Leading Issues Journal

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The Centre for Leadership for Women features an article by Professor Peter Sheldrake who is Head of Management at RMIT University. In a style that is refreshing, yet probing, Sheldrake examines the issue about the knowledge that organisations possess. He argues that 'in most organisations, we don't know what we know, and what little we do know is often the least important knowledge.' When an individual leaves an organisation the person takes with them all the knowledge that they have accumulated from experience. This knowledge is unwritten and remains in people's minds rather than in a tangible form. Sheldrake distinguishes this type of knowledge as Tacit knowledge and explores the significance of this in relation to two other types of knowledge: Explicit knowledge, and Knowledge about knowledge. He challenges us to reconsider people as the most crucial resource of any organisation. Although this proposition is not a recent one, Sheldrake's insights into why we should accept this proposition are enlightening and noteworthy.

An interview with Professor Peter Sheldrake is featured in our section, Interviews with Leaders.

Knowing what we know By Professor Peter Sheldrake

In the late 1960's, I was commissioned to carry out a study of training needs in the wool, jute and flax industry in Scotland. I visited places as diverse as Aberdeen and Elgin, Arbroath and Brora, interviewing mill owners, managers and staff. At one mill, I was ushered in to meet the chemist, Harry, who made up the dyes used to produce the wools that were woven up as tweeds. He seemed very old to me then (he was about 40 years old, I think), and looked at me patiently as I explained what I was assessing. "It takes five to ten years to learn dyeing, alongside o'me", he said, "and we have no-one interested in the trade". He turned back to the rows of bottles, and got on with his work.

I was reminded of that incident some twenty years later, when I got to know Peter, the local car mechanic in Hawthorn, who looked after my Volvo, and then later my Honda. Peter knew about cars. He would listen as you drove up, ask a few questions, and then ask you to return at 3pm that day. The car would be fixed, and the price was always reasonable - he often used second hand parts, and sometimes required no parts at all.

Peter and Harry were knowledge workers, of course. Their technical skills were excellent, but what made them successful was the knowledge that they had acquired, and were able to use. In both cases, moreover, the knowledge was tacit, not to be found in textbooks or manuals. When they wanted to teach someone, it was a long apprenticeship - not in learning the skills, but in acquiring that core stock of tacit knowledge. When they stopped working, their knowledge walked out of the door with them.

These two stories make two important points. The first is that the knowledge workforce is nothing new: many companies have relied on knowledge workers for many, many years. Second, as was clear then, and remains the case, knowledge is funny stuff. It sits inside

peoples' heads (even thought we try various techniques to get them to put it on paper), much of it is tacit and uncodified, and even if you sell it, it remains with you (except, as I am discovering, when your memory begins to fail you!). Indeed, with all the current hype about knowledge based companies, and the new 'revolution' in business, it is easy to ignore what we have already learnt, in the mistaken belief that the new world is entirely different.

Let me draw a couple of simple distinctions. First, there is an important difference between information and knowledge. Information is simply data; knowledge is the translation of that data into capability for action, through the use of theories, models, frameworks, and 'rules of thumb'. Second, there are various types of knowledge, but at least three important groups include tacit knowledge, explicit knowledge, and knowledge about knowledge. If all this sounds a bit precious, let me explain why these distinctions are important.

First, one change that has taken place in the past few years is an explosion in available information. I am not sure that such an explosion constitutes a revolution (to be compared with the Industrial Revolution): in fact, the important revolution that is taking place seems to be in telecommunications. However, the consequences of the explosion are evident. We have extraordinary amounts of information available to us - as a search on the Internet for any category of information soon reveals, there are thousands of places where data on any given topic can be found. However, there is no evidence of a corresponding increase in knowledge. Indeed, as the cycles of fashion keep turning around, there is a uncomfortable sense that, in many areas, there is no new knowledge appearing. In my own field of management, it seems we keep recycling ideas - operations and methods becomes 'business process re-engineering'; productivity becomes 'economic value added', and skills become competencies.

To put it in a nutshell: while there are some important changes taking place right now, there is little evidence to suggest we are going through either an 'information revolution' or a 'knowledge revolution'.

However, knowledge is an important asset (and it always has been). While it is fashionable to try to develop ways to measure the 'stock of knowledge' of a company, (it seems to be the latest way to boost the share value of an enterprise, now that we have extracted the last dollar out of brand and reputation), the task of 'capturing' knowledge remains formidable. Explicit knowledge is easy, of course, as the name suggests. Universities live by codifying knowledge and then passing it on to students. Textbooks and academic monographs represent the codified knowledge stock of a society - and, in passing, it is a little sad to realise how little new has been added to that stock in the past few decades. Indeed, in one of my programs, I like to explore the extent to which Machiavelli, in The Prince, wrote an excellent textbook in traditional management (albeit with some somewhat crude approaches to those strategies we nowadays call downsizing, lateral shifts, and managing by bread and circuses).

Far more interesting are the other two categories. Tacit knowledge is a hidden asset in most companies, and one that is most often overlooked when efficiencies and improved productivity become the order of the day. Experienced staff, with significant experiential knowledge, are often the first to be released as a company seeks to reduce its costs. When those staffs' knowledge walks out of the door, the loss is invisible. However, we all know of companies that have subsequently rehired staff because they were the only people who knew how to do some things - and they love coming back as consultants paid three times as much as they were paid before. Lack of understanding of the importance of tacit knowledge

is compounded by the explosion of information that is available. Many senior managers confuse the two, and feel comfortable that they have 'all the information', without realising that they don't know how to use it. In other words, we often don't know what we know, and we don't know when we have lost it.

Knowledge about knowledge is another key category of knowledge that is poorly understood. This was the province of philosophers for some 2,500 years, of course, (and therefore immediately regarded by most people as clearly irrelevant). However, the importance of epistemology was brought home in the natural sciences at the beginning of this century when the nicely articulated world of classical physics was torn apart by Einstein and others. For the greater part of this century, scientists have battled with competing ways of understanding the world, and their inconsistencies and ambiguities: the sociological force of all this was explored by Thomas Kuhn when he wrote about 'the structure of scientific revolutions' (and put the 'paradigm' word into circulation, since when it has been constantly used and abused!).

The world of business is just beginning to catch on to the fact that all this might be relevant to them. While science has gone through turmoil, enterprises have operated within a framework of rationality and a positivist model of understanding that has been largely unchallenged. Even today, we describe those few analysts who try to see the world in different ways as 'mavericks', dwelling on the 'age of unreason'. However, the past few years have seen more and more 'rational' corporations bite the dust, while mavericks keep changing and making money. Tom Peters is alive and well!!

The ability to live with ambiguity, to see things differently and to reconceptualise - these are seldom attributes that are sought in new staff, or praised in existing staff. We reward conformity, and those who follow the explicit and established ways of doing things. We fear the unconventional, and prefer to exclude rather than embrace those who disagree with us. We ignore tacit knowledge and knowledge about knowledge at our peril. On the one hand, it is tacit knowledge that marks out the successful from the unsuccessful in thousands of enterprises - large and small. As long as the process of capturing that tacit knowledge remains largely unrealised, so it is the people who count - whether they be mechanics or chefs, people in woollen mills, international business coporations or fashion houses. The calculation of a company's intellectual capital may satisfy the shareholders in the short term, but the management of its people will be far more important in the longer term.
On the other hand, knowledge about knowledge (perhaps we can call it wisdom), is also critical. As enterprises seek to reinvent themselves, it is those who have the ability to rethink and imagine the new that are the most important contributors. This knowledge is even less codifiable - and the people even more important.

In most organisations, we don't know what we know, and what little we do know is often the least important knowledge we have. However, we do know that tacit knowledge, that which enables us to do things well, sits inside the heads of our staff. We also know that the ability to see things differently is also a personal attribute. Perhaps we should be worrying more about our people, and less about the essentially unproductive task of measuring intellectual capital. - and that is a point of view which is as old as the fact that companies have had knowledge workers in their workforce.

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The Centre for Leadership for Women focuses on the subject of Genetically Modified Foods (GM Foods). Dr Rosemary Stanton, well-known Australian Nutritionist explores various perspectives of this contentious development. An informed debate about the production of GM Foods, requires a consideration of what this means to all the stakeholders - farmers, researchers, retailers, investors, government and consumers. Stanton's discussion presents insights into key questions which she raises, challenging us to debate this new technology before rushing into accepting it.

Genetically Modified Foods By Dr Rosemary Stanton OAM

Throughout the world, there is a debate raging over genetically modified (GM) foods. Are they safe? Should they be labelled? How might they affect future health? What will they do to the environment? Are they necessary? Can Australia afford to miss out on the benefits of growing GM crops? Who benefits from these new technologies?

Reactions against GM foods range from the logical arguments of the Union of Concerned Scientists to protesters in space suits ripping up trial fields of GM crops in the United Kingdom. Some large food companies and major supermarket chains in the United Kingdom and Europe have declared they will not stock the foods, usually because they see the commercial advantages in taking such a stand. Many, including consumer groups in most countries of the world, have called for a moratorium on commercial growing of GM crops until their health, environmental and ethical effects have been fully investigated by independent researchers and appropriate committees.

On the other hand, companies marketing GM foods and some researchers react angrily to anyone who questions their wholehearted support of the technology. Researchers are often enthusiastic about potentially useful applications of the technology, and also see many job opportunities. Organisations representing large food companies are also in favour of GM foods, convinced that the public concern is fuelled by ignorance and scaremongering on the part of 'green' groups.

Where will it all lead, and what are the options?
Gene technology itself is not inherently bad and it undoubtedly has many potential uses. Medical applications of gene technology, for example, are vitally important and are well accepted because consumers see them as useful and their production and use is contained.

Theoretically, GM crops could offer better nutrition to people in countries where undernutrition is a major problem. The reality, however, is that GM crops are being grown in countries where there is more than enough food and are sold only to those who can pay for them. Many are being used for animal feeds - a

proven distortion of use of the world's resources and GM crops have not been cheaper than regular crops and have not given the increased yields promised. Over 80% of the world's farmers are subsistence farmers and for them, GM crops will lead to a continued and worsening indebtedness to large agribusinesses. Many consumers believe there has not been sufficient recognition of the potential ecological problems of GM crops. The ethical aspects of large companies owning the patents on seeds used for basic foodstuffs has also been largely ignored as companies rush to secure their markets ahead of their competitors. The influence agribusinesses exert on governments, the lack of consultation with the public, the unwillingness to label GM products, the attempts to marginalise those who enter the debate and the dismissal of valid concerns as scaremongering do not engender confidence in those promoting GM foods. Nor does the fact that those who stand to profit from the research are its funders.

There are many examples where embracing new technologies before all the evidence is to hand have proved disastrous. The problems of pesticides when used in combination, the land degradation resulting from overenthusiastic clearing, salinity from irrigation and mad cow disease from inappropriate animal feeds are a few examples. We already have evidence that some forms of GM technology could create future problems with weed control and disrupt ecological balance through their effect on beneficial insect populations, so you might assume we would accept the lessons of history and move slowly.

Even more importantly, we should be working out whether there are practical ways this technology could benefit those who need it most instead of increasing the coffers of those who want the right to own and patent genetic resources. The disparity between rich and poor throughout the world is likely to accelerate with ownership of GM food patents. Much more debate on this technology is needed before we rush into accepting it.