A BRIEF HISTORY OF THE ICM MOVEMENT

Patrick H. Sullivan (2000); **Value-driven Intellectual Capital**; How to convert Intangible Corporate Assets into Market Value.

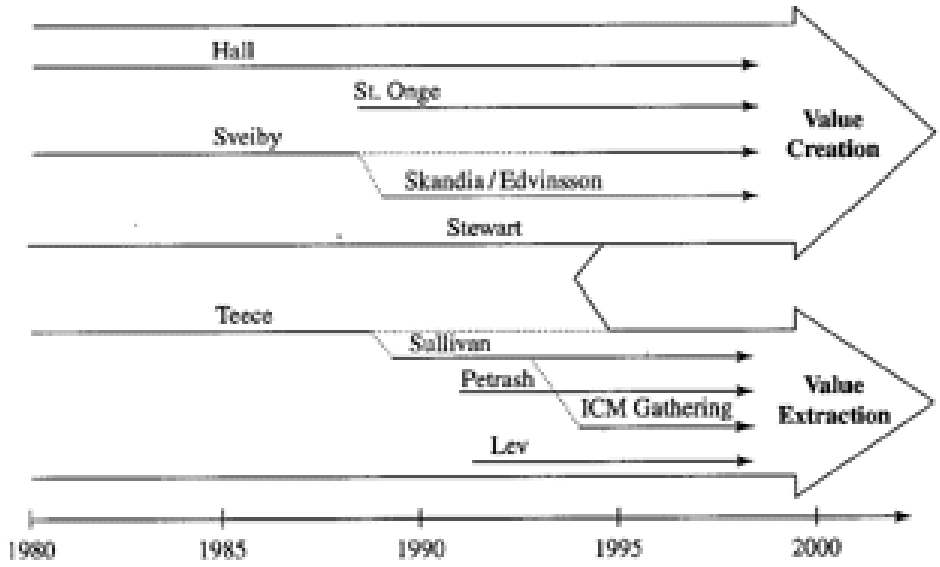
Wiley, Page 238-244.

The Conceptual Thinkers

The evolution of intellectual capital management as a discipline followed a pattern that is detectable in hindsight, although to the people involved at the beginning there was no pattern discernible at the time. There were three distinctly different origins of what has become the intellectual capital management movement. The first was in Japan with the groundbreaking work of Hiroyuki Itarni, who studied the effect of *invisible assets* on the management of Japanese corporations. The second was the Work of a disparate set of economists seeking a different view or theory of the firm. The views of these economists (Penrose, Rumelt, Wemerfelt, and others) were coalesced by David Teece of UC Berkeley in a seminal 1986 article on technology commercialization. Finally, the work of Karl-Erik Sveiby in Sweden, published originally in Swedish, addressed the human capital dimension of intellectual capital and, in so doing, provided a rich and tantalizing view of the potential for valuing the enterprise based upon the competences and knowledge of its employees.

Over the period 1959-1997 a diverse set of academic researchers and economists developed a new view on business strategy that emphasized resource efficiency rather than the generally accepted competitive forces. The resource-based perspective notes that firms have differentiated or unique resources, capabilities, and endowments. Further, these resource endowments are "sticky" (they are not easily added nor are they easily discarded), at least in the short run, so that firms must operate with what they have. The resources-based perspective focuses on strategies for exploiting existing firrn-specific assets. Since some of the firm's assets are intellectual, it follows that issues such as skills acquisition, the management of knowledge and know-how, and learning become fundamental strategic issues. In this context, the work of Itami and Sveiby, dealing with invisible assets or human capital, may have enormous potential for contributing to business strategy.

There has been an increasing frequency and specificity of contribution to the field since its inception. The timeline in Exhibit A.6 shows the diversity of contributors and their influence on each other. The contributions of those whose names appear in the timelines in Exhibits A.6 and A.7 are briefly explained below.



Time Line

1980 Itami publishes "*Mobilizing Invisible Assets*" in Japanese

1981 Hall establishes company to commercialize research on human values

1986 Sveiby publishes "*The Know-How Company*" on managing intangible assets

April 1986 Teece publishes seminal paper on extracting value from innovation

1988 Sveiby publishes "*The New Annual Report*" introducing "knowledge capital"

1989 Sveiby publishes "*The Invisible Balance Sheet*"

Summer 1989 Sullivan begins research into "commercializing innovation"

Fall 1990 Sveiby publishes "*Knowledge Management*"

Fall 1990 Term "Intellectual Capital" coined in Stewart's presence

Jan. 1991 Stewart publishes first "Brainpower" article in Fortune

Sept. 1991 Skandia organizes first corporate IC function, names Edvinsson VP

Spring 1992 Stewart publishes "Brainpower" article in *Fortune*

1993 St. Onge establishes concept of Customer Capital

July 1994 First meeting of Mill Valley Group

Oct. 1994 Stewart authors "*Intellectual Capital*" cover article in *Fortune*

Nov. 1994 Sullivan, Petrash, Edvinsson decide to host a gathering of IC managers

Jan. 1995	Second meeting Mill Valley Group
May 1995	First Skandia public report on IC
April 1996	SEC symposium on measuring intellectual/intangible assets
Sept. 1996	Sullivan and Parr book, *"Licensing Strategies"*, published
Oct. 1996	Lev founds Intangibles Research at New York University
Mar. 1997	Sveiby publishes"*The New Organizational Wealth*"
Mar. 1997	Edvinsson and Malone book, *"Intellectual Capital"*, published
April 1997	Stewart book, *"Intellectual Capital"*, published
June 1997	Hoover Institution conference on measuring intellectual capital
March 1998	Sullivan book, *"Profiting from Intellectual Capital"*, published

Hiroyuki Itami

Itami's groundbreaking work on the value of invisible assets to the corporation was originally published in ja anese in 1980. Not published in English until 1987, it was slowto be found by people interested in intellectual assets and therefore slow to be seen as significant contribution to the field. Nevertheless, readers of Itami's work uniformly conunent on its prescience and the clarity of its insights into intangible assets and their importance to the corporation.

David Teece

Teece's 1986 article "Profiting from Technological Innovation" brought together much of the work done by academic researchers and economists leading toward a resource-based theory of strategy. This article was instrumental in demonstrating the economist's view of technology commercialization and contained several ideas that were key to a management capability for extracting value from innovation. This article (and subsequent work) identified sources of value in technological innovation, the mechanisms for converting value to profits, and the steps necessary for commercializing innovation.

Brian Hall

For more than 25 years Hall has studied human values. In collaboration with Benjamin Tonna, he developed a hierarchy of human values as well as several instruments for measuring and describing the value sets of individuals and corporations. Hall founded Omega Associates in 1981 to commercialize his research. This company transitioned into Values Technology in 1989. Values Technology works with firms to identify their values, analyze how those values aid or impede firms' achievement of their business goals, and change the values, if necessary, to make them more supportive of the firms' business goals.

Karl-Erik Sveiby

Sveiby, currently Professor at Macquarie Graduate School of Management in Sydney, is the founding father of the very early "Swedish Movement" in knowledge management and intellectual capital. In 1986, he published his first book (written in Swedish) in which he explored how to manage the

rapidly growing field of knowledge companies-organizations that have no traditional production, only the knowledge and creativity of their employees. In 1990, he *published Kunskapsledning* (written in Swedish), the world's first book dealing with knowledge management. Sveiby was the first to recognize the need to measure human capital, and he pioneered accounting practices for these intangible assets, testing them in his own company. In 1989, he published the results of the Konrad working group in the book *The Invisible Balance Sheet,* proposing a theory for measuring knowledge capital by dividing it into three categories: *customer capital, individual capital, and structural capital.* The approach was adopted by a large number of Swedish-listed companies and, in 1993, the Swedish Council of Service Industries adopted it as their standard recommendation for annual reports, the first ever standard in this field. One of the many people inspired by Sveiby's concepts was Leif Edvinsson. Edvinsson went on to re-label these intangible assets as *intellectual capital* when he produced Skandia's first annual report supplement on intellectual capital in 1995.

Hubert St. Onge

The father of the concept of customer capital, Hubert St. Onge is considered to be one of the most creative thinkers in the field of learning and knowledge management. St. Onge, responsible for developing learning programs for the Canadian International Bank of Commerce, was interested in how to translate learning into both human and structural capital. He began by exploring the relationship between human and structural capital and the firm's financial capital. He realized that in order to be commercially successful in the long term, the first two capitals must focus on customer-related interests. In so doing, the firm creates a stock of capital around its customers, which St. Onge dubbed *customer capital*. (St. Onge defines structural capital in largely the same way that this book defines intellectual assets; see definition later in this appendix.) The St. Onge model shows that long-term profits are created at the confluence between human, structural, and customer capital.

Patrick Sullivan

The focus of Sullivan's work has been the extraction of value from IC. As one of the founders of the ICM Gathering, Sullivan has encouraged companies and individuals involved with value extraction to share information and to jointly develop decision processes, methods, and systems that produce practical results. This book is one of the outcomes of that approach. He has been closely associated with the ICM model of a knowledge firm, which was fonnulated at the first Gathering meeting using much of his thinking as its basis.

Thomas Stewart

Stewart began his association with intellectual capital when, as a feature writer for *Fortune* magazine, he wrote a brief article in 1991 about new ideas in business. That led to a longer story, which became "Brainpower," published in 1992. Stewart's interest in knowledge management led him to write "Intellectual Capital," which appeared in 1994. Stewart has become one of the most visible spokespersons for the field of intellectual capital management and continues to write articles that focus on the brainpower and knowledge management themes he has done so much to popularize. Now a member of the board of editors of *Fortune* magazine, Stewart published a book, *Intellectual CapitalThe New Wealth of Organizations* (Doubleday) in 1997.

Gordon Petrash

Originally trained as an architect, Petrash joined Dow in 1986 as a development manager for construetion materials. After successes in both construction materials management and in managing Dow's Styrofoam films business, he was asked to create an intellectual asset management function to identify innovations or ideas that might have been overlooked by the corporation and bring them to commercialization if possible. Petrash developed an intellectual asset vision and implementation model, including approaches and tools to enable the company to maximize the value of its existing

portfolio of intellectual assets. The success of this work led Dow to expand his responsibilities, Petrash was Dow's Director of Intellectual Capital/Knowledge Management. Since 1998 he has been a partner with PriceWaterhouseCoopers, specializing in consulting on intellectual assets with an emphasis on tax donations.

Leif Edvinsson

As Corporate Director of Intellectual Capital at Skandia AFS, a Swedish insurance company, Edvinsson was responsible for creating ways to describe what Skandia called "the hidden values" and develo an intellectual capital management model for the firm. As one of the best-known spokespersons for intellectual capital management, Edvinsson built upon the concept pioneered by Sveiby of reporting on external capital. Skandia has now issued some six intellectual supplements to its annual financial reports, outlining the.firin's intellectual capital and the ways in which this hidden value is used for the benefit of customers and shareholders.

Baruch Lev

Currently a professor at the Stem School of Management at New York University, Lev first began his research into valuing intangibles in the early 1990s as a colleague of David Teece's at UC Berkeley's Haas School of Business. Lev's work focuses on quantifying the value of intangibles and correlating those values with financial measures observable in the capital markets.

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