

How Property Valuation will be affected in the Postnormal.

Given that 2020 represents a time of perfect sight, at least in some mythologies, there are good reasons to suggest that as contemporary society nears that magical year we need to consider it might have very different characteristics from the period that preceded it. While this paper focuses on a number of these contextual elements as they relate to the future of property valuation in Australia it is intentionally an outside perspective on the profession and the sector. Thus, although other papers will be deliberately 'valuation centric' and given that "the future is already here but it is just not evenly distributed", the purpose of this paper is to describe these external continuities and discontinuities in a way that encourages conversation about potential impacts on the profession. It also aims to assist in making visible early signs of these (future) changes in the present (what I term the present future).

In order to better illustrate how the future might emerge, this examination uses a methodology known as Causal Layered Analysis¹ to illustrate how particular propositions might unfold as an alternative reality to the one that represents the conventional contemporary dialogue. This way of thinking seeks to articulate not just the accepted wisdom or litany view but also the structures and systems upon which those realities, the worldviews that underpin them and finally the often subconscious and rarely questioned foundation myths and metaphors that frame all we think and utter. In presenting these alternatives, as a way of comparative understanding, no assertion is being made about whether any distinct construction is right or wrong. Rather what is being attempted is a reframing of the possible so that options are considered and available should any particular alternative reality come to pass.

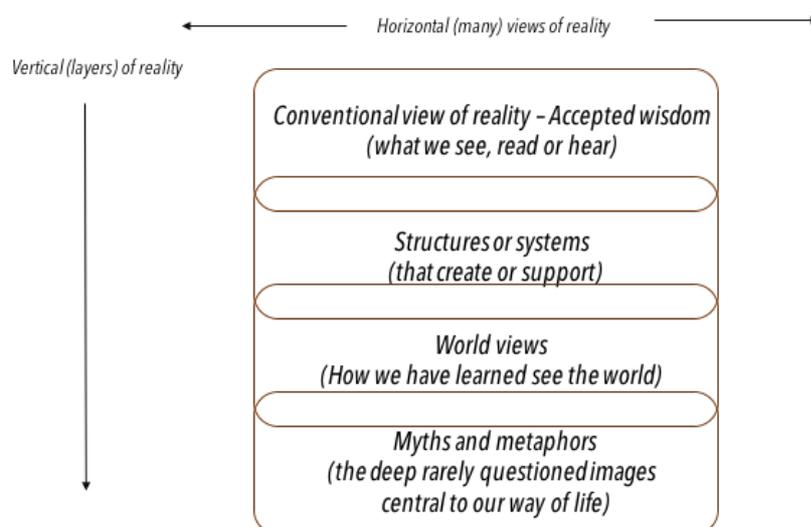


Figure 1. Reality is not a single idea
Causal Layered Analysis Model as developed by S. Inayatullah²

Before exploring a range of specific contextual changes that include; changes to the nature of property ownership, the space of place and the future of finance, two macro reality framings are considered useful. The first is that any consideration about the future needs to factor in a new context that is rarely considered; namely that the large critical systems (environment, energy and economy) that frame all of our social and economic arrangements, are feeding back on each other in ways that destabilise how we have assumed that they should operate. The second macro reality contends that as a consequence of globalization and ubiquitous mobile interconnectedness the very sense of normal that underpins almost all of what occurs in 'developed nations' like Australia has been completely compromised. The 'normal' on which we have based all of our socio-economic arrangements has morphed into a 'postnormal'. The effects of both of these contextual shifts has profound implications for how each of lives and how the organisations we inhabit define themselves.

Horizons

My thesis is that time practises are always sociomaterial, that the contours and rhythms of our lives are calibrated by and with machines. In other words we cannot comprehend the social organisation of time separate from technology.

J. Wajcman Pressed for Time³

As Lewis Carroll always understood, 'time' has particular even peculiar ways of affecting our sense of reality. While we currently live in a society which has built its socio-economic arrangements on an ever increasing mastery of chronological or clock time and the profession has essentially linked its value to the charging of 'professional time', network based technologies have the ability to both expand clock time (by allowing a particular project to have work done on it around the clock in different time zones in a seamless fashion) and to facilitate particular services in close to real time. Thus 'time' has become hyper-chronological, expanded and timeless (real time) at the same time. Notwithstanding this change to multi-time another manifestation of time needs to also be factored in – what is sometimes called temporality. This transcends clock time – it looks at patterns like winter and spring. It makes visible of some features of the future in the present – what might be termed 'present futures'. The rising number of extreme weather events as a precursor to a climate changed world is a useful example of the future in the present. So in addition to the senses of time suggested as variations to chronological time, and as Figure 2 portrays, there are multiple ways to consider what is even meant by the present and the future. These redefinitions of time destabilise the dominance of widely accepted linear thinking paradigms and the

conceptions of form and shape that have framed our current mechanistic society. When these different dimensions of time are considered together our sense of what is past, present or future fuses. This blurring, in particular of the 'present future', the 'near future' and the 'future future' has been used to establish the framing of horizons upon which this and other papers are based.



Figure 2 Time horizons through which future perspectives are framed

Big System Interrelatedness.

We have recently come to the conclusion that certain processes have now become so obvious, dominant and determinative that they have now become part of a "new normal" that must underlie our development and generic images of the future.

Jim Dator, "New beginnings" within a New Normal for the Four Futures.⁴

The entire structure of our present socio-economic system has been built upon access to very cheap and useful energy (mostly oil and coal based) and a view that all natural resources are there for the benefit of human-kind. In more recent times it has also relied on the belief that if the economy grows (or in the Northern Hemisphere on recovery from the 2008 Great Recession – what we called the GFC) then almost everybody who is willing to work benefits (the trickle down effect) notwithstanding concerns about widening disparity.⁵ While the case to argue at length that this might not be so in the 'near future', is interesting and as Figure 3 depicts, this is not the focus of this paper. Rather the point being made is that if energy becomes more expensive and if environmental costs continue to mount (because of climate induced extremes, ocean acidification or loss of biodiversity to name but three of the environmental systems under threat⁶) then there will be consequential effects on economic systems that will at the same time, struggle under almost any definition to grow over the next decade. While it is uncertain how this system convergence will manifest itself, the collisions it will occasion will frame the scale of transitions that need to occur.

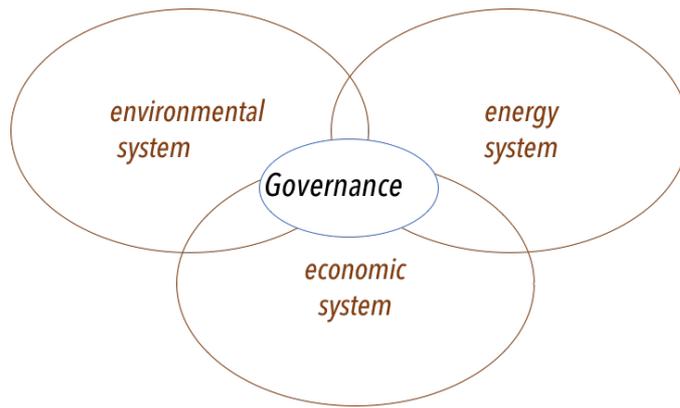


Figure 3. Dator's new normal: the interrelatedness of core human support systems

Perhaps what is of more concern is that there is a conspicuous failure at multiple levels of governance to even consider let alone act on the emerging issues arising from this system interrelatedness. If they are considered at all (and issues like the over reliance on cheap energy are not) the preference always seems to be to address issues within each system in isolation. The consequence is the management of complication not the management of complexity and an obsession with the short term rather than the systems that shape us.

	<i>Dominant Western View</i>	<i>New Normal View</i>
<i>Accepted Wisdom</i>	Energy is cheap Nature is our servant Capitalism is basis for prosperity	Energy will become more expensive Future constrained by planetary limits The current economic system can't adapt
<i>Structure Systems</i>	Humans are there to serve the economy Issues can be tackled in silos	Economy is there to serve humans Issues at a systems level are interconnected
<i>World View</i>	Technology will save us if we make the right adjustments	Many systems are at or beyond their limits
<i>Myth & Metaphor</i>	What has worked (at least for some) will always work	There is an urgent need for transformation

The Postnormal (Complexity, chaos and contradiction)

It is the primary contention of postnormal times that in the current epoch when facts are uncertain, values in dispute, stakes are high and decisions are urgent the accepted normal doesn't work. (Further) the basic assumptions of normality such as progress, modernisation, growth, development and efficiency are dangerously obsolete.

Zia Sardar, Postnormal Times Revisited.⁷

If globalized connectedness and ubiquitous mobile technologies are added to the system interrelatedness described above a new kind of complexity becomes evident, one which renders the siloed approaches that have served us so well almost redundant. The current chaos in the Middle East and how to treat the consequent flow of refugees into Europe is a prime example of a number of situations where the solutions are obvious. Moreover, even where there are solutions because of our reliance on connectedness and globalization they can rarely be implemented without consulting others who see things differently. It is even more confusing to realise that the connectedness and ubiquity that was set up to extend and benefit the current system is now also acting against its effectiveness at the same time.

There are three important consequences that emerge from this complexity. The first is that seemingly very small changes made in one part of the system can have vast unintended consequences (e.g. the Brexit vote) that might not or even could not have been anticipated when the change was made. Thus chaos is a constant factor in the future. The second is that the transparency that comes from these same effects is highlighting increasing contradictions. So humans have never been more connected but many are feeling more alone than ever, never has there been more wealth nor so much disparity (89 individuals have as much wealth as the bottom 3.5 billion on the planet) and so on. What makes these contradictions even more confronting is that many of those on the down side are becoming reluctant to accept that status quo as their fate, particularly when they now have devices available to them that reveal quite clearly how the privileged few live. The third and perhaps the most confronting of these consequences is the realization that the sense of normality that contemporary society has relied on makes it ill-equipped to deal with the postnormal conditions, it now faces.

The advent of the postnormal is a structural earthquake for organisations that were established for a very different set of operating conditions. It seems likely that just as earlier organisations designed for a world of written communications gave way to upstarts designed for a world of telephony and media, so too will today's

incumbents yield to those that are designed to thrive in the connected and networked world in which we now live.

	<i>Normal</i>	<i>Postnormal</i>
<i>Accepted Wisdom</i>	It is possible to manage the world in ways that are simple, orderly and efficient	Interconnectedness at multiple levels has created an environment that is complex, chaotic and contradictory
<i>Structure Systems</i>	Our language and structures are mostly mechanistic	The dominant network ethos is better seen as ecological
<i>World View</i>	Most of the risks we face are known and certain	Increasingly the world is uncertain and the risks are unquantifiable
<i>Myth & Metaphor</i>	Progress and Enlightenment guides what we do	There needs to create a horizon of possibilities beyond the way we do things now

A Radical Rebalancing – from Property Ownership to Hyperutilisation

The very thought of leaving markets and the exchange of property behind – of advancing a conceptual change in the structuring of human relationships way from ownership and toward access - is as inconceivable to many people today as enclosure and privatisation of land into property relationships must have been half a millennium ago.

Jeremy Rifkin, Zero Marginal Cost Society⁸

If private ownership of things is the defining characteristic of the present mechanistic economic system, then access and utilisation is emerging as the ethos of network society. Under scrutiny, ownership is fast becoming a very expensive way of using goods and services, when compared with ‘access’ services that provide the same or better choices at vastly cheaper rates. The average privately owned automobile for example lies idle for 95% of its life and the costs of that privilege rise considerably when the residential and commercial parking costs are factored. While there are always scenarios where ownership of a vehicle is the only way to ensure mobility, organisations like Ford are working with ride sharing companies like Uber and Lyft to put significant numbers of driverless cars on the road (by 2021) thus increasing the mobility options for those who cannot or choose not to own vehicles.⁹ More importantly as access offerings grow they are demonstrating that hyper-use of particular assets has a completely different cost and usage profile to that based on ownership.

The shift to hyperutilisation isn't just confined to cars. It has already extended to spare residential space (Air BNB), underused office space (LiquidSpace) and children's toys (Rent that Toy). As more and more people experience access services, ownership of things as a status symbol diminishes. 'Peak stuff' or more properly 'peak consumerism' has probably passed as growing numbers realise (as they did in the GFC) that much of their so-called ownership is really built on unsustainable debt and that very little of what they now own has delivered the levels of happiness the advertising hype promised. As the English 'consumer' historian Frank Trentmann has observed;

According to a number of recent commentators we are already living in the twilight of the empire of things. They announce the coming of "dematerialisation' and post-consumerism', marked by a growing interest in experiences, emotions and services, a revival of repairing, and the spread of leasing initiatives and sharing networks enabled by the internet.¹⁰

In what is now becoming known as the 'sharing' or 'collaborative' economy the interest is often as much in the relationships that are created through the process as it is in the goods that are used or exchanged. Designed with thought these relationships can involve those who invest in the production of the goods also being the users of the same thus replacing supply push consumerism with user centric pull or prosumerism; a trend that not only has profound implications for the future of finance but one that also destabilises the entire supplier-buyer model upon which market economics and private ownership is built.

	<i>Property Ownership</i>	<i>Hyperutilisation</i>
<i>Accepted Wisdom</i>	To use things when I want to I need to own things	All I need is access to things The more ubiquitous they are the easier that is
<i>Structure Systems</i>	Consumerism Materialism	Post consumerism Dematerialism
<i>World View</i>	What I own tells others about me	Who I connect with and how I connect defines me
<i>Myth & Metaphor</i>	Wealth and things make you happier	Beyond subsistence there is no correlation between wealth and happiness

From the Space of Place to the Space of Flows

The most fundamental contradiction (is emerging in our globalized, urbanized, networked world: in a world constructed around the logic of the space of flows, people make their living in the space of places.

Manuel Castells, The Rise of the Network Society¹¹

The way we think about, talk about and use space cannot be defined without reference to the social practices that are undertaken in those particular spaces.¹² In early industrial society the 'mill by the water' or the 'town on the railway line' circumscribed space. Today the hub CBD's, institutional edifices and suburbs do the same thing. Form and shape are important markers of what we are and what we aspire to. What is evident in 'statements of space' is that while 'value' and 'location' are closely linked ideas, what was (or is) perceived as value has dramatically changed as our energy and communication technology infrastructures have reframed commonly accepted conceptions of time and space.¹³

If as many theorists argue and observable practice makes evident, network technologies both change how we use spaces while in many ways making us independent of having to be in particular spaces, then it may be concluded the 'space of place' which defined organisations twenty years ago is taking second place to the 'space of flows'. These 'flows' are creating a new taxonomy that will define our future economic, political and symbolic life and will have diverse effects on values that have until recently been solely developed by the space of place.¹⁴

This shift from place to flows changes dramatically the nature of what is benefit and who benefits. In the mechanistic space of place benefit is principally captured by those who supply places, goods and services. However, in the world of networks, it is estimated that up to two thirds of the value generated through the space of flows will and is being captured by consumers or citizens, rather than by those organisations and institutions that have until now dominated supply power.¹⁵ What this suggests is an incremental but transformative reshaping of the space of places to those entities that understand how to capture value from the space of flows. Perhaps the most obvious example is in the development of co-working spaces where highly flexible variations and terms for space are combined with careful design of how tenants act and interact with each other.¹⁶ In the space of flows the idea of co-locating with others of the same orientation has value (mostly untrue in the siloed place model) and that what constitutes value will differ depending on whether the community or commons being established is seeking to service a particular niche, multiple location abilities, synergistic partnerships or beyond work relationships. The emphasis therefore is in creating diversity not sameness. Thus it is contended that this constitutes a completely different representation and

qualification of value than that assessed through a location and 'tenant security' prism.

	<i>Space of Place</i>	<i>Space of Flows</i>
<i>Accepted Wisdom</i>	Socio-economic activity requires the 'right' space (location)	Activity is framed by information flows and co-locating with the like minded
<i>Structure Systems</i>	The spaces we inhabit determine reality, socio-economic influence and power	As the physical and virtual blend into the other, reality is changing and value can be created in other ways
<i>World View</i>	Value lies in occupancy/control of supply	Value lies in connections and reach of network
<i>Myth & Metaphor</i>	The places I inhabit define me	How I connect defines me

Trust machines

The Blockchain (or its derivative Ethereum) is a new digital ledger of economic and other transactions that can be programmed to record (in real time) virtually everything of importance to humankind; birth and death certificates, marriage licenses, deeds and titles of ownership. Educational degrees, financial accounts, medical procedures, insurance claims, votes, provenance of food and anything else like IP that can be expressed in code.

Don Tapscott, Blockchain Revolution.¹⁷

The Blockchain was originally developed to underpin (but should not be confused with) digital currencies like Bitcoin. It operates in a series of secured public ledgers where the transactions in question, once recorded in a series of 'blocks', are visible across all the internet devices interested in that particular series of transactions. These records are therefore held in a 'distributed' manner rather than in a centralized repository. Further, because they are translated into a series of hashes (mathematically scrambled code) and they are then sequentially embedded into all other transactions of that same kind, no duplications are possible, mistakes are rejected (in other words the transaction doesn't complete) and consequently they are both secure and unhackable. For to alter any one transaction would require the altering of every other transaction both before and since. This would not only require the power of several supercomputers it would be in all probability far more expensive to achieve than whatever the object of the original hack was. It is for this

reason that the Economist Magazine recently dubbed the Blockchain as 'the trust machine'.¹⁸

The Blockchain (mainly used for cryptocurrencies) or Ethereum (that is beginning to be used for everything else) will within the next five years rewrite the rules of transactions. Since the 15th century, when the *Banca Monte dei Paschi di Sienna* was first used as a trusted third party by farmers tired of being robbed on their way home from the markets, great numbers of industries, professions and bureaucracies have been developed to act as that trusted third party in a variety of transactions. As Figure 4 shows such is the pace of Ethereum development that it is likely there will be a wide variety of off the shelf applications within the next five years. As they come online, these will displace entities and/or people that acted as the third party conduit.

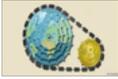
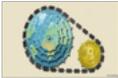
Blockchain 1.0 	Decentralization of money and payments	Major disruption to the role of banks and other trusted 3 rd parties
Blockchain 2.0 	Decentralisation of markets for stocks and other exchanges Transfer of other assets	New methods of exchanging stocks, bonds, mortgages, titles and contracts
Blockchain 3.0  	New governance & social contract models New verification methods in science, health, learning, publishing, overseas aid and cultural artefacts	New voting, digital ID IP. Participant controls own information. No more 3 rd party use of big data without permission

Figure 4 Showing planned growth path for Ethereum and the Blockchain¹⁹

It is a mistake to think that this technology is some kind of fringe proposition. All of the large financial services organisations in Australia are considering how they might use it and some have active trials (including ASIC who are already running Blockchain in parallel with their current systems). More recently (February 2016) the UAE formed a Global Blockchain Council.²⁰ In May it announced pilot projects in areas as diverse as health records, securing the diamond trade, title transfer, business registration, digital wills, tourism engagement and shipping records.

While the projects of the Global Blockchain Council have as their prime purpose ownership of the use of particular applications of the software, it is important to note that the underlying software cannot be owned in a monopolistic fashion. Thus, it is a mistake to assume that those who currently control third party transactions in a centralized manner can simply commandeer this software for their own purposes in ways that prevent others from offering the same service. Indeed, it is more likely

that advantage will go to vast collaborations of organisations who operate on widely differing scope and scale but which have a shared ethos. Small niche providers of organics or Farmers Market providers for instance could access a shared transaction platform (currently in development), in the process availing themselves of levels of transaction cost presently only available to large supermarkets. Such is the design of the Blockchain that the parties to any particular transaction need only provide the data required for that transaction. Hence in very simple ways they can ensure (through virtual personal network software) that this data is used for only that and no other purpose. Ethereum therefore undermines the idea of a core or centre as a fundamental for organisation integrity and also the concept that personal or transaction data can be used for any purposes other than for those transactions to which it was initially directed. It therefore as a trust Machine has the capacity to constrain supply driven models of 'big data' that are normally used for to benefit the supplier rather than the customer.

The Future of Professional Work

While we do not anticipate an overnight big-bang revolution, equally we do not expect a leisurely evolutionary progression into the post-professional society. Instead we predict what we call 'incremental transformation' in the way we organise and share expertise in society.

Richard & David Susskind The Future of Professions.²¹

The Blockchain is just one instance where either robotics or algorithms are intruding upon, even replacing routine and analytical work, be that manual, clerical or middle management. Most of the professions are not exempt from this process and Susskind and Susskind describe it as an incremental transformation in the making.²² Their argument rests on three premises; firstly that the democratization of knowledge has undermined the tacit social contract upon which the craft of professions were initially established. Their second premise (commodification) suggests that the aggregation of professionals into large firms has led to levels of standardization and systemization that enable many parts of those standardisations to be carried out by para-professionals (and algorithms over time). Finally, their third (externalization) premise looks at how the professions disaggregate when their roles are externalised in an online and networked world.

In considering this divergence, they explore the counter arguments of trust, professional norms, personal relationships, empathy, and the investment in expertise that are frequently used by particular groups to rebut even the possibility

that their profession might change when faced with these contentions. In general, these counter counter-arguments show that the fundamental premises for maintaining the professional advantage cannot be sustained with respect to the majority of work professionals undertake in their day to day practice. However, they also acknowledge that there is a small body of work that is non-routine and of a variable non-analytical nature, for which this argument does not apply. But they also point out that this same 'variable' work while requiring significantly fewer professionals to undertake it cannot be used as a justification for the maintenance of traditional entitlement.

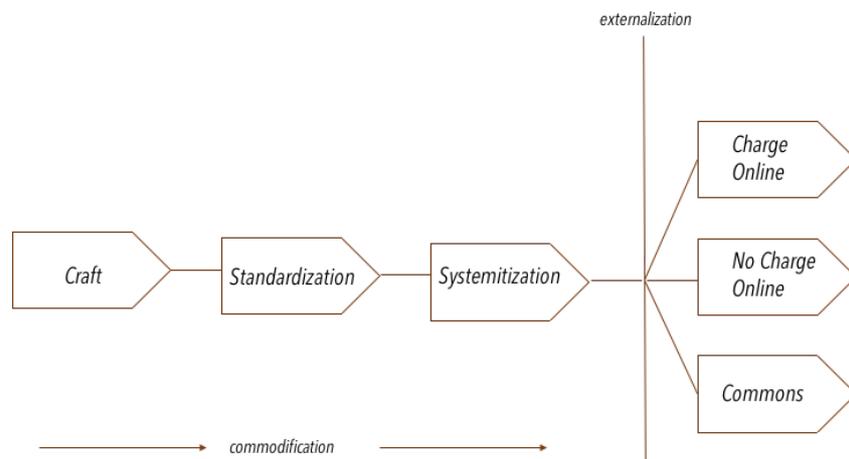


Figure 5. Susskind and Susskind Incremental Transformation of Professions²³

Richard and David Susskind posit that the traditional and often explicit social contract between professions and the public rests on an *implicit social contract*. This contract suggests that as recognition of the extraordinary knowledge of great importance in a particular field that a professional has demonstrated, they have a mandate for social control in that specialisation. Further they have autonomy in the management of that specialization and a license to determine who shall assume the mantle of professional authority or as it is sometimes known accreditation. Clearly as the access to knowledge has democratized through the internet, the gap between what is known to the educated and interested observer and the professional has diminished. Like many other kinds of knowledge, the 'extraordinary' has become 'ordinary' and technological in its orientation. As a consequence, the implicit social contract is disappearing, particularly on those occasions when those same professionals who seek to maintain their advantage outsource many of their functions (sometimes with oversight) to those who are not professionals. This use of 'para professionals' lowers costs and is particularly prevalent when the services of professionals are aggregated into large firms. Concurrently an increasing number of professional services are being made available through the internet, either for free or at vastly reduced rates further undermining the sense of social contract

(professional dentistry in Singapore v the same in Australia or accounting functions undertaken in the Philippines for instance). The consequence of all these factors is that the 'craft of the professional' is reduced to a rump. These few are so highly specialized or knowledgeable in a particular form of practice that what they offer it is not considered practicable to include in aggregations of increasingly standardized, technological, professional practice.

This consideration of the future role of the professional needs to set within the wider future of work context, in a time where higher education systems driven by output metrics are producing as many graduates as possible. The breaking of the link between any sense of supply and demand seems to be occurring in every sphere without any consideration of the evolving skill sets required by any given professional in a networked society. As traditional avenues to work are increasingly unavailable to these graduates, they are turning to social enterprises. In many instances these enterprises are creating integrated propositions outside of the traditional silos (e.g. architects, social workers and journalists working together to produce low cost housing propositions) where the value per owner/employee is many thousands of times that which is considered the norm in a traditional enterprise. Unsurprisingly, these alternative enterprises are both diverging and disaggregating the standard 'industry' models that most professions have used as a barrier to entry. As a consequence, the social contracts upon which the professions have relied are making even less sense and are certainly less relevant than was previously the case.

	<i>The professional of today</i>	<i>The professional of tomorrow</i>
<i>Accepted Wisdom</i>	Professionals are valued and have unique skills and knowledge	Most professional work is commodified and externalised
<i>Structure Systems</i>	Professional bodies will control standards and protect role	Standards are being built into algorithms and customers can get advice online or in the Commons
<i>World View</i>	Professionals are trusted 3 rd parties who always add value	Only occasionally is a trusted physical 3 rd party required otherwise no value is added.
<i>Myth & Metaphor</i>	The professional role is specialist and based on deeply embedded and mostly implicit social contracts	The future requires a blend and integration of knowledge not protection of self interest

The Future of Finance

The overall conclusion is that the market economy based on private property if left to itself contains powerful forces of convergence, associated in particular with the diffusion of knowledge and skills, but it also contains powerful forces of divergence which are potentially threatening to democratic societies and the values of social justice on which they are based.

Thomas Piketty, Capitalism in the 21st. Century.²⁴

The concept of property valuation is intrinsically linked to the idea that property has financial value; in other words property has individual title and is something to be bought and sold. It is worth noting as an aside that in some cultures there are different ways of thinking about property (e.g. a home in the village is part of the intergenerational statement of belonging). However, if the conventional Australian view of property as a tradable asset is accepted as the starting point, any consideration of the future of property valuation needs to be considered in tandem with how the finance sector might evolve, given the role that financing has in the trading process.

While it is important to acknowledge that in the period since the 2008 Great Recession there has been a significant increase in the market power of the big four (pillar) banks, their continued and privileged incumbency cannot necessarily be taken for granted by them or others who might depend on it.²⁵ They too are likely to be impacted by the same *disruptive innovation model* affecting the Valuation sector. A recent World Economic Forum Report noted that “innovation in financial services is likely to be deliberate and predictable and that these innovations will first emerge where the greatest source of customer friction meets the largest profit pools”.²⁶ However there is also another alternative developing that might be described as *‘the Collaborative Economy model’*. This extends what is now called by some the sharing economy idea (which is really just part of disruptive innovation model) to an idea that is beyond “property based markets and hierarchically organised firms”.²⁷ As confronting as it may seem, this proceeds from the premise that “the best of capitalism is over and for the rest it will be over in our lifetime.”²⁸ While this may seem fanciful, the commons model is in many ways just a socially distributed variant on the Dee Hock designed ‘Visa chaordic system’, that the banks now own. Unsurprisingly there are already multiple examples of the commons at work and at scale. It is particularly evident in the information services sector with Linux being an early standout example (a commons based operating system that destroyed the market leader’s (Microsoft) proprietary operating system). When considered together, there are therefore two kinds of disruption at play at the same time, with each having the potential to mask the impact of the other. However,

whatever the outcome both (or either) suggest that business as usual is unlikely to continue as the de facto reality.

The Disruptive Innovation Model. While digital technologies have until now enhanced the power of incumbents and extended the nature of their services, what the WEF Report really demonstrates (see Figure 6) is that the convergent and divergent forces that have previously impacted other sectors will now impact on financial services in the present and near future in ways that fundamentally effect every part of their business model. The WEF concludes that “while the most imminent effects will be felt in the banking sector the greatest impact of the disruption is likely to be felt in the insurance sector”.²⁹ This will come through the adoption of business models that are platform based, data intensive and capital light”. (Further these) “disruptions will not be one-time event, rather a continuous pressure to innovate that will shape customer behaviour, business and the long term structure of the financial services industry”.³⁰ Seen through this prism, it is reasonable to assume that the nature of the relationship between Financial Services and Valuers will be re-examined at a fundamental level in the same way that every other part of the Financial Services sector will. It invites the possibility that banks will find other ways to secure value and thus threaten those that rely on the status quo while affording opportunities to those that present attractive, non-incumbent dependent, alternatives.

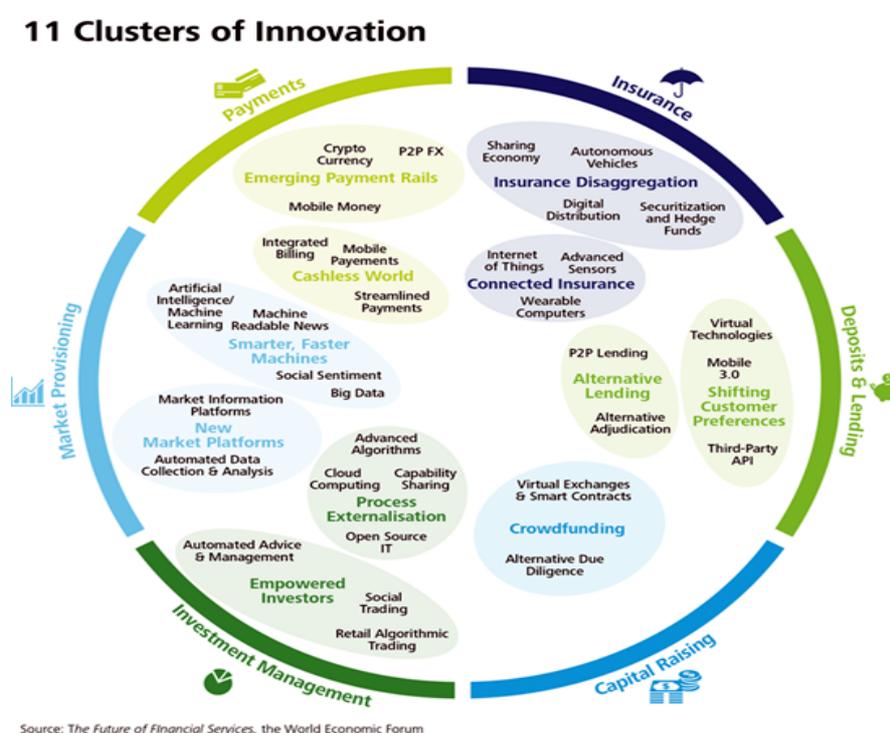


Figure 6. 11 Clusters of Innovation World Economic Forum, *Future of Financial Services Report*

The Collaborative Economy Model. While considerations of collaborative economy are normally cast as intergenerational changes (the future future), their advent might be hastened by any one of a number of contemporary unravellings (the recent Greek crisis or Brexit being stand out examples). As Figure 7 shows, these collaborative or commons frameworks are coherent, well developed, alternative social operating systems.³¹ As they gain influence, they are gaining attention and critical mass in three ways. Firstly, they are easily recognised and adapted by those who live in cultures that have been marginalised and/or oppressed by the current system (in India, Africa. IndoAmerica in particular). Secondly, they are the de facto business model for those in the Western world (mostly young and often unemployed) designing social enterprises (Enspiral is a useful example³²). Thirdly, they are patronised by those who are concerned with the unsustainable effects of the current model and who are looking for escape (Rifkin, Mason, Taylor³³).

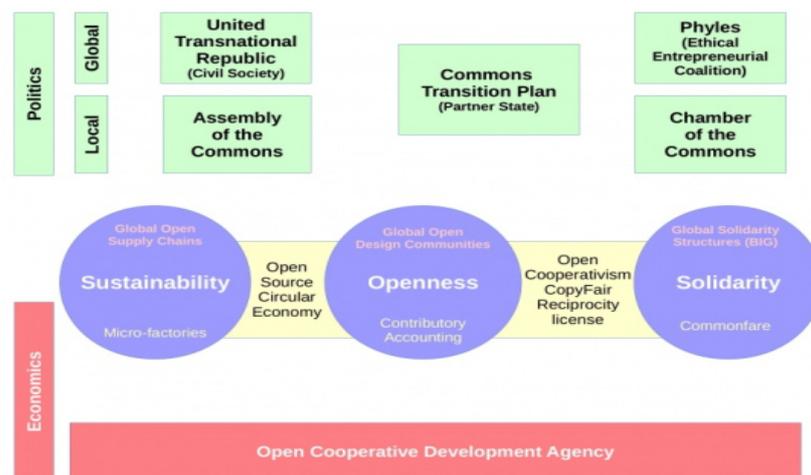


Figure 7. P2P Post Capitalist Architecture.

These commons based models intentionally challenge the assumption that in economic production human beings seek profit maximisation. They argue that individuals are free to contribute or take depending on their inclinations (markets of exchange) without the invisible hand of the market.³⁴ In other variants, they often employ prosumerism models (the investors are the consumers), where through some kind of crowd sourcing platform risk is spread, because the level of individual investment is often low. Furthermore, consumers receive greater value than is normally the case with supply push models as these often have a significant percentage of cost in non added value market intermediaries in their value chains (e.g. brand in pharmaceuticals). More significantly, commons value chains often remove the ability of those who wish to take profit through simply providing capital. In each of these instances, the stigmergic (indirect coordination) relationships have primacy and value is agreed upon through iterative feedback loops by the parties.

Value is embedded into a seamless web of transactions where distinctions between supply and demand are blurred and that may or may not result in any kind of ownership transfer. In this collaborative space everyone becomes their own valuer and continues to negotiate value for as long as they interact in that commons.

	<i>Conventional Finance</i>	<i>Disruptive Innovation</i>	<i>Collaborative (Post Capitalist)</i>
<i>Accepted Wisdom</i>	The FS is integral to and necessary for profit maximisation	Disruptive technologies will allow innovation that embeds FS in every aspect of socio-economic activity	Current system is unsustainable and inaccessible to many.
<i>Structure Systems</i>	FS systems are both technological and personal - designed to serve markets and shareholders	Present FS models are replaced by platform based service offerings that will better serve markets and shareholders	Commons and P2P models allow for other forms of economic activity
<i>World View</i>	Neoliberalism and uncontrolled markets best route to prosperity	Next generation technology will create ecosystems that are effective drivers of wealth creation *	Technology by itself will not save us - a new post capitalist system must be developed
<i>Myth & Metaphor</i>	Accumulation and strong activity creates prosperous societies	There is no other model	The current system is broken and it cannot adapt to what is required

* K. Schwab, *The Fourth Industrial Revolution*, p 112

Membership and Belonging

One of the key ways that professions have managed to protect their status is through controlling 'barriers to entry'. They normally achieve this through the establishment of organisations whose status is sometimes protected by legislation or regulation. Thus membership in its traditional definition is linked to both status and reputation. It can be seen as a space or place, or network that provides an opportunity to gain or sell influence "for people that would otherwise lead more limited lives".³⁵ In the history of prestigious organisations, election to membership (say of the Royal Society) or ascension to the position of 'office holder' was seen as the pinnacle of one's career and a statement of respect by one's peers. However, now almost ubiquitous connectedness is redefining both our understanding of what it means to network and what it means to belong. In sum, membership as an idea is being redefined. Traditional organisations are now losing their allure not just because joining everything and anything is becoming easier but because the things that such organisations were designed to do can now be done in other ways. This reconception is not just about the capacity to create connections or circles of influence, it is also about the availability of robust and transparent ways to assess reputation together with high levels of versatility (the capacity to rapidly change) that modern networks exhibit in contrast to the constitutionally bound organisations of yesteryear.

Most membership organisations were established in eras where the space of place dominated. They for the most part reflect those geographical origins in their structures and rituals (like Annual Conferences). They also have an ethos that the organisation as a whole has a status and importance that is greater than those who chose to be members. In contrast modern networks operate in the space of 'information' flow and thus have the capacity to transcend distance and synchronicity. They are developed around the individual and in that sense are both user defined and user centric. Their value lies in what the importance of what they enable as defined by those users. As many commons and peer to peer initiatives show, the influence of any network is determined by its participation levels, its reach is measured by those who 'follow' its progress and the status of individuals is assessed by their contributions rather than by any sense of position. Finally, many networks by design operate on little or no cost and yet provide services and value that far exceeds that of their traditional 'membership' counterparts. They also have and can be used to create counter networks of influence for those who were previously excluded or marginalised within the conventional model.

One of the most important roles of professional membership based organisations is that of verifying good standing and reputation management. These might be described as the protection of 'global trust values'. Perhaps surprisingly these trust values are as important or perhaps even more important in networks where the relative anonymity of the participants, some of whom may have malicious intent, is possible. In fact "it has been suggested that the future development of P2P systems will depend largely on the availability of novel methods for ensuring that peers obtain reliable information on the quality of the resources they are receiving"³⁶. While in transactions this 'reputation indexing' can be obviated by the nature of the system itself (Ethereum) or in the interactions between physical entities through the embedding of algorithms based on Promise Theory,³⁷ other more specific algorithms are required for network and commons interactions. In the work of Kamvar et al., their view is that such algorithms should be self policing, protecting of anonymity, providing no (extra) benefit to newcomers (thus incentivising and encouraging of consistent behaviour by group members) and be robust to the malicious activities of peers.³⁸ These 'reputation indexes' now form a vital and dynamic part of commons communities like Kickstarter (crowd funding), Freelancer (marketplace for information services) and Trip advisor (travel experiences). With their dashboard like reporting, they aggregate nuanced feedback in transparent ways that would previously have been unobtainable. This user centric reputation management is challenging to 'professional' membership based organisations, who with their concern to 'protect' members seem unable or unwilling to provide a similar offering. Reputation indexing is now establishing new base lines for transparency and information that consumers and communities are increasingly

creating when those that should create them don't (comparative Insurance offering sites is a useful example).

In many network based clusters their virtual nature, together with almost real time feedback (reputational) systems, both allows and encourages changes that are reflective of that feedback. They can even use these system dynamics to experiment, to refine what is required. In short it provides levels of versatility that conventional organisations struggle to imitate but that they will need to adopt if they are to survive.

	<i>The Membership organisation</i>	<i>Networked clusters</i>
<i>Accepted Wisdom</i>	Established to verify, protect and Promote interests of members	Link together to create shared value among those who are invited to participate
<i>Structure Systems</i>	Constitutionalist structures Place based 'chapters'.	Commons and P2P virtual (open or closed) clusters
<i>World View</i>	Belonging provides benefits, status and influence	Participation grows shared knowledge and opportunity
<i>Myth & Metaphor</i>	Exclusivity is Value	Inclusivity creates value

Articulating Uncertainty

This paper has introduced eight key ideas about how the external context for this sector will change in a post-industrial age. It argues that the early indicators of all these changes are evident now and that their effect and impacts will accelerate over the next decade. Consistent with the logic of 'big system interrelatedness' and the reframing of time, form and shape occasioned by a revolution in network technologies, it suggests that very little of what we now define as successful will stay the same. If it does it may well be through an artifice that goes against the logic the changing context demands. It also contends that many of the effects will come about through the way that these shifts and others act and interact with each other. As such the most important changes may well lie between the shifts identified here rather than in any particular location.

While emphasising that the purpose of this paper has been to explore 'what ifs' rather than predictions, our suggestion is that attention should focus on naming and understanding key uncertainties that will if they come to pass have a profound effect. This search to understand which of the many will have the most impact is now central to many strategic conversations in organisations and sectors across the

globe. However, this is an exercise that should be undertaken with care. Having then reached some consensus on what those uncertainties are, the next step is to understand the nature of the option spaces in which solutions might be found. If this is done in a concentrated way then not only will threats be obviated but opportunities may well emerge that would hitherto have remained hidden. The consequence will be a new diversity of activity among those who realise that now is not a time to have a crisis of imagination and that what is at stake is a better understanding of what it means to be human.

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Endnotes

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