. Information becomes intelligence only after it has been filtered, checked, analysed and processed.

Commercial CI&IM has a long history. Wright *et al* (2004) referred to Nathan Rothschild's timely intelligence to make a fortune on the London stock exchange following the Battle of Waterloo in 1815. Among Rothschild's intelligence network was an agent who watched Napoleon's defeat at Waterloo, subsequently sent carrier pigeons to Rothschild, who the following morning sold large volumes of shares. Observers wrongly concluded that the French had won the battle, and shares slumped. Rothschild then bought back and awaited the news, which arrived conventionally that Wellington had won. The market correction helped Rothschild to his fortune (Ferguson, 1998).

Historical records point towards commercial intelligence collection activities happening even earlier. The Byzantine emperor Justinian I (483-565) in the 6th century used monks

to steal silk worms from the Chinese in an attempt to understand how to make silk (Fraumann, 1997). Although this is more an example of what would now be termed 'industrial espionage' than CI, it does demonstrate how long there have been efforts to scan the environment for information that will provide organisations or countries with a competitive advantage.

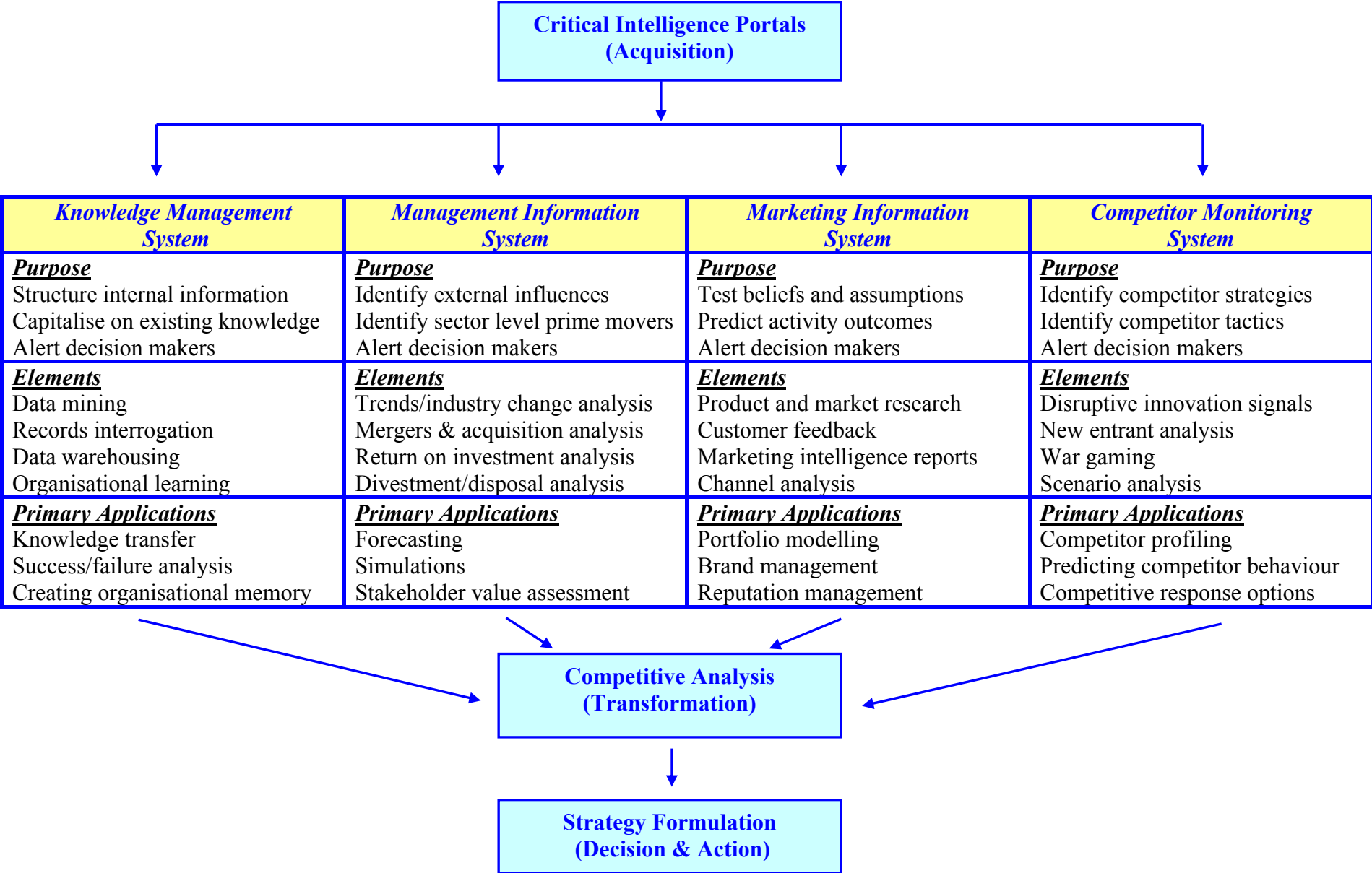
It is reported that 87% of all large companies, regardless of location, have an intelligence capability (Global Intelligence Alliance, 2006), but as can be seen from the examples above, the commercial application of CI, as we know it, has been around for at least 5000 years, if not longer.

CI&IM - Capitalising on Organisational Intelligence Systems

An organisation will typically benefit from a number of intelligence acquisition efforts, most likely, all operating to different objectives and to different time scales (Dishman & Calof, 2008; Fleisher *et al*, 2008, Trim & Lee, 2008; Sharp, 2009). The role of ***Competitive Intelligence*** is to capitalise on these efforts, identify knowledge gaps, to supplement the output via a process of analysis and transformation to provide new knowledge for the firm. It is this latter process which is regarded as ***Insight Management***.

The traditional intelligence systems from which a firm can capitalise are ***Knowledge Management System, Management Information System, Marketing Information System*** and ***Competitor Monitoring System***. Buckman (2004) and Liebowitz (2006) imply that whilst it is clear that not all firms will have all of these systems set up in a formal manner, or that their information gathering programmes operate perfectly, the intelligence flows from these sources, would still be regarded as contributing to the intelligence capital of the organisation. As such, it is appropriate to identify the purpose of each system, the elements which comprise them and the primary applications to which the information is applied in the pursuit of intelligence-based competitive advantage. Each of these systems has value in its own right but collectively, they form the Critical Intelligence Portals Approach to CI&IM, a concept first introduced by Wright (2005d) and developed subsequently for the purposes of this thesis. The resultant framework is provided in Figure 2.1.

Figure 2.1
Principal Components of a Competitive Intelligence & Insight Management System

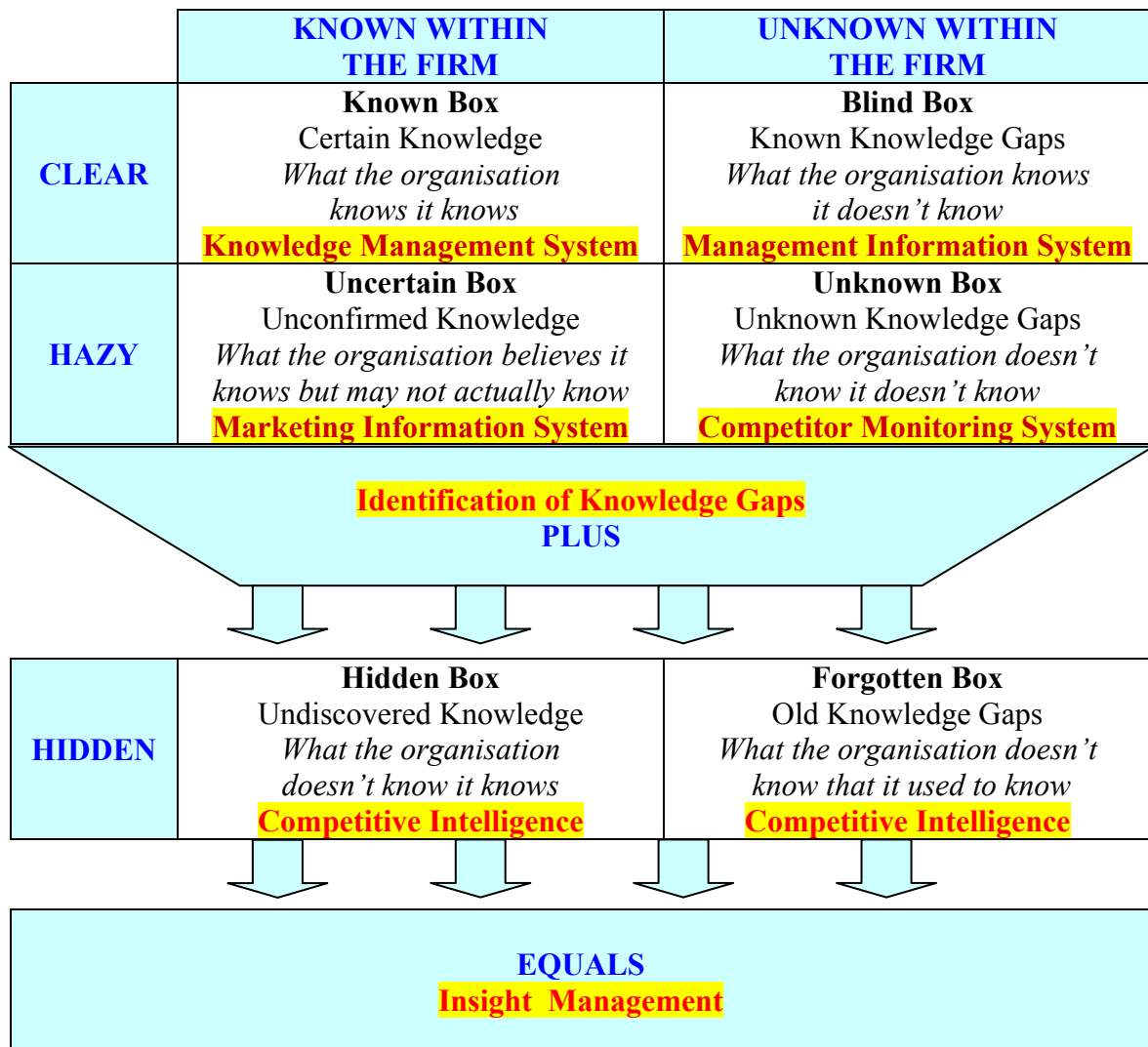


This approach has been developed as a consequence of viewing companies as learning organisations and employees as willing learners as suggested by Miller *et al* (2006). A case study on this subject reported on by Scheeres *et al* (2010), centred on how learning takes place through organisational practices when there is no formalised learning agenda, whilst Geiger & Schreyögg (2009, p. 477) state *“the need to select and distinguish useful from useless knowledge, outdated from valid knowledge, and accurate from misleading suggestions and so on is becoming increasingly challenging in today’s societies and organizations. Contemporary organizations and knowledge societies are not so much troubled by a lack of knowledge, but rather by the selection of relevant, useful or right knowledge”*.

It is in this area that CI&IM plays its part, as a complementary, rather than confrontational element to existing systems of knowledge acquisition. Joseph Luft and Harry Ingham, in their work on how to understand inter-personal relationships, developed a framework, naming it, somewhat unimaginatively, as the Johari Window (Luft & Ingham, 1955). Applying their principles, with minor changes, this model can be applied equally to categorise the different types of knowledge which either exist, or are absent, in a firm’s systems. This novel application of the Johari window was first introduced by Wright & Pickton (1998a) and developed by Weiss & Wright (2006). It has been further extended by the author, for the purposes of this illustration. The original Johari Window has also been applied by Shenton (2007) who claimed that *“no previous paper has applied the Johari Window to the investigation of information needs”* (p. 487). Not only was this an inaccurate claim but it was inaccurate by, at worst, 11 years, at best, two years.

Having identified the range of knowledge which can be held by a firm, it is now possible to map the four Critical Intelligence Portals shown in Figure 2.1 onto an Organisational Knowledge Matrix, illustrated in Figure 2.2.

Figure 2.2
Organisational Knowledge Matrix



Knowledge Management System

Dawson (2000) draws attention to the danger of regarding the phrase ‘Knowledge Management’ as implying that knowledge already exists and simply needs to be managed to produce benefit. To emphasise his point, Dawson draws comparisons with ‘asset management’ and ‘property management’. Drawing on the work of Damodaran & Olphert (2000) and Haseman *et al* (2005), Lin & Huang (2008, p. 410) provide a succinct definition of idealised Knowledge Management Systems (KMSs). They suggest that “KMSs increase organisational learning by capturing internal knowledge and making it available to employees for reuse. KMSs maintain corporate history, experience and expertise of long-term employees. Employee knowledge is incorporated into the systems

that help them and their successors run the business". The problem with KMSs is that they are typically IT driven, using historical, internal data as their primary source, typically with a past and present only perspective. Choi *et al* (2008) referring to Hansen *et al* (1999) notes that KMS ".... *strategy attempts to increase organizational efficiencies by codifying and reusing knowledge mainly through advanced IT*", and that by its very nature, a KMS is a delivery system rather than an interpretation mechanism. That is not to disregard the worth of a good KMS, but their potential to deliver more than a forecast based on historical records is limited.

Feng *et al* (2004) and Lee *et al* (2005) examined the direct relationship between KMS usage and organisational performance and reported only a few positive effects. Kalling (2003) argued that current research on KM fails to offer a detailed understanding of the role of knowledge in improving an organisation's performance. Khalifa *et al* (2000, p. 121) also states that "*the mere usage of KMS does not necessarily lead to the anticipated benefits*". A KMS system, whilst not in itself a panacea (Stapleton, 2003), would seem to provide a tangible and obvious contribution to understanding the '*known-knowns*' and as such, represents the **Known Box** in an organisation's knowledge matrix.

Management Information System

The focus of a Management Information System (MIS) should be one of understanding the external environment and assessing elements which could detrimentally affect the firm's sustainability or positively enhance its future success. However, Moutinho & Southern (2010, p 100) point out that trying to draw the distinction between internally and externally focused systems is "*becoming increasingly blurred*" as the two converge through technological advancement. They confirm that "*the key output of a traditional MIS would be management reports*", which would suggest a backward facing orientation.

A more forward looking organisation would be utilising its MIS as input to the decisions which it knows it needs to make, but it should also be seeking information on the elements that it knows it is not yet fully prepared for. Gilad (2004) refers to these as Early Warning Signals and these are precisely the drivers which can lead to sector level shifts, mergers and/or acquisition activity, investment and/or divestment plans.

In an expansive text which draws attention to the many functions which can make up an MIS, Oz (2009, p. 18) states that:

“Different types of information systems serve different functions for particular types of organizations, functions within organizations, business needs, and management levels of an organization. Business enterprises differ in their objectives, structure, interests, and approaches. In recent years the capabilities of many applications have been combined and merged. It is less likely that you will find stand-alone systems with a single capability. Managers and other professionals plan, control, and make decisions. As long as a system supports one or more of these activities, it may be referred to as a Management Information System (MIS)”.

The purpose of an MIS therefore should be to provide the impetus for asking questions about the future and spending more time on speculating, through the use of simulation, on the potential effect which significant change could have on the firm's success. (Filip, 2008) supports this view, drawing attention to the left or right brained orientations which an MIS can take. In a left brained system, the emphasis would be on quantitative and computational output whereas with a right brained system, pattern recognition and human reasoning would prevail. Whilst agreeing in principle with this stance, Hodgkinson *et al* (2009), through numerous examples, draw attention to the value of intuition in the decision making process and identifies a shift in today's MISs which are *“giving way to more sophisticated conceptions (of) intuitive and analytical approaches to decision making”* (p. 277).

This suggests that a modern MIS would address the *'known-unknowns'*, would be focusing its attention on learning more about how the firm's commercial future could evolve and would be seeking answers to the dilemmas raised by the **Blind Box** of an organisation's knowledge matrix.

Marketing Information System

According to Stair & Reynolds (2010, p. 412), a Marketing Information System (MkIS) *“supports managerial activities in product development, distribution, pricing decisions, promotional effectiveness and sales forecasting”*. An important sub-system is market

research which is ideally placed to obtain answers to specific questions which would normally relate to product or service features as well as customer preferences and buying behaviour.

Authors such as Hooley *et al* (2004) and Wilson (2002) identified the basic functions of an MkIS:

- conducting market research which obtains data with the purpose of answering specific questions which would normally relate to product or service features as well as customer preferences and buying behaviour
- use of statistical analysis techniques to manipulate raw data and prepare it for dissemination to interested parties
- creation of internal market models on the effect of price/sales relationship or changes to product offering
- creation of new market models which integrate and then simulate the effect of changing forces in demand, overall company performance and changes to brand reputation

However, Ranchhod & Gurău (2007) note that while many firms have developed multi-functional and centralised databases but they draw attention to the problems experienced when the organisation and storage of that information is handled only at departmental level. The dissemination of such data to decision makers can sometimes be detrimentally affected. As the name suggests, the general focus of an MkIS is on the market and the firm's activities within that market, which leaves a significant gap regarding technical, manufacturing, R&D and process intelligence. Whilst there are element of known-knowns in an MkIS as its output can be used to obtain confirmation of those known-knows, it can also be used to expose mis-understandings or mis-beliefs about current activity. For that reason, an MkIS would be regarded as primarily addressing the '*may not know-knows*' and would place it in the *Uncertain Box* of an organisation's knowledge matrix.

Competitor Monitoring System

The value of a Competitor Monitoring System (CMS) which provides input into decisions on how to respond to the competitive environment has long been recognised as a

significant aspect of a firm's activity (Buchele, (1962; Ansoff, 1965; Brock, 1984; Fahey, 1999; Fahey, 2002). Yet today, despite the decades-old warnings of Oxenfeldt & Moore (1978; 1981), Uttal, 1979), Wong *et al* (1989), Whittington & Whipp (1992), Slater & Narver, (1994, MacDonald (1995) and more recently Zhou *et al* (2007), the analysis of competitors can still be subordinated as greater emphasis is placed on understanding customers and consumers. Clearly, important though customers and consumers are, it is debateable whether they should dominate a firm's thinking (Pickton & Wright, 2000).

Even less well understood is the process of how firms identify their competitors (Rothschild *et al*, 1991; Paley, 1994; Francis *et al*, 1995; Francis, 1997; Clark & Montgomery, 1999), how they track them (Kydd, 1996), where they get their information from (Clark, 1983; Kendrick, 2001; Keep *et al*, 1994; Kahaner, 1995; Teitelbaum, 1992), how they assess competitive arenas (Day, 1997a; Park & Smith, 1990; Bennett, 2003), how they analyse their capabilities (Band, 1986; Press, 1990; Harari, 1994; Porter, 1998a; Porter, 1998b; Ram & Samir, 1998; Wilkinson, 1998; Saxby *et al*, 2000; Rivette, 2001; Gordon, 2002; Marchi, 2005), how they maintain their competitive edge (Day, 1997b; Fuld, 1985) or how they devise their own response strategies to competitor action (Porter, 1983a; Piorier, 1993; Gatignon *et al*, 1997; Reibstein & Chussil, 1999; Robert, 1991). Of the work cited above, only that of Ram & Samir (1998) reported on an empirical study.

An important element of the CMS is competitor profiling which provides the foundation for the formulation of action plans, either offensive or defensive (Linn, 1994; Clarke *et al*, 1999; Heil *et al*, 1997; Vella & McGonagle, 2000) and assesses a competitor's predisposition to compete (Werther, 2000, Wells, 2001).

No empirical research has been published on competitor monitoring or profiling practices since 2001 although it remains a critical activity of a firm's decision making process. It is also regarded as a "must have" function, even if it is not formally recognised as such. It is hard to image any business, marketing or competitive strategy textbook being regarded as complete, without a significant proportion of its pages being devoted to the importance of competitor knowledge and competitive analysis as input to the competitive strategy design process (Hart, 1992; Nutt, 1993; Fuld, 1995; April 2002; Jaworski *et al*, 2002; Warren, 2002; Fleisher & Bensoussan, 2003; Hussey, 2003; Loshin, 2003; Metcalfe & Warde, 2003; Rifat, 2003; Robinson, 2003; Savioz, 2003; Allee, 2004; Badr & Wright, 2004a;

2004b; Boisot, 2004; Callingham 2004; Hurd & Nyberg, 2004; Rothberg & Erickson, 2004; Mostert, 2005; Woodside, 2005; Comai & Tena, 2006; Fuld, 2006; Goldman & Nieuwenhuizen, 2006; Harding, 2006; Fahey, 2007; Zhou *et al*, 2007; Dishman & Calof, 2008; Sharp, 2009)

Due in part to the apparent confusion as to the importance of competitor monitoring, and perhaps the mistaken impression that “*everybody does that, don’t they*”, the evidence would suggest that in reality, if competitor monitoring and competitor profiling is conducted at all, it is conducted in reactive, rather than proactive, mode (Jayachandran & Varadarajan, 2006; Landrum *et al*, 2000) or is confined to the tactical issues of price and product offering (Miller & Chen, 1996).

As such a CMS would be representative of the ‘*unknown-unknowns*’. In other words, if nobody knows which questions to ask, and nobody is sufficiently concerned to consider what they might be, then the firm doesn’t know what it doesn’t know. Whilst monitoring competitors is a relatively easy task in this information rich age (Griffiths, 2011), the proliferation of automated competitor dashboard systems sold by software vendors, results in a lack of human interface which means the task of understanding, predicting and simulating their future moves is less so (Quinto *et al*, 2010). A CMS which did not embrace those features would be placed in the ***Unknown Box*** of an organisation’s knowledge matrix.

Identification of Knowledge Gaps

It is upon the components identified above which CI&IM draws, not only for its intellectual input but the identification of areas which are not being satisfied. It stands alongside, yet apart from, existing systems in order to provide the overview which is essential to ensure adequate intelligence coverage for the firm. Taking this approach avoids duplication of effort, providing greater benefit and streamlined input for the firm’s decision makers (Sharp, 2009). By adopting a process of knowledge conversion (Ammann, 2009), and the management of expert knowledge (Waring & Currie, 2009) a competitive intelligence framework also addresses both the ***Hidden Box*** and the ***Forgotten Box*** of an organisation’s knowledge matrix.

In attempting to address the elements which might come into the *Hidden Box*, a formalised CI&IM structure ensures that there is a known location, and a process, through which employees can report information which on the face of it may not necessarily seem important, but, when combined with other elements of unstructured and structured information, may provide insight on, or confirm the existence of, a situation which requires immediate attention (Ringland, 2002; Allard, 2004; Tyson, 2005; Pai, 2006). In one of the few empirical studies conducted on undiscovered knowledge, Pai (2006, p. 117) argues that it is “*necessary to elucidate the tacit knowledge that often remains undiscovered and is not shared in the organizational knowledge base and to make this personal knowledge explicit at the organizational level*”.

Pai (2006) also points out the problems of securing such tacit knowledge as it is linked to the individual. It is argued here that this is best addressed via an active CI&IM function which can facilitate the extraction of this knowledge, either formally, through interviews, workshops and seminars or informally, from conversation, debate and encouragement.

Potentially, the more damaging box to ignore would be the *Forgotten Box*. Besanko *et al* (2010) refer to a number of studies which suggest that organisations can forget the know-how which made them successful (Harris & Wegg-Prosser, 2007) and state that this is inevitably due to employee turnover and a failure to garner the tacit knowledge held by those individuals, to benefit the next generation. As noted by Fernandez & Sune, (2007, p. 620), “*since the 1970s and 1980s, the subject of organizational forgetting has been studied by a small number of researchers working in the areas of operations and/organization theory*”.

Organisational forgetting has been defined as the intentional or unintentional loss of organisational knowledge at any level (Martin de Holan & Phillips, 2003; 2004), yet inattention to this area of old knowledge retention and new knowledge creation can be devastating. Wang *et al* (2009) also emphasises the role of firm-specific knowledge resources, as being an important element in the attainment of sustainable competitive advantage. Benkard (2000) and Martin de Holan & Phillips (2004) point out the dangers of organisational forgetting whilst Kosinen (2010) warns that as firms increasingly move towards a project-based structure from a silo-style functional structures, “*knowledge, not labour, raw material or capital, is the most important resource*” (p. 149).

Argote & Ingram (2000) argue that by embedding knowledge in interactions involving people, organisations can both effect knowledge transfer internally and impede knowledge transfer externally. Thus, knowledge embedded in the firm, stays within the firm, and becomes the basis for competitive advantage. A proactive CI&IM attitude, if properly embedded and implemented within a firm, is ideally placed to deliver the desired competitive advantage. It does this by posing, and seeking answers to, question that the firm does not even know it should be asking, speculating on those questions which could be asked, as well as ensuring that those questions are not addressing issues about which the firm already has the answer, if only it knew where to look (Schatzki 2005; 2006).

CI&IM is a focused, active and multi-level organisational mindset, which seeks to engender both an internal and external information sharing culture, with the over-riding objective being the acquisition, and/or maintenance of, intelligence-based competitive advantage. Whatever a firm might wish to call the activity of gathering, assessing, analysing and acting upon an intelligence acquisition process is almost irrelevant, but it has to be advantageous and add to a firm's intellectual capital. To suggest otherwise, surely, would have little basis in the world of common sense.

Cross-Boundary, Inter-Disciplinary Field

As a field of academic study, CI&IM is possibly the strongest candidate there is for being regarded as a truly inter-disciplinary subject. In order to fully capitalise on its benefits, practitioners, and academics, need to have an understanding of the roles which all other functions play in an organisation's commercial effort (Wright *et al*, 2002; Felin & Hesterly, 2007). Knowledge of the activities which each function undertakes, and some appreciation of their technical lexicon is essential, otherwise it is impossible to communicate. This is a concern voiced by those seeking to capitalise fully on project management techniques applied to multi-team working (Fong, 2003; Jugdev *et al*, 2007; Mathur *et al*, 2007).

As has been shown already in this section, the real-world work of CI&IM, as well as academic research, has touch points with strategic planning, organisational learning, decision making, organisational culture, management style, competitive behaviour,

corporate taboos, myths and legends as well as the more traditional functional areas of Accounting, Treasury, Legal, HRM, IT, R&D, Marketing and Manufacturing.

Other inter-disciplinary areas of study which enjoy similar cross-boundary influence to CI&IM would be Total Quality Management, Corporate Reputation Management, Corporate Social Responsibility, Customer Relationship Management, Customer Service, Talent Management, Process Improvement and Innovation Management. All of these require both an organisational mind-set, an operational structure and a management style which empowers each and every employee, regardless of position or rank, to deliver results. CI&IM also sits alongside other cross-functional, inter-disciplinary activities which generally remain the responsibility of senior staff such Strategic Planning, Mergers & Acquisitions, Capital Investment, Strategic Alliances, R&D Management and Technology Marriages.

There are some areas which have a natural fit with CI&IM, one being marketing which typically carries the responsibility for revenue critical activities such as product/service offering, pricing, promotion, distribution strategies, product portfolio management, competitor monitoring and profiling to name a few. It is not surprising therefore that a symbiotic relationship exists between CI&IM and marketing (Badr & Wright, 2004a; 2004b; Wright, 2005a; 2005b; Vorhies & Morgan, 2005; Weiss & Wright, 2006; Menguca *et al*, 2007; Fleisher *et al*, 2008; Wright *et al*, 2008; Wright *et al*, 2009a; 2009b). Linkages in product use for example, can indicate new segments or the need for modified products (Leenders & Wierenga, 2008) which can encourage better targeting (Chen *et al*, 2010). An example cited by Frates & Sharp (2005) referred to widespread use and acceptability of text messaging. Recognising this as a complementary service for the majority of its customers, mobile phone manufacturers realised that it was a primary service for a hitherto inaccessible segment - the deaf and hard of hearing. It is in these 'serendipitous product functions' and actions such as: walking in the customer's shoes, redefining the competitive arena, converting problem customers into new market segments, examining the value chain access points and acting on customer feedback, that issues of drifting market share, reducing revenues and product obsolescence can be viewed (Kristensson *et al*, 2008; Zott & Amit, 2008). CI&IM can be nothing but a valuable ally in the search for marketing's Holy Grail, the hitherto unidentified, unexploited yet potentially highly profitable niche (Trinh *et al*, 2009; Toften & Hammervoll, 2010).

Changes in a firm's situation, whether that be of a positive or negative nature can provide opportunities upon which competitors can capitalise which brings into play all other functions in the firm. CI&IM embraces the serendipitous and one-off aspects of intelligence gathering which leads to better visioning and more exciting scenario development. It really does epitomise the 'no surprises' style of management which is embodied in a firm-wide management style (Gilbreath, 2010) implemented not only at the strategic level (Fahey, 2007) but at both the tactical and operational levels where, arguably, more immediate effects may be observed (Azvine *et al*, 2006; Desouza & Evaristo, 2006; Wright & Calof, 2006; Andreou & Bontis, 2007; Dishman & Calof, 2008; Ashton & Stacey, 2009). CI&IM output informs competitive opportunities and/or threats which frequently require swift action. Empowering managers to make informed decisions and embrace the CI&IM mind-set fully, at all levels, encourages firms to look for the unusual, consider the implications, act upon this if necessary, but always attempt to anticipate shifts in the competitive landscape.

Erickson & Rothberg (2005) draw attention to the requirement for a firm, in this information rich age to be more aware of how it manages the critical information and knowledge which is passed around the many networks within a firm. The potential for greater exploitation of the increasingly large amounts of valuable information which reside in downstream networks is obvious, as is the number of interfaces which occur across functions (Bhatt *et al*, 2010; Mathur *et al*, (2007). This adds further evidence for the need for a firm-wide CI&IM mind-set which encourages employee engagement with all aspects of their work, the identification of intelligence acquisition opportunities but equally as important, their care and diligence in ensuring that vital data and information does not fall into the wrong hands (Richelson, 2006; Gorge, 2008; Hahn *et al*, 2009).

Managerial style and culture play an important part in securing a successful CI&IM operation. O'Gorman (2005) identified cultural tendencies, or memes, which act as an aid to understanding the complexity of strategic decisions and competitive behaviour. These issues have been addressed in the broader context by illustrious writers such as Day *et al* (1997), Fahey (1999), Heil & Robertson (1991), Porter (1983a; 1983b; 1985; 1998a; 1998b), and Smith *et al* (1997).

Porter (1998c) famously took the notion of a predisposition to compete and linked this with the identification of national assets which could help to determine to which industries or markets, any one country would be attracted.

During the past decade, writers such as Leeflang & Wittink (2001), Debruyne *et al* (2002), Gordon (2002), Warren, (2002), Pauwels (2004), Mostert (2005), Neilsen (2005), Steenkamp *et al* (2005), Pietersen (2006), Magin (2006), Michaluk (2007), Tully (2007), Wagner (2007), de Bruijn *et al* (2008), Warren, (2008), Moatti (2009), Pandza & Thorpe (2009), and Reibstein & Wittink (2009) have developed a more focused approach to questions such as why an organisation takes a particular stance in different competitive situations. Why is reaction activity predictable in one scenario but unpredictable in another? What is the meme-set of a competitor's top management team and how does this influence that firm's decision-making output? At the product level, how emotionally tied is the firm to a particular product line? How vigorously will the firm defend its territory, even in light of irrefutable evidence that this is not a wise move? In other words, is there a meme-set at work which is responsible for the way in which a firm conducts itself? Understanding why competitors, customers and individual influencers behave in the way they do has to be a core element of any CI&IM programme. Otherwise, the entire effort becomes one of data collection and mechanistic analysis with little or no regard for the psychology of competitive behaviour.

Whilst it may appear that CI&IM does not have a natural academic home, to some extent, this is its strength. The inter-disciplinary, cross functional nature of the work ensures that whichever area of impact is being researched, that is the only identifier of whether it is relevant or useful to that audience. The opportunities for CI&IM to positively affect, and engage with, several functional areas of a firm is commendable. Fleisher *et al* (2007) provided evidence for the spread of CI&IM related articles being published across a number of differing subject areas. Therefore, an organisation-wide perspective, without trying to shoe-horn the subject into any one of the major business disciplines, is necessary.

As CI&IM relies heavily on a strong working relationship with all the functional areas of a firm, it is possible to say that what is actually being studied here is an operational framework for the achievement of intelligence-based competitive advantage which has as its overriding goal, the provision of analysed and considered input which aids and informs

the risk reduction aspects of a firm's decision making process. It is inevitable therefore that academic research and individual studies will draw equally on the features of different disciplines.

CI&IM goes beyond the understanding of knowledge, typically past events, and strives to create fore-knowledge which is future orientated and addresses the 'what if?' and the 'what now?' questions. A firm which embraces this concept and takes steps to ensure it is fully operationalised with the added ingredient of employee empowerment, will be better placed than most to secure intelligence-based competitive advantage.

Thesis Focus

The articles presented within this thesis are representative of this inter-disciplinary body of work. They examine and critically evaluate aspects of CI&IM, placing the findings into a context of best-practice and the potential for improvement. Identification of the body of work and arguments for this being representative of a coherent and high standard of sustained academic output follows in Section 3.

SECTION 3

Identification of Selected Works, Linkages and Coherence

Selection Process

In deciding which articles to include for this submission, consideration was given to both the intellectual focus and content of the article, as well as the quality of the publication in which it appeared. This was important to demonstrate not only an *“acceptable standard”*, but an *“advancement of knowledge”*. It was also important to include articles which represented a *“coherent body of work”* and it is on this selection that the case is made for the award of PhD by Published Works. It should be noted that the articles presented here, are, by necessity, a small representation of a larger portfolio of professional, academic and scholarly activities which have taken place on both a domestic and an international stage.

Future activities of this nature are continuing with a number of research projects either in place or in design and scholarly output under preparation.

All of the articles are co-authored and it is suggested that this is representative of good practice in terms of developing, enhancing and capitalising on research capability, interests and collaborative networks of like minded individuals. Those individuals with whom collaborative work has been produced are highly regarded and enjoy high status within the CI&IM community.

Statements from the principal co-authors were presented earlier in the thesis and these testify to the independent, intellectual input of the candidate. Copies of the published articles can be found in Appendix 2.

The articles which make up this submission are identified in Table 3.1

Table 3.1
Articles Comprising the Body of Work

<i>Article No.</i>	<i>Citation</i>
1	Wright, S., Pickton, D.W. & Callow, J. (2002) ‘Competitive Intelligence in UK Firms: A Typology’ <i>Marketing Intelligence and Planning</i> , Vol 20, No 6, pp 349-360
2	Wright, S., Badr, A., Weiss, A. & Pickton, D.W. (2004) ‘Competitive Intelligence Through UK Eyes’ <i>Journal of Competitive Intelligence and Management</i> , Vol 2, No 2, pp 68-87
3	Wright, S. & Calof, J.L. (2006) ‘The Quest for Competitive, Business and Marketing Intelligence: A Country Comparison of Current Practice’ <i>European Journal of Marketing</i> , Vol 40, No 5/6, pp 453-465
4	Badr, A., Madden, E. & Wright, S. (2006) ‘The Contribution of CI to the Strategic Decision Making Process: Empirical Study of the European Pharmaceutical Industry’ <i>Journal of Competitive Intelligence and Management</i> , Vol 3, No 4, pp 15-35
5	Fleisher, C.S., Wright, S. & Tindale, R. (2007) ‘Bibliography and Assessment of Key Intelligence Scholarship: Part 4 (2003-2006)’ <i>Journal of Competitive Intelligence and Management</i> , Vol 4, No 1, pp 32-92
6	Fleisher, C.S., Wright, S. & Allard, H.T. (2008) ‘The Role of Insight Teams in Integrating Diverse Marketing Information Management Techniques’ <i>European Journal of Marketing</i> , Vol 42, No 7/8, pp 836-851
7	Calof, J.L. & Wright, S. (2008) ‘Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective’ <i>European Journal of Marketing</i> , Vol 42, No 7/8, pp 717-730
8	Fleisher, C.S. & Wright, S. (2009) ‘Examining Differences in Competitive Intelligence Practice: China, Japan and the West’ <i>Thunderbird International Business Review</i> , Vol 51, No 3, pp 249-261
9	Wright, S., Eid, E.R. & Fleisher, C.S. (2009) ‘Competitive Intelligence in Practice: Empirical Evidence from the UK Retail Banking Sector’ <i>Journal of Marketing Management</i> , Vol 25, No 9/10, pp 941-964
10	Fleisher, C.S. & Wright, S. (2010) ‘Competitive Intelligence Analysis Failure: Diagnosing Individual Level Causes and Implementing Organisational Level Remedies’ <i>Journal of Strategic Marketing</i> , Vol 18, No 7, pp 553-572

Acceptable Standard

All of the articles presented have been accepted for publication in peer-reviewed Journals and, it is argued, demonstrate an increasing velocity in terms of the ranking of those Journals. Article 1 (Wright *et al* 2002) appeared in the specialist title *Marketing Intelligence & Planning*, rated 1 by the Association of Business Schools (2010) through to Article 9 (Wright *et al* 2009b) appearing in *Journal of Marketing Management* rated 3, and Article 10 (Fleisher & Wright, 2010) appearing in *Journal of Strategic Marketing* rated 2. As a primarily inter-disciplinary subject, albeit having roots in marketing intelligence, the potential for achieving publication in higher rated Journals such as the five 4 and 4* titles in the marketing sub-discipline is almost impossible. The focused nature of their content: *Journal of Marketing Research*, *Journal of Consumer Research*, *Marketing Science*, and *Journal of Retailing*, present a significant barrier. Only the *Journal of Marketing* offers a non-specific outlet for marketing related work.

The situation is similar with the Organisation Studies sub-discipline which offers only four titles: *Organization Science*, *Organization Studies*, *Leadership Quarterly* and *Human Relations*, the Strategic Management sub-discipline which has only one 4* title: *Strategic Management Journal*, the International Business sub-discipline which also has one 4 title: *International Journal of Business Studies*.

Given this situation, it is claimed that not only does this collection of articles demonstrate the required academic standard, maintained over a period of eight years, but that they have been published in the best possible outlets available at the time. Seven have been published in titles rated 1-3 with the other three appearing in the sector's specialist title, published in Washington USA.

Advancement of Knowledge

McGonagle (2007) produced a thought provoking analysis of the various process models which have been offered since the 1980s and concluded that the "classic CI cycle model" no longer served practitioner needs, or paid attention to, the dynamic, rapidly evolving environment within which most of them operate. In short, the notion of a CI cycle doesn't work any more and there is sparse empirical evidence to show that it ever did. The work

by McGonagle (2007) confirmed what was already suspected in both the practitioner and academic communities, and it was this dichotomy between received wisdom and practice which became the impetus for much of the work presented in this thesis. The desire to identify, classify and develop a framework of best practice began with Article 1 (Wright *et al* 2002) and the critical impact of organisational structure, process and culture was later identified in Article 3 (Wright & Calof, 2006).

There is, however, agreement that the CI&IM process is not just a function in the firm, rather it is an attitude towards organisational learning, information sharing, a co-operation driven management culture and a desire by decision makers to capitalise on gathered intelligence (Wright & Calof, 2006). There is also agreement that CI is a widespread practice in competitive markets for firms of all sizes, strategies or cultures, regardless of whether or not it is formalised as a function or role (APQC, 1998; 2000; 2003).

The articles presented in this thesis date from 2002 to 2010 and it is suggested that these have helped to shape the current thinking of practitioners and scholars by drawing attention to the key aspects of CI&IM practice. It is not about what data is collected. Today's information rich world has made that part of the task easier, albeit harder to value because of the ubiquitous nature of search engines. Effective CI&IM is about how that data is dealt with by the firm, how it is exploited and capitalised upon. It is also about the organisational aspects of how the process is championed, how employees are encouraged to be involved and the structures which organisations put in place to facilitate the execution of a vital decision making tool.

The studies reported on in this thesis represent an advancement of knowledge by way of a significant shift in approach. Researchers had exhausted the seam of *whether* CI&IM was being undertaken by firms and had largely answered that question in the affirmative, but little was done to extend that answer. Hardly any empirical work had been published prior to 2000 on *how* or *how well* CI&IM was being conducted and this collection of work has certainly addressed this hitherto, less researched aspect of the field.

The articles are deemed to be original works by way of them being the result of analysis and interpretation of new data collected from bespoke empirical studies, or the original interpretation of findings from a thorough literature review and 'state of the nation' type

study, new interpretations and comparative studies of previously published works and the interpretation of extensive secondary sources. These are all critically evaluated and in most cases, recommendations for improvement are made. Should there have been an absence of such elements in the work, then it is unlikely that the articles would have survived the editorial desk review stage, would not have been processed through the peer review system or been accepted for publication by any academic Journal of note.

Coherent Body of Work

Throughout the body of work there is the continuing theme of competitive intelligence practice and management of the process. Unlike other authors in the field who see CI&IM as an additional string to their bow whilst continuing to supervise and carry out research in one or more of the other sub-disciplines of business, this work represents the bow, not a string, for the author. Dedication to the subject, a desire to explore all aspects of CI&IM (Wright *et al*, 2002; Fleisher *et al*, 2008; Fleisher & Wright, 2009b) and a willingness to tackle the more difficult, typically secretive sectors such as pharmaceuticals (Badr *et al*, 2006) and retail banking (Wright *et al*, 2009b) is worthy of note.

The articles report on the findings from studies which cover the spectrum of CI&IM and can be classified into five groupings which make up the body of work. These groupings also represent a progression of maturity in the work, moving from the macro to the micro view of CI&IM, addressing increasingly more complex issues, increasingly more challenging sectors and building on previous work to produce incrementally more valuable outputs.

CI Scholarship

- Article 5: Bibliography and Assessment of Key Intelligence Scholarship: Part 4 (2003-2006)
- Article 7: Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective

Country Level Analysis

- Article 2: Competitive Intelligence Through UK Eyes
- Article 3: The Quest for Competitive, Business and Marketing Intelligence:
A Country Comparison of Current Practice
- Article 8: Examining Differences in Competitive Intelligence Practice: China, Japan
and the West

CI Management and Best Practice

- Article 1: Competitive Intelligence in UK Firms: A Typology
- Article 6: The Role of Insight Teams in Integrating Diverse Marketing Information
Management Techniques
- Article 9: Competitive Intelligence in Practice: Empirical Evidence from the UK
Retail Banking Sector

Strategic Decision Making

- Article 4: The Contribution of CI to the Strategic Decision Making Process:
Empirical Study of the European Pharmaceutical Industry

Analysis Management

- Article 10: Competitive Intelligence Analysis Failure: Diagnosing Individual Level
Causes and Implementing Organisational Level Remedies

As the work covers the key areas of study within CI&IM, it is argued that this is indeed a coherent body of work, representing a coherent research approach and demonstrating an increasing velocity of impact on the field. The issue of coherence is further addressed in Section 6 - Contribution to Knowledge, with the future development of the themes identified above, addressed in Section 7 - Reflections and Future Research Agenda.

An analysis of each article follows in Section 4.

SECTION 4

Analysis of Selected Works

Introduction

Section 4 presents an analysis of the selected works, by considering each article individually in this submission in terms of *background and antecedents, research design, substantive findings* and *outcome*.

The use of mixed methods has enabled the delivery of differing types of outcome from the investigations undertaken which Denscombe (2010, p. 17) classifies as: *facts* (a body of new information), *theoretical development* (clarification of concepts or issues) and *applied knowledge* (answers to practical problems, recommendations for good practice).

Arguments in favour of each article being considered to have *value* in its own right are also presented and these are supported by a citation analysis for each article, presented in Appendix 1. This identifies work by authors who have drawn on the content of the submitted articles in reference to, confirmation of, or inspiration for, their own work. By being published in peer reviewed journals, refereed conference proceedings, examined (in the case of PhD and Masters theses), or subject to editorial scrutiny, it is suggested that these citations can be regarded as reaching an appropriate level of academic rigour. In contrast, citations which emanated from professional/trade magazines, unrefereed conference papers, websites, blogs and the like are excluded.

As identified within this section, some of the articles presented have been regularly cited and have been the impetus for further empirical studies by writers. Unless otherwise stated, the citations are refereed journal articles. All known citations and those which had been released on-line prior to physical publication have been included up to an arbitrary cut-off date of 1st October 2010.

Article 1
‘Competitive Intelligence in UK Firms: A Typology’
Marketing Intelligence & Planning, Vol 20, No 6, pp 349-360

Background and Antecedents

This article represented the culmination of a number of phases of research focusing on understanding the CI practice of UK firms. At the time, late 1990s/early 2000s, it was known from personal corporate experience and contact with similarly placed practitioners, that CI was taking place, albeit frequently subsumed, into other major disciplines, primarily marketing. It had received no academic attention whatsoever and the only UK authors who had written texts were Pollard (1999) and Hussey & Jenster (1999). Both their texts are titled Competitor Intelligence, which, although an important feature, is nevertheless, just one component of a CI system.

The function of CI had already been established in the USA for over a decade but the predisposition, and approach there was heavily influenced by ex-military and ex-CIA personnel who, in their own inimitable fashion, felt they could readily transfer their elicitation and analysis techniques into the commercial world (Prescott, 1999). Wright & Roy (1999), referring to McCugan gave a stark warning:

The number of industrial spies and competitive intelligence specialists is likely to increase. Indeed, although it may sound far fetched, it has been noted that the end of the cold war resulted in the unemployment of many former spies. It is claimed that many have started new careers as security or competitive intelligence specialists, whereas others have continued as industrial spies, either for government agencies or for hire by the private sector”
(McCugan, 1995, p. 55).

The transfer from a command and control, strong hierarchical environment to a more discursive, considered, collaborative one was not quite as easy as had first been anticipated but nevertheless, the structured models and systematic reporting lines were held up to embody the way of conducting a CI operation (Hansen 1992; Augustini, 1995; Barker, 1995; DeGenaro, 1996; Bartram, 1998; Barrett, 2001).

Those working in Europe, where simply having been ‘in the military’ was not a guarantee of a seat at the top table of a corporation, were operating their CI & IM roles in a more pragmatic fashion (Pollard, 1993), working on a multitude of tasks, adjusting to the changing environment and relying less on a code-book approach in an effort to give support to their decision makers. These views have since been reinforced by Romppel & Goehrlich (2005) and Wright (2005a), but more provocatively by Pollard (2004) who presented practice based evidence which suggested that European CI was more ‘grown-up’ in the commercial world than that in the US and that progress in the US was being stifled by an obsession with the secret services.

In order to engage fully with the debate, it was clear that evidence was needed to show how CI really was conducted outside of the US and in particular, the UK. Even the US-based President of the Society of Competitive Intelligence Professionals (SCIP) at the time, expressed his views strongly that CI professionals needed to be more visible and better able to articulate the highly valuable contribution they made to their decision makers (Dishman, 2002).

The notion that CI was fast becoming a new *modus operandi* for marketers and strategists, one which had great potential to deliver competitive insight was also gathering momentum, sufficiently so that a research grant was awarded by Leicester Business School for an exploratory study. This was also a timely project as it coincided with a period of growth and excitement for CI in the UK. A pilot study was conducted with the survey instrument being despatched to 200 firms and public bodies. The response rate was an acceptable 15.5%. From this, a preliminary classification was derived of three attitude types (1-3), three gatherer types (A-B), three user types (G-I) and two location types (M-N) (Wright & Pickton, 1998b). It was clear that further data was required to substantiate the pilot study results and further develop the descriptors at which point the study reported on in Article 1 was initiated.

Research Design

Population, Sampling and Response Rate

The SCIP membership list at the time was consulted, and with their permission, a *census* approach was adopted and 178 firms were contacted. Some of the target respondents

worked for consulting firms or were sole trader consultants. The views of that group were found to be atypical of respondents working in a corporate role and as such, 29 returns were put aside and retained for future use. This resulted in 45 usable questionnaires which had been returned from CI active employees, representing an acceptable **30% response rate**. Semi-structured interviews were also conducted with 20 respondents who were excited about the research and were delightfully willing to share their views.

Paradigm Adopted

A **constructivist/transformational** approach was adopted as the aim was to explore the views of a community of professionals working in a variety of industry sectors. Elements of pragmatism were present as there was an acceptance that any data collected could only be a reflection of 'provisional knowledge' as opposed to the discovery of 'facts'. Having said that, it was possible to produce a typology of practice which has since been used and adopted by practitioners and academics alike as one of only two empirically based classifications of CI practice published to date.

Research Instrument(s)

A **self-completion questionnaire** using a mixture of closed and open style questions was used to initiate the data set. This produced bare analysis, typically frequency counts and short, free form, answers to open questions. **Semi-structured interviews** were conducted concurrent with, and subsequent to, completion of the questionnaire. These were used for triangulation and verification purposes and also to enable the successful presentation of thematic analysis. This was done without the aid of NVivo or any other such qualitative data analysis software as such sophisticated tools were not easily obtained at the time. Instead, a careful and thorough analysis of the responses was made which resulted in a comprehensive evaluation of their content.

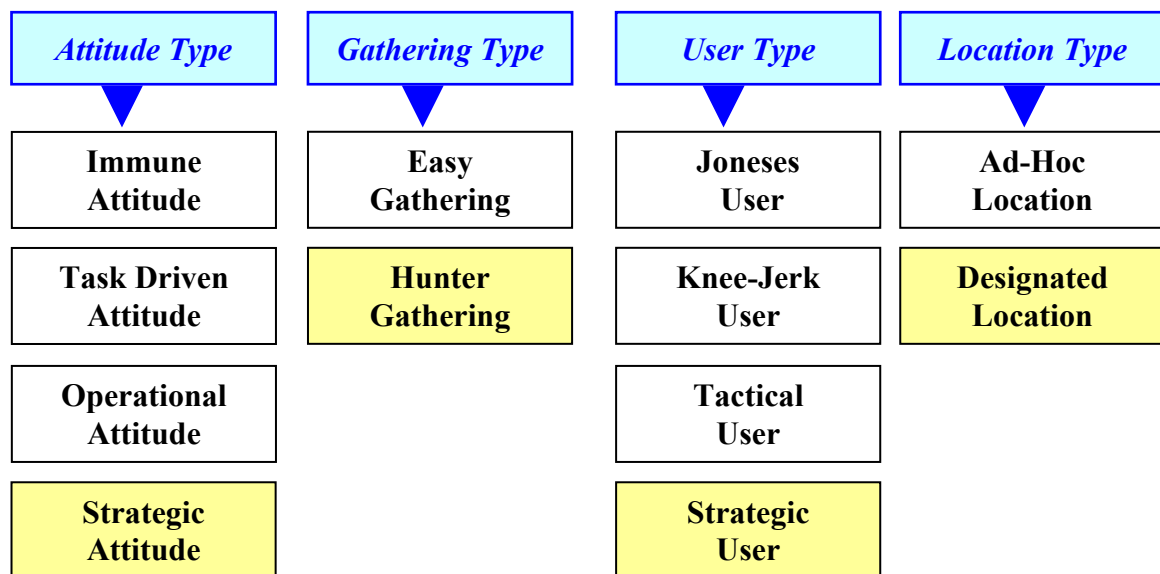
Substantive Findings

The purpose of this research was to establish the type of conditions and behaviour required to ensure that CI activity was beneficial. What was illuminating though, was the realisation that misunderstandings surrounding CI persisted. It was viewed as being the domain of large companies only, requiring considerable financial and human resource investment, neither of which need be the case. It could be argued that the tactical use of

CI, with the likelihood of quicker, tangible results meant that not enough companies were taking a longer term strategic view of CI, but that may be entirely acceptable to their market.

The evidence suggested that the overriding influences on successful CI activity were the existence of a management style, culture and structure which encouraged trust, facilitated communication and encouraged the easy flow of information. Having used the findings of this study to further inform the typology, it was possible to develop a hierarchy of practice as shown in Figure 4.1. The concluding utopian situation for firms wishing to undertake CI & IM activity was postulated as one which displayed the connected behaviour of strategic attitude, hunter gathering, strategic user, designated location.

Figure 4.1
Best Practice Model for Effective CI



It is likely that this research reflected a transitional situation. Not all firms can immediately go from a cold start to the ideal situation, nor would it make sense to recommend this as universally ideal. Intermediary stages are there for a purpose and the organisational learning which takes place through these stages is highly valuable.

Outcome

This study has subsequently been responsible for *theoretical development* (clarification of concepts or issues) but that was neither the primary objective, nor was it obvious at the time. The aim was to produce *applied knowledge* (answers to practical problems, recommendations for good practice), which the study accomplished. This is evident in the resultant typology reported in Article 1, subsequently being referred to as a unique study into the management of CI in a corporate setting (Comai, 2004; Bouthillier & Jin, 2005; Priporas *et al*, 2005; Oerlemans *et al*, 2005; Smith, 2005; Liu & Wang, 2008; Hudson & Smith, 2008; Suchon & Randall Haley, 2008; Trim & Lee, 2008; Larivet, 2009; Zangoueinezhad & Moshabaki, 2009; Xu & Kaye, 2007; Wright *et al*, 2009a; 2009b; Smith *et al*, 2010).

A number of these authors also noted one of the key findings from this research, that differing management styles and organisational cultures have a significant effect on the success or otherwise of CI practice. This aspect of CI practice is further addressed in Article 3.

It has been pleasing to be the initiator of terminology which has subsequently been capitalised upon, not only by further work but by other authors. Having said that, it should be recognised that the causal linkages, if indeed there are any at all, can only be understood within the context of the research and the respondents' mind-set at the time. Unlike a positivist approach, time and context free generalisations could not be reached on the basis of this study, but ideographic statements were possible.

Value

Until this research was undertaken there had been only one previous attempt by Rouach & Santi (2001), researchers from ESCP-EAP, European School of Management, Paris, to classify CI practice. Whilst interesting to read, their work was not based on empirical evidence or any form of primary data collection from practicing managers. The claim is therefore made that with the exception of the pilot study previously referred to, Article 1 was the first, and as yet, only, classification based on primary data collection which has produced a typology, or any real understanding, of CI practice in the UK, or other

European CI active firms for that matter. This view is shared by Priporas *et al* (2005), Smith (2005), Tryfonas & Thomas (2006), Calof & Wright 2008, Hudson & Smith (2008), Juhari, (2008), Smith 2008) and Whitehurst, (2008).

The mixed methods approach to this study certainly enhanced the quality and quantity of data collected. To the practitioner community this was a significant recognition that what they were doing really did have value and that their efforts, dilemmas and frustrations with ad-hoc organisational placement was being reported upon and solutions being offered. It is known that this article is used for teaching in USA, Canada, Sweden, France and the UK. Goldmann & Nieuwenhuizen (2006) also draw on the findings of Article 1 to illustrate the notion of intelligence-based competitive advantage.

As can be seen from Appendix 1, this article has been cited in two well regarded books, 22 refereed journal articles and eight refereed conference papers, all with published proceedings. Attention is drawn to those pieces which have either used Article 1 as a platform or inspiration for further work and/or replication studies Badr (2003), Madden (2004), Bouthillier & Jin (2005), Oerlemans *et al* (2005), Priporas *et al* (2005), Smith (2005), April & Bessa (2006), Tryfonas & Thomas (2006), Dishman & Calof (2008), Hudson & Smith (2008), Liu & Wang (2008), Whitehurst (2008), Wright *et al* (2008), Adidam *et al* (2009), Larivet (2009), Suntharamoorthy (2009), Wright *et al* (2009a; 2009b) and Santos & Correia (2010).

Article 1 was indeed a landmark piece of research for understanding how CI operated in the UK. Several authors have adopted definitions and descriptors which were developed from this work. It can be seen to have had a wide geographic impact, having been cited in eight foreign language articles as well as, more notably, 15 PhD or Masters level theses from universities in Sweden, Germany, Spain, New Zealand, Brazil as well as four in the UK.

Article 2
‘Competitive Intelligence Through UK Eyes’
Journal of Competitive Intelligence and Management, Vol 2, No 2, pp 68-87

Background and Antecedents

Article 2 came about as a direct result of Article 1 which set down a marker to the academic community that the expert in CI in the UK was located at De Montfort University. This article was one in a series of country-based studies which set out to document the practice, attitudes and future potential for development in each. Experts from around the world were asked to contribute with documented evidence of broadly similar headings so that a definitive account could be published in the principal Journal for the field. It was an honour to be asked and to take a place at the high table of acknowledged experts and for this article to sit alongside those from Canada (Calof & Brouard, 2004), Finland (Hirvensalo, 2004), Israel (Belkine, 2004), South Africa (Viviers & Muller, 2004), Australia (Bensoussan & Densham, 2004), Korea (Kim & Kim, 2004), Russia (Ignatov, 2004), Spain (Tena & Comai, 2004), Sweden (Hedin, 2004), Germany (Michaeli, 2004), Japan (Sugasawa, 2004), Lithuania (Stankeviciute *et al*, 2004) and New Zealand (Hawkins, 2004). This was an impressive list producing in-depth country based studies which had hitherto not been attempted. It is fair to say that without the impact which Article 1 had on the field and other academics, it is unlikely that the opportunity and challenge of producing something as comprehensive as Article 2 would not have been contemplated. The topics covered in considerable depth in Article 2 were: evolution of CI in the UK, Government support, historical timeline, founding fathers, major UK based consultancies, role of the uniformed services, firms engaged in CI, growth in the CI community, consultancy growth, involvement of universities, the business press, CI meeting and conference, significant names and unique facets of UK CI.

Research Design

Population, Sampling and Response Rate

A summary of results produced in Article 1 was included as evidence of research into CI practice in the UK but as Article 2 was predominantly a critical examination of secondary material, this section does not fully apply to this scenario.

Paradigm Adopted

The *transformative/pragmatism* paradigm was deemed to be the most appropriate for this research, as seeking absolute truth was not an objective and it was necessary to address the various topics under review using both inductive and deductive logic. In terms of axiology it was clear that there would be a degree of researcher value being placed upon the material included or excluded, as well as the interpretation of secondary data findings. Similarly with ontological considerations, diverse viewpoints were not only accommodated but welcomed. Causal linkages between the various elements under review may have existed but as a primarily secondary data study, it is by its very nature, transitional and only a reflection of the framework of the research. As one of the first to be published in the series, Article 2 did serve as an exemplar for the remaining contributions and could be classified as an in-depth case study but it did not attempt to suggest that there was any potential for transferability in the findings from this setting to any other. Just because something works or not in the UK does not mean that the same applies to other locations. As such, paradigm selection inevitably, was location centric.

Research Instrument(s)

Considerations of time and cost pointed towards the use of *secondary data* as the most relevant research instrument. As the article would be a 'state of the nation' type review it was decided that not only were reliable, verified public domain sources the most efficient data collection tool, but that they were the most efficient means of gathering information on which to comment, critique, analyse and draw conclusions. Wilson (2010, p. 171) suggests that this approach is sensible when, as it was in this case, "*the nature of your research is to compare and contrast existing data*". Wherever possible, multiple sources were accessed for verification, reliability and triangulation purposes.

Substantive Findings

In carrying out this research it became apparent that CI as a named activity had been established in the UK since approximately 1987 and championed by just one or two individuals. Government support to aid firms to be more competitive was found to be non-existent in all but the small and entrepreneurial business sector where fairly unspecific advice, typically on export and finance issues, was offered at the time, via the British

Chambers of Commerce (2003) and the Business Link (2003) network. The link between CI practitioners and the uniformed services was virtually non-existent as the tendency was for CI to grow from within marketing or information science departments. It is likely that in the more covert areas of surveillance, military and ex-police officers may be employed, but this was not a significantly visible activity. It would be highly unusual to find an ex-military or ex-police officer which could satisfy the educational or business experience requirements to work in a commercially orientated CI role.

Article 2 concluded with a considered evaluation of the challenges which will affect the growth and future of CI in the UK. Not least was the perception of its practitioners who were actually doing most of the data collection tasks but had yet to transform into analysts. Typically they worked in a marketing or information function rather than in a CI department. The evidence suggested that most CI activists had grown into CI from other communities and as such, described themselves as business information professionals, or marketing intelligence professionals in preference to CI professionals, even though that is the work they were undertaking. A statement on what needed to happen in order for those challenges to be faced included the professionalisation of the various educational aspects of CI and a CPD programme to ensure high standards of practice.

Article 2 remains the definitive account of CI practice in the UK and an updated version has been selected for an *Advances in Competitive Intelligence Around the World*, text book being published by Peking University, in both English and Chinese.

Outcome

The principal outcome from this study could not really claim to be one of ***facts*** (a body of new information), rather a critical evaluation of pre-existing information which arguably, delivered ***applied knowledge*** in the guise of answers to practical problems with an element of recommendations for good practice in the concluding sections. In line with the transformative paradigm, the principal philosophy was one of a recognition that realities are socially constructed and shaped by the environment within which the study is undertaken and the situation at that time. Were a similar review to be undertaken in 2010, the outcome may well be different.

Value

By its very nature of being a one-off, arguably, comprehensive piece, the opportunity for others to extend the work is limited. Smith (2005, p. 17) specifically cited Article 2 as “*by far the most comprehensive and recent research on CI in the UK today*” and went on to use the content of Article 2 to draw a comparison between UK and French approaches, particularly in terms of Government support. The lack of such support was evident in the UK whereas significant support is afforded to SMEs in France, a reality which should be of concern to policy makers wishing to encourage UK firms to take a more competitive stance in their business dealings.

Some elements of the findings and the views expressed have since been supported by others. Trim & Lee (2008) quotes directly from the text regarding the measures needed to ensure that CI was regarded as at least equal to, if not more vital than, other business professions. Suchon & Randall Haley (2008) agreed with the proposition put forward in Article 2 that too much emphasis in the research carried out to date was on whether or not firms practiced CI or not and that an important feature of intelligence practice, that of cultural differences, had at that time, not been undertaken.

Tryfonas & Thomas (2006) in looking at the global situation, refer specifically to Article 2 and by association Article 1. They noted the findings of both articles and used these as a basis for their discussion on the ethical challenges of information operations.

Article 2 was the first time that an account of CI practice and myriad related issues related to the UK had been produced. In that respect it remains the benchmark and start point for anybody wishing to understand the evolution of CI in the UK. Article 2 has not been heavily cited with just five journal articles, two refereed conference papers, one foreign language citation and pleasingly, two theses, one PhD, one MSc. Despite this, the article has value in putting a marker down for those who wish to understand the evolution of CI in the UK.

Article 3
**‘The Quest for Competitive, Business and Marketing Intelligence:
A Country Comparison of Current Practice’**
***European Journal of Marketing*, Vol 40, No 5/6, pp 453-465**

Background and Antecedents

It had become apparent that too many academic researchers, and consultants, were feeling far too satisfied with reports of CI practice which were not what one might regard as being of a rigorous nature. There were a number of models utilised by firms in an effort to organise their CI activities (Kahaner 1996; Wright & Roy 1999; Fitzpatrick & Burke 2003) yet research had revealed that these were superficial and concentrated purely at the macro level. The focus seemed to be on the intelligence cycle of *needs statement* → *data collection* → *analysis* → *dissemination* (Herring, 1988; 1999) as opposed to trying to understand what were the critical internal and support structures needed to make the process work effectively (Marin & Poulter, 2004). This gap had also been identified at the time by Herring (2006) himself, as well as Bertacchini & Dou (2001), April (2002), Tryfonas & Thomas (2006) and later, Trim & Lee (2008).

Three studies were selected for comparison on the basis that they had at least recognised the CI effort as a systematic process of intelligence and insight management as opposed to mere data collection and transmission. Empirical studies from Canada (Calof & Breakspeare, 1999), the United Kingdom, (Wright *et al*, 2002) and Europe (Badr, 2003) were analysed, compared and critiqued. The studies were compared along a conceptual model developed by the lead author, drawing on the work of Wright *et al* (2002) and containing four central concurrent, rather than consecutive, stages of planning and focus, collection, analysis, communication.

Whilst the changes in terminology may appear to be semantic it is worth noting that there is a huge difference between a *needs statement*, which assumes that the decision maker always knows what they need and *planning and focus*, which reflects the greater reality that they won't know what they want until they see it. Similarly *data collection* suggests that there is only data to be obtained whereas *collection* suggests a more inclusive approach which would embrace opinions, feelings, impressions and 'gut feel'. Finally *dissemination* suggests one-way traffic of sender to receiver whereas *communication* is

indicative of a feedback mechanism whereby the other three elements can be revisited without having to traverse the entire cycle once more.

Two influence drivers were also identified from the literature and the study itself. These were introduced into the comparative framework: *process and structure* as well as *culture, awareness and attitude*.

Research Design

Population, Sampling and Response Rate

For the ***Canadian*** study, a ***census*** approach was taken, using 2030 contact addresses of industry association members primarily from the technology sector. This produced a ***33% response rate***. Analysis was carried out on 1,025 responses from typically SME firms reporting up to C\$1 million turnover.

The ***UK*** study comprised of SCIP members and a ***convenience/purposeful sample*** approach was taken which produced 149 contact addresses for large firms reporting in excess of £10 million turnover. A very acceptable ***39% response rate*** was achieved.

The ***European*** study also used SCIP members as the contact source and from a ***convenience/purposeful sample*** of large firms, 806 questionnaires distributed, a ***28% response rate*** was secured. The European survey focused on large firms with 56% of respondents reporting a turnover in excess of €1 billion and 71% having more than 1000 employees.

Paradigm Adopted

This study adopted a ***pragmatism*** paradigm in that the knowledge derived could be regarded as provisional and subject to a different interpretation over time. Some quantitative facets were evident but there was scope for the interpretation of data collected by free form responses. Seeking absolute truth was never an objective, rather that the interpretation gleaned would be representative of the studies being compared and a particular view of reality. Additionally, in terms of generalisability, this research was willing to recognise caveats and accept measures which were observed from relatively large samples.

Research Instrument(s)

The principal instrument for all three studies was *self-completion questionnaire*. The purpose was to initiate a data set upon which a comparative analysis could be performed. For the Canadian study, 44 mainly dichotomous question were asked. Whilst this may not be the ideal structure for a questionnaire, it was possible to pose questions which would elicit feelings and impressions as well, albeit through a Yes/No answer frame. It could be argued that the simplicity of this approach went some way towards securing a good response rate. Both the UK and European studies used a range of questions, some forced choice, some using Likert scale preferences and others allowing free form answers. The UK survey was the most detailed with 65 questions with the European one having 20 questions.

Substantive Findings

The studies provided good insight into intelligence practices in different locations with significant differences and similarities within. Summary of findings is provided in Table 4.1.

Table 4.1
Summary of Findings from Comparative Analysis

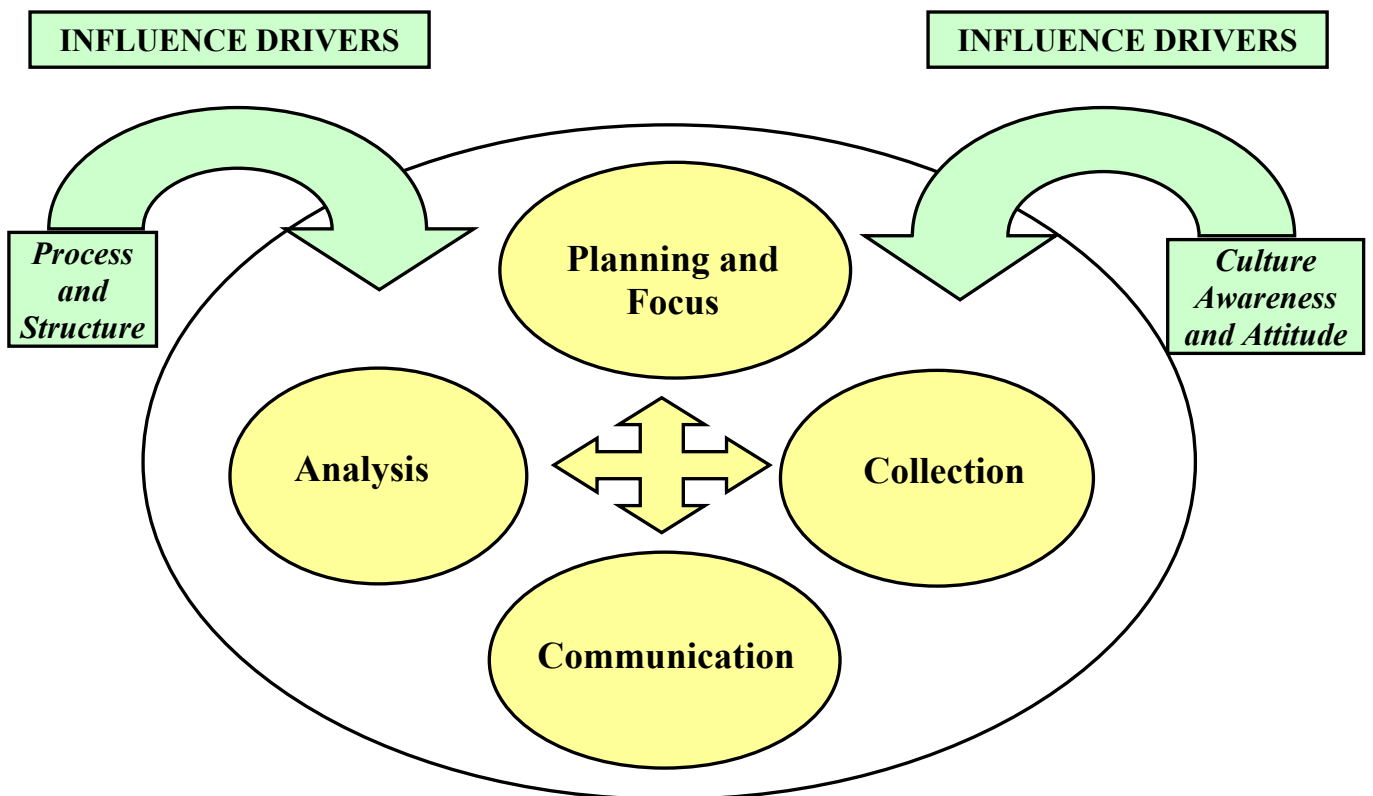
<i>Topic</i>	<i>Canada</i>	<i>UK</i>	<i>Europe</i>
Firms with formal CI units	2.7%	69%	23%
Culture for information sharing	Strong	Some	Not asked
Planning and focus	Competitors Customers Regulators	Not asked	Competitors
Collection dominance	Secondary sources	Secondary sources	Secondary sources
Analytical proficiency	Poor	High	High
Communication	Personal	Written reports	Not asked

The above raises an important question. Did the studies reflect cultural differences in intelligence practices or were they the result of differences in study design? The European and UK studies focused more on larger firms, while the Canadian study was targeted primarily at SMEs. Further, the Canadian study focused exclusively on technology firms while the other two studies were broader. Different approaches were evident also in the

questions asked and questionnaire design. In short, the research methodology of the three studies was very different.

One of the most significant findings of this comparative analysis was inconsistency in the studies being reviewed, particularly that which addressed the macro, or country centric view. The lack of attention to what this research had identified as influence drivers was evident. This led to the development of a revised operational model, offered as a solution to the previously stated concern of over-reliance on intelligence cycle terminology and emphasised the organisational aspects of successful CI practice. The resultant Critical Elements Model is shown in Figure 4.2

Figure 4.2
Critical Elements for an Effective Intelligence Operation



Outcome

This could be regarded as the delivery of *facts* (a body of new information) as it had hitherto been unrecognised that the lack of thoroughness in the research process was affecting the way in which apparent results were being regarded. There is also a case for stating that both *theoretical development* (clarification of concepts or issues) and *applied knowledge* (answers to practical problems, recommendations for good practice) was apparent. The depiction of a new model which highlighted the lack of attention to the interactive nature of the four central elements and the critical features of influence drivers in this article has been applauded by others, as noted below.

Value

Article 3 has featured significantly in terms of citations with 11 journal articles using this output, six refereed conference papers with published proceedings, six foreign language papers and six theses, two PhD studies and four Masters level. Article 3 has been cited as one of the very few which used surveys and statistical methods to compare different practices within different countries (Liu & Wang, 2008). Bose (2008) refers to the findings in Article 3 that reveal the extent, or otherwise of competitive information use by Fortune 500 firms and emphasised the point made that despite this apparently high figure, many firms still struggle with the process and mechanisms. Bose (2008) also advocated for a universal understanding of the competitive landscape, in order to move decision makers towards the maximisation of competitive advantage. Hudson & Smith (2008) drew extensively on the facets of the revised operational model presented in Article 3 and examined further the role of the two influencing drivers identified therein. Hudson & Smith (2008) then went on to apply the findings of their empirical study to this revised model.

Guo (2008) used Article 3 as a platform for his research stating that there has been a marked increase in the number of companies putting the machinery in place to collect and analyse competitive intelligence. Guo (2008) also agreed with the view put forward in Article 3 that it is somewhat inexplicable that so many fail to capitalise on this effort. Suchon & Randall Haley (2008) re-iterated the differing features which are encountered when carrying out comparative analyses and Calof & Wright (2008) also referred to

Article 3 to emphasise that it is not sufficient to stay within the structured boundaries of the CI cycle but to test the effectiveness of the various elements in a wider perspective.

Adidam *et al* (2009) agreed with the view posited in Article 3 that CI is both an art and a science. In their work they concluded that a comprehensive cross-country empirical survey is required and that it be conducted along the same lines as Article 3 and their recommendation was that this should include both developed and emerging markets.

Venter & Tustin (2009) among others, used Article 3 to make their case for the critical role that staff have on the successful operation of a CI process. Søylen & Hasslinger (2009) identified Article 3 as a good source for defining the difference between BI and CI with Santos & Correia (2010) used Article 3 output as a foundation for regarding CI as a source of competitive advantage. The model presented in Article 3 was also the impetus for, and adopted as, the theoretical foundation for an investigation into the role of attitude and awareness and how that is influenced by government support programmes for SMEs in France (Smith *et al*, 2010).

The value of Article 3 has not only been advocated by the academic community but the revised operational model has been considered by several practitioners as a viable alternative approach to the intelligence cycle. Workshops where this approach has been presented to practitioners has garnered a favourable response and a commitment to action the findings (Wright, 2007; 2008a; 2008b; 2008c; 2010). Similarly, discussions with CI&IM managers from firms such as Orange, Vopak, Rolls Royce, Anglian Water, British Gas, Kodak, ABB and Comintell has revealed that this framework has helped them to bring into sharp focus the role of structure, process, culture, awareness and attitude in aiding the formation of a successful CI operation.

Article 4
**‘The Contribution of CI to the Strategic Decision Making Process:
Empirical Study of the European Pharmaceutical Industry’**
Journal of Competitive Intelligence and Management, Vol 3, No 4, pp 15-35

Background and Antecedents

Whilst it was recognised at the time of this study that pharmaceutical firms were very adept at information gathering (Gilad *et al*, 1998; McMillan *et al*, 1995; McMillan & Hamilton III, 2000a, 2000b; Ferreyra, 2004; Fuld, 2004; Lam, 2004; Madden, 2004; Muller, 2004; Viviers, 2004), the volatile nature of the sector and the obsession of firms within it to keep their secrets very secret, meant that the notion of trying to undertake an investigation into their CI practices was almost doomed from the start. To then think of asking them how CI contributed to their strategic decision making process probably sounded like madness. This however, formed part of the appeal, not least because of the challenge but because of the insights which could be gleaned from one of the more successful industry sectors in Europe at the time. It is also easy to think that CI in pharma had already been heavily researched and that there was little left to learn. The truth was that the published and publicly available empirical work in this area, specifically in CI practice in pharma was minimal and non existent as far as linking that to the strategic decision making (SDM) process in the sector.

Canongia *et al* (2004) argued that CI, if implemented and used correctly can lead to technological foresight, which is likely to be a key consideration in the pharmaceutical industry, given it is a sector which is driven by innovation and technological advancement in pursuit of competitive advantage.

The literature foundation was formed from works dated prior to 2006, the year in which Article 4 was published. From what transpired to be a limited resource, it was possible to conclude that researchers had not addressed the practicalities of CI in terms of the sources used, the type of individuals who are engaged in CI, the departmental structure, the levels of communication between other departments or the role which CI had on SDM. Using the bibliographic listings covering the period (Dishman *et al*, 2003; Fleisher *et al*, 2003; Knip *et al*, (2003) it was possible to identify that in terms of intelligence acquisition, the

academic articles of substance which had appeared between 1980 and 2006, focused mainly on *patents* (Pakes & Griliches, 1980; Pavitt, 1982; Ashton *et al*, 1983; Basberg, 1983; Faust & Schedl, 1983; Narin *et al*, 1984; Pavitt, 1985; Basberg, 1987; Narin *et al*, 1987; Wineberg, 1988; Ashton & Sen, 1989; Narin *et al*, 1993; Steele, 1994; Quazzotti *et al*, 1997; Breitzman & Thomas, 2002; Breitzman *et al*, 2002; Breitzman & Moguee, 2002), *R&D practice* (Mansfield, 1988; Krogh *et al*, 1988; Herbert, 1989; Walton *et al*, 1989; Klavans & Simon, 1990; Kodama, 1992; Halliday *et al*, 1992; Serapio & Dalton, 1993; Breitzman, 2000), *science and technology watching* (van der Eerden & Saelens, 1991; Ashton *et al*, 1991; Bodelle & Jablon, 1993; Ashton *et al*, 1994; Mort, 1994; McMillan *et al*, 1995; Kopcsa & Schiebel, 1998; Lane & Klavans, 2005; Fleisher, 2006; Savioz & Sugawara, 2006) and *biotechnology issues* (Soete & Wyatt, 1983; Eisenberg, 1987; Nystrom & Lalanyee, 2003).

Only 16 articles had been published on the topic of CI in the pharmaceutical industry, two being PhD studies (Esposito & Gilmont, 1991; Desai & Bawden, 1993; Krol *et al*, 1993; McNair & Liebfried, 1993; Keiser, 1994; Ashton *et al*, 1994; Steele, 1994; Krol *et al*, 1996a; 1996b; Albagli *et al*, 1996; Mullen *et al*, 1997; McMillan & Hamilton III, 2000a, 2000b; O'Guin & Ogilvie, 2001; Madden, 2004; Muller, 2004). At the time, Breitstein (2002) also claimed that despite the expectation that few can teach pharma anything about handling competition, there was evidence to suggest that the sector had a long way to go to catch up with others such as software and manufacturing and that many pharmaceutical firms were perplexed when it came to the collection of CI. Gilad *et al*, (1998) had previously argued that while the majority of executives in the pharmaceutical industry were happy with the way their company handled the gathering and communication of competitive data, the reality was that their efforts were wholly inadequate and that very few companies possessed a serious competency in CI. It was against this background that the study for Article 4 was designed.

Research Design

Population, Sampling and Response Rate

The study sought to investigate the practices of European pharmaceutical managers who carried out CI, particularly, their reasons for practising CI, the techniques they used to analyse CI and their views on the contribution, or otherwise, of CI to each stage of the

SDM process. As such a *convenience/purposeful sample* was selected from European based members of the Society of Competitive Intelligence Professionals (SCIP). This provided access to individuals with knowledge of CI, working in the pharmaceutical industry and across a range of company sizes. There was an underlying assumption that the respondents selected would at least be aware of CI and this was confirmed in the responses. It would have been somewhat futile to attempt to conduct this research with managers who were not familiar with CI terminology. Despite the fear that managers might have a negative response toward questions dealing with intelligence activities, a satisfying *32.4% response rate* was secured from a sample of 244.

Paradigm Adopted

This study adopted a *pragmatism* paradigm in that it sought to reap the benefits of a good numerical data set on which simple statistical measures could be applied such as means and standard deviation. To this could be added the pure qualitative data obtained from semi-structured interviews. At the outset there was recognition that any knowledge or impressions gained could only be put forward as a reflection of the situation at the time. Seeking absolute truth was not an objective, rather, the attainment of insight into the actual practice of CI by the sample. This also complies with the epistemological and ontological conditions of a pragmatic approach in that diverse, objective and subjective, points of view on how CI was utilised in their firm were accommodated.

Research Instrument(s)

A *self-completion questionnaire* comprising four main sections: reasons for practicing CI, techniques used for analysis, extent to which CI is a key component of the SDM process and CI's contribution to the overall SDM process. This final section was further split into four sub-sections to cover setting strategic objectives, strategic analysis, strategy formulation, implementation and control. Statements which respondents could agree with were offered, as well as 'other' and 'don't know' options. For some sections, a five point Likert scale ranging from 'never' to 'very often' was more appropriate. Follow up face-to-face and telephone *semi-structured interviews* were also held with 14 CI managers who had indicated on the questionnaire that they were willing to participate in further discussion. This provided a non-confrontational situation where further points of view could be gleaned and information obtained which was initially outside the scope of the questionnaire. The interviews also served as a parallel form of reliability, meeting the

conditions of such practice in that both the interview and the questionnaire contained items which were intended to measure the same things, carried out on the same group of individuals with the results of each being used to correlate the consistency, or otherwise of both instruments. In this instance, the interviews produced data of a richer, deeper nature which was complementary to, rather than conflicting with, the data already collected.

Substantive Findings

The major findings revealed a less than dynamic attitude towards CI in this most dynamic of sectors. The main reason for practicing CI was given as *industry awareness*. This is a passive activity typically relying on secondary data only. The most commonly used analytical tool was *SWOT* which is hardly challenging, whereas the techniques one might think would be of more concern, *key success factors*, *competitor profiling*, and *financial analysis* was only used sometimes. On the positive side, *STEP analysis* was rarely used, but, more worryingly, the more advanced techniques of *win/lose analysis* or *war gaming/role playing* were not commonly used.

The majority of respondents reported that CI made a contribution to all four stages, but 17.7% felt that there was never, or rarely, a contribution from CI in setting strategic objectives. More concerning was that 26.4% could discern no contribution from CI at the implementation and control stage.

This could indicate that the strategic decision making of some firms is bereft of CI at two key stages of the process, and just as important, this could detrimentally affect the value to be derived from the entire CI effort. Failure to obtain intelligence early and throughout the entire SDM process may result in companies obtaining intelligence at too late a stage when it is impossible for any necessary adjustments to be made. It can be seen that the relationship between CI and the SDM process at the time of this study, was not fully integrated in the firms represented by respondents. More effort and commitment may be required in the form of guidelines as to how CI can be integrated effectively into the SDM process.

Whilst clearly pharmaceutical companies do have some formalised CI functions and do engage in intensive collection and distribution of competitive data, too often this becomes

a ‘paper shifting process’ with companies experimenting with many different approaches. The unmistakable conclusion from this study was that the executive decision makers were not getting the right information at the right time in order to make decisions. It was suggested that a certain mindset existed within large pharmaceutical circles that the more ‘layers’ of CI there were, the better the intelligence would be. A more simplified and direct model of CI would result in actionable intelligence being fed to senior management rather than being stored by middle management.

Outcome

This study could be regarded as the delivery of *facts* (a body of new information) as the subject had hitherto not been researched in quite the way undertaken here. There is also a case for claiming that the delivery of *applied knowledge* (answers to practical problems, recommendations for good practice) was apparent. This was a relatively simple piece of empirical work but one which was carried out in a recognised hostile sector. The fact that results of substance were possible, is worthy of note.

Value

Due to the rarity of research of this nature in this sector, Article 4 has considerable value. As this study evolved, concerns were raised which would be worthy of future research and the following points were highlighted as being important factors in the industry. It would be worthwhile for these to be researched further:

1. The SDM process in the pharmaceutical industry can be extremely long and laborious. The speed with which CI can reach decision makers has to be investigated and the dangers of delay identified.
2. The ability for the role of CI in the SDM process and its component stages to be mapped and as a consequence, the intelligence needs identified and anticipated.
3. The contribution of CI to each of the stages needs to be assessed and measured otherwise it is impossible to know if there is any return on the effort expended.

4. Investigation into the physiology of effective CI managers in a high technology /innovation driven industry such as pharmaceuticals.

In commencing this study it was clear that few researchers had ventured this far before, and even fewer have gone there since. Jin & Bouthillier (2008) reported on a qualitative study of the human information behaviour of 24 participants, of which six were from pharma. This study has resonance with item 4 above. In the closely related area of Knowledge Management, Bramhandkar *et al* (2007) examined the impact of intellectual capital management on organizational performance and Purcărea *et al* (2009), in a secondary data review article, applied their view of the challenges facing the Romanian pharmaceutical sector in the 21st Century. No other relevant studies could be found. To this day, Article 4 remains the only empirical study, in any location and at any level, to investigate the link between CI and SDM in the highly challenging pharmaceutical sector.

Article 5

**‘Bibliography and Assessment of Key Intelligence Scholarship: Part 4 (2003-2006)’
Journal of Competitive Intelligence and Management, Vol 4, No 3, pp 32-92**

Background and Antecedents

This was Part 4 of what had been, up until the publication of Article 5, a three part series of bibliographic listings of books, book chapters, scholarly articles, practitioner articles and dissertations/ theses (Dishman *et al*, 2003; Fleisher *et al*, 2003; Knip *et al*, (2003). In response to requests from the CI community, we embarked on Part 4 to cover the period 2003-2006 but instead of simply listing the citations, it was agreed that a degree of bibliometric analysis would provide added value to the reader.

Research Design

Population, Sampling and Response Rate

As a secondary data study only, these topics do not apply.

Paradigm Adopted

It could be argued that a ***transformative*** approach was taken to this work in that both deductive and inductive logic was employed, in terms of ontology, diverse viewpoints were accommodated on what should and should not be included. Likewise, the quantitative measures of frequency count demonstrated outcomes which were credible to the community. The evidence was transparent, as was the mechanism of employing a number of discretionary filters to the raw data. Inevitably, this had a degree of influence on what was included in the listings and what was not. Although a rationale and justification statement was made, the ‘in or out’ decision remained with the researchers but was open to appeal for amendment from the community.

Research Instrument(s)

The approach taken was in accordance with what McConville & Chui (2007, p. 2) refer to as ***black-letter research***, one typically employed by academic lawyers which “*focuses heavily, if not exclusively, upon the law itself as an internal self-sustaining set of principles which can be accessed through reading court judgements and statutes with little or no reference to the world outside the law*”. In undertaking this ***systematic review*** of the

literature, the black-letter approach was an entirely sensible one to take. There is no claim that this article is a full bibliographic study rather, simple bibliometric frequency count procedures were used to provide a series of citation analyses. These were produced to show trends in terms of book output by publisher, exposure in scholarly outlets, links by discipline, individual publishing track records, and a record of theses and dissertations. Of the three author team, having agreed the search criteria and discretionary filters to be applied, Fleisher and Tindale undertook the task of obtaining and reviewing the citation lists. On receipt of these, Wright produced the analysis and took responsibility for preparing the article for publication.

Substantive Findings

The analysis revealed a number of interesting facts:

- A total of 611 items were cited:
 - ◊ 66 books
 - ◊ 6 book chapters (additional to those in the Books category above)
 - ◊ 149 scholarly articles
 - ◊ 356 practitioner articles
 - ◊ 34 theses and dissertations

- John Wiley & Sons and South-Western were the most frequent book publishers
- Craig Fleisher topped the table for the most books and also book chapters
- Journal of Competitive Intelligence & Management was the principal Journal
- Information Science and Information Technology journals published the most CI work
- John McGonagle headed the count for writing across the spectrum
- Ken Sawka was the only author in the 21-25 articles category, so became the most published, albeit primarily comprising practitioner pieces
- The most theses/dissertations were produced during the period by USA
- De Montfort University in the UK, topped the table for the most CI theses/dissertations produced by any one institution during the period.

It was possible to compare output with previous years and it became clear that the literature in the area of competitive intelligence and insight management continues to grow. The goal in producing Article 5 was to identify and make freely available, a wide-ranging, comprehensive, thoroughly researched bibliographic listing of the field and there is no reason to suspect that this has not been achieved. It was a mammoth task and as updates and amendments are constantly being undertaken, it remains so.

Outcome

This study produced a comprehensive review of the available literature between the period 2003-2006 and as such delivered *facts* (a body of new information). It is relevant to note here though that it was only possible to assess and evaluate works published in the English language so some important articles, potentially in French, Swedish or German will have been excluded.

Value

The full listings have now been made available on the Competitive Intelligence:Marketing Interface Teaching & Research Initiative website (CIMITRI, 2010) so continued citations are less likely. Article 5 has been cited on five occasions in journal articles, in five refereed conference papers, one foreign language article and two theses. Dishman & Calof (2008) refer to Article 5 stating that is the only source which presents a complete list of CI studies, Fleisher (2008) cites Article 5, lamenting the lack of case study material produced by researchers, Calof & Wright (2008) commend the work as an independent and authoritative source of CI scholarship and Brownlie (2009) refers to both Article 5 and 7 as authoritative sources for understanding the field of CI. Hoppe (2009) also quotes directly from Article 5 and agrees that researchers have the potential to publish their work in well established disciplinary and cross-disciplinary Journals. Smith (2009) also regards Article 5 as a major contributor to the cataloguing of CI scholarship and commented on the time and effort saved by his being able to access this to identify studies carried out on SMEs.

It is known from informal conversations with academics and researchers who are publishing in the field, that the data within Article 5 and its predecessors have been used as evidence to show impact in the field by way of number of publications in each category

and the ability to write across several media. PhD students in the CI&IM, as well as related fields, use it frequently and new lists are eagerly awaited. On receiving notification that the latest update had been loaded on to the website, Dr Klaus Solberg Søylen of Blekinge Institute of Technology, Sweden, wrote to the candidate on 28th October 2010 via e-mail saying *“This is a great collection. Your contribution of the CI field cannot be exaggerated [sic]”*. Dr Sophie Larivet, ESCE (Ecole Supérieure du Commerce Extérieur), Paris, France, also e-mailed on 28th October 2010 saying *“Thank you so much for having done this amazing work”*.

Article 5 and its predecessors have been the impetus for a like-minded effort in France by Frion (2010) who also drew on Article 5 for his analysis of articles tackling information overload.

Article 6
**‘The Role of Insight Teams in Integrating Diverse Marketing Information
Management Techniques’**
European Journal of Marketing, Vol 42, No 7/8, pp 836-851

Background and Antecedents

The opportunity to observe and document the transition which one organisation made in its effort to re-focus the business could not be turned down. The task of the on-site project manager was to address the viability of planning and executing the integration of four independent marketing information management techniques: competitive intelligence (CI), customer relationship management (CRM), data mining (DM) and market research (MR). Researchers have used the case method before to look at integrating marketing information systems (Wright & Ashill, 1998), using decision support systems to enhance marketing planning (Wilson, 2004), and mapping marketing information systems (Daniel *et al*, 2003).

The Holy Grail of producing a fully integrated system from these often disparate parts, has been looked at by others, specifically the combined effect of CRM and DM (Dillon & Hope, 2004), CI and MR (Blenkhorn, 2003; Fleisher & Bensoussan, 2004; Gilad, 2006a), Business Intelligence (BI) and CRM (Stone *et al*, 2002; Gordon, 2002), and DM and MR within CRM (Elliott *et al*, 2003). Despite these efforts, managerial and scholarly concerns persist as to whether or not, marketing information systems (MkIS) and other techniques such as CI, CRM, DM and MR, all designed for a specific purpose, are capable of compatibility and whether these could, or should, be successfully integrated in practice.

If they exist at all, strategy-focused skills tend to remain in silos, disaggregated in a variety of roles across, for example, finance, marketing, IT, planning and/or sales, (Appelbaum & Gonzalo, 2007). The failure to align efforts usually manifests itself within information systems that remain distinctly separate. Subsequently, the work programs of such personnel are rarely aligned and the insights derived from their respective outputs are focused too narrowly on relatively short-term operational and tactical issues. The consequence of this is two fold:

- Skills and projects addressing overlapping business questions cause duplication and consume greater resources than necessary, and

- The opportunity to uncover insights of strategic importance is lost. Instead, there is the increased potential for conflicting information and recommendations that create confusion, or hamper, rather than support, management decision making.

It was with the objective of avoiding this situation and attempting to optimise the return achieved on the costs associated with building such an integrated capability that an Insight Team within the case study firm (EAG) began to evolve and the observations reported in Article 6 were made.

The whole notion of cross functional integration has since received attention from the research and practitioner community, so much so that a CI practitioner is now more likely to refer to themselves as a competitive intelligence and insight manager as this is the way in which the discipline is evolving. Recent work in this area has focused on cross functional coordination and its impact on performance (Carr *et al*, 2008), maximising productivity in product innovation (Cooper & Edgett, 2008), cross functional integration as a knowledge transformation mechanism (Hirumyawipada *et al*, 2010), shared vision and goal interdependence among departments (Wong *et al*, 2009), viewing sales as a strategic cross functional process (Storbacka *et al*, 2009) and multi-level boundary spanning (Marrone, 2010). It is likely that a stronger focus on this aspect of CI&IM will continue.

Research Design

Population, Sampling and Response Rate

This research used several approaches and as such, could be described as a ***longitudinal***, ***explanatory***, and ***descriptive case study***. What is somewhat unique about the approach taken here, is the context of a medium-sized, national, not-for-profit organization. Real time observation and critical dissection of results was possible. All relevant employees of the case study firm (EAG) were involved in an action research style project. The case setting was within a bounded system using multiple forms of data, rich in context (Yin, 1994; Creswell, 1998). As argued by Riege (2003), the case study approach permits holistic insights and analyses of previously unrecorded practitioners' experiences, which contained a wealth of information, frequently involving creative discovery. Cepeda & Martin (2005) stated three reasons why case study research is a viable approach:

1. It allows a study of management in its actual context
2. It provides material to answer complex “how” and “why” questions, thereby permitting a more accurate comprehension of the fundamental nature and degree of complexity inherent in the subject.
3. It is an appropriate way to explore areas in which previous studies are lacking.

All of these issues had resonance with the research objectives for this study and, as such, a case study approach was deemed entirely appropriate and fit for purpose.

Paradigm Adopted

The study bears all the features of a *pragmatism* paradigm. As a single case study, no generalisation claims could be made other than it would be possible to apply the features identified and the tasks undertaken to a similarly placed, similarly structured case and as such, EAG could be regarded as an exemplar. Having said that, the study identified practices which were applicable to the case at the time of investigation, and any cause and effect elements, may be transitional rather than fixed. In epistemological and ontological terms, both objective and subjective points of view were sought and diverse viewpoints were not only accommodated, but welcomed. It was inevitable that value would be evident when interpreting results as seeking absolute truth was not an objective. Both inductive and deductive logic was applied when interpreting the results and this was a good example of an approach which was fit for purpose and suited the environment within which the study was being undertaken.

Research Instrument(s)

Key participants in the Insight Team were *interviewed* and *observed* during the three-year long study. As such, the approach was a combination of *action research* and *case research*. The procedure recommended by Wilson (2004) was followed, as this is designed to minimise two practical methodological problems associated with employing a combination approach. These are: 1) the need to rigorously analyse action research data and (2) ensure steps are taken to minimize potential which may arise from the action researcher’s dual role as participant and observer. The required actions were, among other things, the keeping and referencing of detailed, written diaries throughout the project,

utilizing project management and planning techniques such as *Project Evaluation Review Technique (PERT) diagrams* which mapped key steps of the processes over designated time periods, and obtaining reliability and accuracy checks from other parties who were involved, either peripherally or centrally, in the process.

Substantive Findings

The development of EAG's Insight Team was iterative and evolved in response to the particular strategic decisions being addressed by the executive management team at various points during the implementation of the three-year Strategic Plan. The process manifested into a three phase implementation plan which ensured that the right amount of effort was being deployed in the right area at the right time. This produced a co-ordinated and comprehensive revision of current activity.

At the heart of the impetus for change was the realisation by EAG that it had not been serving its customers effectively. By changing its business model with the future in mind, the firm was able to better understand its markets, make more accurate predictions of customer needs and devise innovative ways of positioning its products and services. Behind this was the absolute belief, within both the executive management and the Insight Team that sustainable competitive advantage would come from information integration rather than information isolation.

The integrative capability developed at EAG is indicative of the types of marketing and management skills which firms will require in the future if they are to compete successfully in the knowledge economy.

Outcome

The investigation delivered *facts* (a body of new information), which was highly relevant to the case study firm and its stakeholders. It also delivered *applied knowledge* in the form of answers to practical problems and recommendations for good practice for the future. There was a genuine recognition throughout the study that the realities were socially constructed and shaped by the environment within which the study was being undertaken. A different time, a different situation and a different management agenda may well have

produced a different outcome but the positive tangible results and the benefits accrued by the firm from this work cannot be overlooked or underestimated.

Value

This work remains one of very few to have been published where outcomes from a drastically changed approach to information integration and insight team management can actually be seen and measured. The financial return from the change of strategy and all associated actions was significant, so much so that without this project, EAG would most likely no longer be in existence. Valos & Bednall (2010) refer to Article 6 as a key article which demonstrates the benefits of systems integration, Larivet & Brouard (2010) cite the work as a good illustration of how to integrate hitherto, independent, marketing systems, Calof & Wright (2008) identified this work as a unique account of how an intelligence department became the focal point, catalyst and change agent in a non-profit environment and Fleisher & Wright (2009b) drew attention to the role that internal information plays and used Article 6 as an illustration of an instance where it significantly enhanced the decision making process. Calof & Wright (2008) also noted that this was a ground breaking study of how an insight team developed its own role to integrate the disparate elements of marketing information systems and turned the combined output into competitive insight.

Article 6 certainly has value in its own right as proof that if a firm really does want to integrate its marketing information systems and the firm's very survival is at risk if something is not done, then the impossible really can be achieved.

Article 7
**‘Competitive Intelligence:
A Practitioner, Academic and Inter-Disciplinary Perspective’**
European Journal of Marketing, Vol 42, No 7/8, pp 717-730

Background and Antecedents

The impetus for Article 7 came from the reception which Article 5 had received on publication. The breadth of publishing outlets and inter-disciplinary touch-points were identified in Article 5 whereas Article 7 sought to identify where the field was heading along a three dimensions framework, in an effort to scope out the domain of CI. Up until this time, few bibliographies of competitive intelligence literature had been published (Dishman *et al*, 2003; Fleisher *et al*, 2003; Knip *et al*, 2003, Rajaniemi, 2004; Fleisher *et al*, 2007) and none had attempted to relate these to the three distinct areas of practice identified in Article 7.

A review of the typical keywords used by authors revealed that the field encompassed many concepts covering a wide spectrum of business activity, especially those usually attributed to the marketing function. They included: analysis, business intelligence, strategy, conditional uncertainties, cost of uncertainty, cross-functional teams, CRM, DM, entrepreneurialism, forecasting, foresight, IS, integration, innovation, performance, MI, market orientation, MR, new processes, NPD, open source, peripheral vision, partnership, service taxonomy, strategic intelligence, resilience, scanning and strategic marketing.

By reviewing article content and focus, it was possible to propose a “situation statement” on where each of the three areas needed to improve.

Research Design

Population, Sampling and Response Rate

As a secondary data study only, these topics do not apply.

Paradigm Adopted

This study adopted a ***pragmatism*** paradigm in that the knowledge derived could be regarded as provisional and subject to a different interpretation were a similar review to be

undertaken by others. Seeking absolute truth was never an objective whilst it was necessary to recognise the existence of an external reality by way of the published works being reviewed. This study identified the direction which scholars were taking in their work, under the banner of CI.

Research Instrument(s)

As with Article 5, this study adopted a ***black-letter research*** approach, typically used when producing a ***systematic review*** of the literature, focusing on the three strands of enquiry: the practitioner view, the academic view and the inter-disciplinary view.

Substantive Findings

In order to understand the situation from a ***practitioner*** point of view it was important to assess the size of the market. At a corporate level, the Competitive Intelligence Forum (CIF 2006) reported on a survey of 520 CI practitioners, worldwide, and stated that over 25% of respondents had said their company's total CI spending in 2000 topped \$100,000. Almost 14% said their company spent over \$500,000 on CI or CI related activities. Other media and consulting groups have focused on understanding how firms manage their CI units rather than the size of their CI budget. Global Intelligence Alliance (2006; 2007) looked at integrated intelligence capacity among the largest international firms with a response rate of 287 in 2005 and 281 in 2007. They reported that 87% of the companies interviewed had some form of integrated intelligence capability with a systematic approach for collecting and analyzing information about their external environment. These studies were carried out in two tranches, but together they covered: Asia Pacific, Belgium, Brazil, Canada, Finland, Germany, India, Mexico, Netherlands, Norway, Spain, Switzerland, The Netherlands, UK and the USA.

The ***academic*** viewpoint was somewhat different and bibliometric techniques were used to identify academic literature which had CI and/or MI at their centre. The decision was taken to exclude work published in *Marketing Intelligence & Planning*, *Competitive Intelligence Review*, and *Journal of Competitive Intelligence and Management* because these were an unfair representation of the spread and scope of CI. A total of 168 relevant articles were identified, published in 123 different journals, giving a strong indication of a very thin layer of representation in a small number of titles.

In reviewing the CI and MI literature, two themes emerged: defining what intelligence is (conceptual models) and the assessment of company intelligence capability. These streams primarily involved the testing and description of the intelligence model. Between the period 1974 to 2007, only 22 articles could be found which attempted to evaluate a firm's intelligence process and its subsequent performance. Even studies which have attempted to link competitive intelligence with performance measures still use too broad a measure of the entire process (Van Der Kooij, 2003; Lönnqvist & Pirttimäki, 2006; Pirttimäki & Karjaluoto, 2006; Buchda, 2007; Blenkhorn & Fleisher, 2007) rather than specific quantifiable outcomes.

The *inter-disciplinary* viewpoint drew attention to potential for valuable CI input related to customers, suppliers, technologies, environments, and potential business relations as well as the wider environment and competitors. This systematic scanning for CI, including noticing and interpreting competitive stimuli was shown to be critical for organizations to stay abreast of changing market conditions and assist in avoiding costly mistakes (Anderson & Hoyer, 1991; Patton & Mckenna, 2005).

Outcome

This article identified the scope of influence which CI activity has in a firm and the role played by CI professionals. As such it can be considered to have delivered *facts* (a body of new information) by way of an aggregation of the literature and the drawing out of key themes. Attention was drawn to other areas of commercial life which were significantly affected by CI input and output. Using Fleisher *et al* (2008) as an example, the importance of insight rather than simply intelligence is emphasised. As outlined by Gilad (2006a; 2006b), compatible and complimentary areas which reside within the domain of intelligence are: risk assessment, war gaming, scenario developments (and testing), stage-gate analysis, blind spot analysis, management assumptions, blue ocean opportunities, proactive asymmetric strategy and early warning signal interpretation.

While several of these concepts are already part of the intelligence literature, others such as proactive asymmetric strategy, blue ocean opportunities and insight have yet to be integrated. The challenge laid down by Gilad (2006) is to encourage practitioners and academics to ensure that the domain of competitive intelligence included these concepts.

Value

Article 7 proved to be of value to researchers who needed to disentangle the various aspect of their competitive intelligence work, notably Trevisani (2010) in his PhD thesis as well as Al Najim (2010) and Tebo (2010) who drew significantly on this work for their MSc theses. Article 7 has also been cited in two foreign language works (Xiaoping, 2009; Solleiro *et al*, 2009). As he had done for Article 5, Brownlie (2009) referred to Articles 5 and 7 as being authoritative sources for understanding the field of CI, whilst Adidam *et al* (2009) adopted the overarching definition of CI offered in Article 7 as the foundation for their country based comparison of CI practice. It is arguably, this article which drew attention, formally, to the many strands of CI research and practice, not least, the need for cross-functional co-ordination and collaboration. This feature of CI, or as it is now more accurately termed, CI&IM, was also an important feature of Article 6, discussed previously. Taken together, these two articles could be regarded as the first occasion where formal recognition had been given to the potential for skilled CI practitioners to positively influence the current and future success of their organisation through their ability to work across functions, within and without boundaries and to act as the ‘glue’ between disparate activities.

Article 8
**‘Examining Differences in Competitive Intelligence Practice:
China, Japan and the West’**
***Thunderbird International Business Review*, Vol 51, No 3, pp 249-261**

Background and Antecedents

The impetus for Article 8 came primarily from the western practitioner community which was experiencing both cultural and operational difficulties in carrying out CI in the east. There was also a growing awareness and recognition of the importance of strategy and knowledge development amongst managers and practitioners in these large economies. Asia had been, and continues to be, recognised as a significant economic force in today’s global economy (Backman, 2001; 2007). Teagarden *et al* (2008) had also noted that effective managerial practices, and knowledge emanating from the region, was worthy of closer examination. Asian companies were being applauded for their business and management proficiency, particularly their operational practices such as total quality management (TQM) and quality circles (QCs). These practices had been almost universally adopted by western firms. Nevertheless, the questions of how, and how much, CI practice had been adopted, or whether it was as beneficial to Asian companies as it was to western ones, had been explored only superficially in scholarly articles (Blenkhorn & Fleisher, 2005).

Work was being undertaken by others to systematically study CI practices in other countries in the Asia-Pacific region, among others, Australia (Bensoussan & Densham, 2004), Korea (Kim & Kim, 2004) and New Zealand (Hawkins, 2004) but Article 8 honed in on China and Japan as a means of making comparisons with the west and to gain a better understanding of how multinationals practice this area of applied strategy.

Clearly it would not be possible to carry out primary research in those locations due to cost, non-existent language competence and time issues, but a systematic and comprehensive literature review with interpretation was considered entirely achievable.

Research Design

Population, Sampling and Response Rate

As a secondary data study of published articles in the subject area, these topics do not apply.

Paradigm Adopted

A ***constructivist/transformative*** approach was adopted as work began on this review. The principal philosophy was that for this particular area of investigation there would be no substantial objective knowledge available. It was recognised that any realities which could be discovered would be shaped by the social environment within which the investigation was taking place and as such, it would be foolish to make any claim of generalisability as a consequence. With regard to epistemology, a subjective point of view was required along with a recognition that the CI practice of all three nations would have been influenced by their community, social history, laws and beliefs. In terms of causal linkages, this approach was appropriate as it was desirable to assess whether the developments in each location were simultaneously shaping each other.

Research Instrument(s)

As a secondary data, ***systematic literature review*** study, the focus was on securing access to as rich a source of existing data as possible. This required large scale interrogation of academic, practitioner and national databases to identify reliable ***archival records*** on which comparisons could be made. Archival analysis was an appropriate choice given the exploratory nature of the work being undertaken (Wilson, 2010). This approach also means that should a future research study be orientated towards a more detailed study in this area, the archival analysis presented in Article 8 would be entirely acceptable as a comprehensive review of the situation at that time.

Substantive Findings

China has long practiced what could westerners would understand as Economic Intelligence (EI) which is primarily a 'big picture', rather than organisation level activity. The Chinese generally believe that good relations with the government and public officials,

at multiple levels, are important for commercial success (Tsang, 1998). Many commercial decisions are still made based on primarily political, not necessarily economic, criteria and there is a heavy influence by Chinese political officials (EIU, 2008). The growth in Chinese CI was rapid in the 1990s (Changhuo *et al*, 1998) and this has continued into the new millennium. Since 2003, more than 15,000 senior managers and CI practitioners have been trained (SCIC, 2008). In addition, between 2003 and 2006, 150 Chinese firms invested in CI software, all purchased through local suppliers. The forecast is that by 2010, Chinese companies will represent a significant demand for CI software licenses, equating to a market value of approximately RMB 250-500 million (SCIC, 2008). Chinese leaders have also considered intelligence as a useful means of helping to overcome its relative isolation from other economic and global trading systems (Chao, 1998; Tao & Prescott, 2000). CI in China is still relatively embryonic and patchy but its practice is growing rapidly and gaining capability at an accelerated pace. Major strides have recently been made in institutionalizing CI among various sectors such as academe, government, and management, but there still has to be further growth in the development of CI infrastructural items such as CI education, leadership, management processes, business systems, technology, and training. In general, China still has a long way to go until it reaches western levels of CI development, but there should be little doubt, based on the growing Chinese interest and activity in the field, that it is moving forward quickly.

Japanese business strategists have always used CI in their development of strategic thinking, pursuing regular intelligence gathering and exhibiting a willingness to remain patient until they have superior intelligence (Ng & Yip, 2004). The Japanese are remarkably adept at developing 'bottom-up' systems of data gathering. They employ their human resources across the organization and inculcate these values into their citizenry early in a child's schooling. This is continually reinforced as they graduate to the workplace. Human source networks are combined with sophisticated organizational practices, as well as modern technology and information systems, creating a formidable means for gathering and circulating information throughout the enterprise (Nakagawa, 1993; Ng & Yip, 2004). Japan has always wielded formidable human source networks that have been useful both within and outside their keiretsus, but, as with their US counterparts, they have struggled to make extensive use of collection techniques and the application of sophisticated analytical tools. The Japanese culture, government and traditions are a significant benefit to its CI practitioners compared with its western peers. Growth in

horizontal markets such as CI consultancies, database providers, information brokers, infrastructure, specialist CI education, hardware, software, will likely propel Japanese CI practice to a level more in line with its economic prowess.

The practice of CI in Asia, and in particular in China and Japan, has come a long way in a short time. Although it has not reached the level of institutionalization or sophistication as its Western counterparts, Asian CI practice is gaining ground quickly as it is promoted by academics, consultants, governments and managers as a way of improving corporate competitiveness. This study showed that there are many factors of Asian culture and history that portend well for the continued growth of CI in China and Japan. Their stated desire to fully integrate with, and hold a prominent place in, global trade will further enhance their already well known value for the collection of information

Outcome

This study produced a comprehensive review of the available literature on the subject matter and as such delivered *facts* (a body of new information) as well as *applied knowledge* (answers to practical problems, recommendations for good practice). It also provided guidance for practitioners on the problems they might face when trying to conduct CI activities in these two nation states. The article drew into sharp focus the need for cultural empathy and the need for this to manifest itself through the appropriate behaviour. Attention was also drawn to the less than compatible inferences which a western firm might draw from intelligence emanating from countries with vastly different commercial rules and norms (Hall & Xu, 1990; Ketley, 1993; Sekora, 1993; Backman, 2001). Herring (2001) noted that this was especially relevant as Asian companies often consider 'scientific knowledge' to be non-proprietary. Therefore, protecting intellectual property, proprietary information or commercially sensitive data in an East:West strategic alliance or joint venture, might lead to damaging culturally-anchored misunderstandings.

Value

In a personal conversation with the authors, Dr Paul Kinsinger, a reviewer for the publishing Journal commented that he found this article to be one of the best and most thorough literature reviews, on any topic, he had ever seen. He commented favourably on

the 102 citations saying that unlike most journal articles, the coverage was of PhD thesis proportions. This concurred with the views from the three reviewers who's feedback included these comments:

“The subject matter (East Asian competitive intelligence practices) is intriguing”

“The bibliography appears to be extensive and current - an excellent resource”

“The record of how CI practice has developed in China and Japan is clearly laid out in your piece”

“While this topic has received a lot of attention in the professional competitive intelligence community, it has only been covered in bits and pieces in print. Thus, this article does serve to advance the literature because it is the first article to capture so much on the topic in one place”

“A very good piece of work that can stand as a foundation for additional study of this intriguing subject”.

Mackay (2009) quotes from Article 8 and echoes the point made there that Eastern business executives are dedicated to collecting legal and open information, using human networks and interaction as their preferred method.

Three foreign language citations have been identified, two of which are written solely in Chinese so it is difficult to translate names, or to assess whether the authors were in agreement or not with the article's emphasis. As a benchmark for a literature review of this type though, Article 8 is a candidate. It is suggested that the only thing which could have significantly improved the piece would have been an empirical mixed methods study of CI practice with similar sized firms in China, Japan and the USA. This would have revealed real-life evidence on which comparative analyses could have been conducted.

As tempting as this idea is, the cost in both time and money would be prohibitive for anybody other than a full-time PhD candidate who spoke all three languages fluently and was able to readily and seamlessly adapt to the cultures of all three nations. Above all, it would be vital that the researcher understood, had access to and was accepted by, the right social networks, especially in the east. Without such assets, a systematic review of the

literature in order to assist and inform the community was the sole objective. It is, after all, the best that any westerner, who speaks only English, can ever hope to achieve. It is suggested here that Article 8 achieved a high standard of literature interrogation and interpretation. No previous work on this scale had ever been attempted before and the challenge of obtaining the material to write the piece cannot be underestimated. As such, Article 8 is commended as having value in its own right.

Article 9
**‘Competitive Intelligence in Practice:
Empirical Evidence from the UK Retail Banking Sector’**
Journal of Marketing Management, Vol 25, No 9/10, pp 941-964

Background and Antecedents

Very little work on the competitive behaviour of the banking sector had been undertaken at the time that this study was initiated. As with Article 4 which looked at CI practice in the European pharmaceutical sector, banking was an equally challenging prospect.

MacMillan *et al* (1985) had published work on competitors’ responses to new products in the US commercial banking sector, Kenneth & Wong (1988) produced competitive marketing profiles of differing financial services structures in the US, and more generally, Pottruck (1988) had reminded the banking community that they should be using their information as strategic weapons. Kitchen & Dawes (1995) looked at MIS in small UK based building societies, Sager (1988) assessed competitive information systems in Australian retail banking, and Ruiz (1998) presented a strategic group analysis of Spanish savings banks. Ruiz (1999) followed this with a dynamic analysis of competition in marketing, using strategic groups in Spanish banking. Virgoana & Purusitawati (1998) also presented a discursive paper which linked the terms ‘technology watch’ and CI in the banking sector, but incorrectly termed this as ‘benchmarking’. In her analysis of competition in the US banking sector, Cetorelli (1999) recognised that banks were employing some aspects of CI practice in order to obtain relevant information about their competitive environment and competitors.

More recently Bernstel (2004) produced a white paper which looked at the more macro subject of sizing up competition in the banking sector, discussing the value of CI in the context of two short case studies. Laeven & Claessens (2003) presented findings from some 50 countries to help determine what was driving bank competition at the time and Shaffer (2004) presented an analysis of patterns of competitive behaviour by US based banks, Lymperopoulos & Chaniotakis (2005) published work on using the internet as an MIS tool in Greek bank branches and Ali & Ahmad (2006) offered a theoretical ‘Banking Knowledge Management Model’ which was subsequently applied to case studies of two Malaysian banks, Tiger and Camel. Heppes (2006) investigated a maturing CI function in

South American retail banks and DeSarbo *et al* (2008) looked at the underlying dimensions for assessing an industry's competitive structure, using public banks in the New York-New Jersey-Pennsylvania (NY-NJ-PA) tri-state area as their sample frame. .

A small number of conference papers have been presented on the specific subject of CI in banking. Boland & Limacher (2005) looked at actionable CI at Visa International and Basinger (2005) focused on competitive insight at Barclays. Both of these were US focused. Finally, Armstrong (2007), reported on the Royal Bank of Canada's CI efforts.

It was possible to conclude from this situation that empirical studies on the practice of CI in the banking sector, regardless of continent, were at best, minimal and nothing could be found which related to the UK retail banking sector. It is against that background that the decision to investigate this sector was taken.

The findings of Article 1 (Wright *et al*, 2002) had revealed that UK firms operated at many different levels with regard to the four strands of study: Attitude, Gathering, Use and Location. This framework was considered to be the most appropriate model to use, given that the study which had produced it, was also conducted in the UK, the state of understanding and sophistication regarding CI could safely be assumed to be similar, and there were no language or interpretation differences. As discussed previously, this framework had also been used successfully by other researchers as a suitable basis to assess CI effectiveness (Badr, 2003; April & Bessa, 2006; Liu & Wang, 2008; Hudson & Smith, 2008). Whilst it was not intended to classify each individual bank, or case, against this typology, the framework provided guidance on the topic areas on which questions could be asked.

Research Design

Population, Sampling and Response Rate

It was not possible to identify, among the entire population of senior UK banking executives, all those responsible for CI, therefore this study selected the group which is commonly termed the 'Big 7' UK banks as the population: Abbey National, Alliance & Leicester, Barclays, Halifax/Bank of Scotland, HSBC, Lloyds TSB, and Nat West/Royal Bank of Scotland. A ***purposeful*** sampling strategy was adopted, enhanced by ***snowballing***

at first contact point, to secure the input of others who they felt would be good sources of information. This helped identify recognised experts within each bank who would have been very difficult to identify without insider input. A total of 23 executives were interviewed and each bank was randomly allocated a letter code for the purposes of analysis and reporting. When looking at the various features of case study research, Yin (2004) reminds us that the interviewing of informants who play a key role in the organisation is a critical element in determining a good result and it is believed that this condition was satisfied. All potential interview subjects were contacted and as expected, asked for advance sight of the type of questions which would be asked. Surprisingly, this did not prove to be a barrier to participation and a *100% response rate* was achieved.

Paradigm Adopted

Features of both a *transformative* and a *pragmatism* paradigm were present in this study. Clearly, a qualitative approach was preferable in order to gather the views of respondents. The relatively small number of interviewees, albeit satisfactory for this study, meant that any attempt at quantitative analysis would have been meaningless. Seeking absolute truth was not an objective but the research was seen as a mechanism for addressing the complexities, not to say relatively protective setting, of the retail banking sector. In terms of epistemology, interaction between the respondents and the interviewer was actively sought, and in terms of ontology, given the framework within which the data would be analysed, diverse viewpoints were able to be accommodated. Whilst it was not intended to classify each individual bank, or case, against the typological framework, the descriptors provided guidance on the topic areas on which questions could be asked.

Research Instrument(s)

This was a *multiple case study* approach in order to obtain a generalised view of the manner in which the sector operated its CI activities. *Semi-structured interviews* were undertaken, using an interview protocol. All but the first question were open-ended, thus permitting the interviewee to respond without any form of prior suggestion or be required to select from a pre-determined set of options. Interviewees were asked to provide evidence where possible to support their answers and this gave rise to a degree of *document analysis* both within and after the interview event. The snowballing approach identified additional interviewees according to relevance rather than simply job title within

each bank. This not only produced additional valuable data, but also permitted the identification of perception differences.

Substantive Findings

As can be seen from Table 4.2 the evidence suggested that the sector was a long way from operating in an ideal manner.

**Table 4.2
Analysis and Categorisation of Responses**

<i>Typology Element</i>	<i>Sector Verdict</i>	<i>Desired Best Practice</i>
<i>Attitude Type</i>	Task Driven Attitude	Strategic Attitude
<i>Gathering Type</i>	Easy Gathering	Hunter Gathering
<i>User Type</i>	Joneses/Knee-Jerk/Tactical User	Strategic User
<i>Location Type</i>	Ad-Hoc Location	Designated Location

From these findings it was possible to make recommendations that the sector needed to move away from a task driven attitude to one which embraced all strategic issues in order to mature beyond the ‘stick-fetching’ phase. Too much effort seemed to be being spent on easy tasks producing volume not value. More focus on ‘need to know’ rather than ‘like to know’ would produce more intelligent intelligence. There was little coherence in what use the sector thought intelligence was being put. Although respondents stated that they were inputting to strategic decision, their understanding of a strategic issue was misplaced. Also, there was no anecdotal or documentary evidence to support their claim. The organisation of intelligence transmission was ad-hoc and as such, no attempt was being made to define roles and responsibilities or to establish a defined location for the collection, interpretation and dissemination of all competitive intelligence elements. The study revealed a haphazard, fragmented, almost serendipitous situation which may go some way to explaining the subsequent financial crisis which hit the US on 12th September 2008, reached the UK on 15th September 2008 and has been felt around the developed world ever since (The Guardian, 2008). It would seem that the global banking system in general and the UK sector in particular does not operate as intelligently as they could and/or should.

Outcome

This study delivered a body of new information by way of *facts* as the sector had never been investigated in this manner before. Parallels exist with the outcome of Article 4 in that the study delivered *applied knowledge* (answers to practical problems, recommendations for good practice). The research instrument and the manner in which it was administered, encouraged the transmission of opinions, feelings and impressions which were vital in being able to look behind the facade of UK retail banking. It was also interesting to obtain documentary and interviewee based evidence which suggested that things were not quite as they should be in the sector with regard to intelligence and information management. This was not a complex or strongly theoretically driven study, but it provided the opportunity to apply the framework derived from the study reported in Article 1 to an entirely different sector and to a different sample type. Bearing in mind the (still) secretive nature of the sector, the fact that good access to the right people was secured and views were freely expressed, is worthy of note.

Value

An important comment was made by (Smith *et al*, 2010) in respect of this work with regard to the research instrument. Smith *et al* (2010) noted that Article 9 was a good illustration of the degree to which understanding of the CI concept could be gauged by the manner in which the questions were asked.

Article 9 has value in its own right, not least because it was only the 20th article of its type since 1985, a period of nearly 25 years, to investigate the competitive behaviour of the banking sector. It was also only the sixth genuine study at all, to investigate CI in banking, anywhere in the world, with only Kitchen & Dawes (1995) being remotely similar in focusing on MIS in UK building societies. Article 9 was indeed the result of a brave venture into an otherwise closed community.

The Conference paper which preceded Article 9 (Wright *et al*, 2009a) was independently peer reviewed and judged as the Best Paper in the Competitive Intelligence, Analysis and Strategy Track at the 2009 Academy of Marketing Conference, sponsored by the *European Journal of Marketing*. The paper was subsequently selected, again by peer and committee

review, to be worthy of a full write-up for inclusion in the highly prized *Journal of Marketing Management* 25th Silver Anniversary Academy of Marketing Conference Issue. This issue contained just 11 articles, selected from over 350 submissions to the Conference.

Article 10
**‘Competitive Intelligence Analysis Failure: Diagnosing Individual Level Causes
and Implementing Organisational Level Remedies’**
Journal of Strategic Marketing, Vol 18, No 7, pp 553-572

Background and Antecedents

Article 10 was developed from Fleisher & Wright (2008; 2009a), both blind refereed Conference papers. Feedback from both sets of reviewers pointed to the potential for development of this conceptual paper. The impetus had come from contact with organisations through both an educational and consultancy setting, where the issue of how to deal with intelligence analysis failure had become one of their uppermost concerns. Whilst it was clear that some of the responsibility for this could be placed at the door of the individual analysts and their ability or competence to do the job (Tversky & Kahneman, 1986; Sawyer, 1999; Bazerman, 2002; Keil *et al*, 2007; Shacham *et al*, 2008; Rhee & Honeycutt Sigler, 2010; Spreng & Grady, 2010), a further consideration was the responsibility of the organisation to provide the correct tools and environment within which the analysts could do their job well. Practitioners were reporting that both aspects of this phenomenon was, most likely, causing poor performance.

It was possible to differentiate intelligence analysis failures from the more task-oriented errors, typically factual inaccuracies resulting from poor and/or missing data and to show that these failures may be due, in part, to failed analysis, but they could also be caused by other factors which interacted with the intelligence analysis process. Attempting to disentangle or disaggregate the analysis portion of the process from other related processes was not an easy or straight-forward task. The over-riding message that needed to be delivered was to stress the importance of analysts and their decision makers routinely carrying out post-mortem exercises on all analysis projects to try and determine any areas for improvement.

Article 10 provided a framework for firms wishing to not only take the analysis task seriously, but to benefit fully from any subsequent review of when things did not go quite as well as had been expected, as well as being able to celebrate and learn from those occasions when they did.

Research Design

Population, Sampling and Response Rate

The population comprised of practitioners with whom contact had been experienced on an ad-hoc basis, through in-house and publicly attended workshops. It became apparent during these meetings that analysis failure was being experienced but there was no attempt, formal or otherwise, by firms to address these issues. Through attendee feedback mechanisms, and a search of the literature it became clear that the possibility and causes of CI analytical failure had not been sufficiently addressed by the thought leaders in the field. Article 10 sought to offer some guidance in this respect.

Paradigm Adopted

A ***constructivist/transformative/pragmatism*** approach was adopted as the aim was to explore the literature and to blend this with the practical experience of the authors to address analyst and analysis failure problems within firms and among practitioners. Elements of pragmatism were present as there was an acceptance that any data collected could only be a reflection of provisional knowledge and that there could never be a single best scientific method to avoid such failure given the high degree of unique variables inherent in each analysis process. Similarly, the knowledge which was presented in Article 10 was the result only of an exploration of the way in which events are interpreted. Ontological considerations recognised that multiple, constructed realities were inevitable.

Research Instrument(s)

The foundation for Article 10 was not a formally designed empirical research project. The issues which it addressed however are very real and the concerns expressed by practitioners could not be ignored. This prompted an in-depth ***literature review*** and the delivery of a four-level hierarchical model of analysis failure, 10 key continua of CI analysis competences and six guiding principles for the firm to ensure that the structure and framework was in place to aid the delivery of quality output.

Substantive Findings

As this was not an empirical study, an alternative descriptor would be ‘guidelines’ which it was possible to offer, based on the literature and also practical experience, Article 10

identified the important questions to be asked in order to identify the source of analysis failure, grouping these into eight main sections:

Analysis problem definition: how well was the analysis problem specified at the outset and was there scope for subsequent redefinition?

Analysis project planning: was a project management plan in place, how well was that implemented, were iterative steps built into the plan to permit re-assessment of the task?

Data gathering error: was the required data accessible, was it acquired efficiently, were data and/or information gaps identified, was poor data collection a primary cause of the analysis failure?

Tool and technique-related error: was the analyst fully familiar with and able to correctly use, the appropriate range of analytical tools, were the right ones used and if so, were these in the right sequence?

Synthesis error: did the analyst arrive at an optimal conclusion, were the 'dots connected' in a defensible manner, would an more experienced analysts have conducted the task differently?

Communication transmission or channel error: how well was the analysis outcome transmitted to decision makers, was the analysis failure a genuine communication failure or a channel blockage?

Communication reception error: to what extent was the analyst and decision maker speaking the same language, did the decision maker factor in the limitations of differing analytical tools and allow for these in the decision making process, was the decision maker able to comprehend all aspects of the analysis output?

Unsystematic development error: was there any derailment of the analysis during the task, did any unexplained variance or random factors impact on analysis task?

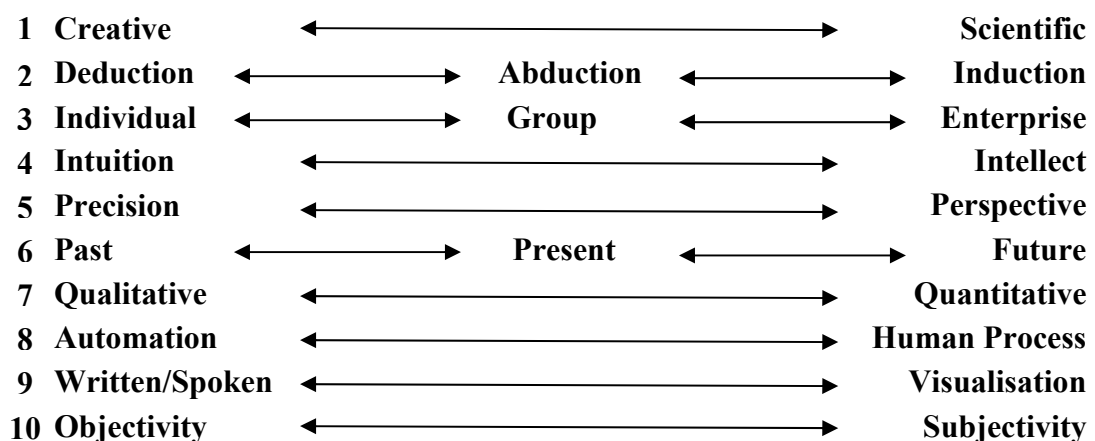
Having answered these questions, it was important to note that the CI analysis task is fundamentally carried out by human beings rather than machines so errors are inevitable. Denying they exist is futile, rather the task should be on minimising their occurrence.

Taking the evidence from previous literature as well as consulting and educational experiences, it was possible to identify the following hindrance factors as being primarily present at the level of the individual analyst, all of which are expanded upon in the published article.

- *Different natural analytical abilities*
- *Naturally limited mental capacities*
- *Natural motivation*
- *Cognitive biases and perceptual distortion*
- *Insufficient understanding and application of analytical tools and techniques*
- *Poor preparedness by higher education*

In an effort to address this, Figure 4.3 proposed ten key continua of skills development which the authors believed a CI analyst had to master before they could consider themselves to be truly competent in their work.

Figure 4.3
Ten Key Continua of Competitive Intelligence Analysis



The final section of Article 10 offered guiding principles for the firm which wished to provide the right environment for successful CI analysis production. These elements were: providing empowerment for both the analyst and the decision maker, realising the value of analysis, asking the right questions, positioning the analyst correctly, providing the right tools and differentiating competitive intelligence analysis from other more mechanical procedures. The problems inherent in CI analysis failure can be corrected and the adoption of these guiding principles can only improve the potential for the delivery of high quality analysis output, leading to the promotion of better practice.

Outcome

Article 10 delivered *applied knowledge* as it addressed practical problems and provided recommendations for good practice, albeit not based on formal primary data collection. It is argued that the content should not be dismissed because of that. At the time it was not possible to secure access to firms to gain primary data on this subject but the publication of Article 10 and the very act of sharing its recommendations with practitioners has resulted in a full, quantitative study to investigate the subject further and is discussed further in the following section.

Value

The antecedent work to Article 10 (Fleisher & Wright, 2008; 2009a) noted that the skill/craft of the CI analyst and the entire process lies in linking apparently unrelated signals events, perceptions and data into patterns and trends. This related specifically to one of the points of organisation level failure identified in Article 10, that of not fully realising the value and complexities of the analyst process or the risk to analysis output if its integrity is compromised in the interests of a 'quick fix' answer.

Only a flavour of the depth of Article 10 can be reflected in a brief overview statement such as this, yet it has considerable value not only in terms of providing a strong coverage of the issue at the time, but it has since become the foundation for a current empirical investigation of CI active firms in the UK on the drivers/motivators for and barriers to, the successful operation of CI within their firms. The objective is to identify what these may be and where their root cause lies. This may be in the organisation's structure, process,

culture and/or attitude, as identified in Article 3 or may be due to analyst competency issues. It is argued that the result of the current study, along with the findings of Articles 3 and 10 will not only prove to be illuminating but will also provide further guidance to the community on how to ensure success from their CI&IM efforts.

SECTION 5

Methodological Stance

Qualitative Research Design

By the very nature of a PhD by Published Work thesis, this task is reflective. Nevertheless, it is possible to identify within the range of articles, methods which fall under the *qualitative* banner, predominantly within the *pragmatic* and *transformative* paradigms. A *mixed methods approach* was adopted but it is noted here that the term *mixed methods* is being used to represent the use of mixed qualitative research methods, rather than to suggest that this work adopts a *mixed methodologies (qualitative and quantitative)* approach, which it does not.

Qualitative tools were preferred because of the nature of the subject matter and the variance between scenarios. A mixed methods approach allows for the adoption of different methods at different stages of the study, which can be executed either consecutively or concurrently, It is also argued that because of the inexact replication nature of the research being undertaken, qualitative tools were the most appropriate. For ease of reference, these are presented in Table 5.1. The research questions asked and the anticipated type of analysis to be undertaken on the outcomes from these studies, was largely made up of investigating opinions, impressions, viewpoints and attitudes, typically regarded as ‘soft’ data which “*adds context and a particular feel that can’t be matched by any statistic*” Kiritz (1997, p. 1).

As noted by Denscombe (2007), reiterated by Onwuegbuzie *et al*, (2009), a ‘fit for purpose’, pragmatic approach also allows for the selection of mixed analytical tools and mixed analysis. Pragmatism also provides the benefit of freeing the researcher of mental and practical constraints which might be inherent through adopting a pure constructivist or pure positivist approach (Feilzer, 2010). It is argued that the pragmatic paradigm was, and still is, entirely appropriate as a research approach for a subject such as CI&IM, which exists in the fuzzy world of a business and/or organisational setting.

Table 5.1
Article Type, Paradigm Adopted and Methods Employed

<i>No</i>	<i>Title</i>	<i>Type</i>	<i>Paradigm</i>	<i>Method(s)</i>
1	CI in UK Firms: A Typology	Empirical study	Constructivist/Transformative	Self completion questionnaire Semi structured interviews
2	CI through UK Eyes	Secondary data study	Transformative/Pragmatism	State of the Nation report Secondary data research
3	The Quest for Competitive, Business and Marketing Intelligence: A Country Comparison of Current Practice	Comparative study	Pragmatism	Self completion questionnaire Cross case comparison
4	The Contribution of CI to the Strategic Decision Making Process: Empirical Study of the European Pharmaceutical Industry	Empirical study	Pragmatism	Self completion questionnaire Semi structured interviews
5	Bibliography and Assessment of Key Intelligence Scholarship: Part 4	Bibliometric study Trends analysis	Transformative	Black letter research Systematic review
6	The Role of Insight Teams in Integrating Diverse Marketing Information Management Techniques	Empirical study	Pragmatism	Case study Interviews and observation PERT diagramming
7	CI: A Practitioner, Academic and Inter-Disciplinary Perspective	Comparative study Thematic analysis	Pragmatism	Black letter research
8	Examining Differences in CI Practice: China, Japan and the West	Systematic review	Constructivist/Transformative	Secondary data analysis Archival record interrogation
9	CI in Practice: Empirical Evidence from the UK Retail Banking Sector	Empirical study Thematic analysis	Transformative/Pragmatism	Semi structured interviews Document analysis
10	CI Analysis Failure: Diagnosing Individual Level Causes and Implementing Organisational Level Remedies	Literature review Thematic analysis	Constructivist/Transformative/ Pragmatism	Observation Literature review

Method Selection Within the Body of Work

Method selection also depends on the chosen paradigm and it is at these levels, ones of paradigms and methods, that the work presented in this thesis is discussed.

Article 1 (Wright *et al*, 2002) and Article 4 (Badr *et al*, 2006) used a self completion questionnaire to initiate a data set, then followed this up with face-to-face interviews to permit further exploration and the attainment of richer data. In contrast, Article 9 (Wright *et al*, 2009b), used semi-structured interviews first to obtain a data set which was then applied to a pre-identified framework. This was followed up by document analysis for checking and triangulation purposes. It would have been impossible to capture such information via a questionnaire alone. Article 3 (Wright & Calof, 2006) examined the output from three separate self completion questionnaire studies and carried out a cross-case comparative study as a means of identifying gaps.

The potential for different types of methods to work well alongside each other, “*capturing various aspects of the same phenomena*” (Sale *et al* 2002, p. 50) is entirely feasible and can take place either simultaneously, sequentially, in a single study or in a series of studies (Sale *et al*, 2002). This was the situation with the study reported on in Article 6, (Fleisher *et al*, 2008) where interviews and observation were used as well as mapping techniques and document analysis to track and record iterative adjustments to the execution plan. (Bryman, 2007, p. 21), echoing the words of Aristotle (384 BC-322 BC), commented that “*the written account should be more than the sum of the parts*” as was the case with Article 6.

This draws into focus the view that disparate avenues of enquiry and different methods of data collection can, and often do, produce a more informative image of the research subject. Hard data such as facts, statistics and measures, backed by softer data typically perceptions, opinions, feelings and views add to the richness of information and the opportunity for interpretive analysis.

The Emergence of a Mixed Methods Approach

The notion of a *mixed methods approach* as the natural complementor to mono-methods was proposed by Johnson & Onwuegbuzie (2004, p. 14) who advocated “*pragmatism as an attractive philosophical partner for mixed methods research*”. Creswell (2009) identified mixed methods as a recent approach, with many of its early supporters coming from a diverse range of disciplines such as healthcare, medicine and education. In the business arena, the mixed methods approach has been found to be appropriate for studies which have been undertaken on: re-orientating economics into social science (Downward & Mearman, 2006), business modelling (Roberts & Toleman, 2007), ethical issues in sustainable development (Lopez-Gamero *et al*, 2008), portfolio management (Killen & Hunt, 2010) and knowledge transfer in international acquisitions (Birkinshaw *et al*, 2010). These research environments would seem to fit very well with Teddlie & Tashakkori’s (2006, p. 15) definition of mixed methods research as being: “*research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using (mixed) approaches in a single study or a program of inquiry*”.

In the late 80s/early 90s, supporters of pure QUAN and QUAL methods were vocal in their rejection of an idea that the two worlds could, or even should, combine. Guba (1990, p. 18), a leading qualitative purist was unequivocal in his statement that “*accommodation between the two is impossible ... we are led to vastly diverse, disparate, and totally antithetical ends*”. The ‘which side are you on?’ debate seems to have been in place since 1990 but Teddlie & Johnson (2009) drew attention to the work of Creswell (1998), Kinecheloe & McLaren (2005) and Willis (2007) and suggested that although critical theory, for example, is an important perspective within the QUAL tradition, through its examination of human phenomena, it also has a long history within the QUAN tradition (Kushner & Morrow, 2003).

Sale *et al* (2002, p. 44) addressed the issue of a difference between the two methodologies in terms of “*a patterned set of assumptions concerning reality (ontology), knowledge of that reality (epistemology), and the particular way of knowing that reality (methodology)*” and they go on to suggest that these are the key issues in the quantitative-qualitative debate.

Mixed Methods and Paradigms

Deshpande (1983) freely uses the term *paradigm* and ‘methodology’ interchangeably in an account of the differences between qualitative and quantitative research, Greene (2008) contributes to this confusion by addressing the merits for considering mixed methods social inquiry (*sic*) as a distinctive methodology. Morgan (2007, p. 50) argues for the “*alternative application of the paradigm concept in social science methodology*” and when considering the use of methods, Downward & Mearman (2006) state that they agree with the distinction offered by Olsen & Morgan (2005, p. 89) that “*methods are techniques of data collection and transformation, whereas methodologies comprise combinations of methods, the practices involved in implementing them and the interpretation placed on this act by the researcher*. Onwuegbuzie *et al* (2009) would regard the second half of this definition which refers to interpretation, to be data analysis, a view subscribed to in this thesis.

Bergman (2010) comments on the use of the term ‘paradigm’ and re-iterates the definition offered by Powers & Knapp.

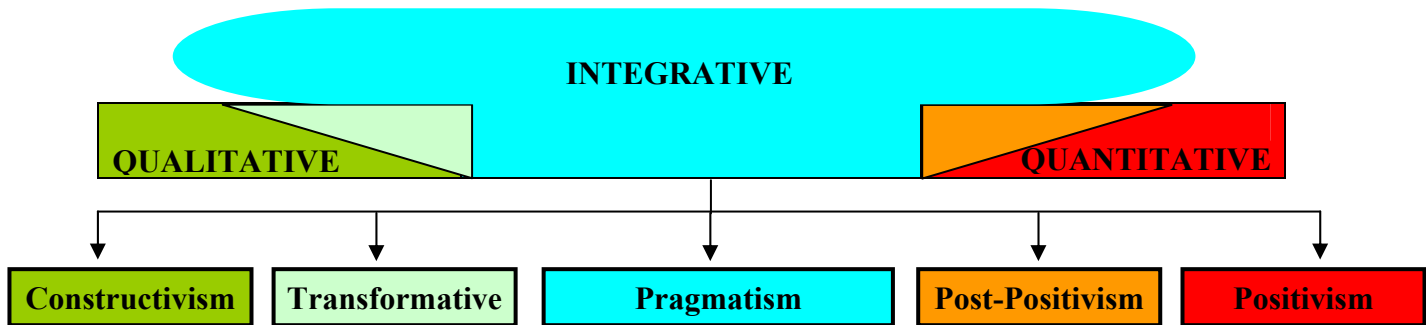
“A paradigm is an organising framework that contains the concepts, theories, assumptions, beliefs, values and principles that inform a discipline on how to interpret subject matter of concern. The paradigm also contains the research methods considered best to generate knowledge and suggests that which is open and not open inquiry (sic) at the time” (Powers & Knapp, 1990, p. 103)

It is possible to identify a number of paradigms which range from a constructivist (qualitative) paradigm to a positivist (quantitative) paradigm. Between these two points, are additional paradigms which are adopted when the researcher wishes to capitalise on the benefits of and/or avoid the drawbacks of a mono-approach.

There is clearly scope, and the need for, an accepted middle ground which is able to take advantage of the benefits which all approaches can offer. Valid claims of the benefits derived from what could legitimately be called an *integrative* approach can then be supported.

Figure 5.1 illustrates the hierarchical nature of methodologies and paradigms. This has been developed by the author to inform research design and as a consequence, method selection in the work presented in this thesis.

Figure 5.1
Methodological Approaches and Paradigm Options in Social Research



The Development and Evolution of Paradigm Contrast Tables

Lincoln & Guba (1985) used five dimensions on which to identify the contrasting features of the different paradigms. This was later developed by Guba & Lincoln (1994), Lincoln & Guba (2000), and Guba & Lincoln (2005) who introduced two additional paradigms, namely, *pragmatism* and *post-positivism*. Greene & Caracelli (1997) consider these to be positions rather than paradigms, with the former, as advocated by Tashakkori & Teddlie (1998, p. 5) calling for the use of “*whatever philosophical and/or methodological approach works for the particular research problem under study*”. In this way, the researcher uses a research design, research instrument and analysis approach which will produce a ‘best fit’ solution.

Drawing on the work of Mertens (2003, 2005, 2007), Teddlie & Tashakkori (2009) added a fifth paradigm, that of a *transformative* perspective, sitting between constructivism and pragmatism. The resultant Expanded Paradigm Contrast Table is shown in Table 5.2. Whilst it is important to recognise the sources and entries which were assimilated by the original authors, the opportunity has been taken here to identify additional sources and to add further descriptive statements in order to provide a rich account of the differing perspectives across the dimensions.

As has been seen in Section 4, each of the articles in this thesis fits into one, or a combination, of the paradigms described in Table 5.2 overleaf, predominantly at the qualitative end of the spectrum.

Table 5.2
Expanded Paradigm Contrast Table
Developed and Interpreted by the Author from Teddlie & Tashakkori (2009)

Dimension of Contrast	Constructivism	Transformative	Pragmatism	Postpositivism	Positivism
Principal Philosophy	<ul style="list-style-type: none"> • Reality is viewed as socially and societally embedded and existing within the mind • There is no objective knowledge • Knowledge is constructed jointly with researcher and researched via consensus 	<ul style="list-style-type: none"> • Primarily used to address issues for oppressed groups, inequality and social injustice. using culturally competent, mixed methods strategies • Recognises that realities are constructed and shaped by social, political, cultural, economic, and racial/ethnic values 	<ul style="list-style-type: none"> • Does not necessarily believe that truth regarding reality can actually be determined • Unsure that any one explanation is better than any other • There is no single best scientific method that can lead to indisputable knowledge • Adopts a ‘fit for purpose’ approach in the pursuit of what works best for the given situation 	<ul style="list-style-type: none"> • Considers that research is influenced by the theoretical framework employed • Questions the ability to prove a theory or causal proposition • A number of theories can account for a body of evidence • Recognises the value-ladenness of facts and the potential influence the researcher can have 	<ul style="list-style-type: none"> • Views truth as absolute and values the original and unique aspects of scientific research i.e. realistic descriptions • Truthful depictions, studies with clear aims, objectives and properly measured outcomes

Dimension of Contrast	Constructivism	Transformative	Pragmatism	Postpositivism	Positivism
<p align="center">Major Characteristics</p>	<ul style="list-style-type: none"> • Exploration of the way people interpret and make sense of their experiences • Identification of how the contexts of events and situations impact on constructed understanding 	<ul style="list-style-type: none"> • Qualitative dimension is needed to gather community perspectives • Quantitative dimension can demonstrate outcomes that have credibility for community members • Seen as a mechanism for addressing the complexities of research in culturally complex settings 	<ul style="list-style-type: none"> • Regard knowledge as being based on practical outcomes and ‘what works’ • Knowledge is provisional in that what is regarded as truth today may not be so in the future • Rejection of immovable distinctions such as facts vs values, objectivism vs subjectivism, rationalism vs empiricism • Seeking absolute truth is not an objective 	<ul style="list-style-type: none"> • A paradigm which is seen to replace the more extreme facets of positivism • Seen as the intellectual heir to positivism • Still bound to the quantitative vision of science • Acceptance of the view that researchers of any leaning, QUAL or QUAN, are prone to constructing their own view of social reality 	<ul style="list-style-type: none"> • Knowledge is viewed as being able to be deduced from careful hypothesis design • Domain features are dominated by regularity • Believe that everything is caused by something • Statistical analysis to deemed to be able to discover facts
<p align="center">Methods</p>	<ul style="list-style-type: none"> • Qualitative 	<ul style="list-style-type: none"> • Both Qualitative and Quantitative 	<ul style="list-style-type: none"> • Both Qualitative and Quantitative 	<ul style="list-style-type: none"> • Primarily Quantitative 	<ul style="list-style-type: none"> • Quantitative

Dimension of Contrast	Constructivism	Transformative	Pragmatism	Postpositivism	Positivism
Logic	<ul style="list-style-type: none"> • Inductive: observation is used to build theory 	<ul style="list-style-type: none"> • Inductive and deductive 	<ul style="list-style-type: none"> • Inductive, abductive and deductive 	<ul style="list-style-type: none"> • Deductive 	<ul style="list-style-type: none"> • Deductive: previously formed theory is tested
Epistemology	<ul style="list-style-type: none"> • Subjective point of view • Sense of reality constructed with participants 	<ul style="list-style-type: none"> • Objectivity and interaction with participants valued by researchers 	<ul style="list-style-type: none"> • Objective and subjective points of view sought, depending on stage of research cycle 	<ul style="list-style-type: none"> • Modified dualism (either/or choices) 	<ul style="list-style-type: none"> • Objective point of view
Axiology	<ul style="list-style-type: none"> • Value-laden inquiry 	<ul style="list-style-type: none"> • Value-laden inquiry 	<ul style="list-style-type: none"> • Value important in interpreting results 	<ul style="list-style-type: none"> • Value in inquiry but their influence may be controlled 	<ul style="list-style-type: none"> • Value-free inquiry
Ontology	<ul style="list-style-type: none"> • Multiple, constructed realities 	<ul style="list-style-type: none"> • Diverse viewpoints regarding social realities • Explanations that promote justice 	<ul style="list-style-type: none"> • Diverse viewpoints accommodated • Best explanations within personal value system 	<ul style="list-style-type: none"> • Critical realism • External reality is understood imperfectly and probabilistically 	<ul style="list-style-type: none"> • Naive realism • Objective external reality that can be comprehended

Dimension of Contrast	Constructivism	Transformative	Pragmatism	Postpositivism	Positivism
Causal Linkages	<ul style="list-style-type: none"> • All entities are simultaneously shaping each other • Impossible to distinguish between causes and effects 	<ul style="list-style-type: none"> • Causal relationships may exist but these need to be understood within the framework of the research 	<ul style="list-style-type: none"> • Causal relationships may exist but these are transitory, hard to identify • May not be visible 	<ul style="list-style-type: none"> • Causes identifiable in a probabilistic sense that change as more predictors are identified 	<ul style="list-style-type: none"> • Real causes occur before or simultaneously with effects
Generalisation	<ul style="list-style-type: none"> • Believe that only time and context bound ideographic statements are possible • Emphasises the importance of transferability of results from one setting to another 	<ul style="list-style-type: none"> • Emphasises ideographic statements • Willing to link results from a specific study, often a single case study and applies that to broader issues 	<ul style="list-style-type: none"> • Emphasises ideographic statements but not to the exclusion of other view points • Frequently carried out as a single case study which can become an exemplar for others 	<ul style="list-style-type: none"> • Accepts measures that are observed from a relatively large sample to give a general outlook • Willing to recognise caveats 	<ul style="list-style-type: none"> • Believe that time and context free generalisations are possible • Total belief and utter confidence that the numbers speak for themselves • Extrapolation of findings to assume representation of a much larger population are typical

Sources: Weber (1949); Cook & Campbell (1979); Durkheim (1983); Lincoln & Guba (1985; 2000); Howe (1988); Cherryholmes (1992; 1994); Miles & Huberman (1994); Tashakkori & Teddlie (1998); Shadish *et al* (2002); Mertens, (2003; 2007); Teddlie & Tashakkori (2003; 2009); Denzin & Lincoln (2005); Guba & Lincoln (1994, 2005); Denscombe (2007); Grbich (2007); Bond (2009)

Benefits of a Mixed Methods Approach

A further consideration, important to any research project is that of *triangulation* which can take place at differing levels. For example, the findings of semi-structured interviews with a sample of research subjects could be used to inform the development of a questionnaire, administered to a far larger sample, or indeed a census of the population. Downward & Mearman (2006, p. 78) argue that such triangulation can, under certain conditions, “*unite research contributions in such a way as to transcend the use of specific methods in a disciplinary sense*”. This would appear to advocate against the use of a mono-method approach in favour of “*mixed methods triangulation which promotes inter-disciplinary research*” (Downward & Mearman (2006, p. 90). The inter-disciplinary, cross-boundary nature of the CI&IM field has been presented in Section 2, which adds further credence to the selection of mixed methods within a qualitative methodology as being entirely appropriate for the research being reported upon in this thesis.

Triangulation occurs within methods where a range of different sources are used, as was the case with Article 2 (Wright *et al*, 2004), Article 5 (Fleisher *et al*, 2007), Article 7 (Calof & Wright, 2008), Article 8 (Fleisher & Wright, 2009b) and Article 10 (Fleisher & Wright, 2010). Creswell (1995) and Tashakkori & Teddlie (1998) put forward the recommendation that methods should be combined, or mixed, typically on pragmatic grounds, a view supported by both Maxcy (2003) and Denscombe (2008), and one actioned in the course of this research.

A qualitative mixed methods approach also enabled a wide range of research skills to be mastered, practiced and developed, thus allowing for a true pragmatic paradigm to be adopted. The research design choices available to the researcher were enhanced by greater awareness of the breadth of options available. It is argued that this was not only a significant outcome of the work contained in this thesis, but also evidence of accomplished execution of those research skills.

SECTION 6

Contribution to Knowledge

Main Focus of this Research

The over-arching theme of the articles within this thesis is one of understanding the operational motivators and barriers to good CI&IM practice and identifying the important facets which determine success or otherwise for both the firm and the individual carrying out the task. This required the identification of key interfaces between CI&IM and other decision making processes, understanding the role of inter-disciplinary insight teams on the execution of a CI&IM plan, rising to the challenge of international comparison in terms of practice, and an interrogation of the extant literature to identify research trends, themes and directions.

Sustained, Substantive and Consistent Contribution to Knowledge

It is suggested that a sustained, substantive and consistent contribution to knowledge is evident in this thesis. The question of the value of each article has been addressed in Section 6, but to re-cap, contained within are four empirical studies, (Wright *et al*, 2002; Badr *et al*, 2006; Fleisher *et al*, 2008; Wright *et al*, 2009b), all of which required the acquisition of new data, thorough analysis, assimilation of findings and delivery of original output. Reflective studies are represented by Wright *et al*, (2004), Fleisher *et al*, (2007). Comparative studies are presented in Wright & Calof, (2006), Calof & Wright (2008) and procedural best practice orientated work is presented in Fleisher & Wright (2009b) and Fleisher & Wright (2010). It is argued that both individually, and as a whole, the articles offer a significant contribution to the advancement of knowledge in the field.

The development of an evidence based best practice model for CI, reported on in Article 1 (Wright *et al*, 2002) particularly, has been used as a platform and impetus for future research, showing a total of 55 quality citations. This was the first study which addressed CI&IM practice in the UK and remains the only evidence-based framework of its type worldwide. It has since been used, and cited in eight foreign language publications showing a wide geographic impact. More importantly, it has either been cited in, or been

the foundation for, 15 PhD or Masters level theses from Universities in Sweden, Germany, Spain, New Zealand, Brazil as well as four in the UK. This evidence supports the claim that Article 1 alone has had considerable impact on the field. Since its publication, the best practice framework has been referred to as a key theory in the CI&IM field and has been the orientation and pivotal point around which future work has been produced. Comai (2004), adopted the term 'immune attitude' to describe typical corporate behaviour as well as reinforcing the contribution which this research made to identifying informational cognitive limitations and competitive blindness. Comai also cited Article 1 as confirming the positive relationship between CI and a firm's performance. Decker *et al* (2005) agreed with the assertions made in Article 1, and stated that the available scholarly advice had not had a strong impact on managerial practice in the past and that future studies, such as that reported in Article 1, should attempt to correct this. In their well regarded text, Goldmann & Nieuwenhuizen (2006) cite the output in Article 1 as being essential reading for students wishing to understand information based competitive advantage whilst Tryfonas & Thomas (2006) in looking at the global situation, noted the findings of Article 1 and commented favourably that this was the first comprehensive study of operational CI practitioners, not only in the UK firms, but in Europe.

A similar story is in evidence with Article 3 (Wright & Calof, 2006) which, again produced an evidence based 'critical elements' model. This drew attention to the absence in both past studies, and therefore the academic literature, of a lack of attention to the need for an underlying process and structure for an effective intelligence operation, as well as the identification of influence drivers such as culture, awareness and attitudes. Bose (2008) refers to the findings presented in Article 3 and emphasises the point that a universal understanding of the competitive landscape is important to move decision makers towards the maximisation of competitive advantage. Søylen & Hasslinger (2009) cite Article 3 as a good source for defining the difference between Business Intelligence (BI) a term typically used to represent IT, and CI, noting that this issue has caused considerable debate between practitioners and academics, with neither really reaching an acceptable compromise. In truth, the terminology is country-centric so agreement and global usage of any term is highly unlikely. Smith *et al* (2010) identified the study reported in Article 3 as the only one which has explored the influencing drivers of awareness, attitude, process and structure in CI processes which is further testimony to its originality and impact on the field.

Article 3 has received 28 quality citations in less than four years, showing a strong international scope with work emanating from The Netherlands, Portugal, France, Spain and China. Article 3 has also been instrumental in the work of six PhD or Masters level theses, two each from Brazil and Sweden, one each from Cuba and UK and is the foundation for a current PhD study also in the UK.

Article 1 and Article 3 have been instrumental in laying down a platform for research into CI&IM which is, by its very nature, a practice based activity. This should not be taken to mean that as a consequence, it is merely a tool for the delivery of a product. Were this the case, then one could successfully argue that strategic planning, marketing planning, portfolio modelling and scenario analysis, for example, are mere tools which deliver a product, yet they enjoy a relatively high status in the minds of academics seeking to apply theories to such activities.

Rather, as stated previously in this thesis, it is an organisation mind-set, an attitude and an activity which strives to reduce risk in the decision making process. It also embraces the theory of ‘thin-slicing’ postulated by Gladwell (2005) who states:

“Thin-slicing is not an exotic gift. It is central part of what it means to be human. We thin-slice whenever we meet a new person or have to make sense of something quickly or encounter a novel situation. We thin-slice because we have to and we come to rely on that ability because there are a lot of hidden fists out there, lots of situations where careful attention to the details of a very thin slice, even for no more than a second or two, can tell us an awful lot” (pp 34-44).

The works of Gladwell (2002; 2005) take their place alongside the wise words of other visionaries such as D’Aveni (1994, 2001), Christenson *et al* (2004), Taleb (2004), Surowiecki (2005), Kim & Mauborgne (2005), Penn & Zalesne (2007), Taleb (2007) and Barnett (2008), who challenge the way in which we think and the way in which we consider risk. These texts should be required reading for any aspiring CI&IM practitioner as well as any academic researcher seeking to understand the realities and problems of generating a firm’s intellectual capital, its application to risk reduction in decision making and subsequent manifestation as intelligence-based competitive advantage.

The Theories Behind Intelligence-Based Competitive Advantage

In a recent, in-depth discussion of the theory of *intellectual capital generation*, Bratianu *et al*, (2011) reported on their research which looked at the creation of intellectual capital and suggested that the traditional perspective of data generation can be changed. They demonstrated the value of intellectual capital derived from organisational mechanisms which they called ‘integrators’. Their theory fits well with the Critical Intelligence Portals Approach to CI&IM as identified in Section 2. Here, the integrator, has the power to bring together the primary constituents of information and knowledge acquisition to integrate them into the final intellectual capital of the organisation.

The *resource-based view* can also be utilised as a theory to guide the pursuit of sustainable competitive advantage as illustrated in the work of DeNisi *et al* (2009) and Fiol (2009). Of the many theories of organisational management, the resource-based view (RBV) is well suited to align with the human capital view of people within the firm. The RBV theory suggests that the method in which resources are applied within a firm can create a competitive advantage (Barney, 1991; Mata *et al*, 1995; Peteraf, 1993; Wernerfart, 1984), and this is also a key philosophy within CI&IM practice.

Brown (2007) states that the RBV of competitive advantage is based on two main assumptions: *resource diversity* and *resource immobility* (Barney, 1991; Mata *et al*, 1995). An action passes the resource diversity test if it is one which competing firms are unable to imitate. For example, legal protection in the case of trademarks or patents, supplier or distributor contracts in the case of manufacturing firms and R&D teams in the case of scientific or technology driven firms. Resource immobility refers to a resource which is difficult to obtain by competitors because the cost of developing, acquiring or using that resource is too high. An example would be the benefits of economies of scale, a theory identified in some detail some 40 years ago by Pratten (1971), and still used to today in a number of industries ranging from public transport (Farsi *et al*, 2007) through banking (Mautin, 2011) to timber haulage (Soirinsuo & Mäkinen, 2011).

The RBV view of the firm suggests that an organisation’s human capital can contribute significantly to sustaining competitive advantage by creating resource diversity via

increasing knowledge and skills, especially that which is difficult to imitate (Meso & Smith, 2000; Halawi *et al*, 2005; Afiouni, 2007; Brown, 2007).

It is in the area of resource diversity which CI&IM plays its part as the output of such a programme will be unique to the firm and will enhance its intellectual capital generation. Barney (1991), Mata *et al* (1995), Swart (2006), Afiouni, (2007) and Brown, (2007) also comment that in order to create human capital resource diversity and immobility, an organization must engage in the right managerial practices, use the right organisational processes and offer the right tools and educational opportunities for the practitioner to do their job right. This aspect of the creation of intelligence-based competitive advantage is addressed especially in Article 10 (Fleisher & Wright, 2010).

In one of very few empirical studies of its type, Newbert (2008) addressed the position of RBV that the exploitation of valuable, rare resources and capabilities contributes to a firm's competitive advantage, which in turn contributes to its performance. In testing these hypotheses, Newbert (2008) found that "*value and rareness are related to competitive advantage, that competitive advantage is related to performance and that competitive advantage mediates the rareness-performance relationship*" (p. 745).

CI&IM aligns itself with the *sense making school of decision making*, which rejects the notion of decision making as a point of inflection in managerial action (Weick, 1995; Weick, *et al*, 2005), rather it sees the process as much more tacit and emergent. Winch & Maytorena (2009), describe the sense making school as one where managers are continually seeking cues from their context. Information arrives as 'news' which may, or may not, be surprising. They use this information to make sense of their context and then shape that context based on the sense made. It follows, therefore, that there are no independent criteria for the evaluation of the sense made, and that action is based more upon pragmatic interpretation of the context than optimisation of the data.

In an empirical study of high-tech firms, Liu and Liu (2008), drawing on the work of Bock *et al* (2005) showed the significance of individual knowledge acquisition and sharing behaviour within the firm. Through their results, they were able to conclude that this "*needs to be emphasised since it will contribute to the critical foundation of organisational knowledge creation*" (p. 424) and as a consequence, the reduction of risk in decision

making (Renzl, 2008). Van den Hooff & Huysman (2009) also showed in their study that *“knowledge sharing is not stimulated by imposing structures and tools, but by rich social interaction and its immersion in practice”* (p. 1), a view voiced both previously and subsequently by Yang (2008; 2010).

The role which CI&IM can play in the development of *organisational learning* and the creation of *organisational memory* has only recently been realised. This connection has already been addressed in Section 2 but for the sake of completeness, some important works are included here.

In a seminal article, Spender (1996) said *“knowledge is too problematic a concept to make the task of building a dynamic knowledge based theory of the firm easy”* (p. 45). He goes on to state *“since the origin of all tangible resources lies outside the firm, it follows that competitive advantage is more likely to arise from the intangible firm-specific knowledge which enables it to add value to the incoming factors of production in a relatively unique manner. Thus it is the firm’s knowledge and its ability to generate knowledge, that lies at the core of a more epistemologically sound theory of the firm”* (p. 46),

The core of most definitions of organisational learning (OL) is one of a change which occurs as the organisation acquires experience, but researchers have debated whether OL should be defined as a change in cognition or behaviour (Crosan *et al* 1990; Easterby-Smith *et al*, 2000). Most researchers would agree with defining OL as a change in the organisation’s knowledge which occurs as a function of experience. This knowledge can manifest itself in changes in cognitions or behaviour and include both explicit and tacit, or difficult to articulate, components (Garvin, 2000; Argote & Miron-Spektor, 2009).

Kandemir & Hult (2005) and Sánchez *et al*, (2009) claim that OL may be the only source of sustainable competitive advantage for a firm in today’s complex and dynamic world. It is certainly the resource which is least able to be mimicked (Spender, 2008). Empirical studies have confirmed the benefits of OL on customer orientation (Hult *et al*, 2001), market orientation (Santos *et al*, 2005) and the strategic supply process (Hult *et al*, 2002).

In a refreshing diversion from academic theorising, Yakhlef (2010) prefers to support an embodied, corporeal approach to the evolving practice based work on learning and knowing.

He suggests that learning and knowing are grounded in practical, bodily, emotional experiences. However, he notes that the ‘practice turn’ in contemporary social theories has not escaped the attention of organisation theorists who have also placed practices front and centre in their studies of various organisational phenomena (Jarzabkowski *et al*, 2007, Johnson *et al*, 2007; Whittington, 2007).

Quoted by Rowlinson *et al*, (2010), Nissley & Casey (2002) regard organisational memory (OM) as potentially being “*the static repository model where some objectified truth is stored*”. They use the metaphor of a corporate museum to illustrate the way in which organisations can choose to ‘*selectively remember or forget*’, and that ‘*what is remembered or what is forgotten shapes an organisation’s identity and image*’ (p. 44).

In attempting to persuade firms to take organisational knowledge and memory seriously, over a decade ago, Van Daal *et al*, (1998) proposed a knowledge matrix which would identify the location of current knowledge, capture this for future generations and identify where rectification was needed. It would appear from the writings of Wood (2002), Martin de Holan & Phillips (2003; 2004), Harris & Wegg-Prosser (2007), Besanko *et al* (2010), Kosinen (2010) and Rowlinson, (2010), that that message has yet to be heard.

The adoption of CI&IM as an organisation wide philosophy and a theory of intelligence-based competitive advantage, places it as an important concept within organisational learning and the creation of organisational memory. As a consequence, this provides significant risk reduction in the decision making process. It is argued that this body of work goes a long way towards fixing CI&IM into those arenas and as such, places them into an acceptable theoretical framework. The symbiosis between CI&IM and the RBV of the firm is also a tangible benefit, as indeed are the cross-functional areas of theory and practice.

Sustained and Coherent Contribution to the Field

In excess of 20 years ago, Prescott, (1999) theorised on the future of CI from the perspective of that year. His theory was that CI would become a core capability in organisations, CI courses would be taught in business schools across the world, integration would be formal and informal, orientation would be strategic, analysis would have a

qualitative emphasis, top management interest would be high and the link to decision making would be direct. The principal location of CI personnel would be in CI units or in marketing or planning departments and that the key issues would be managing the parallel process, developing the CI function as a learning mechanism and designing an intelligence infrastructure for multi-national firms. This latter element was more recently highlighted by Kalkan (2008) who identified it as a problem still to be fully resolved. The body of work presented in this thesis addresses all of the research related areas of the above concerns as well as the practical, organisationally, managerially driven issues. This further adds to its value as being not only academically valuable, but also highly relevant.

This body of work has been published in respected UK, European and US academic Journals which in itself demonstrates the achievement of a peer-reviewed quality standard, one not normally expected of a traditional PhD study prior to examination, but it is doubly pleasing to observe that these articles are actually being read and used by scholars and students in the field. This is arguably, the only truly independent measure of an original contribution to knowledge. In an e-mail dated 6th December 2010, Professor Douglas Brownlie commented to the author, *“I wish your work had been available when I was looking at what we used to call environmental scanning and other such strategising activity areas”*, and this would seem to provide further testimony for the value and relevance of the body of work.

In addition to the works presented here, the author has a strong presence in the practitioner community via the delivery of workshops from San Diego (Wright, 2008a) to Abu Dhabi (Wright, 2005c) to Germany (Wright, 2007), from large firms (Wright, 2008b), to Government Departments (Wright, 2005d; 2010) to small firms (Wright, 2008c) all of which have been informed by the findings of these research projects, also contributing to the teaching of Masters and PhD students in the field. The frequency of invitations to speak to practitioner audiences, contribute to professional events and take on leadership roles within the academic community, all contribute to the progression, and further exposure, of CI&IM as an exciting field for research and teaching. The candidate was also the first person from the UK to be nominated, and subsequently elected by the predominantly North American membership, to the Executive Board of the Society of Competitive Intelligence Professionals, headquartered in Alexandria, USA. Having also been elected by the membership of the Strategic Planning Society to serve on its Board, it

is argued that this serves as a significant testimony to the candidate's standing, intellectual contribution and recognition in both fields.

It is worth noting that CI as a dedicated module was taught for the first time in the UK on De Montfort University's new full-time MBA programme in 1996, with the first student selecting this as a dissertation topic, passing with distinction the following year (Guillex, 1997). Since that time, another 11 Masters level dissertations (McNidder, 1997; Smith, 1998; Badr, 1998; Callow, 1998; Madden, 2004; Wallace, 2004; Trafford, 2009; Shukkla, 2009; Suntharamoorthy, 2010; Al Najim, 2010; Gatt, 2010) and two PhD theses (Badr, 2003; Eid, 2006) have been published. This represents the highest output in the field of CI&IM for any University worldwide (Fleisher *et al*, 2007), and the trend is set to continue with three PhD studies currently in progress. Whilst not reaching the expectation of Prescott (1999) for a worldwide explosion of CI courses in Business Schools, the author can claim credit for one in the UK.

Originality

The deliverables from all the articles have been identified in Section 4 but attention is drawn specifically to the output from Article 1 (Wright *et al*, 2002), Article 3 (Wright & Calof, 2006), Article 4 (Badr *et al*, 2004), Article 6 (Fleisher *et al*, 2008), Article 7, (Calof & Wright, 2008), Article 8 (Fleisher & Wright, 2009), Article 9 (Wright *et al*, 2009) and Article 10 (Fleisher *et al*, 2010). All are original pieces of work which have been derived from either the collection of primary data through an empirical study, or are the result of a unique interpretation of published literature. Much of this broke new ground. Until the publication of these articles, no research had ever been carried out on CI practice in the UK and no researcher had attempted to identify the underlying facets which drive a successful CI programme. The European pharmaceutical industry was, and to some extent remains, a closed book to researchers. Nobody had attempted to observe the realities of a CI programme being used as the change agent in a non-profit setting. Nobody had ever attempted to gain access to, and research, CI practice in the UK retail banking sector and nobody had considered the linkages between organisational responsibility and intelligence analyst failure.

These claims are substantiated by the verdicts of experienced reviewers and the decisions by Editors to publish the articles in their refereed Journals. If they were not original, they would have been rejected.

Methodological Consistency

The stance adopted has been consistently of a qualitative nature, this being the most appropriate due to the type of research being undertaken. The studies have taken a largely exploratory approach which has enabled the delivery of recommendations for improvements in practice. There has been no desire, or intention, to produce or test theories from these studies, rather the production of frameworks or models which aid the delivery of good practice, or which enable firms to organise their CI&IM effort more efficiently.

CI&IM is a practical subject. Identifying competitors and assessing strategies are also practical subjects. It is solutions to obstacles which practitioners face on a daily basis which is needed. The philosophical and intellectual thinking behind CI&IM is one of the attainment of intelligence-based competitive advantage, risk reduction in decision making and the achievement of organisational learning. It is hard to see why a firm would not want to engage with such a process, but implementing this across the totality of a firm, recognising the different organisational settings, and countries, in which CI&IM is undertaken is a key challenge for researchers and practitioners alike.

SECTION 7

Reflections and Future Research Agenda

Reflections

The very nature of a PhD by Published Works thesis requires the presentation of a number of articles, all of which were originally designed to achieve, typically, a single objective and a single outcome, which will be largely different across the range of articles. The articles themselves are but one output from any research effort but as it is those which are under examination here, that is the focus of this section.

Typically a Journal article submission is restricted to between 5000-7000 words and as such, some judicious efficiency with description, methodological and research design justification is required. It can sometimes be disappointing for these sections to be so treated but that is the nature of the medium. It should be recognised however, that having been published in the form in which the article appears, it can be assumed that sufficient attention to that area has been given, at least to the satisfaction of the reviewers, arguably the only people who count at that time. The articles contained within a PhD by Published Works are not required to discuss methodological, paradigm and methods alternatives at length. It is sufficient that this be stated in the article, the selection defended and then applied appropriately.

There is a consistency of approach which sits predominantly in the qualitative arena and no apology is offered for this tendency. The approach has been entirely appropriate for the subject matter and the exploratory and developmental style of study being undertaken. Any suggestion that there is potential to engage in large scale quantitative style research would be inappropriate as the community itself is not sufficiently large enough to be suitable for such a study. This could only be achieved if it were done on a global scale which would not be ideal given the different geographical locations and the different operating structures within different countries. It is known that different attitudes to CI&IM and operational styles exist between countries such as France, Sweden, USA, South Africa, Russia, China, Japan and Korea to name a few. To attempt to subsume findings from so many locations, purely to demonstrate a quantitative research skill would

be pointless, and most likely be rejected for publication. The findings would be neither informative nor useful - just voluminous.

It is accepted that the literature cited within the articles submitted are all written in the English language. France in particular has a number of scholars with rich and long histories of writing in this subject area but in common with researchers from the USA, it is a source of frustration that the lack of language ability naturally prevents access to this resource.

Similarly, the literature cited in each article was indicative of the current thinking at that time. In reviewing some of the earlier works it is obvious that things have moved on since publication, but the articles need to be viewed in the context of both relevance, originality and context at the time of publication.

In the empirical studies which report on CI&IM practice within firms, a broadly similar sample of respondents has been selected. This choice is defended as these are precisely the individuals who can provide the information necessary to successfully take part in interviews, complete questionnaires and provide their opinion on how things work in their firm. They are the people who understand the terminology, who appreciate the importance of the output they produce and quite frankly, are sufficiently interested and motivated to participate. There is little point in seeking answers to questions from people who do not understand them. To attempt to do otherwise in the interests of seeking a wider sample would be counter-productive and more akin to asking an Accountant to explain the tooling up process of a product line change.

Differing methods were selected for each piece of work, and there is always the potential for more interviews to have been held, greater access to have been sought, more analysis to have been undertaken and the like. In this respect a research study is never really completed but it is not possible to enjoy a cost, time and restricted access free zone. The studies produced sufficient data on which an appropriate framework or model could be produced and defended, or on which suitable conclusions and recommendations for improvement could be made. It is rarely possible in the social sciences to carry out an exhaustive study which embraces a 100% response rate from an entire population.

The situations reported on at the time were very real but it is highly likely that things have changed since the article was published. The subject matter is not one to be viewed as a mechanical process. Efficiency and effectiveness is affected by changes in attitudes, funding and stated desires by managers and decision makers. Having said that, this collection of articles does represent the most numerous studies undertaken by any UK researcher in the field. The delivery of findings and recommendations has paid heed to the practical world of CI&IM, garnered through professional experience and being able to understand the inferences of responses, as well as the shared experience of the practitioners themselves.

A specific and valuable outcome from the work carried out in the context of the research projects and empirical studies reported on in this thesis has been the pleasure of being able to engage with a number of different research instruments, across a range of methods, within a diversity of paradigms, primarily in the domain of a qualitative methodology. The intellectual knowledge and practical experience gained from this work should not be under-estimated. It is argued that the exposure to, and acquisition of, such a broad range of techniques and skills is further testimony to the benefits of a mixed methods approach to social science research, one which is entirely suitable to the field of CI&IM and the interdisciplinary nature of the field.

Future Research Agenda

The articles presented in this thesis represent the themes which offer opportunities for empirical research from which lessons can be learned, frameworks developed and ideas applied or reviewed for efficacy in practice. As such, future work is likely to focus on the ways in which CI&IM can deliver value to the firm's decision makers, understand the needs of different industry sectors as CI&IM is not a 'one size fits all' option for implementation, how to put into place the individual, organisational and structural features that are necessary to support CI&IM and how to champion the cross-boundary, cross-functional philosophy required for CI&IM to work successfully.

The future direction of research can be encapsulated within the main themes of the field.

CI Scholarship

The increasing number of articles being published on CI&IM suggests a greater number of researchers and academics entering the field and finding it to be a satisfying area for research. There is potential for scholars in CI&IM to join forces with those from the fields of Organisational Behaviour (OB), Organisational Learning (OL), Organisational Memory Studies (OMS) and other cross-disciplinary areas, for example, Engineering, Science, Research & Development, Manufacturing, Technology Forecasting and Information Technology to examine how the real value of information held within a firm can be capitalised upon and used in decision making processes. Whilst the ‘silo’ style of management has been rejected by a significant number of large firms, there remains attitudinal and structural issues which would benefit from a demonstration of how CI&IM can benefit a firm’s performance.

Country Level Analysis

There is perhaps less emphasis now on general country level studies such as that produced in Article 2, but the study of CI practice in China and Japan in Article 8 highlighted the significant cultural difference between East and West, not least those related to language and inference. The difficulty of comparing practice between one country and another was also highlighted in Article 3 in that an agreed framework under which such comparisons could take place, does not exist. Whether it needs to exist or whether carrying out country level studies produces any replicable insight, is another matter. What is of value and is likely to be the subject of future work is the support afforded to particular sectors, by National Governments, to encourage the practice of CI&IM. The involvement of Chambers of Commerce which produce, support and finance CI&IM training for SMEs in France is just one example of a situation which does not exist in the UK. Future research should examine whether that support results in greater competitiveness for the SME sector in France and if so, an investigation into how much that can be attributed to CI&IM practice could be undertaken. If proven to have been a positive effect, such findings could be used to encourage other Governments into adopting a similar strategy for their SME sector. If the link is not proven then at least other countries can rest in the knowledge that public funds are not being wasted on such an activity.

CI Management and Best Practice

Building on the work reported in Articles 1, 6 and 9, there is scope for the development of industry sector typologies of practice. For example, the emphasis on competitor monitoring is likely to receive high prominence in a dynamic and complex market such as software development, pharmaceuticals and biotechnology where competitor action and reaction can have a significant effect on a firm. Forecasting, mathematical modelling and scenario planning is likely to be of more interest to firms in a fairly simple and stable market such as commodities, agriculture and mining. There is potential for typologies of practice to be developed by industry sector which would also highlight the particular skills and talents which would be necessary for practitioners working in those industries.

Article 6 presented a unique case study of a firm undergoing change and using CI&IM as the catalyst for this. Organisational behaviourists might be interested in studying the challenge of engendering a CI&IM attitude within a firm, addressing the challenges of employee engagement and managing the required boundary crossing.

The question of how to measure the cost of engaging with CI&IM as an organisational mind-set is a perennial challenge. This should also be part of any research programme as it is a question to which both academics and practitioners have yet to find a satisfactory answer. The usual response is to ask what the cost of not engaging with CI&IM might be in terms of competitive stance and positioning, but that is not a reply which sits well in today's audit driven world which requires a number in order to judge. At some point in the very near future this is a task which has to be undertaken.

Strategic Decision Making

Article 4 identified several potential research areas with regard to decision making in the pharmaceutical industry but this should not exclude other sectors. The barrier to further research in this particular area of CI&IM is of course, access to suitable firms. The best way to address this would be to initiate a 'day in the life of' observational, in-house project with a CI&IM team which would produce some genuine, original insight as to the problems faced and the benefits enjoyed. The aim would be to investigate issues of time lags between data acquisition, intelligence production and decision making, looking specifically at the optimum time needed and the dangers of delay. Similarly, the various stages of CI&IM practice could be mapped so that intelligence needs were identified and

anticipated in a timely manner. This would also enable the activity to be assessed and any outcomes measured and would help to address one of the issues for future work identified in the CI Management and Best Practice section above, that of quantifying the worth of a CI&IM effort.

Analysis Management

Article 10 identified the various causes of analysis failure and there is still much to learn and apply to this task, in particular the need for complementary skills in analysis teams. In terms of providing analysts with the right tools and environment to do the job well, a research programme is in place to identify the blockers and drivers to effective CI practice in UK CI active firms. The paucity of skills in the expert use of analytical tools among practitioners has already been identified through prior research. Future efforts are now needed to identify the effect which such in-expertise is having on analysis output and subsequent decision making. This would go some way towards developing an instrument with which to measure the effectiveness of the overall effort and evaluate the CI&IM process, albeit positively or negatively.

Raw data is an important input to the analysis process and the skills practiced by investigative journalists and other experts who obtain intelligence, legally and ethically, from both secondary or primary sources have yet to be fully integrated into the CI&IM field. It is likely that future research will investigate how to fully exploit human intelligence (HUMINT) and how to train CI&IM practitioners in the area of elicitation and inference. Collaborative studies with experts from fields such as market research, advertising and communication studies would be beneficial here which further testifies to the cross-disciplinary nature, and intellectual reach of the field.

In conclusion, there is much work to be done in the CI&IM field and there exists a rich seam of material as yet, un-mined.

SECTION 8

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APPENDIX 1

Citation Analysis

Citation Analysis

Article 1: *Competitive Intelligence in UK Firms: A Typology*

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Bexon, M., Stephens, D.P. & Pritchett, C. (2002) ‘Competitive Intelligence: A Career Opportunity for the Information Professional in Industry’ <i>Journal of Librarianship and Information Science</i> Vol 34, No 4, pp 187-196</p>	<p>Quotes directly from the 1998 precursor paper to Article 1 which contained a revealing comment from Sir Clive Sinclair.</p>
<p><i>Refereed Conference with Published Proceedings</i> Comai, A. (2004) ‘Discover Hidden Corporate Intelligence Needs by Looking at Environmental and Organizational Contingencies’ <i>Proceedings of EBRF Conference: Frontiers of e-Business Research 2004</i>, pp 397-413 Tampere University of Technology, Sweden</p>	<p>Use of the typology term ‘immune attitude’ to describe typical corporate behaviour as well as reinforcing the contribution which this research made to identifying informational cognitive limitations and competitive blindness. Cited our research as one which confirmed the positive relationship between CI and a firm’s performance.</p>
<p><i>Refereed Conference with Published Proceedings</i> Rajaniemi, K. (2004) ‘Literature Research Approach on Research Topic: Scanning Competitive Environment’ <i>Proceedings of EBRF Conference: Frontiers of e-Business Research 2004</i>, pp 428-443 Tampere University of Technology, Sweden</p>	<p>Uses the same search criteria for literature as was used for Article 1 and bases the article around this. Aligns the focus of this article with one of the issues highlighted in Article 1, namely, the danger of being too customer focused in marketing strategy planning when the real role of CI is to create proper marketing strategy</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Bouthillier, F. & Jin, T. (2005) ‘Competitive Intelligence and Webometrics’ <i>Journal of Competitive Intelligence and Management</i> Vol 3, No 3, pp 19-39</p>	<p>Noted as one of several country based studies and quotes directly from the article. Noted that one of the findings of the UK study was that a long term commitment to CI in the UK was starting to take shape. Commented that the findings of their study on CI web presence in the UK, confirmed the findings in Article 1</p>
<p>Priporas, C-V, Gatsoris, L. & Zacharis, V. (2005) ‘Competitive Intelligence Activity: Evidence from Greece’ <i>Marketing Intelligence & Planning</i> Vol 23, No 7, pp 659-669</p>	<p>Uses the premise set forward in Article 1 that CI is a new research area, given the longevity of other business functions, much of it being concentrated in the US. Quotes extensively from Article 1 and its 1999 predecessor and copies text from Article 1 on several occasions as the authors build the foundation, and value case for their study.</p>
<p>Decker, R., Wagner, R & Scholz, S.W. (2005) ‘An Internet-Based Approach to Environmental Scanning in Marketing Planning’ <i>Marketing Intelligence & Planning</i> Vol 23, No 2, pp 189-199</p>	<p>Agrees with the assertion made in Article 1, and quotes from it, to say that the available scholarly advice has not had a strong impact on managerial practice in the past and that future studies should attempt to correct this.</p>
<p>Oerlemans, L, Rooks, G & Pretorius T (2005) ‘Does Technology and Innovation Management Improve Market Position? Empirical Evidence from Innovating Firms in South Africa’ <i>Knowledge, Technology & Policy</i> Vol 18, No 3, pp 38-55</p>	<p>In this empirical study of the role of technology and knowledge management, the authors adopt the definition of competitive intelligence stated in Article 1 and link this to the task of technology forecasting</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Smith, J.R. (2005) ‘The Effectiveness of Competitive Intelligence: An Anglo-French Comparative Study’ <i>Proceedings of the First European Competitive Intelligence Symposium, 21st-22nd January 2005</i>, pp 1-15 Poitiers, France</p>	<p>Produces a UK-French study using the typology and ideals put forward in Article 1 as the basis for comparison. Findings show that the French tend to follow the UK in terms of practice. Notes that De Montfort ‘<i>is persuasively the leading research centre for CI in the UK</i>’ (p. 5). Regards the typology developed in Article 1 as a key conceptual model for the evaluation of practice and describes it as a ‘<i>serious attempt to model CI practices in the UK</i>’ (p. 9)</p>
<p>Noonan, J. & Wallace, M. (2006) ‘Improved Optimism through Advanced Relationship Planning’ Supply Chain Management Vol 11, No 6, pp 483-490</p>	<p>Quotes and refers to a significant point made in Article 1 where it was stated that at the risk of being accused of blasphemy, there is a case for arguing that some marketers had lost their way by focusing over heavily on customers at the expense of other influencing groups in the market.</p>
<p><i>Book</i> Goldmann, G. & Nieuwenhuizen, C. (2006) <i>Strategy: Sustaining Competitive Advantage in a Globalised Context</i> Cape Town, SA, Juta & Co Ltd</p>	<p>Cites the output in Article 1 as essential reading for students wishing to understand information based competitive advantage</p>
<p>Wright, S. & Calof, J.L. (2006) ‘The Quest for Competitive, Business and Marketing Intelligence: A Country Comparison of Current Practice’ <i>European Journal of Marketing</i> Vol 40, No 5/6, pp 453-465</p>	<p>Refers specifically to the literature review elements of this paper, as well as the findings from both the 1998 and 1999 developmental papers which provided the foundation for Article 1. Noted the findings of Article 1 that collection formed 25% of overall CI activity. Article 1 formed the basis for a three country comparison with the findings reported in Article 1, referred to extensively.</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Tarraf, P. & Molz, R. (2006) ‘Competitive Intelligence at Small Enterprises’ <i>SAM Advanced Management Journal</i> Vol 71, No 4, pp 24-34</p>	<p>Refers to the Typology developed in Article 1 on numerous occasions. Notes that this study focused on the companies micro and macro environment but was selective in the use of company size and industry. Noted that this UK study excluded sole proprietors and/or partnerships due to the assumption that they would be less likely to use CI. Agreed with the distinction drawn in Article 1 of the difference between competitor and competitive intelligence.</p>
<p><i>Refereed Conference with Published Proceedings</i> Tryfonas, T. & Thomas, P (2006) ‘Intelligence on Competitors and Ethical Challenges of Business Information Operations’ <i>Proceedings of the 5th European Conference on Information Warfare and Security, 1st - 2nd June 2006</i>, pp 237-244 National Defence College, Helsinki, Finland</p>	<p>In looking at the global situation, notes the findings of Article 1 and comments that this was the first comprehensive study of operational CI practitioners, not only in UK firms, but in Europe. Uses the findings of this article to posit their own arguments on the challenges of BI operations in a more general context</p>
<p>April K, & Bessa J. (2006) ‘A Critique of the Strategic Competitive Intelligence Process within a Global Energy Multinational’ <i>Problems and Perspectives in Management</i> Vol 4, No 2, pp 86-99</p>	<p>Notes the distinction made in Article 1 between competitor and competitive intelligence and the effect this has on perception. Commented favourably that Article 1 highlighted that different management styles had a direct influence on attitude and use of CI. Included a direct quote related to the importance of feedback as well as several other dissemination problems highlighted in Article 1. Noted and quoted the finding that lack of time and/or too many projects were key blockers to intelligence access</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Dishman, P.L. & Calof, J.L. (2008) ‘Competitive Intelligence: A Multiphasic Precedent to Marketing Strategy’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 766-785</p>	<p>Replication study using the same sample type as was used in Article 1.</p>
<p><i>Refereed Conference with Published Proceedings</i> Wright, A., Fleisher, C.S. & Madden, E. (2008) ‘Characteristics of Competitive Intelligence Practice in R&D Driven Firms: Evidence from the UK Pharmaceutical Industry’ <i>Proceedings of the European Business Research Forum, 22nd-24th September 2008</i>, pp 1-14 Katajonnokka, Helsinki, Finland and Stockholm Sweden</p>	<p>Draws on the distinction made in Article 1, and its predecessor (1989) on the difference between competitor and competitive intelligence. Specifically uses the questions used in the survey element of Article 1 as part of the empirical study of a dynamic UK sector.</p>
<p>Liu, C-H. & Wang, C-C. (2008) ‘Forecast Competitor Service Strategy with Service Taxonomy and CI Data’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 746-765</p>	<p>Uses the Typology framework from Article 1 and applies this to their own study, producing an integrated service taxonomy model. Also applies the typology strands to their findings (pp 759).</p>
<p>Fleisher, C.S. (2008) ‘Using Open Source Data in Developing Competitive and Marketing Intelligence’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 852-866</p>	<p>Notes the findings of Article 1 in that CI is a process most commonly found to be taking place in the marketing function</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Hudson, S. & Smith, J.R. (2008) ‘Assessing Competitive Intelligence Practices in a Non-Profit Organisation’ <i>Proceedings of the 2nd European Competitive Intelligence Symposium, 27th-28th March 2008</i>, pp 1-20 Lisbon, Portugal</p>	<p>Applies the typology model from Article 1, and its predecessor paper (1998) to a case study of ‘Quest’. Draws heavily on the descriptors and then allocates the finding of their empirical study to framework. Conclusions and recommendations are reached.</p>
<p>Suchon, K. & Randall Haley, K. (2008) ‘The World is Still a Village: The Use of Competitive Intelligence by SMEs to Support International Activities’ <i>Review of Business Research, January 2008</i>.</p>	<p>Notes the significance of Article 1 as one of a number of country based studies, the only one of its type at that time in the UK Retrieved on 26th July 2010 from http://findarticles.com/p/articles/mi_6776/is_1_8/ai_n28552098/?tag=content;col1</p>
<p>Calof, J.L. & Wright, S. (2008) ‘Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 717-730</p>	<p>Identifies Article 1 as one of the keystone studies which have evaluate intelligence processes and performance at the firm level. Identifies the Liu & Wang (2008) study as using the typology developed in Article 1 and draws attention to their study as being an application and test of that model.</p>
<p>Trim, P.R.J. & Lee, Y-I (2008) ‘A Strategic Marketing Intelligence and Multi-Organisational Resilience Framework’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 731-745</p>	<p>Quotes from Article 1 and uses the definition presented there that CI is an all-embracing term which suggests a strategic dimension. Also quotes from Article 1 and draws attention to the assertion made there that successful CI activity is dependent on a management style, culture and structure which encourages trust, communications and the easy flow of information</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Adidam, P.T., Gajre, S. & Kejriwal, S. (2009) ‘Cross-Cultural Competitive Intelligence Strategies’ <i>Marketing Intelligence & Planning</i> Vol 27, No 5, pp 666-680</p>	<p>Related to the ‘Gathering’ strand of the Typology. Draws attention to key areas which were identified in Article 1 as ones which should be borne in mind when gathering CI.</p>
<p>Zangouezinezhad, A & Moshabaki, A (2009) ‘The Role of Structural Capital on Competitive Intelligence’ <i>Industrial Management & Data Systems</i> Vol 109, No 2, pp 262-280</p>	<p>This is a large scale survey of 200 companies in Iran exploring how structural capital in the form of information systems are related to the achievement of organisational capital through the use of CI. The study uses the definition of CI as presented in Article 1, as their foundation for the understanding of CI</p>
<p>Nwokah, N.G. & Ondukwu, F.E. (2009) ‘Competitive Intelligence and Marketing Effectiveness in Corporate Organizations in Nigeria’ <i>African Journal of Marketing Management</i> Vol 1, No 1, pp 010 - 022</p>	<p>Quotes from Article 1 and notes the distinction drawn between competitor and competitive intelligence. Uses the position stated in Article 1 that CI has a wide scope, is an all-embracing activity which covers all aspects of the unknown elements of business decision making and is a discipline which has emerged in its own right. Notes that Article 1 contributed significantly to the theoretical development of CI as a distinct discipline.</p>
<p>Book Xu, M. & Kaye, R. (2009) <i>The Nature of Strategic Intelligence: Current Practice and Solutions</i>, previously published in <i>Managing Strategic Intelligence: Techniques and Technologies</i>, 2007, (ed M. Xu) pp 36-54, Information Science Publishing</p>	<p>The authors draw attention to the dissemination of CI findings in Article 1, noting that one of the most common problems was making information and structure relevant to the audience while being brief yet useful. Describes Article 1 research and, the typology strands and the descriptors fully</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Venter, P. & Tustin, D. (2009) ‘The Availability and Use of Competitive and Business Intelligence in South African Business Organisations’ <i>Southern African Business Review</i> Vol 13, No 2, pp 88-117</p>	<p>Comes to a broad definition of CI using several sources and quotes directly from Article 1</p>
<p><i>Refereed Conference with Published Proceedings</i> Larivet, S (2009) ‘Economic Intelligence in Small and Medium Business in France: A Survey’ <i>Proceedings of the 3rd European Competitive Intelligence Symposium, 11th-12th June 2009</i>, pp 128-12144 Mälardalen University. Stockholm, Sweden</p>	<p>In a strong study of SMEs in the Rhone-Alp region of France, the author concludes her findings and states agreement with one specifically in Article 1, that the practice of EI(CI) in SMBs depends on the attitudes, perception and personalities of the decision-makers at the companies. Some see CI as part of strategic decision-making, and some think that CI activity is for followers, not leaders, or even a waste of time and resources.</p>
<p>Nwokah, N.G. (2009) ‘Customer-Focus, Competitor-Focus and Marketing Performance’ <i>Measuring Business Excellence</i> Vol 13, No 3, pp 20-28</p>	<p>The author draws extensively on the definitions and stances put forward in Article 1 to identify the theoretical foundation for the competitor-focus element of this paper.</p>
<p>Wright, S., Eid. E.R. & Fleisher, C.S. (2009) ‘Competitive Intelligence in Practice: Empirical Evidence from the UK Retail Banking Sector’ <i>Journal of Marketing Management</i> Vol 25, No 9/10, pp 941-964</p>	<p>This article adopted the typology produced in Article 1 and applied it to empirical data derived from the UK retail banking sector. The full set of descriptors was used and recommendations for improvements were produced concomitant with the Wright-Pickton-Best Practice model</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Santos, M. & Correia, A. (2010) ‘Competitive Intelligence as a Source of Competitive Advantage: An Exploratory Study of the Portuguese Biotechnology Industry’ <i>Proceedings of the 11th European Conference of Knowledge Management, 2nd-3rd September, 2010</i>, pp 867-873 Universidade Lusíada de Vila Nova de Famalacão, Portugal</p>	<p>Uses the output of Article 1 to base their discussion and theoretical foundation for regarding CI as a source of competitive advantage and draws attention to the findings of Article 1 that there is still a misconception that SMEs are too small to become engaged CI.</p>
<p>Smith, J.R., Wright, S. & Pickton, D.W. (2010) ‘Competitive Intelligence Programmes for SMEs in France: Evidence of Changing Attitudes’ <i>Journal of Strategic Marketing</i> Vol 18, No 7, pp 523-536</p>	<p>Defends the use of the Rouach and Santi (2001) attitude typology for this research but notes that the similarities between this and the typology reported in Article 1 lent credibility to the chosen framework.</p>

<i>Foreign Language Citations</i>
<p>Comai, A & Tena, J.M. (2005), ‘La Intel·ligència Competitiva a Espanya:Desenvolupament Actual i Perspectives Futures’, <i>Bibliodoc</i>, pp 31-45</p> <p>Smith J.R. (2008) ‘Efficacité de la veille Concurrentielle et Consequences Stratégiques’, pp 181-199 in Larrat, P. (Ed), <i>Benchmark Européen de Pratiques en Intelligence Economique</i>, Paris: L’Harmattan</p> <p>Kim, S.K. & Im, N.Y. (2008), ‘A Study on the Relationship between Environmental Scanning of Fashion Merchandisers’, <i>Journal of Information Technology Applications and Management</i>, Vol 15, No 4, pp 137-157</p> <p>Dominique, P. (2009), ‘A Quelles Conditions Peut-On Esperer Une Synergie Entre Intelligence Strategique et Management Des Ressources Humaines Dans Les PME-PMI?’, pp 0-19, University of Orleans, France</p>

Dos Santos, A.C. & De Almeida, F.C. (2009), 'Os Diferentes Conceitos, Interpretações e Aplicações da Inteligência Competitiva', *Revisita Científica da FAI, Santa Rita do Sapucaí, MG*, Vol 9, No 1, pp 46-58

Lagunes, S.G. (2009), 'La Enseñanza de la Inteligencia Competitiva en las Carreras Empresariales', Universidad Nacional Autónoma de México, Occasional Paper Series, pp 1-9

Göb, J. (2010), *Marketing Intelligence: Wissen als Entscheidungsgrundlage im Marketing*, Heidelberg, Germany, Springer Fachmedien

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Wickberg, M. & Zaksaitė, A. (2002), 'Creating an Information Exchange Network - Improving the Marketing Intelligence Process - A Case Study of Volvo CE in Australia', MSc International Business, School of Economics and Commercial Law, Göteborg University, Sweden

Westner M. (2003), 'IT-based Tools for Competitive Intelligence', Diplomarbeit zur Erlangung des akademischen Grades Diplom-Kaufmann, European Business School, International University Schloß, Oestrich-Winkel, Germany

Badr, A. (2003), 'The Role of Competitive Intelligence in Formulating Marketing Strategy', PhD, De Montfort University, UK

Madden, E. (2004), 'Competitive Intelligence in the UK Pharmaceutical Industry', MBA, De Montfort University, UK

Wallace, E.A. (2004), 'The Role of Competitive Intelligence in Implementing Marketing Strategy', MSc Strategic Marketing, De Montfort University, UK

Massón Guerra, J.L. (2005), 'Inteligencia Competitiva Bases Teóricas y Revisión de Literatura', PhD, Universitat Autònoma de Barcelona, Spain

Eid, E.R. (2006), 'Competitive Intelligence and its Effect on UK Banking Strategy', PhD, De Montfort University, UK

Juhari, A.S. (2008), 'Evaluation of Competitive Intelligence Software for SMEs in Malaysia', PhD, University of Loughborough, UK

- Whitehurst, G.R. (2008), 'How Today's Top Companies Evaluate and Use Intelligence on their Competitors', MBA, University of Warwick, UK
- Suntharamoorthy, P. (2009), 'Competitor Profiling in the UK Manufacturing Sector', MSc Strategic Marketing, De Montfort University, UK
- Skerrett, T. (2009), 'The State of Competitive Intelligence within New Zealand Private and Public Sector Organisations: A Comparison Study of Competitive Intelligence in New Zealand in 2009', MSc Information Management, Victoria University of Wellington, New Zealand
- Giacomello, C.P. (2009), 'Relação Entre Inteligência Estratégica e Orientação para o Mercado e seus Impactos no desempenho das Organizações', PhD, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande, Brazil
- Al Najim, M. (2010), 'An Examination and Evaluation of the Strategic Pressures Facing the High Quality Printing Sector and the Role which Competitive Intelligence can have in Securing or Defending Competitive Advantage', MSc Strategic Marketing, De Montfort University, UK.
- Tebo, B.T. (2010), 'The Role of Competitive Intelligence In Marketing Decision Making within the UK Mobile Telecom Sector. The Case of a Major Mobile Telecom Operator', MSc Strategic Marketing, De Montfort University, UK.
- Gatt, D. (2010), 'An Investigation to Identify the Motivation, Drivers For and Barriers to, Running a Successful CI Operation within UK CI Active Firms', MSc Strategic Marketing, De Montfort University, UK

Citation Analysis

Article 2: 'Competitive Intelligence Through UK Eyes'

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Smith, J.R. (2005) 'The Effectiveness of Competitive Intelligence: An Anglo-French Comparative Study' <i>Proceedings of the First European Competitive Intelligence Symposium, 21st-22nd January 2005</i>, pp 1-15 Poitiers, France</p>	<p>Refers significantly to Article 2 as the platform for a comparative study between UK and France. States that Article 2 is '<i>by far the most comprehensive and recent research on CI in the UK today</i>'. (p. 5) . Refers to other work by the candidate (not included in this submission) to show the depth of research being undertaken under the candidate's direction and/or supervision.</p>
<p><i>Refereed Conference with Published Proceedings</i> Tryfonas, T. & Thomas, P. (2006) 'Intelligence on Competitors and Ethical Challenges of Business Information Operations' <i>Proceedings of the 5th European Conference on Information Warfare and Security, 1st-2nd June 2006</i>, pp 237-244 National Defence College, Helsinki, Finland</p>	<p>In looking at the global situation, refers specifically to Article 2 and by association Article 1. Notes the findings of both articles refer to the way in which CI operates in the UK and uses this as a basis for their discussion.</p>
<p>Wright, S. & Calof, J.L. (2006) 'The Quest for Competitive, Business and Marketing Intelligence: A Country Comparison of Current Practice' <i>European Journal of Marketing</i> Vol 40, No 5/6, pp 453-465</p>	<p>Notes that Article 2 is one of a number of country-based studies, all of which examine in depth, individual country biases, cultural and operational differences.</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Suchon, K. & Randall Haley, K. (2008) ‘The World is Still a Village: The Use of Competitive Intelligence by SMEs to Support International Activities’ <i>Review of Business Research, January 2008</i> Online publication, retrieved on 26th July 2010 from http://findarticles.com/p/articles/mi_6776/is_1_8/ai_n28552098/?tag=content;coll</p>	<p>Notes the comments in Article 2 that whilst country studies had been somewhat different in scope, the focus was generally on whether or not firms practiced CI. The authors agreed with the proposition put forward in Article 2 that an important feature of intelligence practice (that of cultural differences) had at that time, not been undertaken</p>
<p>Calof, J.L. & Wright, S. (2008) ‘Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 717-730</p>	<p>Quotes the Nathan Rothschild’s use of battle-field intelligence to make a fortune on the London Stock Exchange following Napoleon’s defeat in Waterloo (1815). This story is used in Article 2 to demonstrate the longevity of competitive intelligence as a profitable pursuit.</p>
<p>Trim, P.R.J. & Lee, Y-I (2008) ‘A Strategic Marketing Intelligence and Multi-Organisational Resilience Framework’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 731-745</p>	<p>Says that one of the main points made in Article 2 is right and quotes directly from the text regarding what would be required for CI to be recognition and accepted as at least equal to, if not more vital than, other business professions.</p>
<p>Adidam, P.T., Gajre, S. & Kejriwal, S. (2009) ‘Cross-Cultural Competitive Intelligence Strategies’ <i>Marketing Intelligence & Planning</i> Vol 27, No 5, pp 666-680</p>	<p>Refers to the point made in Article 2 which identifies the peculiarities of differing European regions, especially when involved with gathering CI.</p>

Foreign Language Citation

Smith J.R. (2008) 'Efficacité de la veille Concurrentielle et Consequences Stratégiques', pp 181-199 in Larrat, P. (Ed), *Benchmark Européen de Pratiques en Intelligence Economique*, Paris: L'Harmattan

Theses Citations

Manullang, S.M. (2008), The Development of SMEs in Bukit Barisan High Land Area to Create an Agricultural Center by Using A Solid Cooperation Between Local Governments, Enterprises, and Farmers An application of Competitive Intelligence for Stimulating the Growth', PhD Information and Communication, Université Paris-Est, France

Al Najim, M. (2010), 'An Examination and Evaluation of the Strategic Pressures Facing the High Quality Printing Sector and the Role which Competitive Intelligence can have in Securing or Defending Competitive Advantage', MSc Strategic Marketing, De Montfort University, UK.

Citation Analysis

Article 3: The Quest for Competitive, Business & Marketing Intelligence: A Country Comparison of Current Practice

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Bose, R. (2008) ‘Competitive Intelligence Process and Tools for Intelligence Analysis’ <i>Industrial Management & Data Systems</i> Vol 108, No 4, pp 510-528</p>	<p>Refers to the findings in Article 3 that reveal the extent, or otherwise of competitive information use by Fortune 500 firms and emphasises the point made that despite this apparently high figure, many firms still struggle with the process and mechanisms. Supports the statement made in Article 3 that a universal understanding of the competitive landscape is important to move decision makers towards the maximisation of competitive advantage.</p>
<p>Liu, C-H. & Wang, C-C. (2008) ‘Forecast Competitor Service Strategy with Service Taxonomy and CI Data’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 746-765</p>	<p>Identifies Article 3 as being one of very few which has used surveys and statistical methods to compare different CI practices among differing countries.</p>
<p><i>Refereed Conference with Published Proceedings</i> Hudson, S. & Smith, J.R. (2008) ‘Assessing Competitive Intelligence Practices in a Non-Profit Organisation’ <i>Proceedings of the 2nd European Competitive Intelligence Symposium, 27th-28th March 2008, pp 1-20</i> Lisbon, Portugal</p>	<p>Draws extensively on the facets of the model produced in Article 3 and agrees with the points raised there that the issues of process, structure, culture, awareness and attitude have not been sufficiently researched. Uses this framework to allocate findings from their empirical study.</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Guo, W. (2008) ‘Establishment and Application of Competitive Intelligence Systems in China’ <i>Proceedings of the 2nd International Symposium on Intelligent Information Technology Applications, IEEE Computer Society 21st-22nd December 2008, pp 279-283</i> Shanghai, China</p>	<p>Uses one of the findings in Article 3 as the platform for this paper, stating that there has been a marked increase in the number of companies putting the machinery in place to collect and analyse competitive intelligence. Suggests agreement with the view put forward in Article 3 that it is somewhat inexplicable that so many fail to capitalise on this effort.</p>
<p>Suchon, K. & Randall Haley, K. (2008) ‘The World is Still a Village: The Use of Competitive Intelligence by SMEs to Support International Activities’ <i>Review of Business Research, January 2008</i> Online publication, retrieved on 26th July 2010 from http://findarticles.com/p/articles/mi_6776/is_1_8/ai_n28552098/?tag=content;coll</p>	<p>Draws significantly from Article 3 in identifying the different empirical work done on CI practice in Canada, UK and Europe. Identifies the differing features of each of the three studies compared in Article 3 and reports on the findings</p>
<p>Calof, J.L. & Wright, S. (2008) ‘Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 717-730</p>	<p>Noted that in Article 3, the needs for more rigorous methodologies were required by researchers when undertaking empirical studies of CI practice in order for their output to be acceptable by the better Journals. Draws attention to the findings that there is a lack of consistency and output value from some studies. Identifies the problems identified in Article 3 that it is not sufficient to stay within the structured boundaries of the CI cycle but to test the effectiveness of the various elements in a wider perspective. Identifies the issues raised in Article 3 as the driver behind their current thinking.</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Dishman, P.L. & Calof, J.L. (2008) ‘Competitive Intelligence: A Multiphasic Precedent to Marketing Strategy’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 766-785</p>	<p>Replication study using the same sample type as was used for our study.</p>
<p>Adidam, P.T., Gajre, S. & Kejriwal, S. (2009) ‘Cross-Cultural Competitive Intelligence Strategies’ <i>Marketing Intelligence & Planning</i> Vol 27, No 5, pp 666-680</p>	<p>Reinforces the view put forward in Article 3 that international competitors continue to evolve and stretch their reach which requires CI practitioners to do likewise in their CI practice. Supports the view posited in Article 3 that CI is both an art and a science. Concludes that a comprehensive cross-country empirical survey is required and that it be conducted along the same lines as Article 3 with the recommendation that this includes both developed and emerging markets</p>
<p>Fleisher, C.S. & Wright, S. (2009) ‘Examining Differences in Competitive Intelligence Practice: China, Japan and the West’ <i>Thunderbird International Business Review</i> Vol 51, No 3, pp 249-261</p>	<p>Refers to the country comparative study in terms of practice and confirms the assertion proposed in Article 3 that this need to be studied in management and business schools to ensure practitioners are aware of differing cultural norms and approaches to CI</p>
<p>Venter, P. & Tustin, D. (2009) ‘The Availability and Use of Competitive and Business Intelligence in South African Business Organisations’ <i>Southern African Business Review</i> Vol 13, No 2, pp 88-117</p>	<p>Identifies the output of Article 3 as proof that members of staff are the most critical primary source of intelligence</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Fleisher, C.S. & Wright, S. (2008) ‘Setting the Standards for the Professionalism of Competitive Intelligence Practice’ <i>Proceedings of the 2nd European Competitive Intelligence Symposium, 27th-28th March 2008</i>, pp 1-25 Lisbon, Portugal</p>	<p>Reiterates the made in Article 3 that CI should not be viewed purely as a North American phenomena and that CI in Europe and Asia has a far longer history than most might imagine.</p>
<p>Wright, S., Eid, E.R. & Fleisher, C.S. (2009) ‘Competitive Intelligence in Practice: Empirical Evidence from the UK Retail Banking Sector’ <i>Journal of Marketing Management</i> Vol 25, No 9/10, pp 941-964</p>	<p>Supports the view put forward in Article 3 that the traditional ‘intelligence cycle’ no longer works in dynamic environments and that the network type processes, also suggest in Article 3 is not only preferred but more effective. Notes the desire by decision makers to capitalise on gathered intelligence and to ensure that organisational processes and structures enable this to happen</p>
<p><i>Refereed Conference with Published Proceedings</i> Smith, J.R. (2009) ‘Competitive Intelligence in Small Companies: A Synthesis of Studies and Research Agenda’ <i>Proceedings of the Academy of Marketing Conference 2009</i>, pp 1-7 Leeds Metropolitan University, Leeds, UK</p>	<p>Agreed with the position proposed in Article 3 that the ‘wheel of intelligence’ was too broad to be measured in one study and that in order to better understand the interaction of the different facets, research should focus on the different aspects of the CI process instead.</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Søilen, K.S. & Hasslinger, A. (2009) ‘How Application Integration, Security Issues and Pricing Strategies in Business Intelligence Shape Vendor Differentiation’ <i>Proceedings of the 3rd European Competitive Intelligence Symposium, 11th-12th June 2009</i>, pp 254-262 Mälardalen University. Stockholm, Sweden</p>	<p>Identifies Article 3 as a good source for defining the difference between BI and CI. Notes that this issue has caused considerable debate between practitioners and academics, with neither really reaching an acceptable compromise. In truth, the terminology is country-centric so agreement and global usage of any term is highly unlikely.</p>
<p>Smith, J.R., Wright, S. & Pickton, D.W. (2010) ‘Competitive Intelligence Programmes for SMEs in France: Evidence of Changing Attitudes’ <i>Journal of Strategic Marketing</i> Vol 18, No 7, pp 523-536</p>	<p>Draws on the definition used in Article 3 as one of the most relevant to CI practice in the English speaking world. This shows a contrast to the definitions typically used in France. Also identifies the study reported in Article 3 as the only one which has explored the influencing drivers of awareness, attitude, process and structure in CI processes</p>
<p>Fleisher, C.S. & Wright. S. (2010) ‘Competitive Intelligence Analysis Failure: Diagnosing Individual Level Causes and Implementing Organisational Level Remedies’ <i>Journal of Strategic Marketing</i> Vol 18, No 7, pp 553-572</p>	<p>Comments on, interprets and agrees with the views put forward in Article 3, stating that if all CI analysis was done scientifically, then the development of artificial intelligence, computational algorithms, and solutions-generating software would already have become the norm, and as such, would be debilitating for analysis as well as decision making in most organisations. Cites this article as an expert view ion the matter.</p>

Foreign Language Citations

- Van Eerden, B.M.J. & Rodenberg, J.H.A.M. (2007), 'Marketing Intelligence as a Strategic Capability for Outperforming Competition', Rodenberg & Associates White Paper, The Netherlands, pp 1-28
- Bégin, L., Deschamps, J. & Madinier, H. (2008), 'Intelligence Économique et Veille Stratégique dans les PME de Suisse Romande: Leçons Tirées d'une Recherche-action', *Proceedings of the 2nd European Competitive Intelligence Symposium, 27th-28th March 2008*, pp 1-23, Lisbon, Portugal
- Laghzaoui, S. (2008), 'Pratiques de Surveillance de l'environnement par les PME Exportatrices: Proposition d'un Modèle Conceptuel', *Proceedings of the 2nd European Competitive Intelligence Symposium, 27th-28th March 2008*, pp 1-14, Lisbon, Portugal
- Wu, S., Zhou, X. & Zhang, H. (2008), 'The Pattern Matching Algorithms Formalized Analyze in Chinese Strings', *Proceedings of the International Symposium on Intelligent Information Technology Applications, 21st-22nd December, 2008*, pp 403-407, Shanghai, China, Vol 1.
- Bennani, A.E. & Laghzaoui, S. (2009), 'L'articulation Entre la Surveillance de L'environnement de L'entreprise et le Système D'information: L'apport d'une Approche Systémique', *Revue Internationale D'intelligence Économique*, Vol 1, Paris, France, Cairn.
- Santos, M.C.F. & Correia, A.M.R. (2010), 'Fundamentos Teóricos da Competitive Intelligence Como Vantagem Competitiva', *Comunicação apresentada na 5ª Conferência Ibérica de Sistemas e Tecnologias de Informação, CISTI 16th-19th June 2010*, Santiago de Compostela, Espanha, Vol 2, pp 329-334

Theses Citations

Ahlstedt, M. (2008), Title: Implementation of an IT Based Marketing Information System in a High Tech Company', MBA (Marketing Management), University of Gävle, Sweden

Eriksson, M. (2008), 'Different Perspectives on the Same Environment – A Study of the Environmental Scanning at Stockholm Public Library and the Bookstore Akademibokhandeln', MSc Library and Information Science, Borås University, Sweden

Casas, L.C. (2010.) 'Propuesta De Sistema De Vigilancia Tecnológica Apropriado Para La Estación Experimental 'Indio Hatuey', MBA Thesis, Universidad De Matanzas, Camilo Cienfuegos, Cuba

Giacomello, C.P. (2009), 'Relação Entre Inteligência Estratégica e Orientação para o Mercado e seus Impactos no desempenho das Organizações', PhD, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande, Brazil

Trevisani, A.T. (2010), 'Inteligência Competitiva e Interpretação do Ambiente: Um Estudo Com Fornecedores do Serviço Público Fedral, PhD Thesis, Univeridad de São Paulo, Brazil

Tebo, B.T. (2010), 'The Role of Competitive Intelligence In Marketing Decision Making within the UK Mobile Telecom Sector. The Case of a Major Mobile Telecom Operator', MSc Strategic Marketing, De Montfort University, UK.

Citation Analysis

Article 4: The Contribution of CI to the Strategic Decision Making Process: Empirical Study of the European Pharmaceutical Industry

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Dishman, P.L. & Calof, J.L. (2008) ‘Competitive Intelligence: A Multiphasic Precedent to Marketing Strategy’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 766-785</p>	<p>Identifies Article 4 as the only study which addresses the connection between CI and Strategic Decision Making (SDM)</p>
<p><i>Refereed Conference with Published Proceedings</i> Wright, A., Fleisher, C.S. & Madden, E. (2008) ‘Characteristics of Competitive Intelligence Practice in R&D Driven Firms: Evidence from the UK Pharmaceutical Industry’ <i>Proceedings of the European Business Research Forum, 22nd-24th September 2008</i>, pp 1-14 Katajonnokka, Helsinki, Finland and Stockholm Sweden</p>	<p>Identifies Article 4 as a primary source for research into CI and decision making in the pharmaceutical industry.</p>
<p>Fleisher, C.S. & Wright, S. (2009) ‘Examining Differences in Competitive Intelligence Practice: China, Japan and the West’ <i>Thunderbird International Business Review</i> Vol 51, No 3, pp 249-261</p>	<p>Identifies the descriptor used in Article 4 as the one which is most appropriate for putting the entire CI effort into perspective but more importantly, ties that into decision making. This was the point of the study reported in Article 4 and as such was an appropriate confirmation.</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Smith, J.R. (2009) ‘Competitive Intelligence in Small Companies: A Synthesis of Studies and Research Agenda’ <i>Proceedings of the Academy of Marketing Conference 2009</i>, pp 1-7 Leeds Metropolitan University, Leeds, UK</p>	<p>Notes the finding and conclusion reached from the study reported in Article 4 that SMEs were less likely to consider CI as a key component in marketing strategy than larger firms.</p>

<p><i>Foreign Language Citations</i></p> <p>Larivet, S & Brouard, F. (2007), ‘Stratégies Des PME et Pratiques D’intelligence Économique et de Veille Stratégique’, <i>Proceedings of the Fifth Congrès International de l’Académie de l’Entrepreneuriat, 4th-5th October 2007</i>, pp 1-19, Sherbrooke, Quebec, Canada</p> <p>Larivet, S. & Brouard, F. (2007), ‘Intelligence Économique, Veille Stratégique et Nature des Stratégies des PME’, <i>Proceedings of the Fifth Conference, VSST (Veille Stratégique Scientifique et Technologique)</i>, Marrakech, Morroco, 21st-25th October 2007, 13 pages (CD-ROM).</p>
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Citation Analysis

Article 5: 'Bibliography and Assessment of Key Intelligence Scholarship: Part 4 (2003- 2006)'

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Dishman, P.L. & Calof, J.L. (2008) 'Competitive Intelligence: A Multiphasic Precedent to Marketing Strategy' <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 766-785</p>	<p>Explicitly refers to the CI bibliographic suite, of which Article 5 was Part 4. Also identifies it as the only source which presents a complete list of CI studies.</p>
<p><i>Refereed Conference with Published Proceedings</i> Fleisher, C.S. & Wright, S. (2008) 'Setting the Standards for the Professionalisation of Competitive Intelligence Practice' <i>Proceedings of the 2nd European Competitive Intelligence Symposium, 27th-28th March 2008</i>, pp 1-25 Lisbon, Portugal</p>	<p>Uses the analytical output of Article 5 to note the less than numerous theses and dissertations which have been conducted 2003-2006. Identifies from Article 5, the Journals which are receptive to CI work, and reiterates the general agreement that Article 5, along with similar efforts by the same authoring teams were as close as one could get to a CI body of knowledge (BoK). Itemised recommendations were produced in this paper to address the problems faced.</p>
<p>Fleisher, C.S. (2008) 'Using Open Source Data in Developing Competitive and Marketing Intelligence' <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 852-866</p>	<p>Identifies one of the findings in the analysis section of Article 5 that firms are not always eager to share their experiences in print and that academic research in this area is typically undertaken primarily for 'output' purposes.</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Wright, A., Fleisher, C.S. & Madden, E. (2008) ‘Characteristics of Competitive Intelligence Practice in R&D Driven Firms: Evidence from the UK Pharmaceutical Industry’ <i>Proceedings of the European Business Research Forum, 22nd-24th September 2008</i>, pp 1-14 Katajonnokka, Helsinki, Finland and Stockholm Sweden</p>	<p>Uses the content and analysis presented in Article 5, as well as other bibliographical listings, to present an analysis of key literature covering primary R&D intelligence focus areas. This culminates in a comprehensive overview of the topic from 1979 to 2006.</p>
<p>Calof, J.L. & Wright, S. (2008) ‘Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective’ <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 717-730</p>	<p>Identifies the analysis and listing of Article 5 as an independent and authoritative source of CI scholarship</p>
<p>Fleisher, C.S. & Wright, S. (2009) ‘Examining Differences in Competitive Intelligence Practice: China, Japan and the West’ <i>Thunderbird International Business Review</i> Vol 51, No 3, pp 249-261</p>	<p>Identifies this Article 5 as a respected and authoritative source for documented evidence of CI practice in large firms, empirical studies, books and case studies. Notes that this source is used in leading business schools for teaching and research purposes</p>
<p>Brownlie, D. (2009) ‘Tales of Prospects Past: On Strategic Fallacies and Uncertainty in Technology Forecasting’ <i>Journal of Marketing Management</i> Vol 25, No 5-6, pp 401-429</p>	<p>Notes that Article 5, as well as Article 7 are authoritative sources for understanding the field of competitive intelligence</p>

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Smith, J.R. (2009) ‘Competitive Intelligence in Small Companies: A Synthesis of Studies and Research Agenda’ <i>Proceedings of the Academy of Marketing Conference 2009</i>, pp 1-7 Leeds Metropolitan University, Leeds, UK</p>	<p>Commented that Article 5 was a major contributor, if not, the only contributor, to the cataloguing of CI scholarship. Used Article 5 to report on work carried out in the SME sector.</p>
<p><i>Refereed Conference with Published Proceedings</i> Hoppe, M. (2009) ‘Intelligence Ideals’ <i>Proceedings of the 3rd European Competitive Intelligence Symposium, 11th-12th June 2009</i>, pp 117-127 Mälardalen University. Stockholm, Sweden</p>	<p>Quotes directly from Article 5 which calls for researchers to write better articles which have the potential to be published in well established disciplinary and cross-disciplinary Journals. Agrees with the sentiments put forward in Article 5 that until and unless this happens, CI will struggle to find its rightful place in the curriculum of degree programmes at top business schools.</p>
<p><i>Refereed Conference with Published Proceedings</i> Frion, P. (2010) ‘Information Acceptance and Information Overload: Towards Information Refusal?’ <i>Proceedings of the Third Organisational Development and Change Conference, 14th-16th June, 2010</i>, 13 pages (CD-ROM) Lyon, France</p>	<p>Uses the output from Article 5 listings to produce an analysis of articles which refer to information overload.</p>

Foreign Language Citation

Ding, L. (2009, 'Analysis on the Competitive Intelligence in Business Management', *Proceedings of the Second International Symposium on Information Science and Engineering, 26th-28th December, 2009*, pp 327-330, Shanghai, China

Theses Citations

Pena, P.H. (2009), 'The SIM Card: An Exercise of Technology Watch Chasing State of the Art and New Opportunities', MSc Knowledge and Information Society, Universitat de Oberta de Catalunya, Barcelona, Spain

Casas, L.C (2010.) 'Propuesta De Sistema De Vigilancia Tecnológica Apropiado Para La Estación Experimental 'Indio Hatuey'', MBA Thesis, Universidad De Matanzas, Camilo Cienfuegos, Cuba

Citation Analysis

Article 6: The Role of Insight Teams in Integrating Diverse Marketing Information Management Techniques'

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Calof, J.L. & Wright, S. (2008) 'Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective' <i>European Journal of Marketing</i> Vol 42, No 7/8, pp 717-730</p>	<p>Identifies Article 6 as a unique account of how an intelligence department became the focal point, catalyst and change agent in a non-profit environment. Notes that this is a ground breaking account of how an insight team developed its own role to integrate the disparate elements of marketing information systems and turned the combined output into competitive insight.</p>
<p>Fleisher, C.S. & Wright, S. (2009) 'Examining Differences in Competitive Intelligence Practice: China, Japan and the West' <i>Thunderbird International Business Review</i> Vol 51, No 3, pp 249-261</p>	<p>Draws attention to the role that internal information plays and uses Article 6 as an illustration of an instance where it significantly enhances the decision making process</p>
<p>Valos, M.J. & Bednall, H.B. (2010) 'The Alignment of Market Research with Business Strategy and CRM' <i>Journal of Strategic Marketing</i> Vol 18, No 3, pp 187-199</p>	<p>Identifies Article 6 as a key article which shows the benefits of, and challenges to, integrating different marketing and customer information systems.</p>
<p>Larivet, S. & Brouard, F. (2010) 'Complaints are a Firm's Best Friend' <i>Journal of Strategic Marketing</i> Vol 18, No 7, pp 537-552</p>	<p>Notes that strategic intelligence development can rely on what is already available in the firm and cites Article 6 as a good illustration of how to integrate hitherto, independent marketing information techniques</p>

Thesis Citation

Casas, L.C. (2010.) 'Propuesta De Sistema De Vigilancia Tecnológica Apropiado Para La Estación Experimental 'Indio Hatuey', MBA Thesis, Universidad De Matanzas, Camilo Cienfuegos, Cuba

Citation Analysis

Article 7: 'Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective'

<i>References in Ascending Date Order</i>	<i>Context</i>
<p>Adidam, P.T., Gajre, S. & Kejriwal, S. (2009) 'Cross-Cultural Competitive Intelligence Strategies' <i>Marketing Intelligence & Planning</i> Vol 27, No 5, pp 666-680</p>	<p>This article begins by using the definition proposed in Article 7, then goes on to use this as a foundation for their country comparative study.</p>
<p>Brownlie, D. (2009) 'Tales of Prospects Past: On Strategic Fallacies and Uncertainty in Technology Forecasting' <i>Journal of Marketing Management</i> Vol 25, No 5-6, pp 401-429</p>	<p>Draws upon the statement made in Article 7 that information as a source of competitive advantage used to be a key feature in UK manufacturing. Notes that Article 7 and Article 5 are authoritative sources for understanding the field of competitive intelligence</p>

Foreign Language Citations

Solleiro, J.L., Castañón, R. & Castillo, J. (2009), 'El Estado del Arte de la Inteligencia Tecnológica Competitiva: Tendencias y Perspectivas', Universidad Nacional Autónoma de México, Occasional Paper Series, pp 1-16

Xiaoping, S (2009), 'Research progresses on basic theories of competitive intelligence from 1996 to 2008', *Knowledge*, Vol 53, No 20. NB: This article is not available in English. A translation is held at the Bodleian Library, Oxford University and due to copyright and licensing regulations they are not able to supply. It is also held at the School of Oriental and African Studies but is held off site and is therefore unavailable.

Theses Citations

Trevisani, A.T. (2010), 'Inteligência Competitiva e Interpretação do Ambiente: Um Estudo Com Fornecedores do Serviço Público Federal, PhD Thesis, Univeridad de São Paulo, Brazil

Al Najim, M. (2010), 'An Examination and Evaluation of the Strategic Pressures Facing the High Quality Printing Sector and the Role which Competitive Intelligence can have in Securing or Defending Competitive Advantage', MSc Strategic Marketing, De Montfort University, UK.

Tebo, B.T. (2010), 'The Role of Competitive Intelligence In Marketing Decision Making within the UK Mobile Telecom Sector. The Case of a Major Mobile Telecom Operator', MSc Strategic Marketing, De Montfort University, UK.

Citation Analysis

Article 8: Examining Differences in Competitive Intelligence Practice: China, Japan and the West

<i>References in Ascending Date Order</i>	<i>Context</i>
<p><i>Refereed Conference with Published Proceedings</i> Mackay, L (2009) 'Cultural Connectivity: The Wealth of a Nation' <i>Proceedings of International Unity in Diversity Conference, 12th-14th August 2009</i>, pp 1-12 Townsville, QLD, Australia</p>	<p>Quotes from Article 8 and reiterates the point made there that Eastern business executives are dedicated to collecting legal and open information, using human networks and interaction as their preferred method</p>

Foreign Language Citations

Ding, L. (2009), 'Analysis on the Competitive Intelligence in Business Management', *Proceedings of the Second International Symposium on Information Science and Engineering, 26th-28th December, 2009*, pp 327-330, Shanghai, China

PLUS two further articles in Chinese - unable to obtain translations

Citation Analysis

Article 9: 'Competitive Intelligence in Practice: Empirical Evidence from the UK Retail Banking Sector'

<i>References in Ascending Date Order</i>	<i>Context</i>
Smith, J.R., Wright, S. & Pickton, D.W. (2010) 'Competitive Intelligence Programmes for SMEs in France: Evidence of Changing Attitudes' <i>Journal of Strategic Marketing</i> Vol 18, No 7, pp 523-536	Refers to Article 9 as a good illustration of how the positioning of CI in the minds of interview respondents can be indicative of their understanding of the concept

Citation Analysis

Article 10: ‘Competitive Intelligence Analysis Failure: Diagnosing Individual Level Causes and Implementing Organisational Level Remedies’

<i>References in Ascending Date Order</i>	<i>Context</i>
Fleisher, C.S. & Wright, S. (2009) ‘Examining Differences in Competitive Intelligence Practice: China, Japan and the West’ <i>Thunderbird International Business Review</i> Vol 51, No 3, pp 249-261	Refers to the point made in an antecedent Conference paper of Article 10 that the skill and craft of the CI analyst and the entire process lies in linking apparently unrelated signals events, perceptions and data into patterns and trends.

APPENDIX 2

Articles Comprising the Body of Work

CI Scholarship

Fleisher, C.S., Wright, S. & Tindale, R. (2007)
'Bibliography and Assessment of Key Intelligence Scholarship: Part 4 (2003-2006)'
Journal of Competitive Intelligence and Management, Vol 4, No 1, pp 32-92
URL: <http://www.scip.org/Publications/JCIMArticleDetail.cfm?ItemNumber=2533>

Calof, J.L. & Wright, S. (2008)
'Competitive Intelligence: A Practitioner, Academic and Inter-Disciplinary Perspective'
European Journal of Marketing, Vol 42, No 7/8, pp 717-730
DOI: 10.1108/03090560810877114

Country Level Analysis

Wright, S., Badr, A., Weiss, A. & Pickton, D.W. (2004)
'Competitive Intelligence Through UK Eyes'
Journal of Competitive Intelligence and Management, Vol 2, No 2, pp 68-87
URL: <http://www.scip.org/files/JCIM/JCIMv2i2UK.pdf>

Wright, S. & Calof, J.L. (2006)
'The Quest for Competitive, Business and Marketing Intelligence: A Country Comparison of Current Practice'
European Journal of Marketing, Vol 40, No 5/6, pp 453-465
DOI: 10.1108/03090560610657787

Fleisher, C.S. & Wright, S. (2009)
'Examining Differences in Competitive Intelligence Practice: China, Japan and the West'
Thunderbird International Business Review, Vol 51, No 3, pp 249-261
DOI: 10.1002/tie.20263

CI Management and Best Practice

Wright, S., Pickton, D.W. & Callow, J. (2002)
'Competitive Intelligence in UK Firms: A Typology'
Marketing Intelligence and Planning, Vol 20, No 6, pp 349-360
DOI: 10.1108/02634500210445400

Fleisher, C.S., Wright, S. & Allard, H.T. (2008)
'The Role of Insight Teams in Integrating Diverse Marketing Information Management Techniques'
European Journal of Marketing, Vol 42, No 7/8, pp 836-851
DOI: 10.1108/03090560810877187

Wright, S., Eid, E.R. & Fleisher, C.S. (2009)
'Competitive Intelligence in Practice: Empirical Evidence from the UK Retail Banking Sector'
Journal of Marketing Management, Vol 25, No 9/10, pp 941-964
DOI: 10.1362/026725709X479318

Strategic Decision Making

Badr, A., Madden, E. & Wright, S. (2006)

‘The Contribution of CI to the Strategic Decision Making Process: Empirical Study of the European Pharmaceutical Industry’

Journal of Competitive Intelligence and Management, Vol 3, No 4, pp 15-35

URL: <http://www.scip.org/Publications/JCIMArticleDetail.cfm?ItemNumber=2539>

Analysis Management

Fleisher, C.S. & Wright, S. (2010)

‘Competitive Intelligence Analysis Failure: Diagnosing Individual Level Causes and Implementing ,Organisational Level Remedies’

Journal of Strategic Marketing, Vol 18, No 7, pp 553-572

DOI: 10.1080/0965254X.2010.529152