



## GUEST EDITORIAL

Competitive  
intelligence

# Competitive intelligence

## A practitioner, academic and inter-disciplinary perspective

717

Jonathan L. Calof

*Associate Professor in International Business, Telfer School of Management,  
University of Ottawa, Ottawa, Canada, and*

Sheila Wright

*Competitive Intelligence-Marketing Interface Teaching & Research Initiative  
(CIMITRI), Department of Marketing, Leicester Business School,  
De Montfort University, Leicester, UK*

### Abstract

**Purpose** – The article traces the origins of the competitive intelligence fields and identifies both the practitioner, academic and inter-disciplinary views on CI practice. An examination of the literature relating to the field is presented, including the identification of the linear relationship which CI has with marketing and strategic planning activities.

**Design/methodology/approach** – Bibliometric assessment of the discipline. Findings reveal the representation of cross disciplinary literature which emphasises the multi-faceted role which competitive intelligence plays in a modern organization.

**Findings** – The analysis supports the view of competitive intelligence being an activity consisting dominantly of environmental scanning and strategic management literature. New fields of study and activity are rapidly becoming part of the competitive intelligence framework.

**Research limitations/implications** – The analysis only uses ABI Inform as the primary sources for literature alongside Society of Competitive Intelligence Professionals (SCIP) and Competitive Intelligence Foundation (CIF) publications, particularly the *Journal of Competitive Intelligence and Management*. A more comprehensive bibliometric analysis might reveal additional insights. Simple counts were used for analytical purposes rather than co-citation analysis.

**Practical implications** – Attention is drawn to the need for the integration of additional, complementary fields of study and competitive intelligence practice. It is clear that today's competitive intelligence practitioner cannot afford to rely on what they learned 20 years ago in order to ensure the continued competitive advantage of their firm. A keen understanding of all business functions, especially marketing and planning is advocated.

**Originality/value** – While there have been bibliographies of competitive intelligence literature there have been few attempts to relate this to the three distinct areas of practice. This article is of use to scholars in assisting them to disentangle the various aspect of competitive intelligence and also to managers who wish to gain an appreciation of the potential which competitive intelligence can bring to marketing and business success.

**Keywords** Business intelligence, Competitive intelligence, Forecasting, Foresight, Marketing intelligence, Peripheral vision

**Paper type** General review



### Introduction

Competitive intelligence (CI) is regarded as a system of environmental scanning which integrates the knowledge of everyone in the company. As will be discussed in this article, the term encompasses marketing, structural, strategic and other organisational elements.

This special issue of the *European Journal of Marketing* demonstrates the breadth of the CI concept, and is the first non-intelligence journal to invite contributions for a special issue entitled “The impact of competitive intelligence on marketing activity”.

In reviewing the keywords, it can be seen that the field encompass many concepts covering the wider spectrum of business activity, and especially those usually attributed to the marketing function. They include: analysis, Bayes’ theorem, business intelligence, business strategy, CI information, CI typology, competitive intelligence, conditional uncertainties, cost of uncertainty, cross-functional teams, customer relationship management, data mining, entrepreneurial attitude, firm classification, forecasting, foresight, information systems, integration, innovation performance, market intelligence, marketing intelligence, market orientation, market research, new processes, new products, new services, open source, OSINT, peripheral vision, partnership, service process, service taxonomy, strategic intelligence, resilience, scanning and strategic marketing.

### **The long history of competitive intelligence**

The concept of CI has a rich heritage (Juhari and Stephens, 2006) and can be traced back over 5,000 years of Chinese history (Qingjiu and Prescott, 2000). These and other authors point to examples in various religions and historical contexts which address intelligence concepts. Many CI texts and articles refer to the work of Sun Tzu who, some 2,400 years ago, wrote *The Art of War*, a seminal text which provides a detailed description of how to develop intelligence for military applications (Sun, 1988). Similarly, many intelligence authors cite Frederick the Great (1740-1786), who was once quoted as saying “It is pardonable to be defeated, but never to be surprised” (Fuld, 1995).

Wright *et al.* (2004) remind us that CI is not a new concept. This is evidenced by 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 and 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 collection activities happening even earlier. The Byzantine emperor Justinian I (483-565) in the sixth 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.

The British tea industry has its roots in CI, going as far back as 1615. Mr R.L. Wickham, who worked as an agent for the English East India Company, was sent to China to gather intelligence and he relayed the importance of tea and its potential to contribute to the British economy. Wickham learned about the Chinese production of tea over ten years and then, thanks to various inventions such as tea boxes and chests, he was able to successfully start a tea industry in Britain (Breed, 1999).

As can be seen from the examples given above, whilst today it is reported that 87 per cent of all large companies, regardless of locations, have an intelligence capability

---

(Global Intelligence Alliance, 2005), it can be seen that the commercial application of CI, as we know it, has been around for at least 5,000 years if not longer.

### **Competitive intelligence in perspective**

The purpose of this article is to explore the CI concept from three perspectives:

- (1) the practitioner view;
- (2) the academic view; and
- (3) the inter-disciplinary view.

Taken collectively, these three areas of enquiry allow for the beginnings of an exercise to scope out the domain of competitive intelligence.

#### *The practitioner view of competitive intelligence*

Several consulting groups have written about the intelligence concept over the years. The Global Intelligence Alliance (2007a) indicated a strong need for intelligence:

Today's business environment demands a comprehensive system for managing risks in the external business environment. Never before have the forces of globalization been as intense as they presently are. Most business executives feel that these forces of change will have a major impact on their organisations.

The Global Intelligence Alliance is a consulting group of individual companies and/or individuals, represented in a number of locations, and their findings revealed that companies were grappling with the need to better understand the complexity of the external environment and integrate that into their strategic planning process. Similarly, Gilad (2004) reported that there was a need for more formal intelligence in major companies. He found that close to two thirds of the respondents in his survey had been surprised by as many as three high-impact competitive events in the past five years. In addition, 97 per cent of the respondents said their companies lacked an early warning system.

To what extent have corporations recognised the need to develop what is known as an intelligence capacity? In a Market Wire (2007) press release, it was reported that:

America's largest 1,000 companies were expected to increase their spending on staff and activities associated with Competitive Intelligence to at least \$10 billion by 2012, from current spending of about \$1 billion. As a means of comparison, this number was close to zero only twenty years ago, when whatever monies spent in this arena were usually buried within the market research or perhaps strategic planning budgets.

Various estimates of the size of the CI market have been reported in the popular media. In addition to the US\$1 billion reported by Market Wire, Reuters (2001) reported that the market for business intelligence was worth about US\$2 billion a year worldwide, including services ranging from detailed investigations to a "news clipping" service. At a corporate level, a survey of 520 CI practitioners worldwide by the Competitive Intelligence Foundation (2006) reported that over 25 per cent of respondents said their company's total CI spending in 2000 topped \$100,000. Almost 14 per cent 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. The Global Intelligence

Alliance (2005, 2007b) 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 per cent of the companies interviewed had some form of integrated intelligence capability with a systematic approach for collecting and analysing 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, The Netherlands, Norway, Spain, Switzerland, the UK and the USA.

Due to the increasing focus on CI activity within the media and consulting environment, it is not surprising that there has been some public debate about why CI is important and what its value might be to companies. *Business Week* (2001) magazine reported on how companies with well-established CI programmes enjoyed greater earnings per share (EPS) than companies in the same industry without CI programmes, stating: “In a recession, competitive intelligence can pay off big”. Among the examples cited was a salutary lesson from Texas Instruments. In this case, the CI team uncovered the need to pursue an acquisition before a rival could do so, and was thus able to protect what is now a US \$100 million business with enormous growth potential. All of this was accomplished at a time when bright spots on the technology horizon were rare.

PricewaterhouseCoopers (2002) also reported:

CEOs who rated competitor information as being either “very” or “critically” important grew revenues by 14.2 per cent, versus 11.8 per cent for all others, a 20 per cent faster rate. Significantly, those placing a premium on competitor information are outperforming their peers on sustained revenue growth, gross margins, and a number of other key performance measures.

*The academic view of competitive intelligence*

References to environmental scanning concepts, a predecessor of CI, have appeared in the literature since the 1960s (Aguilar, 1967) with subsequent development by some authors in the 1970s, 1980s and 1990s (Fahey and King, 1977; Daft *et al.*, 1988; Hambrick, 1982; Culnan, 1983; Grabowski, 1987; Daft and Macintosh, 1981; Slater and Narver, 1994) but more significant and more relevant work has been done in the 2000s (Beal, 2000; Kourteli, 2000; Saxby *et al.*, 2002; Kumar *et al.*, 2001; Voros, 2001; Decker *et al.*, 2005; Vojak and Suarez-Nunez, 2005; Rajaniemi, 2005; Brouard, 2006; Knip, 2006).

The need for organisations to be aware of developments in their business environment ought to be a concept that is well understood, appreciated, and well represented in the literature. Nearly 30 years ago, Porter (1980) reported that whilst companies were carrying this activity out informally, in his opinion this was nowhere near sufficient. He advocated the need for a structured intelligence process at all times in order to continuously and systematically identify business opportunities and threats.

To examine academic focus on CI, various bibliometric techniques were used to identify academic literature on the topic. Table I is the result of a search on ABI

**Table I.**  
ABI-INFORM  
PROQUEST search  
results

	Competitive intelligence	Market intelligence	Marketing intelligence	Marketing or market intelligence
Total	710	144	1,379	1,497
Excluding <i>CIR</i> , <i>JCIM</i> and <i>MIP</i>	369	127	61	168

Inform-Proquest which was designed to identify those articles which had CI and/or MI at their centre.

Articles where CI and/or MI had only a peripheral mention were excluded. This was achieved by selecting only those articles which appeared in refereed publications and had the words “competitive intelligence”, “market intelligence” or “marketing intelligence” present either the document itself, or the title, the abstract or the subject heading.

The results were:

- competitive intelligence: 710;
- market intelligence: 144;
- marketing intelligence: 1,379; and
- market or marketing intelligence (combined): 1,497

Focusing on marketing intelligence itself, when eliminating *Marketing Intelligence & Planning* (a journal devoted to MI), and the two additional CI journals, i.e. *Competitive Intelligence Review* and *Journal of Competitive Intelligence and Management*, only 168 articles could be found on marketing or market intelligence. In comparison with other management concepts such as knowledge management or international business, attention to MI appears to be very limited. These 168 articles appeared across 123 titles, which is indicative of a very thin layer of representation in a small number of titles.

An extraction of the data from Table I above reveals that despite the popularity of intelligence in terms of its adaptation by business, journals which published articles about MI had on average 1.4 articles over the past 40 + years. Table II itemises these.

To further analyse the content of these articles, all 168 were examined. In many cases, the article was just a one or two page overview on the concept. Only 36 had the term “marketing” in the article title. This suggests that despite the popularity of MI in

Journal title	Number of articles
<i>Industrial Marketing Management</i>	6
<i>International Trade Forum</i>	6
<i>Management Decision</i>	6
<i>European Journal of Marketing</i>	5
<i>British Food Journal</i>	4
<i>Journal of Marketing Research</i>	4
<i>The International Journal of Bank Marketing</i>	4
<i>The Journal of Business Forecasting Methods &amp; Systems</i>	4
<i>American Marketing Association Conference</i>	3
<i>Bank of England Quarterly Bulletin</i>	3
<i>California Management Review</i>	3
<i>International Marketing Review</i>	3
<i>Journal of Business Research</i>	3
<i>Journal of Marketing</i>	3
<i>The Journal of Product Innovation Management</i>	3
Journals with two articles: 17	34
Journals with only one article: 74	74
Total articles	168

**Table II.**  
Marketing intelligence  
scholarship by journal

the popular literature it remains relatively unexplored outside of the three dedicated academic journals mentioned earlier.

The first academic article on MI appeared in 1965, with just three more being published pre-1970 (see Table III) with the title “marketing intelligence”. Two of these were book reviews, but the third (Kelley, 1965) was accepted by the *Journal of Marketing*. Kelley’s article explained the need for marketing intelligence and provided tips for marketing managers to develop the function.

In reviewing the CI and MI literature, two themes appear to emerge:

- (1) defining what intelligence is (conceptual models); and
- (2) the assessment of company intelligence capability.

These streams involve the full testing and description of the intelligence model. Several efforts have been made, across several decades, to evaluate companies’ intelligence process and subsequent performance – for example Antia and Hesford (2007), Hodges (2005), Greenley *et al.* (2004), Lichtenthaler (2004), Hasanali *et al.* (2004), Nitse *et al.* (2003), Wright *et al.* (2002), Gibbons and Prescott (1996), Solomon (1996), Maltz and Kohli (1996), Sawka *et al.* (1996), Cartwright *et al.* (1995), Tyson and Swanson (1993), Gelb *et al.* (1991), Ghoshal and Westney (1991), Gilad (1989), Daft *et al.* (1988), Prescott and Smith (1987), Zinkhan and Gelb (1985), Montgomery and Weinberg (1979), Fahey and King (1977) and Keegan (1974).

In examining the state of scholarship in CI, the *Journal of Competitive Intelligence and Management (JCIM)* has published four bibliographies of the CI literature. These reviews have included scholarly articles, management articles, books and other such writings (Dishman *et al.*, 2003; Fleisher *et al.*, 2003, 2007; Knip *et al.*, 2003).

It is evident from the count of the number of articles published on CI and MI that there has not been much published scholarship on the subject. To compound this situation, little has been conducted with methodological rigour. Wright and Calof (2006), reviewed the literature and expressed concern about the need for more rigour in methodology:

There is little consistency in terms of measurement and output value. Future research instruments need reliability and validity testing to establish construct strength. To date, few studies have demonstrated this.

Wright and Calof (2006) also expressed the need to focus more on various elements of the competitive intelligence model, and to test, not just measuring the entire holistic construct. In its most basic form, the activities of competitive intelligence involve planning, collecting, analysing, communicating and management. Most studies to date have tried to measure all of these, with varying success. Even those studies which have

**Table III.**  
Marketing intelligence  
literature 1965-2007  
(excluding *MIP*, *JCIM*  
and *CIR*)

Time period	Total	Article title includes marketing intelligence
Pre-1970	3	3
1970-1979	4	3
1980-1989	25	4
1990-1999	47	9
2000 onwards	89	17
Total	168	36



attempted to link competitive intelligence with performance measures still use broad measures of the entire process (Lönnqvist and Pirttimäki, 2006; Pirttimäki and Karjaluoto, 2006; Van Der Kooij, 2003; Buchda, 2007; Blenkhorn and Fleisher, 2007). In this Special Issue, the opportunity has been taken to bring forward more focused scholarship. Papers presented include Fleisher *et al.* (2008), a case study which looks at how an intelligence department was the catalyst for profitable success in a membership-led organisation, and Trim and Lee (2008), which explores the link with strategic marketing intelligence and organisational resilience. Michaeli and Simon (2008) explore the application of how a technique used frequently in other fields, Bayes' theorem, can be used in CI analysis. Focus is also evident in Fleisher (2008), a paper which looks at open source intelligence (OSINT), proposing new ways to categorise it and identifying the practical problems with its use.

Liu and Wang (2008) look at the use of intelligence for forecasting service strategies and provide a much tighter focus on using competitive intelligence. Although being located in one industry and examining the use of competitive intelligence for a specific purpose, this paper does represent the testing of a CI typology model developed by Wright *et al.* (2002). By demonstrating the linkages between intelligence and other fields, Qiu (2008) examines entrepreneurial attitude, normative beliefs and their influence on managerial scanning practices for CI. This in turn is linked to managerial interpretation of organisations' strength and weakness in the competitive arena. This provides evidence on how intelligence itself is linked not only to decision-making but also to organisational assessment. Tanev and Bailetti (2008) focus on the link between intelligence activities and innovation within technology firms, while Dishman and Calof (2008) report on the CI practice of technology-led companies and how this is used in the development of their marketing strategy.

This *European Journal of Marketing* special issue is starting to respond to the concerns highlighted by Wright and Calof (2006), and provides evidence that the required focus and rigour is possible within the field.

#### *The inter-disciplinary view of competitive intelligence*

CI involves the collection of information, internal, external and from competitors, but also from customers, suppliers, technologies, environments, and potential business relations. CI is designed to provide early warning and help to predict the moves of competitors, customers, and governments (Gilad, 1996). This suggests that the focus of CI covers the entire competitive environment, not just the competition. This systematic scanning for CI, including noticing and interpreting competitive stimuli, is critical for organisations to stay abreast of changing market conditions and avoid costly mistakes (Patton and McKenna, 2005; Anderson and Hoyer, 1991).

The Competitive Intelligence Foundation (2006) commissioned study found that in respondent firms, CI was focused on producing the following results:

- new or increased revenue;
- new product or services;
- cost savings/avoidance;
- time savings;
- profit increases; and
- financial goals met.

Their systems were focused on various key intelligence topics (KITs), given below in rank order:

- (1) company profiles;
- (2) competitive benchmarking;
- (3) early warning alerts;
- (4) market or industry trends;
- (5) customer or supplier profile;
- (6) technology assessment;
- (7) economic/political analysis; and
- (8) executive profiles.

There was clear evidence that the CI gathered from these KITs resulted in supporting decisions in the following areas:

- corporate or business strategy;
- sales or business development;
- market entry decisions;
- product development;
- R&D/technology decisions;
- M&A decisions;
- due diligence;
- joint venture decisions; and
- regulatory/legal responses.

This reveals that CI influences a wide range of decision-making areas and is a vital ingredient in the formulation of business strategy. It is difficult to identify any aspect of an organisation's activities which would not garner a positive benefit from CI input.

### **Conclusion**

This article has identified the scope of influence which CI activity has in a firm and the role played by CI professionals. Attention has been drawn to other areas of commercial life which are significantly affected by CI input and output. Perhaps the most tangible result from a combined intelligence effort can be seen in Fleisher *et al.* (2008), where a firm, led by its Insight Team, successfully combined its disparate marketing information systems and turned this into competitive insight. The article makes the important point that insight is a domain within the intelligence frame. As outlined by Gilad (2006), compatible and complimentary areas which also reside within the domain of intelligence are:

- risk assessments;
- intelligence estimates;
- war gaming;
- scenario developments (and testing);
- stage-gate analysis;



- blindspot laundry;
- management assumptions;
- blue ocean opportunities;
- proactive asymmetric strategy; and
- early warning.

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 of Gilad (2006) is to encourage practitioners and academics to ensure that the domain of competitive intelligence included these concepts.

Similarly, there are new and emerging areas of business scholarship that are making reference to competitive intelligence literature. One of these areas is peripheral vision. Day and Shoemaker (2006), explain that CI practitioners should pay attention to information from the periphery, in order that the organization may hear dire warnings, or recognise other significant shifts in the environment. This is not too dissimilar to Albrecht (1999), who also references CI literature in his exposition of “corporate radar”.

Another field which makes reference to CI and intelligence in general is that of foresight. van der Meulan *et al.* (2003) define a distinct sub-set of foresight as science and technology foresight (STF) in the following way:

This is an interactive and systematic exploration of future dynamics of science, technology, the economy and society with the aim of identifying and supporting viable strategies and actions for stakeholders.

The objective of foresight is to look at potential longer-term future scenarios and then identify the most appropriate technology solutions to deal with them (Durand, 2003; Christensen *et al.*, 2004). Conceptually, foresight is designed to identify today’s research and innovation priorities based on the scenarios of the future.

The concepts of the peripheral vision, corporate radar, weak signals, business insight, foresight, competing on analytics, and knowledge management use similar terms to those used in the competitive intelligence literature. The definitions are very similar.

Recognising the overlap in these concepts, the Telfer School of Management at the University of Ottawa has established a management insight research programme. The goal of the programme is to:

... unify and promote strategic thinking that may be labelled foresight, competitive or business intelligence, forecasting, strategic planning and similar names. We choose to call this Management Insight, signifying the use of clear thinking, sensible data gathering, careful, judicious use of software/procedural tools and wise sharing of information to provide for well-founded decision-making and enhanced performance (Calof, 2008).

Finally, it is clear that the potential for skilled CI practitioners to positively influence the current and future success of their organisation is significant. Their ability to work across functions, within and without boundaries, and to act as the “glue” between disparate activities is remarkable. The evidence from the articles contained in this special issue is that CI input and output certainly does impact on marketing activity and as such the two fields enjoy a mutually beneficial complementary role in the enlightened firm.

## References

- Aguilar, F.J. (1967), *Scanning the Business Environment*, Macmillan, New York, NY.
- Albrecht, K. (1999), *Corporate Radar*, AMACOM/American Management Association, New York, NY.
- Anderson, W.T. and Hoyer, W.D. (1991), "Marketing in the age of intelligence: the case for control", *European Journal of Marketing*, Vol. 25 No. 8, pp. 32-54.
- Antia, K.D. and Hesford, J.W. (2007), "A process-oriented view of competitive intelligence and its impact on organizational performance", *Journal of Competitive Intelligence and Management*, Vol. 4 No. 1, pp. 3-31.
- Beal, R.M. (2000), "Competing effectively: environmental scanning, competitive strategy and organizational performance in small manufacturing firms", *Journal of Small Business Management*, Vol. 38 No. 1, pp. 27-47.
- Blenkhorn, D.L. and Fleisher, C.S. (2007), "Performance assessment in competitive intelligence: an exploration, synthesis, and research agenda", *Journal of Competitive Intelligence and Management*, Vol. 4 No. 2, pp. 4-22.
- Breed, T. (1999), "Tea consumers, tea trade, and colonial cultivation", available at: [www.bell.lib.umn.edu/Products/tea.html](http://www.bell.lib.umn.edu/Products/tea.html) (accessed August 2004).
- Brouard, F. (2006), "Development of an expert system on environmental scanning practices in SME: tools as a research program", *Journal of Competitive Intelligence and Management*, Vol. 3 No. 4, pp. 37-58.
- Buchda, S. (2007), "Rulers for business intelligence and competitive intelligence: an overview and evaluation of measurement approaches", *Journal of Competitive Intelligence and Management*, Vol. 4 No. 2, pp. 22-54.
- Business Week* (2001), "In a recession, competitive intelligence can pay off big", *Business Week*, 26 November.
- Calof, J.L. (2008), "University of Ottawa Insight Program", available at: <http://insight.telfer.uottawa.ca/>
- Cartwright, D.L., Boughton, P.D. and Miller, S.W. (1995), "Competitive intelligence systems: relationships to strategic orientation and perceived usefulness", *Journal of Managerial Issues*, Vol. 7 No. 4, pp. 420-34.
- Christensen, C.M., Anthony, S.D. and Roth, E.A. (2004), *Seeing What's Next*, Harvard Business School Press, Boston, MA.
- Competitive Intelligence Foundation (2006), *State of the Art*, Competitive Intelligence Foundation, Alexandria, VA.
- Culnan, M.J. (1983), "Environmental scanning: the effects of task complexity and source accessibility on information gathering behaviour", *Decision Sciences*, Vol. 14, April, pp. 194-206.
- Daft, R.L. and Macintosh, N.B. (1981), "A tentative exploration into the amount and equivocality of information processing in organizational work units", *Administrative Science Quarterly*, Vol. 26, June, pp. 207-24.
- Daft, R.L., Sormunen, J. and Parks, D. (1988), "Chief executive scanning, environmental characteristics, and company performance: an evaluative study", *Strategic Management Journal*, Vol. 9 No. 2, pp. 123-39.
- Day, G.S. and Shoemaker, P. (2006), *Peripheral Vision: Detecting the Weak Signals that Will Make or Break Your Company*, Harvard Business School Press, Boston, MA.

- Decker, R., Wagner, R. and Scholz, S.W. (2005), "An internet-based approach to environmental scanning in marketing planning", *Marketing Intelligence & Planning*, Vol. 23 No. 2, pp. 189-99.
- Dishman, P., Fleisher, C.S. and Knip, V. (2003), "Chronological and categorized bibliography of key competitive intelligence scholarship: Part 1 (1997-present)", *Journal of Competitive Intelligence and Management*, Vol. 1 No. 1, pp. 13-79.
- Dishman, P.L. and Calof, J.L. (2008), "Competitive intelligence: a multiphasic precedent to marketing strategy", *European Journal of Marketing*, Vol. 42 Nos 7/8, pp. 766-85.
- Durand, T. (2003), "Twelve lessons from 'Key Technologies 2005': the French technology foresight exercise", *Journal of Forecasting*, Vol. 22 Nos 2/3, pp. 161-77.
- Fahey, L. and King, W. (1977), "Environmental scanning for corporate planning", *Business Horizons*, Vol. 20 No. 4, pp. 61-71.
- Ferguson, N. (1998), *The House of Rothschild*, Penguin, Harmondsworth.
- Fleisher, C.S. (2008), "Using open source data in developing competitive and marketing intelligence", *European Journal of Marketing*, Vol. 42 Nos 7/8, pp. 852-66.
- Fleisher, C.S., Knip, V. and Dishman, P. (2003), "A chronological and categorized bibliography of key competitive intelligence scholarship: Part 2 (1990-1996)", *Journal of Competitive Intelligence and Management*, Vol. 1 No. 2, pp. 11-86.
- Fleisher, C.S., Wright, S. and Allard, H.T. (2008), "The role of insight teams in integrating diverse marketing information management techniques", *European Journal of Marketing*, Vol. 42 Nos 7/8, pp. 836-51.
- Fleisher, C.S., Wright, S. and Tindale, R. (2007), "A chronological and categorized bibliography of key competitive intelligence scholarship: Part 4 (2003-2006)", *Journal of Competitive Intelligence and Management*, Vol. 4 No. 1, pp. 34-107.
- Fraumann, E. (1997), "Economic espionage, security missions redefined", *Public Administration Review*, Vol. 57 No. 4, pp. 303-8.
- Fuld, L. (1995), *Competitor Intelligence*, Wiley, New York, NY.
- Gelb, B., Saxton, M.J., Zinkhan, G.M. and Albers, N.D. (1991), "Competitive intelligence: insights from executives", *Business Horizons*, Vol. 34 No. 1, pp. 43-7.
- Ghoshal, S. and Westney, D.E. (1991), "Organizing competitor analysis systems", *Strategic Management Journal*, Vol. 12 No. 1, pp. 1-15.
- Gibbons, P.T. and Prescott, J.E. (1996), "Parallel competitive intelligence processes in organizations", *International Journal of Technology Management*, Vol. 11 Nos 1/2, pp. 162-78.
- Gilad, B. (1989), "The role of organized competitive intelligence in corporate strategy", *Columbia Journal of World Business*, Vol. 24 No. 4, pp. 29-36.
- Gilad, B. (1996), *Business Blindspots*, Probus Publishing Company, Chicago, IL.
- Gilad, B. (2004), *Early Warning: Using Competitive Intelligence to Anticipate Market Shifts, Control Risk, and Create Powerful Strategies*, AMACOM, New York, NY.
- Gilad, B. (2006), "Early warning, anticipate market shifts and control risk", paper presented at Society of Competitive Intelligence Professionals European Summit, London.
- Global Intelligence Alliance (2005), "Competitive intelligence in large companies – global study", GIA White Paper 4/2005, Global Intelligence Alliance.
- Global Intelligence Alliance (2007a), "Market intelligence for the strategy and planning process", GIA White Paper 1/2007, Global Intelligence Alliance.

- Global Intelligence Alliance (2007b), "Market Intelligence in large companies – global study", GIA White Paper 2/2007, Global Intelligence Alliance.
- Grabowski, D.P. (1987), "Building an effective competitive intelligence system", *Journal of Business & Industrial Marketing*, Vol. 2 No. 1, pp. 39-44.
- Greenley, G., Hooley, G. and Saunders, J. (2004), "Management processes in marketing planning", *European Journal of Marketing*, Vol. 38 No. 8, pp. 933-55.
- Hambrick, D.C. (1982), "Environmental scanning and organizational strategy", *Sloan Management Review*, Vol. 3 No. 2, pp. 159-74.
- Hasanali, F., Leavitt, P., Lemons, D. and Prescott, J.E. (2004), *Competitive Intelligence: A Guide for Your Journey to Best Practice Processes*, American Productivity & Quality Center, Houston, TX.
- Hodges, C. (2005), "Competitive intelligence overview: feeding the competitive analysis process", *ASQ World Conference on Quality and Improvement Proceedings*, Vol. 59, pp. 441-5.
- Juhari, A.S. and Stephens, D.P. (2006), "Tracing the origins of competitive intelligence throughout history", *Journal of Competitive Intelligence and Management*, Vol. 3 No. 4, pp. 61-82.
- Keegan, W.J. (1974), "Multinational scanning: a study of the information sources utilized by headquarters executives in multinational companies", *Administrative Science Quarterly*, Vol. 19 No. 3, pp. 411-21.
- Kelley, W.T. (1965), "Marketing intelligence for top management", *Journal of Marketing*, Vol. 29 No. 4, pp. 19-24.
- Knip, V. (2006), "Culture counts: teaching business students why and how to leverage cultural analysis to optimize global macro-environmental scanning", *Journal of Competitive Intelligence and Management*, Vol. 3 No. 4, pp. 85-110.
- Knip, V., Dishman, P. and Fleisher, C.S. (2003), "A chronological and categorized bibliography of key competitive intelligence scholarship: Part 3 (the earliest writings-1989)", *Journal of Competitive Intelligence and Management*, Vol. 1 No. 3, pp. 10-79.
- Kourteli, L. (2000), "Scanning the business environment: some conceptual issues", *Benchmarking*, Vol. 7 No. 5, pp. 406-13.
- Kumar, K., Subramanian, R. and Strandholm, K. (2001), "Competitive strategy, environmental scanning and performance: a context specific analysis of their relationship", *International Journal of Commerce and Management*, Vol. 11 No. 1, pp. 1-33.
- Lichtenthaler, E. (2004), "Technology intelligence processes in leading European and North American multinationals", *R&D Management*, Vol. 34 No. 2, pp. 121-35.
- Liu, C.-H. and Wang, C.-C. (2008), "Forecast competitor service strategy with service taxonomy and CI data", *European Journal of Marketing*, Vol. 42 Nos 7/8, pp. 746-65.
- Lönnqvist, A. and Pirttimäki, V. (2006), "The measurement of business intelligence", *Information Systems Management*, Vol. 23 No. 1, pp. 32-40.
- Maltz, E. and Kohli, A.K. (1996), "Marketing intelligence dissemination across functional boundaries", *Journal of Marketing Research*, Vol. 33 No. 1, pp. 47-61.
- Market Wire (2007), *Corporate Spending on Competitive Intelligence Projected to Rise Ten-fold, to \$10 Billion, in Five Years*, press release, available at: [www.marketwire.com/mw/release.do?id=743788&k=competitive%20intelligence](http://www.marketwire.com/mw/release.do?id=743788&k=competitive%20intelligence)
- Michaeli, R. and Simon, L. (2008), "An illustration of Bayes' theorem and its use as a decision making aid for competitive intelligence and marketing analysts", *European Journal of Marketing*, Vol. 42 No. 7/8, pp. 804-13.

- 
- Montgomery, D.B. and Weinberg, C.B. (1979), "Toward strategic intelligence systems", *Journal of Marketing*, Vol. 43 No. 4, pp. 41-52.
- Nitse, P.S., Parker, K.R. and Dishman, P.L. (2003), "Multi-class interest profile: applications in the intelligence process", *Marketing Intelligence & Planning*, Vol. 21 No. 5, pp. 263-71.
- Patton, K.M. and McKenna, T.M. (2005), "Scanning for competitive intelligence", *Competitive Intelligence Magazine*, Vol. 8 No. 2, pp. 24-9.
- Pirttimäki, V. and Karjaluo, A. (2006), "Measurement of business intelligence in Finnish telecommunications company", *The Electronic Journal of Knowledge Management*, Vol. 4 No. 1, pp. 83-90.
- Porter, M.E. (1980), *Competitive Strategy: Techniques of Analyzing Industries and Competitors*, The Free Press, New York, NY.
- Prescott, J.E. and Smith, D.C. (1987), "A project-based approach to competitive analysis", *Strategic Management Journal*, Vol. 8 No. 55, pp. 411-23.
- PricewaterhouseCoopers (2002), *Trendsetter Barometer*, PricewaterhouseCoopers, London, March.
- Qingjiu, T. and Prescott, J.E. (2000), "China: competitive intelligence practices in an emerging market environment", *Competitive Intelligence Review*, Vol. 11 No. 4, pp. 65-78.
- Qiu, T. (2008), "Scanning for competitive intelligence: a managerial perspective", *European Journal of Marketing*, Vol. 42 No. 7/8, pp. 814-35.
- Rajaniemi, K. (2005), "Framework, methods and tools for acquiring and sharing strategic knowledge of the competitive environment", Industrial Management, University of Vaasa, Vaasa.
- Reuters (2001), "Business intelligence growth", Reuters, 2 September.
- Sawka, K.A., Francis, D.B. and Herring, J.P. (1996), "Evaluating business intelligence systems: How does your company rate?", *Competitive Intelligence Review*, Vol. 6 No. 4, pp. 22-5.
- Saxby, C.L., Parker, K.R., Nitse, P.S. and Dishman, P.L. (2002), "Environmental scanning and organizational culture", *Marketing Intelligence & Planning*, Vol. 20 No. 1, pp. 28-34.
- Slater, S.F. and Narver, J.C. (1994), "Does competitive environment moderate the market orientation-performance relationship?", *Journal of Marketing*, Vol. 58 No. 1, pp. 46-55.
- Solomon, M. (1996), "The intelligence asset-building process", *Competitive Intelligence Review*, Vol. 7 No. 4, pp. 69-76.
- Sun, Tzu (1988), *The Art of War*, Oxford University Press, Oxford.
- Tanev, S. and Bailetti, T. (2008), "Competitive intelligence information and innovation in small Canadian firms", *European Journal of Marketing*, Vol. 42 No. 7/8, pp. 786-803.
- Trim, P.R.J. and Lee, Y. (2008), "A strategic marketing intelligence and multi-organizational resilience framework", *European Journal of Marketing*, Vol. 42 No. 7/8, pp. 731-45.
- Tyson, K.W. and Swanson, K.M. (1993), "Global business intelligence processes: executive information systems approaches for simple or complex organizations", in Prescott, J.E. and Gibbons, P.T. (Eds), *Global Perspectives on Competitive Intelligence*, Society of Competitive Intelligence Professionals, Alexandria, VA, pp. 367-75.
- Van Der Kooij, M. (2003), "A framework for business performance measurement", in Vriens, D. (Ed.), *Information and Communications Technology for Competitive Intelligence*, Idea Group Publishing, Hershey, PA, pp. 158-80.
- van der Meulan, B., de Wils, J. and Rutten, H. (2003), "Developing futures for agriculture in the Netherlands: a systematic exploration of strategic value of foresight", *Journal of Forecasting*, Vol. 22 Nos 2/3, pp. 219-33.

- Vojak, B.A. and Suarez-Nunez, C.A. (2005), "Sources of information used in technology planning in the upstream environment of the electronics industry", *International Journal of Technology Intelligence and Planning*, Vol. 1 No. 4, pp. 441-55.
- Voros, J. (2001), "Reframing environmental scanning: an integral approach", *Foresight – The Journal of Future Studies, Strategic Thinking and Policy*, Vol. 3 No. 6, pp. 533-51.
- Wright, S., Badr, A., Weiss, A. and Pickton, D.W. (2004), "Competitive intelligence through UK eyes", *Journal of Competitive Intelligence and Management*, Vol. 2 No. 2, pp. 68-87.
- Wright, S. and Calof, J. (2006), "The quest for competitive, business and marketing intelligence: a country comparison of current practice", *European Journal of Marketing*, Vol. 40 Nos 5/6, pp. 453-65.
- Wright, S., Pickton, D.W. and Callow, J. (2002), "Competitive intelligence in UK: a typology", *Marketing Intelligence & Planning*, Vol. 20 No. 6, pp. 349-60.
- Zinkhan, G.M. and Gelb, B.D. (1985), "Competitive intelligence practices of industrial marketers", *Industrial Marketing Management*, Vol. 14 No. 4, pp. 269-75.

#### Further reading

- Pearce, F.T. (1976), "Business intelligence systems: the need, development and integration", *Industrial Marketing Management*, Vol. 5 Nos 2/3, pp. 115-38.

#### About the authors

Jonathan L. Calof is an Associate Professor at the Telfer School of Management, University of Ottawa. He is Co-director of the Intelligence Teaching & Research Academic Network (INTRAN) and a board member for the Canadian Association for Security and Intelligence Studies (CASIS). Jonathan has given over 1,000 speeches, seminars and keynote addresses around the world on competitive intelligence and has helped several companies and government agencies enhance their intelligence capabilities. In recognition for his work in competitive intelligence, Jonathan L. Calof was recently presented with a lifetime achievement award in competitive intelligence from Frost and Sullivan.

Sheila Wright is a Principal Lecturer at Leicester Business School, De Montfort University, where she leads the Competitive Intelligence-Marketing Interface Teaching and Research Initiative (CIMITRI). She holds an MBA from the University of Warwick, has served on the board of SCIP and is Co-Editor for the *Journal of Competitive Intelligence and Management (JCIM)*. She is a Fellow and Chartered member of CIM, and has authored or co-authored articles published in *Marketing Intelligence & Planning*, *European Journal of Marketing*, *R&D Management*, *Journal of Marketing*, *Comportamento Organizacional e Gestao*, *Strategic Change* and the *Journal of Competitive Intelligence & Management*. Numerous CI-related research projects have been undertaken under her supervision, and she is a regular speaker and workshop leader for CI and marketing-related projects.