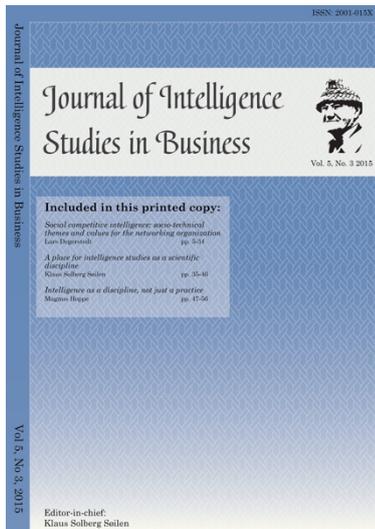


Journal of Intelligence Studies in Business



Journal of Intelligence Studies in Business

Publication details, including instructions for authors and subscription information: <https://ojs.hh.se/index.php/JISIB/index>

A place for intelligence studies as a scientific discipline

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To cite this article: Søylen, K.S. (2015) A place for intelligence studies as a scientific discipline. *Journal of Intelligence Studies in Business*. Vol 5, No 3. Pages 35-46.

Article URL: <https://ojs.hh.se/index.php/JISIB/article/view/136>

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A place for intelligence studies as a scientific discipline

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Received 7 December 2015; accepted 15 December 2015

ABSTRACT Is the field of Competitive Intelligence (CI) or Intelligence Studies (IS) a proper scientific field of study? The empirical investigation found that academics and professionals within CI and IS could not agree upon what dimensions, topics or content are handled by their own area of interest that is not covered by other areas of study. In fact, most topics listed as special for CI and IS are covered by other established scientific journals. Most topics are covered by other disciplines. The data also showed that the same group could not list any analysis that is not used by other areas of study. It shows that a majority of the analyses the respondents think are unique to their study come from the area of strategy and military intelligence. However, this does not mean that CI and IS do not have their own place or niche as a study and discipline. It is suggested here, but further investigation is encouraged, that CI and IS bring a number of unique dimensions to the social sciences.

KEYWORDS competitive intelligence, intelligence studies, science

1. INTRODUCTION

What is a good scientific discipline? When is an area of study a discipline? Is the field of Competitive Intelligence (CI) or Intelligence Studies (IS) a proper scientific field of study? These are the questions that this article will attempt to answer.

In the literature Prescott and Bharadwaj (1995) define the area of CI as a practice. Wright and Calof (2006) set out to discover the nature of competitive, business and marketing intelligence by a country comparison. Solberg Søylen (2014) looks at the value a scientific articles on IS for professionals. An analysis of articles published in earlier journals like CIR and JCIM is presented in Solberg Søylen (2013). Du Toit (2015) investigates the extension and trends in the IS literature. She ranks the most published authors and evaluates their work. These three last contributions are part of an attempt to

reevaluate the study of CI which started only a few years back in time.

More generally, Leydesdorff et al. (2013) have written on how to do a mapping of sciences. Earlier, Morillo et al. (2003) have shown how research has become increasingly interdisciplinary.

A discipline is different from what is called general knowledge in that it contains a body of particular knowledge, has experts and it must be possible to separate it from other areas of knowledge. A discipline is defined as a branch of science, developed by a group of specialists who all adhere to the same practice and research. To what extent is this true for CI and IS? There have been no scientific articles that attempt to answer these questions for the study of CI and IS¹.

There are different ways to answer these questions. One way is to go by the criteria of the larger publishers of scientific databases, like SCOPUS and Web of Science (WoS).

¹ The term CI was dominant in the literature until five years ago. Today IS is used as often. The term was suggested by Sheila Wright, the co-editor of JCIM, for the new journal at the ICI conference in

Bad Nauheim in 2011. See the conference summary by Arthur Weiss at <http://competitiveintelligence.ning.com/forum/topics/2011-ici-atelisci-conference>

Serious researchers publish in well-accepted scientific databases. A journal – and thus also a discipline – has much greater chances of attracting the attention of other scholars if it is accepted in these databases, even though there are others. The pressure is particularly high for getting into WoS. The problem is that WoS does not evaluate a discipline per se, but only the journal. The journal must follow certain publishing standards, have an editorial board, reviewers, an international focus and it must be cited by other journals. This last criterion is the difficult threshold for WoS, as Thomson Reuters does not say how many times a journal must be cited.

Another problem is the question of if this means that all journals in WoS represent a specific discipline. The answer is no. This is not one of the criteria by which journals are accepted into WoS. There is also a significant number of overlap areas and journals in WoS, so that an area such as marketing is covered by dozens of journals with little difference between them.

If CI and IS is not a discipline, is it then a scholarly approach? This is another question of relevance. A scholarly approach may be defined as an area that is multidisciplinary, interdisciplinary (knowledge that exists between or beyond existing academic disciplines or professions), transdisciplinary (a union of all interdisciplinary efforts) and cross-disciplinary, all with less focused practices. Academic disciplines are more focused. That an area of study is a scholarly approach is not an assessment of content, practitioners or its use. Biochemistry and geophysics are good examples. Wright and Calof (2006) recommend a stronger adhesion with other disciplines to develop a more robust research agenda. Memheld (2014) shows in a case study how an initial intelligence effort is led astray. Instead the solution is a combination of approaches.

There are relevant historical and sociological aspects to consider for this investigation too. The 1970s and 1980s saw the start of an explosion of academic fields. Many of these had a focus around a specific theme, like media studies, women's studies or black studies. This was, to some extent, a continuation of a process that started at German universities in the nineteenth century whereby the term "discipline" was used as a catalog and archive for a new body of information produced by a scientific community. Communities of academic disciplines can also be found outside of

academia, within corporations and in government agencies. SCIP is an example for the field of CI. In fact, as we shall see, CI has been driven forward first of all by consultants, not academics.

The starting point for any discipline is a clear definition of the area of study. So far there has been no agreement as to a definition of CI. If we google the question, the three first definitions we get are quite different. At entrepreneur.com it says "The process of gathering actionable information on your business's competitive environment." On Investopedia it says "The process of collecting and analyzing information about competitors' strengths and weaknesses in a legal and ethical manner to enhance business decision-making". On Wikipedia it says "Competitive intelligence is the action of defining, gathering, analyzing, and distributing intelligence about products, customers, competitors, and any aspect of the environment needed to support executives and managers making strategic decisions for an organization." The first has a focus on the information, the second on decisions and ethics and the third on the intelligence cycle, Porter's five forces and decisions.

Another problem with these definitions is what in the study of logics is called "*Ignotum per ignotius*" or "*obscurum per obscurius*," which describes the making of a definition with the help of words that need further explanation. For example, what do "actionable information," "competitive environment," and "ethical manner" mean? What is ethical in one culture may not be so in another. When we try to see how these definitions are made there is no laying out of the "connotation" or necessary qualities of the term, which is what any definition requires. We then need to define the "differentia," those qualities which separate one term from another. Then we must spell out the property of the term, or the qualities that must belong to the term. Jumping over this is typical for most definitions in the study of management. Many new areas became popular after a bestselling book for practitioners becomes available. Consequently, management theory is riddled with sophisms. The sophists used grandiloquent phrases and confused their pupils, all in the name of persuasion. Winning a discussion was seen as more important than trying to lay out truths. Afterwards, researchers are often called in to sort out the logic.

The more consistent definition of intelligence is about intelligence as the faculty of thinking, emotional intelligence or artificial intelligence, which are all very different phenomena. Most scientific articles are also in these fields. The problem with the definition of our intelligence – the product and process of information gathering – is to a large extent the same for state intelligence, as Dr. Michael Warner, a CIA History Staff reminds us: “We have no accepted definition of intelligence. The term is defined anew by each author who addresses it, and these definitions rarely refer to one another or build off what has been written before. Without a clear idea of what intelligence is, how can we develop a theory to explain how it works?”² Most of the definitions suggested for the term state that intelligence makes little sense in the notion of private intelligence. What is needed for IS is a definition that can fit both state and private intelligence. Instead of reinventing the wheel, we can first look at what has already been done.

The Clark Task Force of the Hoover Commission in 1955 made the following definition: “Intelligence [Studies] deals with all the things which should be known in advance of initiating a course of action.”³ In the mid-1990s the Brown-Aspin Commission said intelligence was “information about ‘things foreign’ – people, places, things, and events – needed by the Government for the conduct of its functions.” The definition fits for CI and IS if one only replaces “Government” with “organization.” The statement then reads “Intelligence Studies (IS) is about ‘things foreign’ – people, places, things, and events – needed by the organization for the conduct of its functions.”

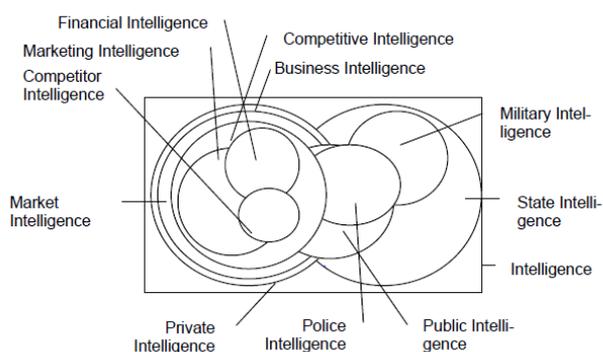


Figure 1 Classification of Intelligence Studies

There is another problem with a great number of definitions; they tend to change over time, because the nature of what they study changes. This is the case with Business Intelligence (BI) for example. Before the software business became engaged in the intelligence area, BI used to be understood as private intelligence, as opposed to state or public intelligence. The confusion lives on even today, even though BI has for many years now been a separate and large scientific discipline dominated by engineers and programmers. In Bose (2008), for example, BI is still what is inside the company whereas CI is what is outside (p. 511).

When the definition is completed we can move on to the question of classification, which is the next step in laying out a scientific area. One such classification of Intelligence Studies is suggested in Jenster and Solberg Søylen (2009), p. 13.

The classification helps us to place different forms of intelligence in a model, which shows how they relate to one another. In the model above, we have used a Venn diagram to show the logic (Figure 1). There are two large types of IS, private and public intelligence, each representing two fundamental spheres of society. State and military intelligence are the two largest parts of the public sphere. In the private sphere we see that, for example, financial intelligence is smaller than and a part of competitive intelligence. We also see that private and public intelligence are not mutually exclusive, but overlap, as some problems are common for both the public and the private sphere.

One way to continue with the scientific investigation about the nature of CI and IS is to find out what areas are covered by the study that are not covered by other areas of study. In much the same way we want to know what analyses are covered by the study that are not covered by other studies. This will tell us something about the uniqueness of the study and how it relates to other disciplines (degree of interdisciplinarily, multidisciplinary and cross-disciplinary). This has not been done in the literature previously.

Many of the analyses used in CI go back to Michael Porter, for example as found in Porter, 1980. Tools and analyses used in CI have been analyzed by Bose (2008). Fleischer and

² From <https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol46no3/article02.html>

³ From the Commission on Organization of the Executive Branch of the Government [the Hoover Commission], "Intelligence Activities," June 1955, p. 26. The interim report to Congress was prepared by a team under the leadership of Gen. Mark Clark.

Bensoussan (2003) identify several strategic analytical techniques used in CI including the BCG growth/share portfolio matrix, the GE Business screen matrix, industry analysis (Porters Five Forces Model), strategic group analysis, SWOT analysis, financial ratios, and value chain analysis. Hussey (1998) identifies sources of information for doing a competitor analysis. Sakys et al. (2013) show a way to do analysis for business intelligence in the classroom. In a similar article, Sakys and Butleris (2011) show how BI tools can improve management courses and training at the university. An extensive evaluation of BI projects is done by Adamala and Cidrin (2011). They show the role BI software plays for the success of business projects. Bruneau and Frion (2015) look critically at the quest for ever more data in BI. They suggest that big data can actually be a problem – not a solution – and suggest a way back to basics, to military strategy and how to formulate better questions.

The answers to the two questions posed above will tell us about the study's uniqueness. In this article we propose to answer these questions empirically. The method for finding the answers is explained in the methodology chapter in the next section.

2. METHOD AND RESEARCH DESIGN

A survey was sent to three active networks of CI practitioners (CI communities on LinkedIn, JISIB readers and CI conference list participants), with an equal mix of academics and professionals. Of a total population of an estimated ten thousand practitioners, we identified a sample of 3500 recipients from which we obtained answers from 286 respondents. The study was conducted in November 2015. It was followed up with deep interviews (20-40 mins) with twenty-nine

practitioners (10% of respondents), randomly selected from the initial respondents.

The research focuses on a relatively new phenomenon and is therefore of a more exploratory nature rather than a study aiming to uncover cause-effect relations or test hypotheses. The extent of researcher interference was moderate in the surveys and excessive in interviews. The study setting for surveys is non-contrived, meaning we study the phenomenon in its natural context. The unit of analysis is individuals. The time horizon is cross-sectional in the study, meaning we conduct the study at one specific time period. Determining moderators for this study are thought to be education and profession as well as the ability to adapt to new technologies.

The two questions asked were:

1. In your opinion, what is the part of the study of intelligence in business (competitive intelligence, market intelligence) that is NOT covered by other disciplines (strategy, management, marketing etc.)? In other words, what is it from a scientific perspective that makes the study of intelligence in business special or unique?
2. Please take a few minutes to reflect on this question: Can you list a number of analyses that you consider to be unique for intelligence studies in business, that is, analyses that are first of all used in intelligence studies (please rank them according to their uniqueness to the area of study, most relevant on top, etc.)

The data collected are presented in the next section of the paper, in the empirical findings part.

Table 1 Empirical data from surveys and interviews

| Interview Number | Part of study NOT covered by other disciplines | Corresponding discipline / area | Analyses NOT covered by other disciplines |
|------------------|---|---|--|
| 1 | Connecting facts in a way that helps to make sense of information | Information science | SWOT, Porter's five forces |
| 2 | IT – data warehousing solutions | IT | Blank |
| 3 | The two steps procedure: 1. Systematic and contextualized information 2. Transform of knowledge into intelligence | Information science | Blank |
| 4 | Neuro-business | Neuroscience | Theory of spontaneous order of business, relativity of time in business |
| 5 | Competitor intelligence, intelligence for sales, win-loss analysis, wargames, market-sizing and forecasting, modelling. The study of people with whom you are going to do business. | Marketing & sales, strategy, managerial accounting, HRM | Competitor analysis, customer insights analysis, market-share analysis, opportunity analysis, propensity modelling for upsell/cross sell |

| | | | |
|----|--|--|--|
| 6 | The study of business contacts | HRM | People involved and their needs. Changes (political, cultural, environmental, economical, etc.). |
| 7 | The link between market awareness and sound decision making | Marketing, decision-making | War gaming, scenario analysis |
| 8 | The connection between information types and sources and decision making | Information science, sources/sci method, decision-making | Blank |
| 9 | The aspects that relate to gathering and disseminating intelligence, as well as the specific use of intelligence in strategic and tactical decision making | strategy, decision-making | Practices and processes of intelligence gathering analysis, dissemination, decision-making; value of intelligence to decision-makers |
| 10 | "Watch" (French " <i>veille</i> ") is not covered by other disciplines. CI is special because it mixes all approaches | Watch, inter-disciplinary | information plan, Research Plan, cartography, dynamic environmental analysis |
| 11 | Competitive intelligence | Blank | SCIP Code of Ethics for Competitive Intelligence Professionals. Studying patents, patent applications, and trademarks of competitors and the potential legal consequences of doing so. Basic technical knowledge needed to understand competitive intelligence |
| 12 | Eliciting information from competitors using human sources (HUMINT) | Competitor analysis, HUMINT | Analysis of Competing Hypotheses. Listing Key Intelligence Areas. Counter Intelligence Audit |
| 13 | CI/MI as an integrator and synthesizer of other traditional disciplines, particularly, strategy and marketing (as well as innovation). | Strategy, marketing, innovation | The body of innovation methods – business model as well as product/technology |
| 14 | None | | None |
| 15 | The study of intelligence in business deals with all methods and tools that allow information to be transformed into knowledge and intelligence | Knowledge management, information science | The Intelligence typology built by Wright, Bisson and Duffy (2012) for companies and by Bisson (2015) for public organizations. Strategic Early Warning System. |
| 16 | The wide coverage of topics makes it unique. | Multi-disciplinary | No specific |
| 17 | The "fog and the friction" (Clausewitz). This is different from the strategy which is planned. Imperfect information. The transdisciplinary approach, more open minded | Imperfect information, trans-disciplinary | How we produce knowledge, how we tend to validate information. To understand failures. Try and avoid deception from our "allies and enemies." Monitoring. |
| 18 | Strategy, management, marketing is very different from intelligence in business. | Management, marketing | General theory of information analysis Analysis of text |
| 19 | The development of business insights | Business insights | Porter, Corner, War Game, Intelligence Funnel, Competitor Profile |
| 20 | Counter-intelligence/ Securing confidential information within the organization | Counter intelligence, security | Scenario Planning, War gaming, Early Warning, External Technology Watch |
| 21 | Advanced analyses, anticipating events | Advanced analyses, anticipating events | Early warning, foresight, Big data analysis, semantic analysis, competing hypotheses, physiologic profiling |
| 22 | Its integration with strategy and marketing | Integration with strategy and marketing | Four corners, scenario analysis, Five forces, PESTL, McKinsey 7s |
| 23 | IT management | IT management | PESTEL, SWOT, Value chain analysis, customer analysis, competitor analysis, supplier analysis |
| 24 | Qualitative research in business context | Qualitative research | LAMP – Lockwood Analytical Method for Prediction / ACH – Analysis of Competing Hypotheses |
| 25 | Decision making support | Decision-making | Data mining |
| 26 | Early warning and forecast | Early warning, forecasting | Patent analysis, forecasting, strategic early warning and flexibility of integration with other methodologies |
| 27 | A collection method distinct from market research survey approaches | Information gathering | War gaming, scenario analysis, win loss analysis, business model canvas (as data required), 4-corners analysis. |
| 28 | I cannot imagine any aspect, which is not related to others | None | All analyses associated with the environment of the firm. Specifically: Scenario analysis, Five forces, Forecasts, Benchmarks and Best Practice |
| 29 | Dynamics of several players: rivals, suppliers etc. The future of things | Industry analysis, future studies | None |

3. EMPIRICAL FINDINGS

In Table 1 below we have restated a summary of the answers from those who participated in the follow-up interviews.

A summary of some of the comments from the interviews are presented below. Each statement is from a different respondent:

“Difficult questions! (...) Answers reflect what I have seen at many companies, but this is not a general rule. In some companies all intelligence functions are executed by other departments.”

“Intelligence was always applied to decision making in conflict situations, especially in fast changing environments. (...) Isn't that a central issue in business too?”

“Competitive Intelligence needs to be indigenized and customized from varied geography and cultures. A method that is effective in Africa may not work in South America.”

“Intelligence in business excels in piggy-backing other scientific areas and that is fine as much as it serves its clients' needs.”

“Intelligence does not mean anymore insight, but the creation of knowledge for competitive and decision purpose. For the study perhaps a section dedicated to strategy would help to make the journal [JISIB] stronger, then increase its impact factor and interest for the study of intelligence in business in general.”

“Some more focus on strategic intelligence and research will lend an interesting flavor.”

“What should be more studied is the human side of CI. Psychology and sociology, organizational behavior, and information

behavior. We also consider too much information analysis, and we very rarely mention information synthesis. Apparently information overload doesn't exist or is not taken seriously in CI (It is so much against the progress paradigm that says that more information is better because information is (always) a good thing, ... which is wrong). We consider too much the idea of "information" and the informational approach (data-driven strategy), we do not consider enough the communicational approach nor the informative approach.”

“Intelligence studies in business need to enrich its own theory, while developing its own unique analysis method.”

“My POV: intelligence as a discipline is part of all areas of management / corporate conduct (...) at any level of corporate decision making the right information at the right time is needed to enable strategic and tactical decision making.

In the next section of the article we attempt to analyze the data gathered in the empirical part of the study.

4. ANALYSIS

One way to start the analysis is to ask which areas of study or problems raised in the comments above do not have their own well established scientific journal. In Table 2 we only added those areas where the answer could be in doubt. We did not list the more established and obvious areas where we know there exists corresponding scientific journals, like market research.

There are many journals that cover topics not reflected in the journal names and that we will have missed. Another limitation was that we only checked in two of the major databases,

Table 2 Related problems areas and their corresponding scientific journals

| Topics/databases | Web of Science | SCOPUS | Corresponding journals |
|--|----------------|--------|--|
| Future, future studies, futurology | No | Yes | Journal of Futures Studies, Technological Forecasting and Social Change, The Futurist World Future Society |
| Early warning | No | No | None |
| Forecasting | Yes | Yes | International Journal of Forecasting |
| Decision Making | No | Yes | Medical Decision Making, Decision Science Letters, Decision Sciences |
| Counterintelligence | No | Yes | International Journal of Intelligence and CounterIntelligence |
| Security | No | Yes | Computers and Security, Security Journal |
| Intelligence | No | Yes | Journals covering AI and computational intelligence |
| Watch/ <i>veille</i> /surrounding world analysis | No | No | None |

namely WoS and SCOPUS.

From the analysis we see that only early warning and watch/*veille*/surrounding world analysis do not have their own established scientific journal. However, these topics are covered in journals related to CI and IS, like JISIB. One surprising area suggested in the comments from the interviews was neurobusiness. Neurobusiness is the capability of applying neuroscience insights to improve outcomes in customer and other business decision situations. It does not correspond to an established journal but is covered by scientific journals in neurosciences. Two participants suggest textualization as an area of interest for CI and IS. The science for this however was developed in computer science, not in the CI field. If anything it shows the multidisciplinary nature of CI and IS. Textualization is related to, but different from, the study of data mining. Text and web mining tools track information sources and allow sifting through vast collections of unstructured or semi-structured data, which are beyond the reach of data mining tools (Hearst, 2003).

In Table 3 we present the number of articles found on the different analyses suggested in the interviews. The examples of journals listed below are limited to those journals with the highest number of articles for each area of study. Only analyses that were represented with five or more articles are included. For example, there was no article with “surrounding world analysis” in the title or topic field.

From the analysis we see that the areas represented by the most article are: scenario analysis (1), SWOT (2), Scenario Planning (3), competitor analysis (4), War gaming (5) and Analysis of Competing Hypotheses⁴ (6). Moreover, we see that there is a large spread of journal areas for each of the analyses. This suggests that these are analyses that cannot be connected with any one particular study. Another way to say it is that the analyses themselves are cross-disciplinary.

In the next section we go over to the discussion of the data and analysis presented above.

5. DISCUSSION

From the data collected it is not possible to identify any analyses which can be said to be exclusive for the study of CI or IS. Instead, most of the analyses come from other disciplines, primarily from strategy (corporate and military) and from the study of the scientific method in general.

To take an example let's look at the development and history of the SWOT analysis. It may have been developed by two Harvard Business School Policy Unit professors – George Albert Smith Jr and C Roland Christensen during the early 1950s. Another HBS Policy Unit professor, Kenneth Andrews, is said to have developed its usage and application. All were specialists in organizational strategy, not in marketing. However, other sources claim that the SWOT was the continuation of Albert Humphrey's work on the SOFT analysis in the 60s and 70s. Humphrey worked on a research project at Stanford University at the time. Yet other sources argue that the first mention of the term SWOT can be traced back to when it was presented to Urlick and Orr for the Long Range Planning seminar held in Zurich in 1964.

The oldest article I could find about SWOT in SCOPUS is from the same Stait (1972). Stait then worked for a company called Orr & Partners Ltd, United Kingdom. He has published no other scientific articles noted in SCOPUS. There are no older sources for SWOT in WoS. It suggests that the SWOT was first developed in Britain, not in the US, but the evidence is not consistent.

The SWOT 2x2 matrix may have been developed much later, in 1982 by Dr Heinz Weihrich. It was initially popularized as the TOWS matrix. The seminar on Long Range Planning became the journal of Long Range Planning (LRP) in 1968 and is now a leading journal of strategic management⁵. Since the 1980s, the SWOT has interested management professionals all over the world and today forms an integral part of strategic planning. Looking at history, we can see that similar concepts to the SWOT were introduced in various research papers, but none of them survived.

When we look to another popular model in CI and IS, the intelligence cycle, we see that it

⁴ Analysis of competing hypotheses was developed by Richards (Dick) J. Heuer, Jr., a CIA veteran.

⁵ The same journal has published 20 articles on CI, most in 2006 and 2007. The first article on CI in LRP was Ewusi-Mensah, K. (1989), on how to develop a competitive intelligence system for IT.

Table 3 Which analyses are presented with articles in scientific journals

| Analyses | No. of articles in web of science, with analysis term in title and selected examples | No. of articles in SCOPUS, with analysis term in title and selected examples |
|----------------------------------|--|--|
| War gaming | 27 Examples: Art and Humanities in Higher Education, Social & Cultural Geography, Cornell International Law Journal, Futures, California Management Review | 43 Examples: Simulation and Gaming, Arts and Humanities in Higher Education, Social and Cultural Geography, Applied Mechanics and Materials, Cornell International Law Journal, Game Studies |
| SWOT | 694 | 717 |
| Competitor analysis | 78 Examples: International Journal of Hospitality Management, American Economic Journal, Applied Economics, Ecology, Maritime Policy & Management, Journal of Digital Convergence | 6 Examples: Tourism Management, Advances in Culture, Tourism and Hospitality Research, Source of the Document Public Administration Review, Journal of Emerging Technologies in Web Intelligence, Place Branding and Public Diplomacy |
| Scenario analysis | 1774 | 2348 |
| Scenario planning | 672 | 776 |
| Analysis of competing hypotheses | 8 Examples: The Korean Journal of Public Administration, Journal of Organizational Behavior, Journal of Quantitative Criminology, Risk Analysis, Cladistics, Journal of Counseling Psychology, Military Operations Research | 13 Examples: Social Science Research, Research in Social Problems and Public Policy, Journal of Organizational Behavior, Journal of Applied and Industrial Mathematics, Risk Analysis, Journal of Quantitative Criminology, Military Operations Research, the Elgar Companion to Public Economics: Empirical Public Economics |

is basically a general research model, as found in any course on the scientific method. There is massive borrowing directly from the scientific method, not only for the cycle. Bose (2008) writes: “The fundamental forms of analysis are: deduction, induction, pattern recognition, and trend analysis. The abilities required of tools and techniques to perform intelligence analysis are as follows. Inductive reasoning: the ability to combine separate pieces of information or specific answers to problems, to form general rules or conclusions. It involves the ability to think of possible reasons why things go together.” pp. 519. This is the procedure for any researcher and for research in general. The data analysis tools mainly consist of data mining, statistical analysis and BI tools (Wee, 2001). The logic behind the analysis of competing hypotheses belongs to the same discipline and scenarios or scenario analysis is as old as military strategy. War gaming belongs also to the same study.

In conclusion there is no major type of analysis used in CI or IS found in this study that can be said to be exclusive for these studies. Instead we see that a great number of analyses are shared by most social science studies, as well as studies in the natural sciences.

As we have seen above, most existing research into the phenomenon of “intelligence” as it relates to management and business is on

artificial intelligence (AI) and emotional intelligence, which are also truly different domains of knowledge. The only research on intelligence existing in WoS is related to BI, how to teach BI and the value of BI to management and business. That is to say, it relates to computer science or information systems, which are more developed disciplines. In SCOPUS there are 48 articles dealing with intelligence analysis within business. Most of these articles are in the International Journal of Business Information Systems, International Journal of Clothing Science and Technology and our own journal, the Journal of Intelligence Studies in Business. CIR and JCIM no longer exist as journals in the public domain, or in any of the major article databases. Other CI and IS articles are found in the Journal of the Operational Research Society and Transformations in Business and Economics. Most of these articles are on emotional and social intelligence.

What we have to ask is what it is that the field of IS does not share with more established fields of study like market research, long range planning and business intelligence? After all, if IS cannot define such elements then it has no logical right to exist as a proper field. This however does not mean it cannot exist as an interdisciplinary or multidisciplinary field. I will suggest an

answer here that IS is more than an interdisciplinary or multidisciplinary field. My observations are presented in the form of working hypotheses, divided into four different realms or dimensions:

1. *METHOD.* The ethical aspects of the method for gathering information are unique for private intelligence. In state, military and public intelligence the ethics are different.
2. *PERSPECTIVE.* Intelligence studies see the competitive organization as dependent on a well functioning intelligence, much like a state or the military has an intelligence organization. This *perspective* is unique in the study of management.
3. *TECHNOLOGY.* A good intelligence system today, in any size company, is dependent upon *Business Intelligence*. IS has a role to play here, to evaluate technology from a user perspective.
4. *FUNCTION.* *Counterintelligence* in business is an underdeveloped area of study within the study of management. It has no other theoretical home.
5. *ACTOR.* *Neglected actor.* The study of marketing has a focus on the market and customers. No other area of study has taken a special interest in *competitors*.

This content is the argument for the existence of a proper study of IS that goes beyond an interdisciplinary and multidisciplinary nature. It is inseparable from the ethical question of information gathering, it takes as its starting point the perspective of the intelligence organization, is

inseparable from the user perspectives of BI and other technologies for information gathering, and it studies counterintelligence in business and focuses on competitors. This list is by no means final or complete. The working hypotheses are the results of reflections when discussing the topic and should also be tested empirically.

There is yet another angle to answer the questions raised in this paper. Any study which can claim to be *useful* has the right to some form of existence. CI has resulted in consulting for decades, even though the popularity of these services has varied and is declining. We see this dominance even today, in the fact that all major CI conference today start from a practitioner's perspective. Academics are in the minority and are left to a special track. Also much of the development of the study has come from consultants. So even though this is no evidence of a scientific discipline, it is an indication that the areas have intellectual substance.

At the same time, we see that the professional interest for CI is declining, as shown in Figure 2.

In Figure 2, we see that the popularity of the two terms CI (blue/top) and IS (red/bottom) are about the same at the end of 2015. The reduction in the popularity of CI coincides with the fact that CI consultancy has decreased and much of the academic literature has centered around IS. The exact causes and effects of this are still to be uncovered. It may also be that CI has declined due to what users see as uncertainties about and around the field. A decade ago, many CI practitioners reinvested themselves under the label market intelligence, even though there is no evidence that the focus of its content shifted, for example for the consultant Global Intelligence

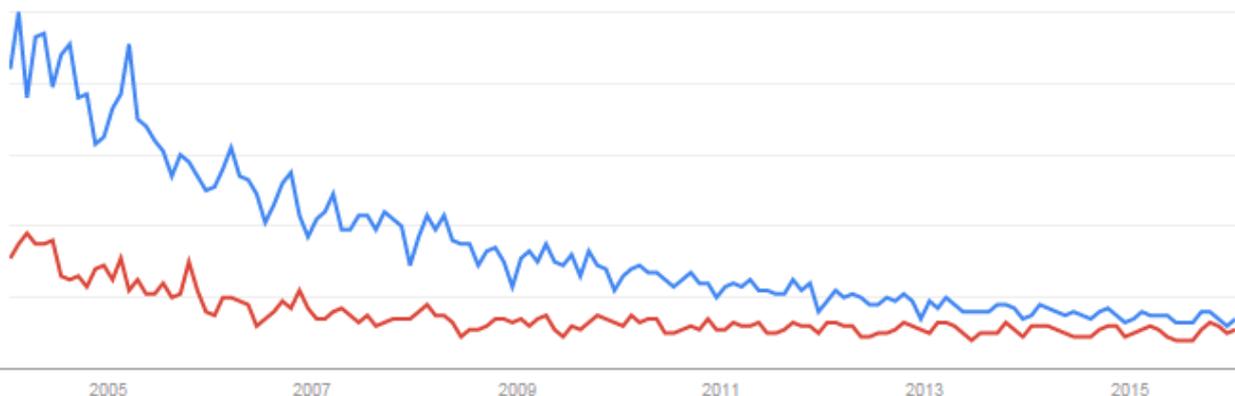


Figure 2 Popularity of the terms “Competitive Intelligence” (in blue) and “Intelligence Studies” (in red) in Google Trends.

Alliance (GIA). Another reason for the decline in CI interest may be due to the cycles that management theories follow in general, replacing one management fad with another. This question however must be the topic of study for market psychology and cannot be treated here.

An issue that should be discussed at this point is whether or not it was right for the CI field to narrow down its scope at the start. While this may have made sense from a consultancy perspective – at least for a while – the same development may have led to the field's decline in the longer run. It should be noted here that there has always been and continues to be great cultural differences in how the field is presented, as in the way that CI is taught and practiced in different cultures. In Sweden it continues to be as “*omvärldsanalys*” or “surrounding world analysis”, which is much broader. The same is true in France, with the notion of “*veille*.” The academic literature has for most part been dominated by Anglo-Saxon contributions, which have followed the narrower perspectives of CI, as seen in CIR and JCIM. Discussions among editors of JISIB have so far led to a broader approach and broader acceptance of different types of articles and methods. Where this is going and how analysis and contributions will look in the future we do not know. Suggestions from the empirical parts of this article suggest future contributions should be more interdisciplinary, multi-disciplinary and cross-disciplinary in nature. More specifically, they should move away from the narrow focus on a limited number of analyses and leave the idea that these are in any way special to CI or IS. Focus could instead be more on helping decision makers prepare information, where that problem is studied from a wider perspective. This corresponds well with the understanding of intelligence both in the private and public sphere, even though the method and means are quite different. It also fits well with the definition of intelligence as suggested by The Clark Task Force of the Hoover Commission: “Intelligence [Studies] deals with all the things which should be known in advance of initiating a course of action.”

Another maybe more difficult question is what sense it makes – especially for practitioners – to break the process of management down in this way and for them to separate strategy from decision making,

information gathering and knowledge management.

6. CONCLUSION

This empirical investigation found that academics and professionals within CI and IS could not agree upon what dimensions, topics or contents are handled by their own area that are not covered by other areas of study.

In fact, most topics listed as special for CI and IS are covered by other established scientific journals. Most of these are covered by disciplines like information sciences, IT, marketing, HRM, strategy, knowledge management and future studies, or they are truly interdisciplinary and/or multidisciplinary in nature.

The data also showed that the same group of respondents could not list an analysis that is not used by other areas of study. It also shows that the analyses the respondents think are unique to their study come from the area of strategy and military intelligence, primarily. The most popular analyses in scientific journals are, in order of popularity, scenario analysis (1), SWOT (2), scenario planning (3), competitor analysis (4), war gaming (5) and analysis of competing hypotheses (6).

This conclusion does not mean that CI and IS do not have their own place or niche as a study and discipline. It is suggested here, but further investigation is encouraged, that CI and IS bring a number of unique dimensions to the social sciences. These are, in terms of method, a continuous discussion of ethical aspects of the method for gathering and using information among private organizations. In terms of perspective, no other study offers the broad approach to decision making that is needed to make good decisions. Instead these are often assumed. In terms of user aspects of new technology, CI and IS is continuously applying technology in its work which is evaluated from a user perspective, primarily in business intelligence software. In terms of function, no other study deals with counterintelligence in business, a largely underestimated topic. In terms of actors, other disciplines continue to neglected competitors. In general, it is suggested that the IS function is a way for academics to try to imagine in what way they can help bring information to decision makers. This seems to be the core of the field.

CI and IS are small areas of study compared to other management disciplines.

The interest for CI has reduced considerably over the last decade. Much of this may be due to the fact that people have found it hard to understand what CI is. This in turn can be explained by the fact that it was never properly defined, and that new articles had other definitions and that there was a lack of consensus. This is not a criticism of CI as a discipline per se, but follow the pattern of most new management and social science disciplines. The study of marketing was in much the same situation a hundred years ago. However, we can say that the study could have focused more on laying out the boundaries of its domain as a discipline earlier. Instead the area was largely developed and steered by consultancy interest. The first scientific journal was developed with the appearance of JCIM and it had only a short life span, much due to a rift between academic and consultancy interests, it must be said. In general, I see no special conflict of interest between the two spheres. On the contrary, I think that a new fruitful discussion can bring forward a more robust discipline which will also produce clearer and longer lasting consultancy services. Some may complain that the theoretical development goes too slowly for the discipline of IS. On the other hand, it can be seen that the study has come a long way and survived in academia for more than half a century already since Stevan Dedijer introduced the topic of Social Intelligence in Sweden in the early 1970s.

One of the reasons why CI has seen a reduction in popularity may also be due to the nature of the topic. Alessandro Comai, a long term consultant in the field who just defended his doctoral thesis at ESADE in Spain, defines this problem well: "You need a set of special skills to sell consultancy services. Companies hire specialists not generalists". Intelligence is about as broad as there is, and is more knowledge than skills. For some intelligence is about wisdom, which is even worse to sell. This then becomes somewhat of a contradiction if you try to sell intelligence as a consultancy product. The customers for this kind of expertise are more likely to be larger organizations, like governments and MNEs.

At the same time, today new technology is making it possible for smaller companies to develop their own intelligence system with a computer, some software and internet access. It's unclear, however, which part of this service can be provided by tech people and which part can be delivered by intelligence

professional and academics. At the end there is probably room for both.

Recent critical articles on CI may be a sign that the discipline is maturing. At least it could be said that in general it is a sign of maturity when a field of study starts to reflect on its own production. JISIB has done so systematically in a number of articles over the past two years, but there is still much to be done.

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