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Knowledge Management Foundations

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KNOWLEDGE MANAGEMENT FOUNDATIONS

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Boston Oxford Auckland Johannesburg Melbourne New Delhi

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Library of Congress Cataloging-in-Publication Data

Fuller, Steve.

Knowledge management foundations / Steve Fuller.

p. cm.

Includes bibliographical references and index.

ISBN 0-7506-7365-6 (pbk.:alk. paper)

1. Knowledge management. I. Title.

HD30.2 .F86 2001

658.4'038—dc21

2001049937

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

The publisher offers special discounts on bulk orders of this book.

For information, please contact:

Manager of Special Sales
Butterworth–Heinemann
225 Wildwood Avenue
Woburn, MA 01801-2041
Tel: 781-904-2500
Fax: 781-904-2620

For information on all Butterworth–Heinemann publications available, contact our World Wide Web home page at: <http://www.bh.com>

10 9 8 7 6 5 4 3 2 1

Printed in the United States of America

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INTRODUCTION

Knowledge Management Foundations attempts to place knowledge management (“KM” to its friends) on a secure intellectual footing. Unlike most others who have written on this topic, I have been primarily oriented to the institutions traditionally dedicated to knowledge production—that is, universities—whose maintenance has been largely dependent on significant state subsidies. The idea that privately owned corporations might be also in the business of knowledge production is a recent development that raises a host of questions about the exact nature of knowledge in our times. Thus, I proceed by asking what the management mentality does to knowledge, rather than vice versa. It means that my analysis tends to adopt the knowledge worker’s perspective, as opposed to the manager’s. If knowledge management teaches nothing else, it is that these two perspectives easily rub against each other.

To be sure, knowledge management’s challenges are not entirely unwelcomed. As knowledge production has come to involve more people in more expensive activities, the relationship of benefits to costs looms ever larger. Academics are not especially adept at handling this issue, having come to expect indefinite funding for their inquiries. Nevertheless, the knowledge management literature presses the case for knowledge producers to justify themselves with a freshness—indeed, a rudeness—that has not been seen since Jeremy Bentham’s original defense of utilitarianism. However, a fine line separates demystification from disempowerment, especially if the power relations among the relevant parties are not closely monitored. This book treads this fine line. Knowledge workers must recognize both their internal differences and their accountability to those who pay their way. However, such recognition need not lead to the mass exploitation—or proletarianization—predicted by Marxists. Nevertheless, it *does* mean that knowledge workers see themselves as engaged in a common enterprise *simply by virtue of producing knowledge*. Ironically, the knowledge management literature cur-

rently tends to obscure this viewpoint—but not surprisingly, considering the little that professors, industrial researchers, and IT specialists naturally share by way of worldview or work setting.

This book begins by considering the historical and philosophical origins of knowledge management, and the ways it has transformed our understanding of what knowledge is. This transformation has generally gone unappreciated by academics, even economists. Two signs of the times provide the focus for *Chapter 1*. One is the subtle shift in knowledge from a public to a positional good, one whose value is directly tied to its scarcity. The other is the KM classification of universities as “dumb organizations” (where a McDonalds franchise is a “smart” one). To be sure, these tendencies have been present throughout most of history, but KM explicitly justifies them. However, there are also opposing tendencies, whereby an academic orientation to knowledge production (the “Executive Ph.D.”) has begun to infiltrate business as a stabilizing force. Together these two tendencies point toward a major rethink about what exactly is the value of producing knowledge. *Chapter 2* probes more deeply the philosophical, economic, and legal peculiarities of knowledge that—up to this point—has made knowledge resistant to a KM-style treatment. *Chapter 3* focuses on how information technology has broken down this resistance, even though much of the IT revolution can be understood by extending a standard Marxist analysis of industrial labor to knowledge work. Yet IT enchantment may be found even in the inner sanctum of the academy, as exemplified by my extended debates with “Cyberplatonists,” featured in the second half of that chapter. In *Chapter 4*, I formally consider the political economy that is needed for underwriting the autonomous pursuit of knowledge—partly to counteract some of the more corrosive KM tendencies. Here I explore the virtues of the elusive brand of politics known as “civic republicanism,” which historically combined the best elements of liberalism and communitarianism. Significantly, republicans prefer the word “governance” to “management.” I discuss how universities as a form of organization have come closest to institutionalizing the civic republican ideal. In the *Appendix*, I explore in depth the issues surrounding the present and future of that characteristic form of academic knowledge production, the peer review process. In the *Conclusion*, I observe that the difficult questions raised by knowledge management ultimately rest on the rather contradictory terms in which we normally conceptualize knowledge. In

that respect, the field is worthy of much deeper thought than it has so far received.

Before we embark on this intellectual journey, I would like to thank a variety of people who represent the full range of those concerned with knowledge management: Steffen Bohm, David Boje, Ahmed Bouzid, Steve Cavaleri, Daryl Chubin, Jim Collier, Art Diamond, Sir Brian Fender, Stevan Harnad, Tomas Hellstrom, Merle Jacob, Hidetoshi Kihara, Kristian Kindtler, Rob Kling, Ron Kostoff, Stephanie Lawler, Brian Loader, Roy MacLeod, Harry Marks, Philip Mirowski, Glynthea Modood, Michael Perelman, Philip Pettit, Sujatha Raman, Greg Ransom, Francis Remedios, Floyd Rudmin, Harry Scarbrough, Esther-Mirjam Sent, Nico Stehr, Jacky Swan, Ed Swanstrom, Stephen Turner, Bjorn Wittrock, and Tarcisio Zandonade. In addition, I would like to acknowledge the support of the U.K.'s Economic and Social Research Council for the work discussed in the Appendix.

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1. MUCH ADO ABOUT KNOWLEDGE: WHY NOW?

“Knowledge management,” “knowledge society,” and not least the burgeoning employment prospects of “chief knowledge officers” (“CKOs”) are signs of our times. To the naïve observer, it is perfectly obvious that knowledge has always played an important role in the organization and advancement of society. In that sense, saying that we live in a “knowledge society” would seem to be no more informative than saying that we live in a “power society” or a “money society” or a “culture society.” But perhaps “knowledge” here is really an instance of what rhetoricians call *catachresis*, i.e., the strategic misuse of words, a euphemism for something a bit unsavory. After all, that knowledge would need to be literally “managed” suggests that its growth should not be left in a wild state: at best it remains unused and at worst it is wasted. Yet, this managerial mindset goes against the grain of the last 2500 years of Western thought, which has valued the pursuit of knowledge “for its own sake,” regardless of its costs and benefits.

People who claim to know something about KM must decide whether the field is more about *knowledge* or *management*. The dark secret of this field is that its name is an oxymoron, for as soon as business enters the picture, the interests of knowledge and management trade off against each other. After all, why spend valuable resources generating new knowledge, if one can simply try to do what one has always done, only more efficiently? To be sure, rising to the level of efficiency demanded of the market can take different forms. It may take the Taylorist route of increasing the level of surveillance on one’s own workers, so that more of the fruits of their labors are

reaped by their corporate employers. Alternatively, it may involve acquiring a better understanding of the market itself. In short: What do consumers want? Who, if anyone, is currently providing it? Or, more ambitiously: What can consumers *be made* to want?

It is only in response to these questions that knowledge is of interest to management. In that respect, “knowledge management” is little more than talk about ordinary management in a world that has become a little too complex for traditional managers to handle. However, complexity is primarily a mathematical feature of reality, referring to an increase in the number of dimensions that need to be taken into account. We can acknowledge that our world has become more complex without necessarily concluding that it demands a qualitatively different mode of analysis. Managers who remain skeptical of the value of investing in people and machines designed to provide something called “knowledge management” figured this out a long time ago.

We are used to thinking that knowledge is produced by hard work that is never fully rewarded, the fruits of which are nevertheless distributed as widely as possible. For economists, this is what distinguishes knowledge as a *public good*. However, from a KM standpoint, it is not a very economic scenario. It would be better for the reverse to occur. Effort toward innovation would then be discouraged except where profits are likely to follow. This would license, on the one hand, the redundancy of research staff and, on the other, the acquisition of intellectual property rights. In both cases, capturing knowledge takes precedence over cultivating it.

Generally speaking, the competitive advantage likely to be gained from the introduction of a new product largely depends on one’s ability to create a demand for it, which usually has more to do with an ability to second-guess consumers than anything truly revolutionary in the product itself. Thus, relatively small innovations can end up making major profits for big companies, while truly radical innovations can be easily captured or ignored. And if the fate of non-petroleum-fueled cars is any indication, some innovations may even be captured *in order to be* ignored.

These features of the *Realpolitik* of KM acquire a special poignancy in the country from which I write, the United Kingdom. It begins to explain why the recent surge in the number of British scientific publications and patents has failed to enhance our national competitiveness in global markets. Even if there is some truth to the

widespread view that scientists and businesspeople do not communicate with each other very well, a deeper problem is that businesspeople regard the need for new knowledge as the moral equivalent of a necessary evil: the more necessary, the more evil. Economists often fail to recognize this point because of the rather patronizing attitude towards business that is enshrined in their “constrained optimization” model of rational action. In this model, the average corporate executive appears as a harried and impatient person—a “bounded rational” agent, in Herbert Simon’s terms—who must strike a balance between doing what is best in the short and long terms (Fuller 1985). This may involve curtailing the work of the Research and Development (“R&D”) division. However, had the corporation a limitless supply of time and resources, it would (allegedly) increase its R&D investments and eventually reap the corresponding benefits, since new knowledge is presumed to be the royal road to an increased market share.

The rise of knowledge management reveals that “the average corporate executive” does not think like this at all. Indicative is the difference in the biological imagery to which the economist and the KM specialist typically appeal. Economists regard new knowledge as spontaneously generated, much like a mutation that eventually becomes the basis for a new species. Despite their pessimism about the prospects for controlling the growth of knowledge, economists are generally optimistic that such uncontrolled growth will ultimately result in overall good. In contrast, knowledge managers regard the uncontrollable character of knowledge growth as itself a problem. Where economists imagine a proliferation of new variations and species, knowledge managers see only potential weeds that crowd out the effort needed to maximize profitability. Where economists see “factors of production” in the staff and equipment of the average knowledge-intensive firm, knowledge managers see “conspicuous consumption,” the cost-effectiveness of which is presumed dubious, unless proven otherwise.

Difference in historical perspective plays an important role here. Economists’ views of knowledge remain anchored in the Industrial Revolution of the late 18th and early 19th century, when capitalized innovation did indeed result in a general expansion of markets and increase in wealth—at least in the Europeanized world. However, KM is anchored in the “information explosion” of the late 20th and early 21st century, in which corporations are struggling to cope with

overflowing databases, the care of which has been left to a highly skilled but mobile labor force.

But knowledge management is equally about academics whose employment prospects have been improved since the 1980s by moving from the arts and sciences faculties to the business schools. This move reflected the global success of capitalism (a.k.a. USA) over socialism (a.k.a. USSR) that marked the end of the Cold War. Here it is worth recalling that, generally speaking, the expansion of the arts and sciences faculties in universities in the 19th and 20th centuries had been nation-building exercises motivated by the prospect of citizen mobilization in time of war. The humanities provided instruction in the values that needed to be upheld; the social sciences taught the relevant mechanisms of social control; and the natural sciences contributed to the consolidation and upgrading of the nation's infrastructure and defense system. However, in times of peace, these disciplines potentially created obstacles to commerce by reifying differences that could be otherwise negotiated away in the free exchange of goods and services. Thus, from a strictly capitalistic standpoint, language differences between trading partners are not indicative of vast cultural chasms that require many years of experience—or advanced academic degrees—to fathom. Rather, they provide opportunities to construct more efficient forms of communication, what linguists call “pidgins,” that circumvent the need for all this learning. KM continues this “if it's good for academia, it's bad for business” mentality—only now within academia itself.

These observations about the origins of knowledge management are complicated by a couple of factors. The first pertains to the field's historical myopia, the second to the arbitrariness of the field's name.

1.1. Historical Myopia as a Precondition for Knowledge Management

Even those academics who in the 1980s were driven by “market conditions” into business schools were taken by surprise by the incursion of capitalist values into their own workplaces. I refer here not only to the increased need for “external” (i.e., non-university) sources of income to validate a “demand” for one's research, but also the use of production and consumption metrics to judge research quality—that is, the number of papers and/or patents produced and the frequency with which they are cited. However, academics have tended

to interpret this situation as heralding the emergence of a new post-industrial order, the *knowledge society* (Stehr 1994), in which “knowledge” is the new “capital” and “knowledge management” the science of this revolutionary order. Seen through these rose-tinted spectacles, knowledge now matters to business in ways it never has before.

Unfortunately, this vision is persuasive only to those with a short historical memory. Ever since Joseph Schumpeter (1961) introduced the “entrepreneur” as the lifeblood of capitalism in 1912, there has been a general appreciation of the centrality of new knowledge—a.k.a. “innovation”—to capital accumulation. However, the legendary entrepreneur championed by Schumpeter was not an academic specialist but a “self-made man” whose confidence was matched only by his determination. The entrepreneur was more Edison than Einstein: a master of induction, not deduction. (In fact, Schumpeter’s favorite example was Henry Ford, who, unlike Edison, managed to incorporate his innovations into a sustained profit-making institution.) But nowadays *everyone* is more educated. The great entrepreneur of our times, Bill Gates, was a Harvard dropout, not a semiliterate journeyman. And, of course, the people who work for Bill Gates have at least a bachelor’s degree. Given this shrinkage in social distance between academia and industry, it is easy for academics to imagine that business has (finally!) come to realize the value of knowledge to enterprise. This explains the rather sanguine outlook of most of the popular and academic KM literature.

As the reader will have already gathered, my attitude is more skeptical. A concept that informs my skepticism and plays an important explanatory role in the pages that follow is the *positional good* (Hirsch 1977). KM’s most lasting contribution to our understanding of the nature of knowledge may be its practical demonstration that, other things being equal (i.e., no special effort to institutionalize knowledge as a public good), knowledge is naturally a positional good: Its value is directly tied to its scarcity, such that the more people who possess it, the less valuable it is. This begins to explain the ease with which management gurus have established themselves as theorists and vendors of “intellectual capital” (Stewart 1997). Indeed, the so-called KM revolution is best understood as the extension of fairly conventional management principles to a more demanding class of producers and consumers. What makes them so demanding? I shall focus mainly on how knowledge workers differ from manual labor-

ers, at least as portrayed in the traditional management literature, and then end with a discussion of consumers.

The appeal to common goals in labor–management negotiations—everyone’s interest in keeping the factory open—can no longer be taken for granted in the case of knowledge workers. A scientist who finds the corporate workplace oppressive may take leave to a university or perhaps even start his own company. To be sure, this lack of commitment and ease of mobility among knowledge workers can be used to management’s advantage, as corporations increasingly shift to “just-in-time” and “outsourcing” production strategies, and otherwise flexibly adapt to changing market conditions. However, the downside is that it becomes harder to motivate worker loyalty when it is needed. The old threats and bribes do not work as well anymore. In terms of management strategy, then, there has been a paradigm shift in the preferred school of behavioral psychology. Heavy-handed, Pavlovian classical conditioning has yielded to the subtler Skinnerian form of operant reinforcement that aims not to make the workers better (in spite of themselves) but to discover (and reward) the good they naturally do.

Moreover, the problem of motivating knowledge workers affects union organizers just as much as managers. Unions traditionally leveraged worker solidarity to ensure the welfare of anyone working in a given trade. But knowledge workers are no more likely to show solidarity with fellow knowledge workers than with the managers who employ them. This problem has dogged the history of scientific professionalization. Despite the best efforts of several eminent scientists, no large scientific labor union has ever survived for very long. Indeed, scientists have never been able even to agree on a code of professional conduct. Thus, restrictions on the use of humans (and animals) in experimental research have had to be imposed on scientists by their managers, i.e., administrators and legislators. The most successful example of union-style solidarity among knowledge workers has probably been the securing of tenure in academia. Yet, as post–Cold War market conditions force new academically trained researchers and teachers into short-term contracts that involve shifting between institutions, both in and out of academia, tenure as a symbol of “academic freedom” appears more as an unearned privilege than a mark of collective identity.

In one sense, the situation of knowledge workers has not changed. They are still largely “alienated” from their labor in Marx’s original