

Towards an HR Science: The Marriage of Technology and Human Enterprise - Consummate Partners or Strange Bedfellows?

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It has become trite to say that the most significant developments of the next quarter century will take place not in the physical but in the social sciences, that industry—the economic organ of society—has the fundamental know-how to utilize physical science and technology for the material benefit of mankind, and that we must now learn how to utilize the social sciences to make our human organizations truly effective.

McGregor (1957)¹

Is management, in particular, human resource (HR) management at a crossroads?

MacGregor's vision (above), formulated in the 1950's, predicted that the future of management thinking would emanate from a crisis very similar to what most businesses face today – a tendency to neglect, even ignore, the *human* component in managing companies and the people who work for them. Sixty years on, his vision remains largely unfulfilled amidst several research studies highlighting that, while organisations have indeed heeded the call and transformed the way people are managed to achieve better outcomes, a great deal more still needs to be done. Lessons of the past and the current status of poor employee engagement, decreased job satisfaction, and low worker productivity attest to sorely needed improvements in the way companies manage their people.

What does this mean for us as HRM educators? While the fundamental idea underlying MacGregor's vision is the marriage of technological innovation with humanity, the missing link in the technology–strategy-HR domain is, and remains, the human side of enterprise. MacGregor's vision succinctly describes the pathway for our own future at SUSS, bringing forth a new model and template for the development of our education programmes and HR graduates of the future. That future is undeniably linked to two recent global trends that have already significantly impacted the future of HR. The first concerns the rise of digital technology. The second is analytics. Both are reshaping the way we think about *organizations*, their *workforces*, and the *HR science* that manages them.

In this chapter, we discuss how digital technology and analytics spur new ways of thinking about careers in HR. At its core, the HR career of the future is not just about administration and policies. Rather, it requires HR professionals who are practiced in the science of people management, and are ready to take on the dual roles of *steward* and *designer* of new people processes.

Digital Technology

The first significant global trend that will impact the future of HR is *digital HR*, which is transforming the HR profession in ways that were unimaginable even ten years ago. Digital HR

¹ McGregor, D. (1957). The Human Side of Enterprise. *The Management Review* 46(11): 22-28.

is a critical component of the *digital economy* - defined by the United Nations Conference on Trade and Development (UNCTAD) as “the application of internet-based digital technologies to the production and trade of goods and services.”² A good example of digital HR is the increased usage of online labour platforms among people looking for work, and the rapidly expanding types of workforces that use them.³ HR industry commentators suggest there is no shortage of online dialogue about people and machines working together and its impact on the future of the HR profession, being one of the most discussed topics in HR media currently.⁴ By bringing together social, mobile, analytics, and cloud (SMAC) technologies, digital HR is revolutionizing the profession through *digital disruption*, and by doing so we are seeing improvements in the candidate experience and the softening of barriers between work and home for employees. Many industry insiders predict that the adoption of mobile HR technologies will enhance companies’ productivity and data quality to an extent rarely seen with traditional HR platforms. Yet these same insiders lament a lag in the adoption of digital HR by most companies:

[While] there are more than 7 billion mobile devices in the world, and more than 40 percent of all Internet traffic is driven by these devices, HR teams remain far behind in deploying mobile solutions. Fewer than 20 percent of companies deploy their HR and employee productivity solutions on mobile apps today.⁵

Industry thought-leader Josh Bersin,⁶ at Deloitte, notes that the new vision for digital HR is impressive, being designed not only to redefine the employee experience and make work easier and more rewarding - while (hopefully) improving work-life balance - but to also transform the HR profession itself in terms of what HR practitioners *do*.

Consider, for example, if the ‘human’ in ‘human resources’ was replaced by a robot. What would it mean for the HR function? Tavis (2015)⁷ argues that while technology – and robotics in particular - will likely have an impact on jobs, she doesn’t predict that employee numbers will decline as much as jobs will change for the better. Citing call centres as an example, robotics is expected to automate basic work functions leaving employees to handle higher level, more complex tasks. The same could be said for any industry more generally.

Despite obvious benefits, adoption of digital HR by companies is slow. Deloitte’s *Global Human Capital Trends Report* (2016) found that only 38 percent of companies were thinking about it and only 9 percent were “fully ready”. Such reluctance could be explained by a lack of qualified HR professionals able to take on the task, which is no small feat considering the digital HR skills required: an ability to partner with IT, experience in design thinking, implementing and utilizing integrated analytics, and carefully analysing and selecting vendor solutions. Acquiring the digital HR skillset may seem insurmountable to some, while creating innovative career opportunities for others.

A further challenge is the likely reluctance of employees at having their work life interfere with their personal life; mobile technologies have notoriously dissolved the barriers between work

² UNCTAD (2017). *Promoting Investment in the Digital Economy*. Geneva, Switzerland, UNCTAD Investment and Enterprise Division.

³ Kuhn, K. and A. Maleki (2017). Micro-entrepreneurs, dependent contractors, and instaservers: Understanding online labor platform workforces. *Academy of Management Perspectives*, doi:10.5465/amp.2015.0111.

⁴ See, for example, Ford, M. (2016). *Rise of the Robots: Technology and the Threat of a Jobless Future*. New York, NY: Basic Books.

⁵ Stephan, M., S. Uzawa, E. Volini, B. Walsh and R. Yoshida (2016). *Digital HR: Revolution, Not Evolution*. Downloaded at <http://diginomica.com/2017/01/05/hr-people-dont-just-digital-digital-2017>. Accessed on 28 February 2017.

⁶ Bersin, J., D. Mallon, L. Barnett and J. Hines (2016). *Predictions for 2017 - Everything is Becoming Digital*. London, UK: Bersin by Deloitte.

⁷ Tavis, A. (2015). *The Future of HR and the Rise of the Machine*. Downloaded at <http://www.advantageperformance.com/the-future-of-hr-and-the-rise-of-the-machine/>. Accessed on 3 March 2017.

and home meaning they are now accessible 24/7.⁸ A careful balance is therefore needed between the possibilities that digital HR presents and the design thinking behind them: the user experience must minimize work-home intrusions while maximizing work-career agility and flexibility.

Analytics

The second significant global trend that will impact on the future of HR concerns what might be considered applying a scientific methodology to HR practices. The art and science of *analytics* has been an emerging discipline in the last decade.⁹ Applied to HR, it offers a whole new meaning and dimension to the scientist-practitioner model of HR practice, conferring legitimate value to the HR professional. HR analytics refers to applying analytic processes to the human resource department of an organization in anticipation of improving employee performance and therefore getting a better return on investment from an organization's human capital assets. HR analytics is founded on data-driven analytics processes and aims to provide insights about people-related issues such as employee performance, evaluation, recruitment, leadership, hiring and promotion, job and team design, and compensation. It is concerned with gathering data and using it to support and/or make decisions about how to improve these processes, and to envision their outcomes (*predictive analytics*).

Undoubtedly, analytics is the methodological and philosophical toolbox of future HR, and is here to stay. What does all this mean for training institutions, professional HR societies, and universities? Analytics is akin to retooling the know-how, and more importantly the mindsets, of current and would-be HR professionals. It does not mean that the older generation of workers will be put out to pasture, or that the HR professional will be over-burdened with new responsibilities in addition to old. Rather, analytics helps to guide better decision making and employee performance, and to re-focus people as human capital assets.¹⁰ Future HR based on analytics is less concerned with HR accounting (HRA; methods of accounting for an organization's human assets)¹¹ as it is with determining the best way to use those assets for an anticipated outcome. HR will still do what it always has, but in better and improved ways, thanks to analytics.

But increasingly, HR, too, will be required to use analytics to demonstrate why it is a significant and worthwhile partner in the business enterprise; that is, to demonstrate its value and to establish its kudos.¹² As the digital HR world becomes reality and analytics becomes a core (HR) competency, a key challenge will be to recruit and hire graduates for the future of HR work. A first step is for more companies to set up their own internal HR data initiatives and teams, and to develop skills that enables them to engage operationally and strategically to develop better methods and approaches.¹³ Bersin suggests that doing so will reveal that analytics is much broader than just the HR function and that the HR data the company holds is, in fact, part of a much broader agenda of business problem-solving.

As trendy as analytics may seem, a challenge it presents is to balance the requirements of analytics' technical rigour with the human element in decision making. Such balance will ensure that the outcomes of decision making support the needs and functions of an entire business. Our

⁸ Nam, T. (2014). Technology use and work-life balance. *Applied Research in Quality of Life*, 9(4): 1017-1040.

⁹ Fitz-Enz, J. (2010). *The New HR Analytics: Predicting the Economic Value of Your Company's Human Capital Investments*. New York, NY: AMACOM.

¹⁰ Russell, C. and N. Bennett (2015). Big data and talent management: Using hard data to make the soft stuff easy. *Business Horizons*, 58(3): 237-242.

¹¹ Flamholtz, E. (1985). *Human Resource Accounting: Advances in Concepts, Methods and Applications*. San Francisco, CA: Jossey-Bass.

¹² Rasmussen, T. and D. Ulrich (2015). Learning from practice: how HR analytics avoids being a management fad. *Organizational Dynamics*, 44(3): 236-242.

¹³ Angrave, D., A. Charlwood, I. Kirkpatrick, M. Lawrence and M. Stuart (2016). HR and analytics: why HR is set to fail the big data challenge. *Human Resource Management Journal*, 26(1): 1-11.

challenge at SUSS is to acknowledge and adapt to the changing HR landscape, meaning that our thinking and therefore our training, education, programme curriculum, and outlook must also change to ensure we can educate and ‘future-proof’ our HR graduates with digital HR and analytics competencies at the forefront.

The Context of HR in Singapore

We earlier cited McGregor’s vision to set the backdrop for this chapter and to highlight the present business landscape of HR in Singapore, and Asia more broadly. As Dickens famously wrote in his *Tale of Two Cities*, the current state of HR education and training can be summed up as being the best of times and the worst of times.

It is the best of times because we have at our disposal innovative ideas that allow and equip us to set our own course. It includes the availability of technology to drive new HR activities, the automation of HR functions through HRIS and ERP systems which are already de facto systems or setups for larger companies, the accessibility of data, and an abundance of data mining opportunities. The major global consulting companies portend an era of technology-driven HR activity, designer organisations, new workforce cultures, and the onset of an HR digital revolution. The new vision is centred on digitization, with digitalization to follow. Mobility Apps is the new watchword, the preferred channel of operations and activity.

It is also the “epoch of incredulity”, as many companies remain rooted in what they do and how they do it, frequently to their detriment. These companies maintain outdated business methods and HR operational approaches resulting in ineffective talent and people processes.¹⁴ Others bemoan that HR lacks imagination and initiative, preferring instead to rely on conventional wisdom, procedures, and processes by continually doing similar things and implementing familiar policies.¹⁵ The strategy is at best inefficient and at worst, largely ineffective. Is it any wonder it is the worst of times?

In Singapore, as elsewhere, those assigned into HR roles have been accused of doing a bad job, being *unstrategic*, and little more than “a necessary evil ... that blindly enforces nonsensical rules, resists creativity, and impedes constructive change.”¹⁶ In short, people don’t much like HR and people assigned into HR roles often detest the job. Driving this dismal professional outlook is that most HR professionals in Singapore don’t hold HR-related qualifications. The general thinking goes that because HR is so functional and operational, it can be outsourced to non-HR degree holders.

Consider by way of example a survey commissioned by WDA (2007) and conducted by Binder Dijker Otte & Co Raffles Consultants¹⁷ reporting that while there were some 22,000 HR professionals in Singapore, the HR sector here currently depends heavily on non-HR trained professionals to meet the demand for HR practitioners: tellingly, more than 75% of those possessing a bachelor’s degree (63%) were from non-HR fields. In another study of HR professionals, the Singapore Human Resource Institute (2010) reported that 41% of respondents considered that their lack of formal HR education was the main barrier hindering advancement in their career; 79% did not have professional certification or accreditation in HR.

The demand for HR practitioners in Singapore is evident and is reflected in initiatives by the Ministry of Manpower (MOM) to further develop the human capital profession and HR services

¹⁴ Rikhof, R. (2017). “*HR Transformation*” is Dead. Long Live Disruptive HR – How We Evolve to Next Generation HR. Geneva: KennedyFitch.

¹⁵ Beer, M. (1997). The transformation of the human resource function: Resolving the tension between a traditional administrative and a new strategic role. *Human Resource Management*, 36(1): 49-56.

¹⁶ Hammonds, K. (2005). *Why We Hate HR*. Fast Company. Downloaded at <https://www.fastcompany.com/53319/why-we-hate-hr>. Accessed on 28 October 2008.

¹⁷ <http://www.mom.gov.sg/Documents/Speeches/facesheets-on-wdas-initiatives.pdf>

industry. HR has been growing rapidly in tandem with Singapore's development as a centre for finance and business. Recently, HR has also taken on an increasingly strategic dimension as organisations come to recognise employees as critical assets and a source of competitive advantage. But is this enough? Keith Hammonds, Deputy Editor at Fast Company,¹⁸ explains it this way:

The problem, if you're an HR person, is this: The tasks companies are outsourcing — the administrivia — tend to be what you're good at. And what's left isn't exactly your strong suit. Human resources is crippled by ... "educated incapacity": You're smart, and you know the way you're working today isn't going to hold 10 years from now. But you can't move to that level. You're stuck.

How do we solve the problem of insufficiently trained professionals entering a profession that has been deemed 'critical' to Singapore's future success? In an opening address at the Singapore Human Capital Summit in September 2013, Acting Minister for Manpower, Mr Tan Chuan-Jin, emphasised the importance of and need for HR education and HR-trained practitioners. More training places for HR professionals are essential to cater to future demand and challenges in human capital management. The minister emphasised that "good leaders need the support of top quality HR professionals who can put in place good human capital practices."¹⁹ The increasing demand for HRM is also reflected in MOM's initiatives for national HR capability through an emphasis on training programmes, institutions, scholarships, and resources for HR professionals and business leaders.²⁰

Getting from HR management to HR science

Boudreau and Ramstad (2007) take aim at traditional HR by arguing that it must re-focus from a near-universal decades-long reactive mindset of planning, budgeting, hiring and training to instead embrace a future that lies in strategic 'talentship.' In moving "beyond HR", they argue for a paradigm shift away from functionality towards human capital management that strategically *adds value*.²¹ Such 'talentship' requires a departure from focusing only on delivering high-quality HR programs to instead aligning the HR function around the quality of talent decisions. Where else is a greater impact to be found, arising from the marriage of technology with the human side of the enterprise, than in the high-quality decisions made about people?

What, then, is HR science and how is it different from traditional HR management?

HR science is the combination of hard and soft approaches to HR with the aim of finding the balance that is *rigorous*, *relevant*, and *right* for a company. Commentators and scholars have for a long time debated the merits of adopting a 'hard' versus 'soft' approach to HR management; should HR act as a lion, or a sheep? At one extreme, hard (or strong) HR management is often interpreted and perceived as fact- and evidence-oriented, coercive, combative, and threatening while being rule-bound, detached, and regulatory. It gets the job done, but at what price? And where is the humanity? At the other extreme, soft (or weak) HR is frequently viewed as open, subjective, intuitive, self-directed, and participative, resulting in harmony and consensus as well as permissive (and perhaps boundary-breaking) behaviours. It

¹⁸ Hammonds, K. (2005). Why we hate HR. *Fast Company*. Downloaded at <https://www.fastcompany.com/53319/why-we-hate-hr>. Accessed on 28 October 2008.

¹⁹ Downloaded at <http://www.mom.gov.sg/newsroom/Pages/Speeches.aspx>. Accessed on 2 February 2013.

²⁰ Downloaded at <http://www.mom.gov.sg/employment-practices/skills-training-and-development/national-hr-capability>. Accessed on 2 February 2013.

²¹ Boudreau, J. and P. Ramstad (2007). *Beyond HR: The New Science of Human Capital*. Boston, MA: Harvard Business School Press.

also gets the job done without offending anyone, but again, at what price? And where is the science?

HR science neither rejects HR as an art, nor insists it is only a science, but accepts and integrates both. It embraces both “the simplicity of science and the complexity and confusion of practice.”²² At SUSS, we adopt a similar principle by insisting that our programmes engender students with a head *and* a heart – both science *and* art. As others have said, *HR is an art but you should act like a scientist*. At the core of HR science is the undeniable notion of humanity; that “HR is all OB”²³, and that when dealing with people there are likely to be a tremendous number of factors that will influence their behaviour (art) as well as impact on business outcomes (science). While people issues will invariably dominate the running of any company (e.g., in concepts related to motivation, engagement, leadership, and personality), it is in the science of HR that these same companies will be able to rigorously monitor and adapt relevant HR processes to more effectively manage people in their various roles and functions. The combination of art and science – of *head* and *heart* – enables the same companies to reap the expected rewards from their people and to run a *successful* company.

At SUSS, we know that the balance and integration between technology (a hard ‘science’) and HR management (a soft ‘art’) requires that we temper the hard decision-science approach of our curriculum with the softer, more sensitive human component that is an essential constituent of a business workforce. We aim to produce graduates armed with current knowledge and competencies that strike a balance between scientific method and the human side of the enterprise. Our goal is to build a HR-qualified professional skilled in HR science, grounded in business, finance and social behavioural disciplines, and with specific domain knowledge of HR. It requires our graduates to embrace technology, to contribute to their organisation’s domain specific knowledge relevant to their HR specialty, and to exhibit a sizeable dose of humanity, ethics and morality in dispensing HR expertise.

How might we do this?

First, we acknowledge that the HR landscape is clearly changing, evident from the increasing numbers of articles, journal papers, blogs and reports extolling the ‘new face’ of HR in business practice. On the one hand, the traditional, conventional, and functional concepts, models, methodologies and HR approaches remain very much embedded in many organisations and in the mindset of most practitioners, a reflection perhaps of the powerful enduring legacy of reinforced work habits. But as scientific developments in all spheres of industry continue unabated while unremittingly pushing the boundaries of digital technology, HR is confronted with a new “new thing”²⁴ – a transformation of models, practices, and mindsets.

Second, we accept that there is a dark side to human nature in the workplace in the form of unrelenting competitiveness. People strive to get ahead, aspire to positions of authority, and desire power, with their ambition driving them forward and upward in an assumed career ladder. They vie for attention, visibility in what they do, and seek acknowledgement. While recognition for one’s work is part and parcel of today’s competitive business culture, it often comes at the expense of work-life balance, collegiality, and professionalism. Must this be so? Can people function and thrive without the acrimony of envy and cut-throat competition? Can’t everyone truly win, in their own way?

Third, we embrace the human side of enterprise, the inclusive idea McGregor brought to bear on ‘industrial management’ - a phrase though antiquated, it nevertheless is apposite in describing

²² Dipboye, R. (2007). Eight outrageous statements about HR science. *Human Resource Management Review*, 17(2): 96-106.

²³ *Ibid.*

²⁴ Lewis, M. (1999). *The New New Thing: A Silicon Valley Story*. New York, NY: WW Norton & Company.

the current climate of business changes and challenges. Although we have moved out of the industrial era into a globalised new world economy, the essence of management that we must continue to embrace is to incorporate within this new economy the *social* behavioural sciences – the *art, heart* and *humanity* of HR. To this end, a HR education at SUSS remains founded on three core themes – knowledge of business practices, understanding of human behaviour, and domain knowledge of what HR does. A fourth theme undoubtedly is the ethical and moral values that guide us in our dealings with others and which enrich our lives. In keeping with the spirit of the university’s mission to provide lifelong education and equipping learners to serve society, our programmes will continue to produce graduates who embrace ethical and moral values with an unquestionable sense of humanity in their professionalism.

Concluding Thoughts

The HR landscape is continually changing, and we need to change too, to innovate and to keep abreast and ahead of the curve. What, then, is our promise to the graduates who will leave us and go on to fill jobs of their choosing? Can they realistically find a fulfilling HR career that allows them to contribute not just economic value but also social capital that is delivered with a humane sense of justice, righteousness, and warmth? Can we envision a future HR career path for them that results in a sense of individual and collective worth? At SUSS, we believe we can. While Dickens likely never intended for his 19th century novel to be used in a HR context, the message remains clear: conventional, traditional HR functions are a thing of the past. The buzzword today is *design thinking*²⁵ (redesigning the way we work). The future of HR science is embedded in several opportunistic challenges, the least of which involves managing big data, simplifying its processes, and building a culture of collaboration, empowerment, and innovation. As SUSS, we understand these challenges and we embrace its opportunities. We are proud to be able to contribute and to be leading the way in a new landscape for HR professionals.

²⁵ Bersin, J. (2016). *The New Organization: Different by Design*. Downloaded at <http://joshbersin.com/2016/03/the-new-organization-different-by-design/>. Accessed on 11 March 2017.