Golden Capital and Other Knowledge-Based Intangibles: Measuring for Excellence Not Compliance

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Introduction

> Information and communication technologies, globalization of economic activity and the trend towards greater personal autonomy and responsibility have changed the education demands of individuals and nations. Education is also increasingly considered an investment in the collective future of societies and nations, rather than simply the future success of individuals (UNESCO/OECD, 2003, p7).

This paper will address the complexities of the Australian higher education sector in new and challenging times and attempt to make sense of the competing tensions and clashing cultures currently affecting the resourcing, leadership, management, work and workers of this sector in an ever increasing globally competitive environment.

This paper will compare Australia's investment in knowledge against OECD indicators and identify how this is affecting the sector's ability to compete now and in to the future. It will situate the higher education sector as central to the country's need to prepare for a future where economic prosperity is based on knowledge creation, production and dissemination and where the productive use of the social, human and intellectual capital (i.e. golden capital) of individuals, teams and organizations will be the key performance indicators of success in a global knowledge-based economy.

The paper will point to contemporary education and management literature for examples of how we might more productively lead and manage our knowledge organizations in these new times. I will argue that the emergent *gold collar worker*—or knowledge worker—and how they are led, managed and engaged in a way to productively use and share their own golden capital is central to the future success of any enterprise engaged in a global knowledge-based economy. Indeed, recognition of their work as the most valuable of resources—rather than an expendable unit of labour—is a first but significant step in navigating out of an industrial economy paradigm toward a knowledge-based one. To this end, the paper will also foreshadow a research project intent on collecting a snapshot of workers views about their own preparedness and that of their organization to move forward, by seeking to identify current working conditions of the contemporary tertiary sector institution.

Finally, this paper will bring all of these elements together and test them against the theme and strand of this conference—"*what we do matters*"; and "*measuring and cultivating excellence*".

Testing times

Workers everywhere, not just Australia, may well be living through a paradigmatic shift that is yet to be formally recognized as an historical event. This can be seen in the way we are regularly described in terms of what we *are not* rather than what we *are,* with 'post' and 'neo' prefixes (post-modern, post-capitalist, post-industrial, neo-liberal, for example) being common current descriptors of the contemporary age. Even a generally accepted descriptor—the knowledge-based economy—means different things to different people, depending on where they live, work or how they personally engage with 'new times' ideas.

Commenting on the fundamental transformation through which we are living, Drucker (1993, p 3) asserted that we are witness to the creation of a post-capitalist society[1] where a global economy is knowledge centred. He also argued that based on historical comparisons of past transformative world events—like the invention of the printing press or the industrial revolution—this transformation would continue for another 5 – 10 years and was unlikely to be analysed in historical terms for some decades after that. This is not to suggest that considerable effort hasn't gone into mapping, commenting and trying to understand the form and function of these so called new times; rather the key point is that the kind of 'big picture' overview analysis enabled by historical distance is not yet available to those caught up in negotiating the new forms of the economy.

In the absence of hindsight then, and regardless of the complexities associated with trying to analyse current conditions as they unfold, two key issues emerge out of even the briefest of analysis of these changed and changing times: i) the extent of Australia's preparedness to adequately support and fully engage in a global knowledge-based economy; and ii) the positioning of the higher education sector as both the driver and vehicle of Australia's capacity building abilities in order for Australia to prosper in these new times.

Underpinning these issues is the importance of knowledge—its creation, production and dissemination—as a driver of economic growth. In the following sections of the paper, a key indicator of Australia's likely success in these new times—a valued, responsive, prepared and vibrant higher education sector—will be tested against international comparisons and knowledge-based economy literature. What emerges is a worrying trend of insufficient government commitment and funding to the sector and ever increasing government regulatory intervention, as Lee (2005) succinctly sums up here:

[1] That knowledge has become ***the*** resource, rather than ***a*** resource, is what makes our society 'post-capitalist'. This fact changes—fundamentally—the structure of society. It creates new social and economic dynamics. It creates new politics. (Drucker, P. F. 1993, *Post-capitalist society*, Butterworth Heinemann, Oxford, p 45)

> Public higher education in Australia is increasingly exposed to regulation from its chief, though increasingly less stable, provider of operating resources, the Federal Government. …policy intervention can be seen as a response to the increasing stress being placed upon higher education, construed in terms of its changing place in the global economy in general and in the global opening of…educational markets. Yet the current situation in relation to government funding is that the increase of regulatory intervention and audit by Government is in inverse relationship to the proportion of universities' incomes from Government sources. This state of affairs hangs in a precarious balance with enormous longer-term implications for the future of the governance of the educative work of Universities.(Lee, 2005, p 26)

The clientele of the higher education sector and the nation's future knowledge producers—students—are also facing testing times, but this is a topic for another paper.[2]

Australia as an underperforming knowledge nation

In a changed and changing economic climate much is made of the capacity of nations to perform as 'knowledge economies'. A knowledge-based economy can be defined as "…an economy in which the production, distribution and use of knowledge is the main driver of growth, wealth creation, and employment across all industries" (Department of Industry Training & Research, in, Andrews, 2004, p4). Accordingly, such an economy is reliant on harnessing the golden capital produced by knowledge workers for growth and prosperity. This point is explored more fully, albeit with particular reference to appropriate training and knowledge practices for doctoral students for new times, where Davis, Evans and Hickey (2006) argue:

> Adapting to a knowledge-based economy requires a significant shift in thinking—at government, academic, corporate and personal levels. It stands to reason that education broadly, and higher education in particular, has an important role to play in the development of new knowledge practices and processes. Amid the social transformation from physical to abstract forms of production it is crucial that coherent and comprehensive educational processes are put in place. (Davis et al., 2006, p 1).

However, the latest OECD indicators reveal that Australia is, in fact, underperforming in this crucial area by continuing to make investments in knowledge below the OECD mean.

[2] For an overview of some of the issues facing university students today see Senator Natasha Stott Despoja's (2006) essay on higher education, in *Time for change: Australia in the 21st century*.

Table 1: OECD comparisons by % of GDP for investment in knowledge, 2002

	Higher education	Research & Development	Software	Total	Change in investment in knowledge to GDP ratio since last review (1999/2000) [1]
Sweden	0.9	4.1	1.8	6.8	1.7
United States	2.2	2.7	1.8	6.6	1.2
Finland	1.1	3.4	1.5	6.1	1.3
Korea	1.9	2.5	1.4	5.9	1.0
Denmark	1.3	2.5	1.6	5.5	1.8
OECD [2]	**1.4**	**2.5**	**1.3**	**5.2**	**0.9**
Japan	0.7	3.1	1.3	5.0	1.2
Canada	1.7	2.0	1.1	4.7	0.1
Australia	**1.1**	**1.6**	**1.4**	**4.1**	**0.3**
Germany	0.7	2.5	0.7	3.9	0.5
Belgium	0.9	2.2	0.7	3.8	..
EU [2]	0.7	2.1	0.9	3.8	0.5
Netherlands	0.8	1.8	1.2	3.8	0.3
France	0.6	2.3	0.8	3.7	0.3
United Kingdom	0.7	1.9	1.1	3.7	0.2
Austria	0.5	2.1	0.8	3.4	1.2
Spain	0.9	1.0	0.8	2.8	0.7
New Zealand	1.1	1.2	0.5	2.8	..
Ireland	1.0	1.1	0.2	2.4	-0.2
Italy [3]	0.6	1.1	0.7	2.4	0.3
Greece [3]	0.8	0.6	0.5	1.9	0.8
Portugal	0.7	0.9	0.2	1.8	0.5

1. 1994-2001 for Greece and Italy. 1995-2002 for Korea.
EU figure excludes Belgium, Greece and Italy.
OECD figure excludes Belgium, Greece, Italy and New Zealand.
2. Exclude Greece and Italy.
3. 2001 data.

Source: OECD Science, Technology and Industry Scoreboard 2005 - Towards a knowledge-based economy

This leads to several uncomfortable questions that we must ask ourselves, our higher education sector leaders and all Federal politicians:

> **Why is our government choosing to under fund the higher education sector at this time, especially when it boasts record budget surpluses? Whose interest(s) is this serving? Why the lack of robust discussion—is it because of ignorance, fear, apathy, acquiescence, complacency, complicity?**

Baird (2006) recently summarised the current state of affairs in this under funded, over audited, energy depleted higher education sector and clearly situated this as a problem for the whole nation:

> It's frustrating to watch because the real problem with universities today is not about left or right-wing ideas…it's about a serious lack of resources that is lowering standards and depleting energy…All of us lose from a flaccid, under-resourced and over-stretched university system (Baird, 2006, p 11).

Baird's public views are a welcome addition to an ongoing academic critique where for some time academics have been concerned about Australia's lack of vision and funding which is risking Australia's capacity to position itself competitively in a global knowledge-based economy (see for example Wood, 2003; Considine et al., 2001; Kalantzis and Harvey, 2004). These views have been expressed in the business sector too, where Rupert Murdoch confirmed the concerns expressed by academia have a much broader resonance:

> Without urgent support for our centres of learning, Australia is at risk of becoming something worse than globally disadvantaged. It's no exaggeration to say we are threatened with global irrelevance. (Murdoch, 2001)

Somehow we need to break the cycle of the short-term, "there-is-no-alternative (TINA[3])" view of the Federal Government and higher education sector stakeholders and encourage them to see the bigger picture that Baird and Murdoch and so many others have so strongly advocated. A supported, responsive and relevant higher education sector is central to Australia's competitive advantage in a global knowledge-based economy and these nation building responsibilities are the subject of the next section.

The nation building responsibilities of the higher education sector in Australia

Drucker's (1993) view of successful organizations for a post-capitalist society rest on the organization knowing its purpose and not being diverted from achieving it. Whilst Australian universities are espousing their strategic vision and purpose and how they can achieve them (a look at any university website will give examples of this), what is actually happening—to a greater or lesser extent—is that all Australian Government funded universities are in fact Government *under*funded universities. The purpose of the higher education enterprise should be, as Salmi (2002) points out, central to the production and utitlization of knowledge:

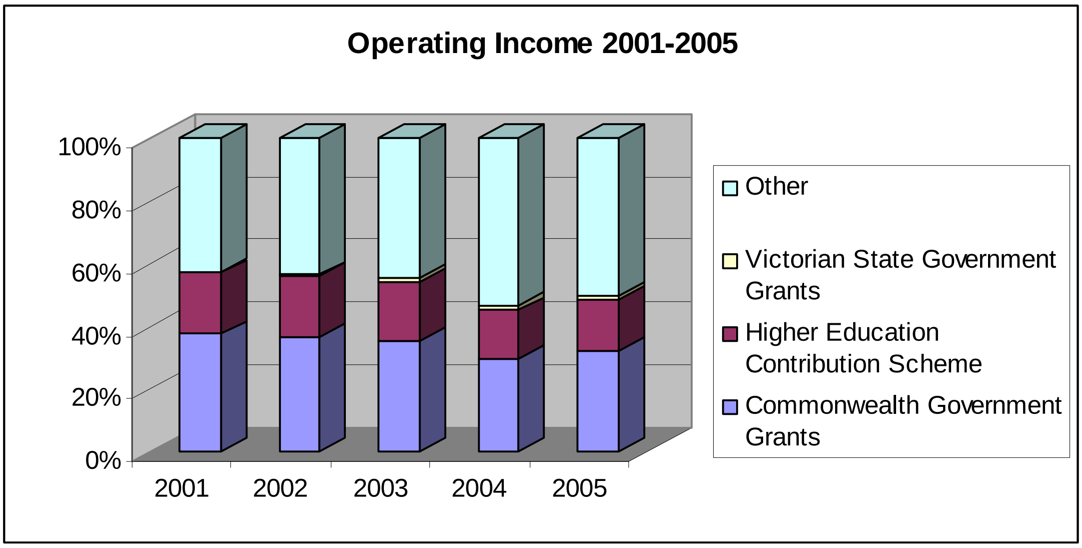
> …As the 21st century opens, tertiary education is facing unprecedented challenges, arising from the convergent impacts of globalization, the increasing importance of knowledge as a principal driver of growth, and the information and communications revolution.
>
> The role of education in general, and of tertiary education in particular, is now more influential than ever in the construction of knowledge economies and democratic societies. Tertiary education is indeed central to the creation of the intellectual capacity on which knowledge production and utilization depend and to the promotion of the lifelong-learning practices necessary for updating people's knowledge and skills (Salmi, 2002, p1).

The effect of our higher education sector being undervalued and underfunded by the Federal government is at issue here. At best, universities are being diverted from their purpose, and at worst the sector is being unnecessarily fractured at a time when it should be building up its knowledge producing capabilities for the

[3] Barry Jones's used this acronym when describing hegemonic managerialist practices of government in his recent ATEM speech (ATEM Breakfast, Melbourne, 14/6/06).

sake of the nation's prosperity in a global knowledge-based economy. Universities are diverting valuable resources and energies into finding the additional income streams necessary simply to stay afloat; whilst for the privilege expected to fully adhere to the many Government compliance measures in place. An example of this trend can be seen here by looking at Deakin University's operating income sources over the last five years.

Table 2: Five-year financial summary
Deakin University 2005 Annual Report, p 27



Marginson (2006) succinctly explains the effects and consequences of what happens when the tertiary education sector is diverted from what Drucker (1993) calls its *core purpose* thus:

> Total university revenues have not declined. Public funding per student is down, private funding per student is up…But on the private income side, what matters is not total income but *surplus*. In many universities international student marketing provides additional cash flow but does not generate net surplus. The new revenues have been largely or wholly absorbed by the new functions needed to raise them: marketing, off-shore activity, special services, etc. The old public income, the gift of government that cost little to 'raise' is not replaced.
>
> In sum, universities spend more on revenue raising functions and less on the 'core businesses' of teaching and research. Yet it is these core businesses from which business draws value. The incentives are wrong. *Universities are spending more on reproducing themselves, and less on producing valuable products (Marginson, 2006).*

Government policies affecting the tertiary education sector

The potential consequences of an underfunded university sector are wide reaching and significant as the higher education sector is both a catalyst and driver of the changes necessary to compete in an increasingly global knowledge-based economy. This point is clearly made in a recent UNESCO/OECD report:

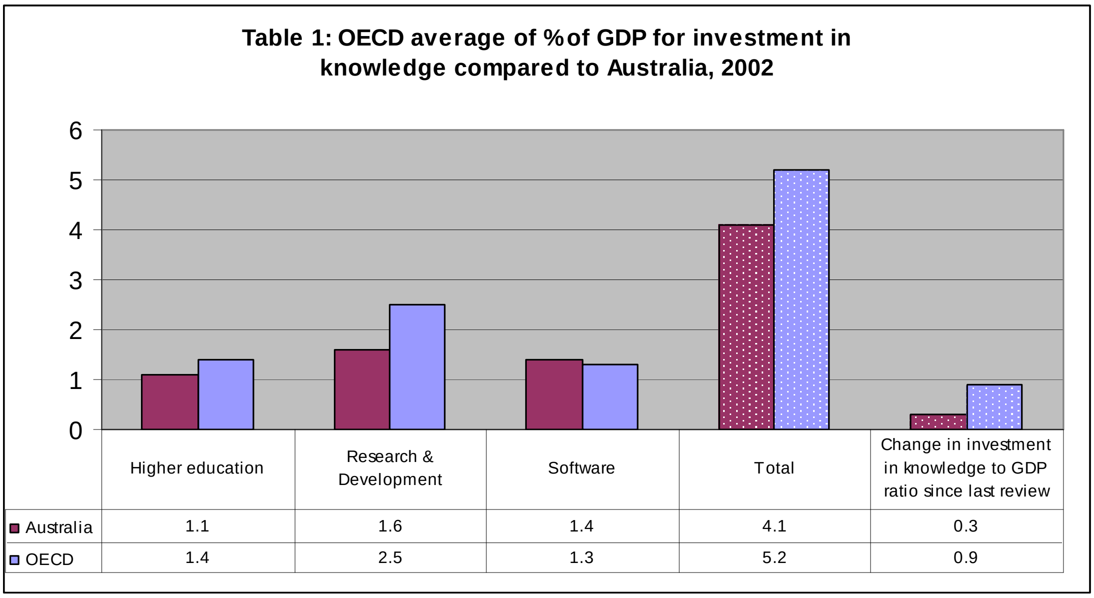
> As individuals and nations recognise that high levels of knowledge and skills are essential to their future success, spending on education is increasingly considered an investment into a collective future, rather than simply as individual consumption. Investment in human capital has thus moved to the centre stage of strategies to promote economic prosperity, better skilled labour forces, social cohesion and other positive individual and social benefits. However, investment in education competes for limited public and private resources. The challenge of expanding educational opportunities while maintaining their quality and ensuring their equitable distribution is linked to questions of education finance.
>
> (UNESCO Financing education – investments and returns report summary webpage http://www.uis.unesco.org/ev.php?ID=5245_201&ID2=DO_TOPIC)

Two of the key indicators used in the OECD comparisons in Table 1 on page five—higher education and research and development—directly impact on the work of universities. The under funding of these two areas of any university's core business—teaching and research—needs to be addressed as a matter of urgency and swift and serious improvement needs to occur if Australia is to be a serious competitor in a global knowledge-based economy.

The present Federal Government policy (with very little resistance by the Opposition[4]) to under resource the higher education sector is threatening Australia's long term capacity to build its social, human and intellectual golden capital. It is threatening Australia's ability to be globally competitive now and in the future. Further, if things don't improve soon Australia may well live up to Murdoch's prediction of becoming globally irrelevant as well.

[4] Barry Jones, current Senior National ALP President, declared in a recent speech to the Victorian Branch of ATEM that the very term "The Opposition" should be renamed "The Acquiescence", such is the current political climate. (ATEM Breakfast, Melbourne, 14/6/06).

Table 3: OECD mean compared to Australia's % GDP for investment in higher education and research and development



	Higher education	Research & Development	Software	Total	Change in investment in knowledge to GDP ratio since last review
Australia	1.1	1.6	1.4	4.1	0.3
OECD	1.4	2.5	1.3	5.2	0.9

Source: OECD Science, Technology and Industry Scoreboard 2005 - Towards a knowledge-based economy

This policy is also at odds with the role that government should play in a post-capitalist society, because, by stealth, universities are being diverted more and more from their purpose simply in order to balance their budgets. The sector, especially in the last 3-4 years, has committed itself to an unsustainable position of doing more and more with less and less. The consequences for the work and workers in universities, as Baird so eloquently declares is the "lowering standards and depleting [of] energy" and the spiraling into unproductive defensive modes of operation.

> Only a clear, focused, and common mission can hold an organization together and enable it to produce results. The organization must be single-minded, otherwise its members become confused…In an organization, diversification means splintering, it destroys the performance capacity of any organization… (Drucker, 1993, p 53).

Higher Education Sector's Institutional Leadership and Management Practices

As argued in the previous section, the sector's funding from the Federal Government is below the OECD average, but of even more concern is just how this funding is being allocated. Whilst academic and non-academic staff are increasingly being asked to do more and more with less and less, the scarce resources that should be going to support the core business of any university—teaching and research—is increasingly being diverted away from its core purpose or into counting, measuring and surveillance measures.

So even if the sector was suddenly funded to an appropriate level by the Federal Government, it still has to overcome the cascading effects of this ideologically driven unilateral government control. This action is often then mirrored by university management whose responses are often defensive, reactive and equally short-term in view as we see this behaviour being filtered down to every level through 'old economy' leadership and management practices that are entrenched in *Model I* Theory-in-Use behaviours[5]. Because these control mechanisms play to our fears and inadequacies, beget defensiveness and keep us busy being busy, it leaves little time for reflection or systems thinking, or even leadership. If only we did pause and took time out to see the bigger picture, we could see the overuse of compliance measures for what they really are—a means of unilateral control—and a by product of the paradigmatic societal change playing out today as we move toward a knowledge-based society.

There has been some critique of the 'new managerial' practices instituted in the Reagan and Thatcher years where the practice of unilateral control began and is still in evidence today (see for example Blackmore, 2001, 2005; Davies, 2003).

> [New Managerialism] is characterized by the removal of the locus of power from the knowledge of practicing professionals to auditors, policy-makers and statisticians, none of whom need know anything about the profession in question…
>
> Within the terms of the new system individuals will be presented with an (often overwhelming) range of pressing choices and administrative tasks for which they are responsible. But any questioning of the system itself is silenced or trivialized. The system itself is characterized as both natural and inevitable. Resistance to it by individuals is constituted by ignorance of what the 'real' (financial) 'bottom line' issues are, as sheer cussedness, or as a sign reminding management of individual workers' replaceability…
>
> The fact that much of the resource base that was previously available to support professional work has been redirected into surveillance and auditing somehow remains invisible, or at least is generally not spoken about, or subjected to critique…
>
> The individual's sense of agency and freedom through which professional energy, dedication and power were formerly generated are overlaid and in tension with an almost subliminal anxiety and fear of surveillance. (Davies, 2003, pp 92 - 93)

In my previous study (Davis, 2003) literature was identified supporting the view that the cultural shifts necessary to move agendas forward, be they organizational or societal, have historically been shown to be the hardest shifts to make, as James (1996) summarises:

> Anthropologists use social data and models from the past to provide a frame or a context for the future. The details of millions of years of history and hundreds of societies reveal patterns. When you understand these patterns of the past, culture is often the last system to adapt. Vestiges of old beliefs hang

[5] See Argyris (2004) for a detailed explanation of Model 1 and Model 2 theories of behaviour and use.

> on long after the technological, economic and demographic systems have changed (James, 1996, p 22).

What this means for organizational development in order to support knowledge workers then is the imperative for an “organizational” change of mindset—the way management is equated with control for example—to a new way of structuring and managing organizations to acknowledge the golden capital of their workers as their most significant asset and the most likely way of operating, competing and gaining competitive advantage in the knowledge economy.

Building on my previous study (Davis, 2003) is an example of the shift in thinking necessary for managing in new times illustrated here by Davenport (2005).

Table 4: Davenport’s Management attributes

Management attributes for the old economy	Management attributes for the new economy
Overseeing work	Managing as well as doing knowledge work
Organising hierarchies	Organising communities
Hiring and firing workers	Recruiting and retaining workers
Building manual skills	Building knowledge skills
Evaluating visible job performance	Assessing invisible knowledge achievements
Ignoring culture	Building a knowledge-friendly culture
Supporting bureaucracy	Fending off bureaucracy
Reliance on internal personnel	Personnel from a variety of sources

Davenport, T.H. (2005) *Managing knowledge workers*, in Thinking for a living: how to get better performance and results from knowledge workers, Boston, Harvard Business School Press, p 191.

However, despite this internal academic driven debate, there remains little public debate about the country’s (lack of) investment in knowledge and so it may be of some surprise to those working in this sector and the public more broadly to learn that Australia finds itself in this position. This ‘undiscussablity’ can be explained in theoretical terms through Argyris’s (2004, pp 8-9) Theory-of-Action which looks in depth at people’s ‘espoused’ versus ‘in-use’ behaviours and why the prevailing Theory-of-Action model seeks unilateral control by encouraging defensive reasoning and single loop learning. This long standing Theory-in-Use model named by Argyris as *Model I* behaviour seeks to win-at-all-costs with entrenched defensive routines prevailing in societal, organizational and personal practice, and is commonly played out thus:

> **Denial/undiscussability of a problem occurs, followed by covering up or stifling debate, then denying such cover ups have occurred.**

This entrenched pattern of behaviour is hardly new and is very difficult to counter—despite longstanding cautionary tales that relate to *Model I* Theory-in-Action behaviours—like, the ostrich with its head in the sand; shuffling deck chairs on the Titanic; or, Emperor's new clothes, etc—even though these type of behaviours are at odds with the recommended management and leadership styles required to operate in a knowledge-based society.

> **It is worth reconsidering the questions on page five to read against *Model I* behaviour theory. Does this change your reaction to these questions?**

Argyris (2004) exposes these latent and entrenched practices when making the point that:

> Defensive reasoning thrives in contexts where the defensive features cannot be legitimately challenged. One consequence of this is that not only are issues undiscussable, but that undiscussability is itself undiscussable…
>
> The consequences of defensive reasoning include escalating misunderstanding, self-fulfilling prophecies, and self-sealing processes. All these escalate because the logic used is self- referential, which does not encourage the detection and correction of error.
>
> When these conditions are combined, a generic syndrome against learning is created. This in turns leads human beings to doubt that errors are unlikely to be genuinely corrected. These doubts and conditions combine to create a sense of helplessness [i.e., protect and defend actor or organization; use self-referential logic in primary reasoning processes; avoid transparency and deny self protection; deny self-deception by cover-up and in order for the cover up to work, it too must be covered up] (Argyris, 2004, pp 1-2).

The identification of these unspoken yet entrenched defensive patterns of denial and undiscussability go some way to explaining why there is no lively public discussion about Australia's preparedness of its higher education sector to successfully lead the country into the global knowledge-based economy.

This of course, raises key questions about the capability of the higher education sector to take a longer view and begin to plan for developing academic and non-academic staff and their students for new times. Any appropriate leadership and management of workers for new times is of course interrelated with the workers and their work. The next section of this paper will focus on changing times, changing work and the increasing importance of knowledge worker attributes at all levels of a knowledge organization.

The contemporary higher education sector worker

As outlined above, we are working in complex and ever changing times. Adding to this complexity is the often highly contested working spaces which make up much of the higher education sector and for which there is little real understanding from outside observers. At the very heart of this contestation is the work of the academic—which focuses on teaching and research—and then the embedded structures in place to manage the work of the university which includes the management and support of academic work as well as other responsibilities such as good governance, financial responsibility, marketing, etc.

There are other sites of contestation in university work at all levels. At the *micro* level, differing academic points of view, competition between faculties for resources or prestige as well as the constant battle to do more and more with less and less as has already been discussed in this paper. These contestations play out at the *meso* level too, where universities compete with each other for performance based government funding and air and debate different academic points of view. At the *macro* level we see the current contestation between inadequate Federal Government funding for the higher education sector and the holding on to record budget surpluses which is illustrated by Australia's underperformance against international knowledge investment indicators.

It is little wonder then, that the sector's energy levels are running low and there is little time or head space to devote to the important work of planning for a challenging and changing future, which in terms of a *meta* view, is towards a global knowledge-based economy. This is arguably the most important issue on the horizon for the higher education sector, not just because the future prosperity of the country depends on a vibrant, effective higher education sector, but also because the current work practices and the leadership and management of the organizations in this sector need to undergo rapid change in order to become effective platforms and loci of knowledge economy construction. The intangible imperative to future proof the sector is actually what we should all be addressing if we truly want to measure for excellence, but rather it is being pushed off a 'busy being busy' agenda because of, in no small part, its very invisibility and intangibility.

It is timely now to discuss in more detail the work of Argyris and Schön (1978) (and already cited Argyris (2004)) around organizational learning theory where they believe learning in its simplest form can be seen as the detection and correction of error. To take up this notion then is to explore the flipside of single loop learning already discussed in this paper—that of double loop learning. Double loop learning requires learners to take responsibility for their own actions and understand that the intended and unintended consequences of these actions will also affect situations they find themselves in. Double loop learning, the identification of defensive routines, and the requirement for all to engage in deeper learning practices, is central to learning organization theory which is seen as an aspirational model to effectively lead, manage and work in a global knowledge-based economy.

In a review of the work of Argyris and Schön (1978) and their impact on management theory in the 25 years since it was published, Senge (2003) sees it as landmark work, but also argues that the potential impact of the work has been lessened because of the entrenched reticence (single loop learning) that people have about changing from comfortable and conventional habits that would rather deny than embrace errors. We can also see in the examples of Senge's (2003) critique here of the ongoing cultural clashes between the 'old' and the 'new' mindsets:

> Specifically, Argyris and Schön's entire theory rests on appreciating learning as the "detection and correction" of error. This sounds eminently logical. But, the sorts of "errors" they are talking about are personal. To detect an error is

> to acknowledge incompetence. Doing so publicly in a work setting is often seen as "career limiting", discouragement enough even if it wasn't so personally threatening. This is why most work cultures around the world today still place a great deal of emphasis on face-saving and denying error, rather than detecting and correcting it…[T]he simple aim of detecting and correcting error [is] still radical today, despite much recognition of the need for organizations to learn.
>
> The fantasy that somehow organizations can change without personal change, and especially without change on the part of people in leadership positions, underlies many change efforts doomed from the start… I think that if any one aspect of the radical core of Argyris and Schön's work, it is this: that real organizational learning must include me (Senge, 2003, pp 47 – 48).

The 'old' and the 'new' mindsets and their points of difference as described by Stuart (1999) also speak to single and double loop learning where single loop learning can be seen as a mindset entrenched in industrial economy values and double loop learning a necessary mindset for a global knowledge-based economy.

Table 5: Industrial Economy and Knowledge Economy Mindsets

Element	Industrial Economy	Knowledge Economy
Workplace Organization	Hierarchical Function/specialized Rigid	Flat Networks of multi/cross-functional teams Flexible
Job Design	Narrow Do one job Repetitive/simplified/standardized	Broad Do many jobs Multiple responsibilities
Employee Skills	Specialized	Multi/Cross-skilled
Workforce Management	Command/Control Systems	Self-management
Communications	Top Down Need to know	Widely diffused Big picture
Decision making responsibility	Chain of command	Decentralized
Direction	Standard/Fixed operating procedure	Procedures under constant change
Worker autonomy	Low	High
Employee knowledge of organization	Narrow	Broad

Stuart, L. (1999) *21st century skills for 21st century jobs, p 3*

Central to the necessary rapid and effective changes required to work effectively in a global knowledge-based economy is the due recognition of the worker for these times, the knowledge worker or *gold collar worker*. The attributes of these workers was researched by Wonacott (2002) and I contend that these attributes should ideally be held by all workers in any knowledge organization. Wonacott (2002, pp 1-2) drew the following common themes from his analysis of the gold collar worker literature:

- For gold collar workers, knowledge is not just having information; it is *using* information—to solve problems, to create solutions and strategies, and to learn from experience;
- Gold collar workers typically use knowledge from more than one area. Gold collar knowledge crosses formal, academic disciplines like science and business; or in occupationally specific roles technical knowledge is used in combination with more general processes, communication, and learning-to-learn skills;
- Gold collar workers tend to be autonomous and big picture thinkers. Whilst autonomous, they also recognize the synergy of teams and can demonstrate leadership;
- Gold collar workers have a portable, flexible skill base relevant to a variety of work environments and maintain that skill base through their own personal development, with well connected networks of contacts at the leading edge;
- Gold collar workers prefer self management and often perform the sort of non repetitive, complex work that is hard to evaluate against 'command-and-control' measures.

The work of the academic in changing times has been well documented, both by reflexive practitioners and in an extensive study by Martin (1999). Martin argues that learning organization theory is an appropriate leadership and management practice for academic work and this view is supported by business and organizational development advocates (see for example Senge, 1990; Drucker, 1993, 1999, 2002; Raelin, 2003; Hock, 1999) who have been promoting learning organization theory since the 1990's. Martin aptly describes the competing tensions of contemporary academic work in new times—the need to balance individualism with collaboration; accountability with reward; and, valuing the past whilst preparing for the future—as she encourages academics to build a contemporary university which is much about a learning organisation as an organisation about learning (Martin, 1999 back cover).

To focus only on developing academic staff for new times would be a shortsighted approach as there is another large cohort of workers in the higher education sector—non-academic staff, but where even today there is hardly any documented evidence about the work or contribution that non-academic staff make to the higher education sector. I found this to be the case when researching a study looking at developing non-academic staff (general staff) for the knowledge economy (Davis, 2003). When undertaking this literature review, it soon became clear that there was very little literature about this cohort of workers in the higher education sector. This view was confirmed soon after when Szekeres (2004) published a seminal article on the topic called *'The invisible workers*' for ATEM's Journal of Higher Education Policy and Management which echoed my own findings:

> Thankfully, there has been research undertaken, literature published and theories expounded on how to equip the tertiary sector for such changes. Interestingly though, no research outcomes have been published about the role that general staff might play or what general staff think about these changes—even though this work group makes up more than 50% of the tertiary sector workforce. It appears that general staff are viewed in terms of their worth as labour rather than their worth as human capital and have not been consulted in any planning relating to this expected change [to a knowledge-based economy] (Davis, 2003, p3).

I believe the competing tensions described by Martin are felt no less by non-academic staff in their daily professional practice. To be serious then about building a contemporary university "which is as much about a learning organisation as an organisation about learning" (Martin, 1999, back cover) the work of non-academic staff—the people who support academic teaching and research—should be acknowledged and opportunities for collaboration between each other as well as between academic, administrative and technical professionals be actively encouraged.

I have reflected upon the changes to my own professional practice and workload since the time of my own study and the article on the invisible worker by Szekeres just a little over two years ago. I strongly believe that we should be focusing on making our *invisible workers* as visible as our academics when planning for the paradigmatic changes we are likely to encounter. More importantly we should also be exposing the increasingly *invisible work* of *ALL* staff because, in essence, this is how our underfunded sector is managing to stay afloat. Academic and non-academic staff, because of their professionalism and/or loyalty and/or fear, are increasingly absorbing the work of the sector at their own personal expense. I am not talking here about pitching in to overcome a short term hiccup or minor problem but rather the effect of continually doing more and more with less and less and where one crisis follows another. This is now a systemic problem for many universities and to allow it to continue at the personal expense of the worker is to view staff—both academic and non-academic—as units of labour, just as was done in the industrial economy era. We should be much more sophisticated than that in the 21st century, if for no other reason than that the real issue around labour relations in a global knowledge-based economy is actually holding on to good people and recognizing them as individuals who contribute their golden capital for the prosperity of their organization.

Drucker's (2000) work on managing the individual in terms of managing knowledge, is relevant here and brings into sharp focus the importance of identifying simple but salient questions in the face of the seemingly overwhelming task of how to best support knowledge workers at an organisational level. The organisational focus—in terms of the higher education sector has historically rested on three simple questions:

1. What are academics paid to do?
2. How much of their time do they spend doing that?
3. How can non-academic staff best support academic staff to do what they are paid to do?

What I believe this means for the higher education sector then, in light of a changed and changing knowledge-based economy, it is no longer appropriate or sustainable to conceptualise non-academic staff solely as 'support' for academics. The role(s) of the non-academic is now much more diverse with responsibilities far beyond traditional tiered management and leadership practices.

The development of the highly necessary but intangible and invisible skillset of the *gold-collar worker* is also at issue here. Drucker (2000) also highlights the importance of developing these skills and that "to succeed in the new world we will all have to learn first who we are", articulate this to others, and see that organisations can best develop and motivate knowledge workers [academic AND non-academic] by:

- Knowing people's strengths;
- Placing them where they can make the greatest contributions;
- Treating them as associates;
- Exposing them to challenges. (Drucker, 2000 pp 1-3)

The prevailing human resource issues that are emerging in the 21st century are in fact labour shortages, especially in the work *gold collar workers* perform. Training and retraining of workers—particularly older workers—and managing a multi generational workforce in order to overcome staff shortages are much more likely to be on the agenda in the future than, say, downsizing. To attract the right people then in an increasingly competitive global market, leaders will need to respect the individuality of their workers just as the literature points to (see for example, Drucker, 1999; Florida, 2003) and as this excerpt from a Western Management Consultants report advocates:

> There are two key points [for leaders] to remember: one, you cannot 'herd' knowledge workers using traditional command and control methods and two, knowledge workers require a certain environment to be productive…Leaders now have to respect different individual workers' learning and communications styles; 'one-size-fits-all' management is no longer appropriate (Western Management Consultants, 2002 p 1).

Following on from my 2003 study, I plan to conduct a research project "*The work of the university's non-academic staff—testing Drucker in testing times*" in order to capture the sentiments of the contemporary non-academic worker. There is much rhetoric about the knowledge-based economy but how is it actually playing out today? How do non-academic staff contribute to the work of their university? What is the impact on non-academic staff of these changing times? (I am also very interested in the views of academic staff on these issues, but because of the paucity of literature about non-academic staff and because the research project is small, it is pertinent therefore to limit the research to this under represented cohort.)

The focus of this study will concentrate on emergent gaps around such questions as rhetoric/reality about learning organization leadership and management (where some universities think that because they are a university they must be a learning organization); gaps between what the customer expects and what is possible to deliver and how any gap is taken up by the worker at their own personal (often invisible) cost; etc.

Conclusion

Given the challenging times we face today it is no surprise that most organizations—including our own—still cling to old economy habits and values when trying to manage for new times. This clash of cultures between old and new economy thinking cannot continue unabated without putting the higher education sector in Australia in serious peril. Current Government policies see Australia as an underperforming knowledge nation by international comparison, where much of the scarce resources that do reach to the sector are churned into compliance measures which, at best, can only ever provide an indication of past performance.

There is little scope—or energy—to plan for the future, or take stock of the current 'more and more with less and less' paradigm we now find ourselves in. There also appears to be little public resistance or protest to these increasingly untenable conditions from the leaders of the tertiary education sector. Government policies and practices and the trickle down effect through ostensibly command and control leadership and management behaviours in universities have their roots in industrial age cultures and values. This is why the ever increasing compliance imperatives we face today are but a symptom of the clash of the old and new times playing out before us and so should be duly identified as such, as this example by Argyris (2004) illustrates:

> …rules of effective [command and control] leadership to keep you in unilateral control. For example, do not trust people to keep their promises; therefore, monitor their actions frequently. Claim that the follow up is not in the service of unilateral control as much as it is holding others responsible for their promises (Argyris, 2004, pp 52-53).

The seeming over reliance on the easy to find quantifiable measures that go to the heart of compliance-for-control initiatives leaves little time, energy or resources for the identification of the harder to measure intangibles like human, social and intellectual capital which are so important for building up appropriate knowledge capacities for new times. It is also why there is so much rhetoric around such terms as knowledge economies, knowledge societies, learning organizations, etc, but very little hard data to show how our sector is coping with the rapid transformations necessary to survive in a globally competitive knowledge-based economy.

The focus of this conference is on "what we do matters". Importantly it may be what we are not doing that will matter even more in the long term. We must therefore ask of ourselves and our leaders, not "***how much will this cost***", but rather "***what cost if we don't***" and begin to future proof our higher education sector right now.

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