

K & I Book Reviews

CREATIVITY: Flow and The Psychology of Discovery and Invention (New York, NY: Harper Collins, 1997)
By Mihaly Csikszentmihalyi:
Reviewed by Robin Holm and, Associate Editor.

One could reasonably ask of what value is it that business and enterprise managers, knowledge workers and knowledge management practitioners and theorists engage in a lively inquiry into the very nature of creativity itself. The answer could be, just as reasonably, that such an inquiry might provide a luxurious intellectual romp through territory not usually explored in the hundreds of tomes we read dedicated to business and enterprise strategies. Csikszentmihalyi's book certainly accomplishes that. And for those of us who have to give ourselves special permission to luxuriate in our "business" reading, it goes quite beyond the pleasure that reading it entails.

Creativity provides a ground-breaking overview of those characteristics shared by some of the most extraordinary visionaries of our most recent century, painstakingly gleaned from hundreds of hours of personal interviews. Finally, it proposes ways in which we can capitalize on these commonalities in order to further creativity in ourselves and in those persons in our enterprises on whom we depend for innovation and breakthrough thinking. This is no "how to" book, although we have gained much from those written by Senge and others in that genre. This is a "how it is" analysis of creativity's amplitude – what it has meant to the evolution of civilization as we know it, and what we can learn from the circumstances which contributed to its empowerment in individual instances and on a vast scale over time.

Csikszentmihalyi and a group of his students at the University of Chicago videotaped interviews between 1990 and 1995 with ninety-one participants in his respondent group. He identified three primary conditions for selecting the study participants: they must have made a significant difference in a major cultural domain [one of the sciences, the arts, government, business, or human well-being in general]; they must still be actively involved in that domain or another one; and they must be at least sixty years of age [there were a very few exceptions to this criterion]. Those who accepted [out of the 275 invited] include recipients of fourteen Nobel prizes [four in physics, four in chemistry, two in literature, two in physiology or medicine, and one each in peace and in economics]. Csikszentmihalyi's aim was to investigate whether there weren't some "myths" regarding creativity that might be dispelled by actual sociological data capture and analysis; and whether what exists outside the usual mythology [that all wildly creative individuals are slightly mad, that they hated school, that

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they are unable to comply with discipline, etc.] could reveal ways in which to foster creativity environmentally and ways in which to respond ably and aptly to its momentum. Each of the respondents provided answers to the same questionnaire [roughly eighty questions] in discussion format.

The author defines creativity in a mode he designates as “capital C”, distinct from individual creative impulses or acts that occur without initiating significant cultural change. The creativity *with a capital C* that is of interest to Csikszentmihalyi is the act of creativity by which culture and cultural evolution are seminally altered. What made Galileo and Einstein think *otherwise* and *but couldn't it be this*? What if they hadn't? They aren't around to ask. But there are others who are.

He uses the story of Florence during the Renaissance to illustrate his theory that Creativity can only be observed in the interrelations of a system made up of three main parts: *domain* [mathematics, quantum theory, etc.] as a set of symbolic rules and procedures; *field* [researchers, art critics, government agencies, etc.] made up of individuals with experience and recognized expertise who act as gatekeepers for the domain; and *person* [scientist, engineer, molecular biologist, etc.] who is able to use the symbolic expression of *domain* to generate novel recognition of pattern and idea in such a way that the *field* accepts and validates his or her contribution, and it becomes permanently ensconced, so that those following on, rely on that act of Creativity as part of the bedrock of their personal creative inquiry. How was Brunelleschi able to successfully arrive at the architectural miracle necessary to complete the enormous dome above the Santa Maria Novella cathedral in Florence after its being unfinished for eighty years, Masaccio's frescoes left to the open air? He would go on to inspire Michelangelo as he designed the cupola for St. Peter's Basilica in Rome. The original builders of the Santa Maria Novella got just so far and had to stop, there being no way to keep the great stones from collapsing inward. How did twenty-one year old Lorenzo Ghiberti come to spend fifty years of his life creating the unparalleled beauty of its towering bronze baptistry doors, the “Gates of Paradise?” Csikszentmihalyi illustrates how *domain*, *field*, and *person* all had to comply in order that these phenomenal acts of Creativity might occur.

And what does this mean to us as devotees to the new realm of science and business we name “Knowledge Management”? Why do a Renaissance city and the theoretical work of an evolutionary psychologist have anything to do with our decision making and those initiatives we choose or dismiss? Florence in its heyday was a bit like Silicon Valley or the I-15 corridor on the East Coast – plenty flush with cash, ripe with well-funded competitive leaders – so much so that it could afford to commit itself to an ideal. In Florence's case, it was to the creation of the most beautiful city in the world. In our case, the ideal currently emerging seems to be that we harness the great stores of data and information existing in our well-funded commercial and government enterprises in such a way as to enable the meaningful, near instantaneous sharing and transfer of tacit and

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explicit knowledge. We don't hope for crumbs in this endeavor. We aren't willing to settle for a flat roof over the cathedral.

We are willing to do the long, hard, applied work required to arrive at the next business solution we can create. We are willing to vet our ideas and methodologies within the growing domain of Knowledge Management. But, more deeply than that, like Ghiberti painstakingly spending year after year on each separate bronze panel piece, or Bach laboring away to provide his patron with a new cantata every few weeks, we want to be present to those moments when the entirety is clear, or when an extreme moment of innovation occurs. We want to arrive at entirely new ways of interacting locally and globally. In the short term, we expect better returns on capital investment, smarter engagement with sources of intellectual capital, and incrementally better IT solutions. In the long term, though, we intuitively sense that there is something much larger in scope with which we are only beginning to engage.

Jonas Salk arrived at his discovery of the vaccine for polio by accident and expressed it facing great professional disapproval. E.O. Wilson arrived at his synthesis of social and biological sciences by virtue of a much resisted, lifelong obsession which began early in childhood and he faced professional disbelief at every stage of the course as well. Ilya Prigogine, forced by his family to study criminal law as a "respectable profession," followed his intuitive sense of what might underlie criminal behavior, and rebelliously opted for neurochemistry studies; and then made the wild leap to a "hunch" that the behavior of simple molecules might shed light on basic problems of philosophy. Rosalyn Yalow's original discoveries in radioimmunoassay procedure occurred as did Salk's, quite by accident, and her follow-on instincts put her in the right place at the right time to give us the basis of what we now know as nuclear medicine. The physicist, Freeman Dyson, and John Reed of Citicorps both recognized the moment when it was most imperative to "walk away from the problem" in order to arrive at a solution. John Reed's letters to himself written while on vacation allowed him to turn his company around on a dime at a time when he had to answer for serious mistakes in corporate judgement. Freeman Dyson's work underwrote a Nobel Prize awarded to Richard Feynman. The answer to "the problem" came to Dyson on a Greyhound Bus in the middle of the night in Kansas as he was returning to the East Coast from a vacation wandering through California.

Conversations with these and dozens of other respondents to Csikszentmihalyi's survey are combined in this book with a careful analysis of what makes Creativity possible and even likely. Those of us in the growing field of Knowledge Management have much to take from it personally and professionally and much, much pleasure to find in it as well.

Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation (new York, NY: Oxford University Press, 2000)

***By Georg Von Krogh, Kazuo Ichijo and Ikujiro Nonaka
Reviewed by Robin Holm and, Associate Editor***

Ikujiro Nonaka's 1995 book, *The Knowledge-Creating Company* [co-authored by Hirotaka Takeuchi], offers its Western readers a telescopic as well as microscopic view into the organizational theories and practices of Japanese companies, many of which have enjoyed the envy of corporate giants trapped in post-Industrial Revolution business methodologies. It gives many of us in the West a view of one approach to effecting a meaningful transition to what Peter Drucker told us would be the most imperative designator for twenty-first century business enterprise: the capability to survive and thrive in the "knowledge society." Industry leaders in Japan, such as Yotaro Kobayashi, Chairman and CEO of Fuji Xerox, commented that the book gives Eastern enterprise leaders lessons in how to better compete effectively using strategies borrowed from Western companies.

The Knowledge-Creating Company goes to great lengths to illustrate the subtle, but essential, philosophical differences in Eastern and Western thinking as applied to enterprise strategy and management. It makes a very successful argument for departure from the Cartesian approach to "a thing out there" which we name knowledge and strives for a much more contextually driven conceptual framework within which knowledge is more process than object, and has as its primary locus of attention the importance of methodologies which make tacit knowledge accessible.

Nonaka, Ichijo, and Von Krogh's new book, *Enabling Knowledge Creation*, begins in the very preface of the volume to address three very central questions which the authors assert are essential to any enterprise endeavor regarding the creation of knowledge, the sustaining of a knowledge-creating environment, and the very nature of "knowledge management" itself. They suggest, in fact, that knowledge cannot *be* managed per se. And that for all the good intentions of companies eagerly jumping on the band-wagon for knowledge creation and "knowledge management", the cart has gone awry and the team and wagon are heading for the ditch in no time flat.

Question: If Japanese companies were so successful [where their Western counterparts were not] in fostering knowledge creation, how is it that those companies were unable to function or adapt well in the recent severe recession in the Japanese economy? What happened? What was missing?

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Question: What was missing when the bright light of knowledge creation as the answer to agility and adaptability in business enterprise solutions began to shine, and our response to it was to devise one more IT gadget after another to funnel “information”, not knowledge, throughout the enterprise?

Question: What is the single ingredient most necessary to the sustainable fostering of knowledge creation, the ongoing *enabling* of knowledge creation?

This reviewer will ask a follow-on question. What if the answer to all of the above questions is embodied in a word not found in any enterprise business plan, only peripherally alluded to in any enterprise vision or value statement? What if the answer to the question is a word that the business community will have a much harder time attaining “buy-in” to than it ever imagined it would face when it suggested up-ending the top-down hierarchy of post-Industrial Revolution business organization and process? What if the word is “*caring*”?

One can be thankful that the authors are such tireless researchers and that they had the enthusiastic support of CEO’s and managers from such companies as Skandia, General Electric Japan, Ayura Laboratories, Maekawa Seisakujo, Toshiba, Sony, Siemens AG, Unilever, Boston Consulting Group, Adtrantz, Phonak, and Gemini Consulting to contribute to the careful examination of the business processes being institutionalized in these enterprises with which to bolster their argument. Otherwise, one could expect the reaction to the book to be met with the enthusiasm business enterprise leaders might have to the recommendation that all employees take EST training or sit under crystals suspended above their cubicle ensconced laptops.

The authors do not suggest that doing business is about making people generally comfortable at the expense of the enterprise; that *caring* is synonymous with agreement and permissiveness; that doing hard business isn’t most of the work-day about *doing hard business*. Rather they suggest that there are certain environmental and human factors which demand the same sort of approach that fosters growth and learning in business as one might find in a functional, rather than dysfunctional, family, community, or life system. It is not enough, they assert, to create an environment which celebrates knowledge creation. One has to do more than entice knowledge workers [and they assert that every worker is a knowledge worker] with large sums of money and leases on luxury automobiles – another enterprise can and will do that with the same worker. It is not possible to “bully” knowledge workers into sharing information and knowledge. Creativity cannot be forced out of an employee as one might squeeze toothpaste from a tube, however much one says the toothpaste is “valued”. Furthermore, given the recent marketplace events which included downsizing and restructuring, most companies attempting to initiate knowledge valuing agendas are faced with a

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workforce rife with suspicion and distrust. One cannot buy nor command nor force loyalty and creativity in such an environment.

Of the roughly three-hundred pages in the book, perhaps sixty are devoted to theoretical propositions; the rest are in-depth case study examples from the companies mentioned above. In addition to the practical discussions provided by CEO's and managers and workers, the book includes substantial examples of process mapping tools implemented by companies engaged in the transition to knowledge enabling organizational processes.

The authors identify five steps essential to organizational knowledge creation which derive their functionality from the proposition that knowledge itself is context driven; that it is dynamic, relational, and based on human action; that it relies on situational circumstance and the people connected to that circumstance rather than any absolute truth or set of hard facts. The knowledge-creation steps they identify are: (1) sharing tacit knowledge, (2) creating concepts, (3) justifying concepts, (4) building a prototype, and (5) cross-leveling knowledge. These steps and the processes which support them are fully examined in chapters within the book.

Further, the authors identify five concepts as "knowledge enablers" within an enterprise and discuss their creation and implementation in depth. They are: (1) instill a knowledge vision, (2) manage conversations, (3) mobilize knowledge activists, (4) create the right context, and (5) globalize local knowledge. Examples in case studies throughout the four chapters devoted to these concepts illustrate how they can be applied throughout the enterprise at every level of interaction.

One essential early section of the book addresses the organizational and individual barriers to knowledge enabling that are important for any knowledge activist to be aware of when approaching knowledge creation and enabling endeavors within an enterprise. Many Knowledge Management enthusiasts have found themselves in situations where the change or solution they offer seems so acutely correct, and the resistance so counter-intuitive. The section of this book which identifies barriers such as the need for a legitimate language, organizational stories, procedures, and company paradigms is perhaps the most important teaching moment in the entire volume. The authors suggest that successful knowledge activists need to be as much psychologists and sociologists as they need to be champions for knowledge creation. So true, so true. And democratic to the n'th degree, the authors amply illustrate the importance of institution-wide recognition of these barriers, and implementation of training throughout the workplace so as to prepare individual workers and microcommunities with the tools necessary to share knowledge and knowledge creation effectively.

In the reviewer's opinion, the less rigidly committed any enterprise already is to a given "Knowledge Management" initiative, the better. The foundations laid by the authors of *Enabling Knowledge Creation* provide the most intuitively sound context from which to begin such an initiative that I've encountered. I would have liked to see more relational associations tied to systems research and complex adaptive systems in particular, but the authors are above and beyond all else deeply committed business strategists, and more practically oriented than theoretical in approach. Lucky is the CKO who can begin to structure a knowledge management vision on the basis of this work.