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Intellectual Capital and Knowledge Management

A major theme emerging in the management literature in the last two years can be encapsulated in the phrase "intellectual capital". The basic concept is a simple one – that a major component of the value or worth or effectiveness of an organization lies in the knowledge and expertise and information that the organization possesses and employs, and that this intellectual capital should be explicitly recognized and nurtured and, in so far as practicable, measured. In business terminology, intellectual capital is "knowledge that exists in an organization than can be used to create differential advantage" (Stewart, 1991). From this recognition there is a growing recognition in the business community of "knowledge management" or "knowledge integration" as a key function in the management and competitive positioning of an organization. We would of course recognize "knowledge management" and "knowledge integration" as librarianship, or at least as an extension of librarianship – but unfortunately the business community does not yet recognize that essential identity.

This concept of intellectual capital is obviously an important one for librarians and information officers – it places the spotlight on the value of information in a fashion that can be wonderfully beneficial to us and to our profession.

The concept is certainly not new. For example there is a famous story that dates from the 1960s about Edwin Land, inventor of the instant camera and founder of Polaroid Corporation, that makes the same basic point. According to the story, Land found himself in a dispute with the tax authorities in which a key point was the value of the corporation and its assets. Land is alleged to have left one conference with the internal revenue service muttering: "those folks don't have a clue about what an asset is; 90% of the assets of Polaroid get in their cars and drive home at night", meaning of course that the real assets of the company were its employees and their knowledge and creativity, not the real estate, nor the machinery, nor the goods in process, nor the inventory that the company possessed.

There are two major themes in the literature of intellectual capital. The first is how do you come to grips with the concept of intellectual capital? how do you get your hands on it? how do you measure it? and the second is how do you get the most out of your assets?

A programme to capitalize on intellectual capital is typically described as having six steps:

1) Define the role of information and knowledge in your business. In some areas, that role and that importance is transcendently obvious – in the pharmaceutical industry for example, where the NDA, the new drug application, the patented new drug is the name of the game. Indeed, Peter Drucker has described information or knowledge as being the pharmaceutical industry's principal product, with the pill being merely the container for the product.

Most contexts will not be so obviously information driven, but when closely examined, the role of information and knowledge is apt to be considerable. For example: almost any technological skills or expertise, or knowledge about customers, what do they need, what do they want?, is in fact intellectual capital, although we haven't typically thought about it that way before.

2) Assess your competitors' knowledge assets and their strategies. What differentials are there? What do they do differently? What can you learn from them?

3) Assess your knowledge assets, your portfolio. Where is that knowledge stored and maintained? Who uses it? Who has access to it? Who else could benefit from access?

Some of us in the library community will be having a slight feeling of *déjà-vu* at this point. Yes this is precisely the concept of "information mapping" that Horton and others in the library community have been promoting for years. We'll return to this point later.

4) Evaluate your knowledge assets. As in the case of a stock portfolio, ask the questions: are the assets performing? What are your assets worth? How can you leverage and manage their value? Patents are an obvious knowledge asset. Perform a triage on them. Which ones are trivial and no longer worth the legal effort and expense to maintain and renew them? More importantly, which ones may have unexamined applications and are worth investing the time to examine where they might be applied, perhaps to develop new products or perhaps to license to other corporations. Dow Corporation is often cited as an example of a company that has successfully done precisely that.

5) Invest and take action. Identify gaps and plug them. Create information resources where they are needed. Direct R & D to where it is needed. Look for

knowledge and technology to license, where appropriate, before your competitors do.

- 6) Reassemble your knowledge portfolio, your info-map, and keep cycling.

Then the question obviously becomes: Where do librarians fit in this?

A librarian's first response is likely to be – hold on, we have been in the knowledge management business for years. What do these people think a library is anyway? To turn that around to its more positive side, those authors in the business community are discovering the role of what we do; they just don't know it yet, and we need to educate them.

First, step 1 and particularly step 3 are to a very large extent the same information mapping concept that arose first in the library community. We have skills that we can bring to the table and we have, largely thanks to Horton, a literature to document that we have those skills. As for step 2, we can certainly take part in the analysis of our competition. Much of the membership of organizations such as SCIP, the Society for Competitive Intelligence Professionals is after all, composed of librarians. For step 5, part of our job is to fill information and knowledge gaps and to create information and knowledge resources.

Perhaps the greatest opportunity though lies in step 4, the strategic heart of knowledge management, the evaluation. If the management of knowledge and intellectual capital is a continuous iterative process (step 6), then it needs continuous management attention. Librarians' obvious (at least to us, but we must educate management) connections with and potential contributions to steps 1-3 & 5 should clearly call for us to be a key part of the structure or team that undertakes that continuous attention, and we should fall naturally, if we play our cards well, into being part of step 4 the evaluation, the strategy. Such a development would move the librarian from being a behind the scenes support position to being, as well, part of the up front strategic decision making team – a dramatic improvement in the positioning of the librarian or information officer.

In step 5, it would certainly be unusual and surprising if some of the investment, the plugging of some of the gaps were not in the domain of the library and information centre. And, if there are options as to where those new investments might take place, in the library / information centre versus in the MIS (Management Information Services) group for example, they are far more likely to be allocated to the Library / Information Centre's domain if the Library Information Centre director has been involved in steps 1-4 of the process.

Finally, and ideally, the Library / Information Centre director can play a key role, ideally the key role in step 6 the assembly of the structure and its process, and the oversight of that structure and its processes, that turns knowledge management from a one-time analysis and reorganization into a continuing ongoing process.

One last political point: We may feel, with some justification, that knowledge management is just a new name for librarianship, but unfortunately that won't sell, that is likely to reinforce the notion, the stereotype, that librarians are too focused and don't see the big picture. It will be far better to describe knowledge management as an extension of librarianship, and librarianship as the base of knowledge management, with a set of tools that it can bring to knowledge management to facilitate the implementation of knowledge management, the extension of librarianship, thus avoiding unnecessary, wasteful, expensive and most of all, time consuming reinventions of the skills and tools we already have.

Key Business Articles in the Literature of "Intellectual Capital"

- Drucker, Peter F. "The Age of Social Transformation". *The Atlantic Monthly*, 274 (11): 53-80 (November 1994). not about intellectual capital per se – but a marvelously insightful essay on the importance of information in the future.
- Botkin, Jim and Stan Davis. "The Coming of Knowledge-Based Business". *Harvard Business Review* 72 (5): 165-107 (Sept./Oct. 1994).
- Stewart, Thomas. "Brainpower". *Fortune* 123: 44-60 (June 3, 1991).
- Stewart, Thomas. "Now Capital Means Brains, Not Just Bucks". *Fortune* 123: 31-32 (Jan. 14, 1991).
- Stewart, Thomas. "Measuring Company I.Q.". *Fortune* 129: 24 (Jan. 24, 1994).
- Stewart, Thomas. "Your Company's Most Valuable Asset: Intellectual Capital". *Fortune* 130: 68-77 (Oct. 3, 1994).
- Stewart, Thomas. "Mapping Corporate Brainpower". *Fortune* 132: 209-212 (Oct. 30, 1995).
- Stewart, Thomas. "Getting Real About Brainpower". *Fortune* 132: 201-203 (Nov. 27, 1995).

Stewart is clearly the key popularizer of the intellectual capital concept in the business world. Reading the two or three most recent articles is sufficient; they include all the concepts of the earlier pieces.

- "Economy of the Mind". *The Economist* 313: 99-100 (Dec. 23, 1989).
- Reich, Robert. "The Real Economy". *The Atlantic Monthly* 267(2): 35-52 (February 1991).
- Wriston, Walter. "Clintonomics: The Information Revolution and the New Global Market Economy". *Vital Speeches of the Day* 59 (12): 375-380 (April 1, 1993).

Key pieces in the library literature that relate to intellectual capital (in many cases predating the business world's discovery of intellectual capital) that can serve you well and that you may be able to use

both for leverage, and to document the role and the legitimacy of librarianship in the domain of intellectual capital.

- C.F. Burk, Jr. and F.W. Horton, Jr. *InfoMap: A Complete Guide to Discovering Your Information Resources*. Prentice-Hall, 1988.
- Horton, Forrest W. Jr. "Mapping Corporate Information Resources". *International Journal of Information Management*, three separate articles: 8 (4): 249-259, 1988; 9 (1) 19-24, 1988; 9 (2): 91-95, 1989.
- Orna, Elizabeth, *Practical Information Policies: How to manage information flow in organizations*. Gower, Aldershot U.K., 1990. Still the best and most practical guide to information auditing.

Read Horton and Orna; it will give you ideas about and tools for info-mapping (Horton) and Information Auditing (Orna) that the business folks haven't thought about yet.

- Badenoch, Douglas et al. "The Value of Information" in *The Value and Impact of Information*, Feeney, Mary, and Maureen Grieves (eds.); London: Bowker, Saur, 1994.
- Koenig, Michael E.D. "Information Services and Downstream Productivity" in *The Annual Review of Information Science and Technology*, ed.; Martha E. Williams. Vol. 25, New York, Elsevier, 1990, Chapter 2, 55-86.
- Koenig, Michael E.D. "The Importance of Information Services for Productivity – Underrecognized and Underinvested". *Special Libraries*, 83 (4): 199-210, Fall 1992. (Reprinted in *Valuing Special Libraries and Information Centers*, Washington DC: Special Libraries Association, 1993.)

The key reviews of the literature describing the positive relationship between libraries and library services and corporate productivity.

- Special Libraries Association. *The Information Audit*, Special Libraries Association, Washington, DC, 1996. A collection of essays by various authors about the information audit. Not, unfortunately as good as it might be; neither Orna nor Horton are contributors.
- Koenig, Michael E.D. "The Information Environment and the Productivity of Research" in *Recent Advances in Chemical Information*; ed., H. Collier. London, Royal Society of Chemistry, 1992: pp. 133-143. Reprinted in: Grimshaw, Anne (ed.) *Information Culture and Business Performance* (Information Strategy Report 2, prepared for the British Library by Hertis Information and Research); Hatfield, Hertfordshire, U.K. University of Hertfordshire Press, 1995.

Perhaps the single most persuasive study on the importance of libraries to corporate productivity. See also:

- Marshall, Joanne G. 1993. *The Impact of the Special Library in Corporate Decision-Making*, Washington DC: Special Libraries Association, 1993.
- Marshall, Joanne G. 1992. "The Impact of the Hospital Library on Clinical Decision Making: The Rochester Study". *Bulletin of the Medical Library Association*. 80 (2): 169-178 (April 1992).
- King, David N. 1987. "The Contribution of Hospital Library Services to Clinical Care: A Study in Eight Hospitals". *Bulletin of the Medical Library Association*. 75 (4): 291-301 (October 1987).

Good recent cases reporting the positive impact of libraries to organizational effectiveness.

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