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Knowledge appreciates your generosity: exploring a meeting point between knowledge and wisdom

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I pay tribute to Don Lamberton in this paper by exploring the importance of generosity in knowledge systems. The purpose of this paper is to show that a range of important dynamics in knowledge systems are enhanced by generosity. I also argue that generosity is one of the meeting points between knowledge and wisdom, and that it should become an important consideration in the knowledge policy development process. It is important that we move knowledge systems closer to wisdom if we are to respond in the best ways to such major global challenges as climate change, a fragile global financial system, the emergence of new technologies, poverty, endemic military and paramilitary conflict, and global food and water security.

Introduction

My research focuses on knowledge and wisdom, rather than information and, unlike Don Lamberton, I am not recognisably an economist. I was not formally one of Don's students. I first met him when I was a PhD student, and his influence on my research (and career) was instant and significant, as if he had been my teacher. My PhD was in history, the history of music technology manufacturing (Rooney, 1997). I crossed paths with Don because of Don's broad and deep interest in technology, industry, innovation and also history, and his willingness to give his time to engage with me. I certainly gained much from Don's generosity.

The goal of this paper is to pay tribute to Don by examining knowledge and generosity and to show why generosity matters in policy debates about knowledge economies. I will show why generosity is essential for a high-performing, high-integrity, inclusive, and democratic knowledge economy. Specifically, I argue that generosity is important because it opens up knowledge for widespread creation, refinement, and application. Generosity is also important because it is a component of wisdom and brings knowledge a step closer to wisdom. Further, I contend – and I am sure Don would have agreed – that wisdom is a far more important (and scarce) resource than knowledge. I focus this paper on the idea that knowledge appreciates generosity. Writing about generosity and wisdom honours the generosity and wisdom that Don showed to generations of students, colleagues, and practitioners, including me.

I was very fortunate to be working for Tom Mandeville as his research assistant when I first met Don. Tom persuaded me to attend the annual STEP conference for

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PhD students interested in information, knowledge, science, technology and economic progress. The STEP PhD conference was something of an institution in Australia and Don was its driving force. As an attendee, you could not escape being interrogated by Don at the end of your presentation. There was nowhere to hide and your every theoretical weakness and piece of sloppy thinking was teased out. The conference, though, was inspiring for me, and so too was Don. In short, I felt as if I had found an intellectual home, and Don was inviting me to sit at the hearth with him and his family of scholars (many of whom I cite to demonstrate that Don's work lives on). In short, Don convinced me that, despite the growing climate of managerialism in Australian universities at the time (cf. Joseph, 2015), it was acceptable in research to take the less-travelled road, that I did not have to focus on safe, middle-of-the-road research, that having an interdisciplinary outlook was essential, and that history matters. I accepted the warm invitation and then started working in collaboration with Tom Mandeville on 'The knowing nation' (Rooney and Mandeville, 1998), published in *Prometheus*.

The present paper begins by defining knowledge; it then defines generosity before presenting a triadic model of knowledge. Finally, the paper discusses wisdom and its potential in a knowledge economy. In following this path, the paper shows how a range of important features of knowledge systems, such as diversity, tacit knowledge, the social dimension of the mind, system integration, and the performativity of knowledge, are each enhanced by generosity.

Social knowledge

I begin by asking a question: What is knowledge? It is one of the most important questions ever asked and has been asked many times in the past 2000 years. The answer is not simple because knowledge is not a static, depersonalised, countable phenomenon (Foray, 2004). Let me start explaining what knowledge is by saying that knowledge is a fully human aspect of mind and body (Varela *et al.*, 1997; Küpers and Pauleen, 2015), and cannot be separated from emotions (Gebser, 1985; Damasio, 2000; Walton, 2004). Going further, and to understand why knowledge appreciates generosity, it is important to acknowledge that knowledge is very much a product of culture and social interaction (Berger and Luckmann, 1966; Scott, 1995; McCarthy, 1996). The primary source of value derived from knowledge is its role in driving social and economic dynamics, and enabling individuals and communities to achieve purposeful things (Archer, 1996; Fairclough *et al.*, 2002) in systematic and collective ways. The greater part of the infrastructure through which knowledge does its work for us as communities is through communication.

Human communication is highly sophisticated (yet also imperfect) and is essential to the creation and maintenance of increasingly complex social, political, and economic systems, including our knowledge systems (Graham and Rooney, 2001; Leydesdorff, 2001; Rooney, 2005; Tsoukas, 2005; Johnson, 2009). The human communication process diffuses information from person to person and group to group to create and diffuse knowledge, learning and understanding, and to take informed or deliberate (purposive) action (Blackler, 1993). Although knowledge for knowledge's sake is rewarding for an individual and is important, knowledge is more important for its social role and value to the community. As knowledge is exchanged (that is, communicated), it is likely to grow in value by creating new insights for more people, by coordinating people's understandings and ability to act cohesively

based on these common understandings, and perhaps also by helping people to become better aligned with empirical reality. Communication of knowledge is also central to the innovation and creativity that moves societies forward through solving problems. Such positive outcomes do not always happen, of course, but historical analysis shows that, on balance, the social value of knowledge is bound to such dynamics (Shapin, 1994; Collins, 1998; Burke, 2000; Mokyr, 2002). That such positive outcomes do not always arise is in part linked to imperfections in communication (think of Chinese whispers).

Critical to knowledge and the overall functioning of any society, then, is communication, something that Don Lamberton understood well (Lamberton, 1996, 2002). Specifically, communication is essential in knowledge systems because it is the process through which (1) ideas are diffused, absorbed and refined to have socially and economically valuable meanings; (2) particular problems or questions are agreed to exist and to be in need of attention; (3) particular groups decide how best to resolve questions and problems; and (4) how otherwise disparate ideas can be re-organised into socially and economically meaningful and creative new sets of ideas to solve new problems. All of these benefits of knowledge rely to some extent on magnanimity and generosity. If the highest form of communication is genuine dialogue (an open conversation among equals), it, too, is dependent on a spirit of generosity.

Generosity and pro-sociality

Generosity is the first of the 10 perfections (or excellences) that are required in Buddhist philosophy for one to become wise or enlightened (Walsh, 1983). Generosity is also associated with western theories of wisdom (Schwartz and Sharpe, 2006; König and Glück, 2013). Generosity is a willingness to share one's resources in a plentiful or big-hearted way. A generous person is likely to give more than is necessary. Generosity, therefore, suggests the willing sharer has a noble, principled or selfless spirit. Naturally, those in receipt of an act of generosity are rewarded, but so too is a person who gives generously (Cameron *et al*., 2004; Aknin *et al.*, 2012). Such people are rewarded personally in the knowledge that they have assisted others. They may feel a great sense of satisfaction from their actions. Although both kinds of reward are commendable and welcome, the greatest benefit from generosity is to the community through reciprocity of knowledge, which many scholars say creates social capital (Walker *et al.*, 2000; Hauser *et al.*, 2007; Bartsch *et al.*, 2013). Knowledge grows with use and with increased social capital. If many people are generous with their knowledge – if, in other words, there is a culture of intellectual generosity, then knowledge is mobile and accessible and ready to create social returns. An economy of ideas is a sharing economy.

To explore more precisely the relationship knowledge has with generosity, it is useful to consider that a central goal of society and knowledge policy is not simply the accumulation of great stocks of knowledge. Instead, I suggest that the really important thing is the relational configuration of knowledge systems and how particular configurations lead to integration of practices, ideas, values and culture that then create social value (Zhu *et al.*, 2016). Particular forms of social organisation turn knowledge into socially valuable action. Wisdom is the special quality that supports such integration. Wisdom and its attendant qualities (such as exceptional communication skill, experience, ethics, imagination and judgement) have much to do with

successfully filling gaps in knowledge (Rooney *et al.*, 2003) and not filling them with what is often assumed to be 'common sense' but which are sometimes just assumptions that stifle innovation. Wisdom is also about excellence that is appropriate to a particular time and place, and that will help secure a sustainable future through the application of knowledge. Wisdom is therefore more than knowledge and facticity.

I will return to wisdom later, but first it is useful to consider further the social dimensions of knowledge, including knowledge as a social good. As already suggested, there are private and social returns from the creation, diffusion and application of knowledge. Diversity is an important element in creating this value (Winter, 1987; Metcalfe, 1994; Dopfer *et al.*, 2004; Foray, 2004). Furthermore, the social returns from the creation, diffusion and application of knowledge are underappreciated in contemporary knowledge economy policy. Given the social returns and the diversity that policymakers should look for in knowledge systems, there is good reason to be concerned about how to manage or facilitate this diversity to create appropriate social returns. I argue that generosity is an important part of the management process.

Living, generous knowledge

To delve deeper into the knowledge/generosity nexus, we must consider that much knowledge is tacit and is understood in rather idiosyncratic and personal ways (Polanyi, 1958, 1967, 1997; Saint-Onge, 1996; Lamberton, 1997; Ray, 2009). Tacit knowledge is essential to an economy's capacity for innovation and creativity (Lamberton, 1997), even if it is difficult to manage and set policy for (von Krogh *et al.*, 2000). Tacit knowledge is created and transferred through action and, in particular, through interaction that includes observation and imitation (Nonaka and Takeuchi, 1995). Tacit knowledge is an example of embodied knowledge (Alibali *et al.*, 2014). On this basis, non-verbal communication is important to knowledge economies. Communicating tacit knowledge is difficult and many of the imperfections of knowledge communication arise because of tacit knowledge. At this point, knowledge systems become very complex, self-organising systems. This self-organising aspect of human knowledge systems is one of the things that makes wisdom so useful because of its capacity to integrate and deal with ambiguity, uncertainty and complexity (Aristotle, 1984). It is also true that tacit knowledge benefits greatly from generosity. Generosity of the master to the apprentice, parent to child, teacher to student are traditional examples of how knowledge systems have evolved social institutions that cater for the transmission of knowledge, and particularly the need that communicating tacit knowledge creates for generosity. Generosity in the tacit knowledge communication process is of extraordinary benefit to knowledge systems. Of course, I recognise that not all masters, parents and teachers show generosity all the time; that is obvious, but nothing is perfect in knowledge systems and not all people are equally generous and wise. Nevertheless, an important motivation for each of those critical social institutions is to bring generosity to knowledge systems in targeted ways to enhance life.

Another important consideration is whether our minds really are connected and whether those connections form a (social) system of interconnected minds. The life of the mind is a social life. An ingenious neuroscience study demonstrates this deep, emotional, human, empathetic connection. The ability of one person's mind to model

another person's mind is shown in an experiment that examines the differences in people's brain responses to electric shocks. The study shows that when a participant holds hands with a friend, the participant and friend both anticipate that the participant will receive a mild electric shock to the ankle and both people will share the same threat response in their brains (Beckes *et al.*, 2013). Other studies show that musicians create interbrain networks that facilitate duets (Sänger *et al.*, 2012). Empathy, altruism, care and generosity are critical natural elements of brains that facilitate our social minds. Indeed, our brains are also specifically structured to 'read' social situations, to be altruistic, and to give and receive care and generosity (Lieberman, 2013). Social cognition is thinking about others, ourselves, and how it all fits together in a more or less cohesive social system. Thinking about social interactions and relationships, and other people's minds, is a default setting for the human brain (Lieberman, 2013). We have social brains and minds.

Of course, philosophers and sociologists have understood the social connectedness of minds and knowledge for a very long time; long before the word neuroscience was even coined. Knowledge is not and never has been disconnected from people acting together in social settings. Knowledge is formed as ideas are meaningfully connected into actionable packages. Knowledge is put into action in social settings through interactions among people. Very often, physical settings and such objects as buildings, parks and information technology assist in the process of knowing (Rooney, Paulsen *et al.*, 2010; Larson and Pearson, 2012). There is a network structure to all this (Latour, 2005). It is possible for policy professionals to design and craft particular architectures for knowledge networks. We can call this the 'social architecture of knowledge' (Corno *et al.*, 2000). It is useful to observe that sociology has a long-held interest in understanding how knowledge and society interact (Scott, 1995). Knowledge-policy professionals need to understand this sociology (and also social psychology) if their policy formulations are to be practical and make a difference (Rooney *et al.*, 2003).

Understanding the social dynamics of integrating ideas and values based on systems of trust and reciprocity is also critical for managing knowledge systems, and therefore for developing knowledge policy (Nahapiet and Ghoshal, 1998). Knowledge is a constellation of phenomena comprising ideas, assumptions, beliefs, intuitions, memories, cognitions and so on that are taken in society to have justifiable and useful 'truth' values, and that are emergent properties of relations. In this sense, knowledge is taken to have reliable understandings that are (re)constructed in social relations and through communication (Berger and Luckmann, 1966; Pinch and Bijker, 1987; Gergen and Thatchenkery, 2004). Knowledge policy, therefore, should include the stewardship, steering and facilitating of these relationally generated phenomena in pursuit of the community's goals (Rooney *et al.*, 2003). Going a step further, knowledge is not simply a possession (in memory); it is performative, it is performed in social situations, and it connects people. The quality of the application of knowledge is conditioned by the qualities of interpersonal and intergroup connections and by the way all elements of a knowledge system integrate. Facts, for example, must be deeply incorporated in ways of knowing (processes, ways of organising ideas, and attitudes/dispositions) that make up, hopefully, a *habitus* for wise practice (Pinch and Bijker, 1987). Thus, when knowledge is enacted, 'there is an intrinsic connection between (a) relational knowledge forms and ways of knowing ..., (b) constitutional political forms regulating relations between citizens, and (c) justice, considered to be the highest ethical virtue because it concerns relations to others' (Eikeland, 2008,

p.81). These intrinsic connections are, again, deeply sociological and behavioural. That justice in relationships is identified by Eikeland brings our attention back to fairness, care and other positive values associated with generosity. In addition, political forms and regulations raise the influence of politicking and power in knowledge systems, which also benefits from generosity.

What this understanding of knowledge means in practical terms is visible at three levels. First, knowledge is more than data and information. As already noted, knowledge is a blend of ideas, insight and creativity, and – at a very fundamental level – it is a cultural artefact (McCarthy, 1996), particularly given its profound links to values, shared meanings, language and the human need for self-expression (Kusch, 2002). It must also be remembered that the links between effective knowledge creation, diffusion and use, and social capital and social networks is well known and understood (Granovetter, 1973; Walker *et al.*, 2000; Hauser *et al.*, 2007; Bartsch *et al.*, 2013). On top of this, power and its distorting effects in knowledge systems are also significant factors in how knowledge systems work (Foucault, 1972; Asimakou, 2009; Adelstein and Clegg, 2012). An important aspect of knowledge-related policy should, therefore, be that it deals not simply with the socially complex ways, but also with the politically complex ways in which components of knowledge systems are interconnected (Leydesdorff, 2006; Vervaeke and Ferraro, 2013). These aspects of knowledge dynamics cannot be over-emphasised in the context of an increasingly networked economy. If policy professionals do not grasp these characteristics of how knowledge systems work, they will succeeded only in creating a technocratic economy with limited meaningful benefits for ordinary citizens (McKenna and Graham, 2000; Graham and Rooney, 2001; Rooney and McKenna, 2005).

Second, research data and theory call for public investment in knowledge economies that includes an investment in the social, cultural and communicative foundations of knowledge systems. Further, for knowledge economies to yield long-term, sustainable benefits, they must have diverse and resilient social and cultural foundations that generate novel ideas and encourage people to take intellectual risks. One element of this is what is known in organisational culture research as psychological safety, which is known to facilitate innovation (Hogan and Coote, 2014). Viewing technology as valuable in itself or for the commercial profits it yields is short-sighted and socially unproductive, and contributes little to social and economic sustainability. Similarly, knowledge and innovation policy that fails to address or even acknowledge research demonstrating the social, political and cultural dynamics of knowledge systems will be largely ineffective in delivering real outcomes for citizens.

Third, much rests on the shoulders of policymakers because they have significant responsibilities in stewarding and steering roles and in focussing on connections and relationships among components of knowledge systems, including thinking in terms of the social architecture of knowledge (Corno *et al.*, 2000). These relationships can be (1) among people, (2) between ideas and people, and (3) even among people, ideas and the physical environment (both natural and built environments). I now move to explore this framework in a triadic model of knowledge.

Triadic model of knowledge

If knowledge is a constellation of interacting and integrating ideas and people, and is situated in time and space (place), we can model it. Figure 1 shows knowledge as a product or emergent property of interactions among ideas, people and places (Rooney *et al.*, 2003). This very basic and simplified architecture provides a useful shorthand for thinking through initial approaches to creating knowledge policy, including the role of generosity and how ideation is linked to individuals and groups who are organised into social architectures.

In the triadic model, knowledge develops in the centre as an emergent property of relations within and among people, ideas and places. Although much policy development can be accomplished even with this simple model, the model can be made more complex and realistic. In its transition, it becomes both more flexible and more precise in its policy development capacity. In adding this complexity, the role of generosity (and related factors) in knowledge economies becomes even clearer and the model sharper in guiding policy developers towards more precise intervention strategies and tactics. Figure 2 adds to the analysis (1) power and resources, (2) social structure and agency, (3) social mindedness, (4) well-being and quality of life, and (5) the *realpolitik* or messy reality of the context in which praxis happens. I now briefly consider each of these in the light of generosity before, finally, turning to wisdom and how it can fit within discourse about policy and knowledge economies.

Power and competition for scarce resources are parts of life that impact on most aspects of our relationships and daily activities. Wise, responsible, ethical, generous use of power and resources is possible and is needed in a knowledge economy. The wise, responsible use of power by leaders remains a scarce resource. The links between knowledge and power are complex and important and cannot be ignored (Foucault, 1972; Asimakou, 2009; Adelstein and Clegg, 2012). Historical analysis shows that closed, insular authoritarian power has a problematic and ultimately

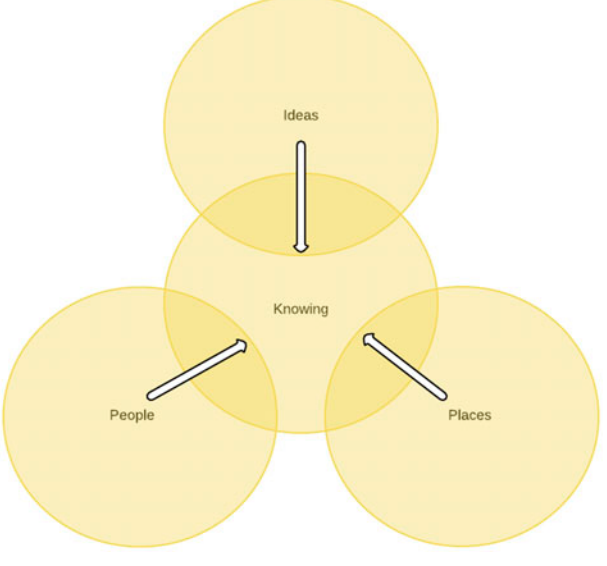

Figure 1. Triadic knowledge model (1).

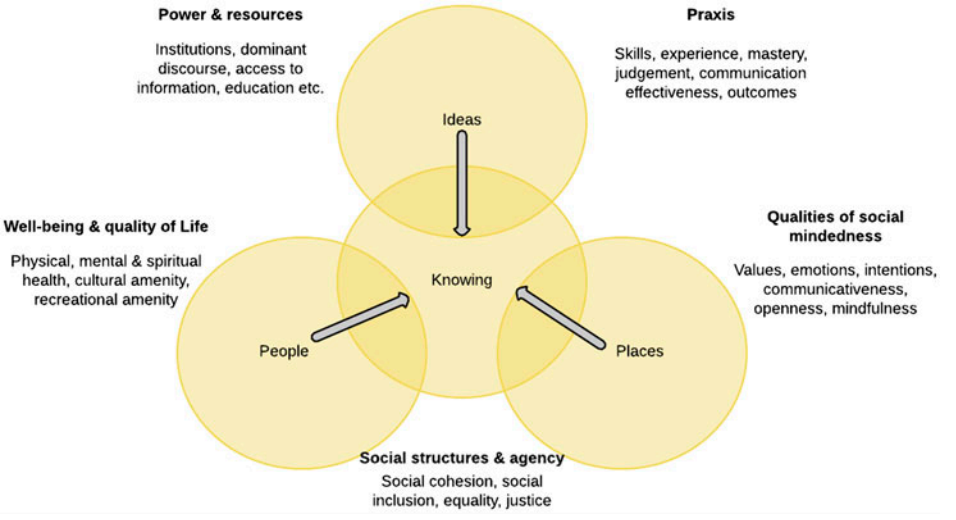

Figure 2. Triadic knowledge model (2).

unsustainable relationship with knowledge (Collins, 1998; Landes, 1998; Burke, 2000; Mokyr, 2002). The power of politicians and government, multinational corporations and media businesses is all potentially deleterious to knowledge economies. These power elites may seek to monopolise or otherwise abuse knowledge (Dempsey, 1999; Maskus, 2000; Drahos, 2005; Carlaw *et al.*, 2006), and close it off from generosity and the free flows of ideas that knowledge needs to create public returns (Mokyr, 2002). Many authoritarian regimes also become the arbiters of truth and what is 'authorised'. State-sanctioned knowledge is used to manipulate attitudes and assumptions so that people acquiesce to the regime. Such institutions as education systems, public research, public information sources and delivery systems (public libraries and open-access repositories) can easily be subverted by power (see Landes, 1998).

Dominant discourses shape not just the way we speak and what we speak about, but also our assumptions, heuristics and behaviour (McKenna and Graham, 2000; Fairclough, 2003; Lemke, 2003). The negative effects of the discourses of ungenerous power elites on knowledge economies are often overt in authoritarian regimes, but often more insidious in democracies (Graham and Rooney, 2001; Asimakou, 2009; Adelstein and Clegg, 2012). They can ossify institutions and the growth of knowledge (cf. Phillips *et al*., 2004). Generally, there is a selfishness in authoritarianism and unsophisticated use of power that extinguishes generosity and diminishes knowledge (Clegg *et al.*, 2006; Drahos and Braithwaite, 2002; Pitsis and Clegg, 2007; Vervaeke and Ferraro, 2013; Oktaviani *et al.*, 2015).

Social structure and agency also matter in a knowledge economy. Social structures are linked to institutions, power and social architecture (Giddens, 1984b; Archer, 1996). Social cohesion, social inclusion, equality, openness, justice and freedom come into focus when considering structure and agency. The delicate balance between the shaping and limiting effects of institutions on the one hand, and the agency or freedom to act without undue restraint on the other hand is a very important issue for knowledge economies (Giddens, 1984a; Sewell, 1992; Archer, 1996;

Dobres, 2000). It is important that people feel they can take the initiative and that it is worth their while to take risks by trying new and innovative ideas. A knowledge economy needs generosity and psychological safety to grant such freedoms.

Social mindedness, community spirit and social intelligence are all ways of being that connect to generosity. Pro-social values and intentions are parts of the mechanisms that allow the discourse of generosity and knowledge systems to work to create cultures and aid social returns (as well as private returns) from knowledge. Communicativeness and openness that enable new, knowledge-enriching discourses to emerge are central to creating the kind of culture knowledge economies require.

Health and wellbeing are closely associated with social mindedness and community spirit in creating a fertile culture for knowledge, innovation and wisdom. Wellbeing and quality of life, including physical health, mental health, cultural amenity and recreational amenity, underpin the intellectual health and life of a community and are therefore important policy considerations in a knowledge economy (Bergsma and Ardelt, 2011; Dolan and Metcalfe, 2012; Eriksen *et al.*, 2014). Yet, knowledge economy policy discourse is criticised for ignoring individual and community wellbeing (Engelbrecht, 2007, 2009). Clearly, a great deal of the knowledge created in the public research sector is directly aimed at health and wellbeing. Wellbeing is waning in many societies around the world (Wilkinson and Pickett, 2009; Helliwel *et al.*, 2014), and a knowledge economy should be able to find ways to arrest this trend. Further, unhappiness and poor mental health (particularly depression) impair cognitive function in individuals (Webster *et al.*, 2012) and a community of cognitively impaired citizens is unlikely to create what we might imagine a knowledge economy should be (McDermott and Ebmeier, 2009; Petersen *et al.*, 2016). The reverse of this, a mindful state of mind, is a very healthy way of being and is characterised by all the positive qualities I have already dealt with, including generosity (Hülsheger *et al.*, 2013).

Praxis or practical action is in many ways what knowledge is all about. Indeed, some suggest that praxis is better defined as wise practical action (Rooney, McKenna *et al.*, 2010), and one might suggest that promoting wise practical action is a proper objective of a knowledge economy. If knowledge is performative, then wisdom is socially excellent performance of knowledge that creates excellent long-term, sustainable outcomes. I now turn to consider what wisdom is through the lens of social practice wisdom, because the triadic model is insufficient on its own to speak precisely to the performative or praxis dimensions of knowledge. Social practice wisdom (SPW) provides a framework for praxis.

Wisdom

Wisdom is the pinnacle of social excellence. We should be reminded at this point to ask what the purpose of public policy is in a representative democracy. While a complete answer to this question is outside the scope of this paper, it is pertinent to say that public policy in a democracy must serve a broad range of interests and needs, and that a goal of policymaking should be to strike a balance across competing interests and needs. These caveats notwithstanding, public policy should also contribute directly to creating social excellence. This, of course, is no easy task. With this challenge in mind, I suggest that any policy, including education, science and innovation policy, should account not simply for knowledge but also for wisdom (Maxwell, 1984; Rooney and McKenna, 2008). Social practice wisdom (see Rooney *et al.*,

2003) is the conceptual framework that my colleague, Bernard McKenna, and I use to specify what wisdom is (McKenna *et al.*, 2006, 2009; McKenna and Rooney, 2008; Rooney, 2013).

SPW and the wise social practitioner integrate the following five principles:

(1) Qualities of mind: an aware and open mind with habituated dispositions that support innate inclinations for virtuous social action. This involves mindfulness, equanimity and the self-knowledge needed to understand uncertainty and situated relativities of life that include conflicting values, identities, cultures and politics.
(2) Knowledge, insight and critical reasoning: using knowledge (including self-knowledge, social, cultural, economic and political knowledge), but also aesthetic knowledge (direct, embodied, sensory-based and non-rational knowing), temporal balance and transcendent ability (creativity, insight, foresight, intuition, mindsight, etc.) in reflecting, judging, imagining and reasoning to create insightful understandings that help achieve social excellence and create wellbeing.
(3) Ethical and moral skill for pro-social behaviour: this includes ethical skill and courage; ability to understand people's emotional, social and material needs; magnanimity; and compassion to find the right and virtuous (ethical) thing to do.
(4) Praxis or wise action: practical ability using creativity, aesthetics, experience, understanding, mastery and judgement for responsible and skilful use of knowledge, power and communication. This involves knowing why, how and when to adapt to the environment, and why, how and when to change it.
(5) Creating positive and sustainable outcomes for long-term positive change to the conditions of life: this involves being a galvanising leader and artful communicator who effects pro-social change with exceptional outcomes. Creating positive, pro-social cultures and communities are central elements of this.

It is no easy task to integrate each of these principles as a social practitioner, including as a policy professional, but then wisdom is not easy to achieve, which is why it is so rare. It is very possible, however, to create the preconditions for wise action through good public policy. It is also possible for the policymaking workplace to be more conducive to wise policy practice.

Discussion: why wisdom and generosity matter in knowledge systems

Given the complexity and uncertainty inherent in knowledge economies, there is a strong case for the inclusion of wisdom in knowledge policy. That virtue, pro-sociality and generosity are core concerns of this paper, and core to knowledge and wisdom themselves, means that they are important enough not to be ignored. Fundamental to wisdom is ethics, a genuine humaneness that gives wisdom its subtlety, integrity and strength. There is no wisdom if thought and action are empty of humaneness. But how do we get wisdom into the policy process?

Just as the master/apprentice relationship has evolved to cope with the intrinsic qualities of knowledge systems, other institutions have also evolved. I briefly consider two of these now before moving on to further consideration of wisdom – first to communities of practice (CoP), and then to interdisciplinarity. In light of what we

know about the social life of knowledge, it is not surprising that organising to acquire and use knowledge in communities is a good idea. A CoP is a clever, successful and natural social adaptation, given what we know about the sociology of knowledge (Wenger, 2000; Tsoukas, 2002; Wenger *et al*., 2002). CoPs are based on the idea of social learning, another notion whose value has been appreciated for some time now (Miller and Dollard, 1941; Bingham and Conner, 2015). Social learning also recognises the importance of creativity, imitation and generosity in knowledge systems. Communities of practice normally evolve as a natural response to the social imperative to share knowledge, but they can also be deliberately designed to enable learning and application of knowledge and can work in policy development processes. Bennett (2012) identifies four different types of CoP – innovation, helping, best practice and knowledge stewarding CoPs – and emphasises the importance of creating a culture that enables social learning.

Diversity is fundamental to knowledge economies and innovation systems. In the light of the role of generosity and the communication view of knowledge systems, it is worth noting that contemporary approaches to knowledge production and discovery routinely depend on leveraging diversity with cross-disciplinary and interdisciplinary practices and collaboration. Most readers of this special issue will have worked in interdisciplinary teams and will understand how difficult it can be to make them function. Intellectual generosity is an important element in making interdisciplinary teams work. Being generous in learning the practices and assumptions of other disciplines, and being generous in accommodating different theoretical, epistemic and ontological positions is also crucial. Of course, this is easier said than done, but efforts in these kinds of matters are important. Generosity is achievable by most people and organisations and if the will is there, generosity can be quickly made part of policy social architectures, including the organisational culture of the policy workplace.

Over centuries, universities have developed communication structures and processes that facilitate innovation, knowledge creation and knowledge communication. More recently, managerialism and narrow economic instrumentalism have challenged these structures and processes. So, too, has reducing the assessment of research quality and impact to a kind of sham facsimile of an audit. The dominant discourse of market fundamentalism and managerialism is hackneyed, formulaic, empty rhetoric, and has run its useful course. There is nothing clever, new or innovative in it anymore. Let us try wisdom and generosity instead, both ideas that have stood the test of time. The starting point for creating this is discourse and communication (Barge and Little, 2002). It is possible to create the space within policy circles in which wisdom can emerge and flourish (Rooney, McKenna *et al.*, 2010). However, the basic model of integration of qualities of mind, knowledge and reasoning, and ethics to create wise outcomes is applicable to the policy development process (Rooney and McKenna, 2008). These outcomes must be good enough to deal with the major challenges for the twenty-first century – climate change, food and water security, global financial security, conflict and poverty. Let us use knowledge and wisdom to deal with all these challenges.

Conclusion

I hope I have convinced the reader that knowledge appreciates generosity, and that generosity should be considered an important aspect of policy for the knowledge

economy. Wisdom and generosity are not normally aspects of knowledge economy discourse, and I am not aware of such concepts being made part of published knowledge policy by any government. Don Lamberton's own example is evidence of the benefits of wisdom and generosity in a knowledge network. Potential is untapped because these fundamental components of knowledge systems are neglected. To my way of thinking, it is disappointing when this neglect is evident among knowledge policy professionals and knowledge researchers.

Finally, and importantly, I have tried to include in the literature on which this paper builds a good number of people whose work is relevant to the questions I have asked and who have been influenced by Don Lamberton's work. As I wrote this paper, I found myself going back to my own papers, books and chapters that bear the mark of Don's influence. I found that, without exception, these publications argue very directly for more humanity in government and industry. The realisation has only deepened my appreciation of what Don gave so many of us. Don has influenced the kind of work that I and so many others have done over many decades. Don created an intellectual (knowledge) network of significance, one that continues to function even in his absence. This is Don's legacy and the source of my gratitude to him.

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