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## The Wisdom Economy: Opportunity in the Chaos



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## OCCASIONAL SERIES



# The Wisdom Economy: Opportunity in the Chaos

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At first glance, the volatile economic conditions, which have prevailed since the global financial crisis, have mostly downsides: accelerating change, greater uncertainty and hard-to-manage complexity.

It's a bewildering, contradictory muddle.

Some big businesses are earning record profits, yet employing fewer workers. Others are facing intense competition and oblivion, threatened by products and services that are faster, smarter and more glamorous than what has come before.

On the way to the scrap heap of history are household brand names such as Blockbuster and Borders and jobs such as bank tellers, travel agents and many kinds of administrative personnel. Yesterday's technological heroes such as Nokia and RIM are challenged by a resurgent Apple, now one of the most cashed up corporations in the world. But even the mighty Apple is facing a serious challenge from other smart

phone manufacturers such as Samsung and operating systems such as Android.

In key industries, particularly high-tech manufacturing, highly skilled people are increasingly hard to find, especially those with math, science, complex project management and leadership skills. Some cities, states and countries are running huge deficits, defaulting on their loan repayments or slashing pensions and public services. People working in previously "safe" jobs, such as teachers, police and firemen, are being let go to save money. And others are being asked to do more for less.

Meanwhile, one in five young people leave school unable to read, write or count adequately. They are unprepared for the new kinds of jobs that are becoming available.

As governments struggle to make sense of what is happening and keep pressing the wrong buttons, their citizens are becoming increasingly militant. In some countries such as the UK, Greece, Spain and Cyprus, where

the cuts are the deepest, there have been outbreaks of civil unrest.

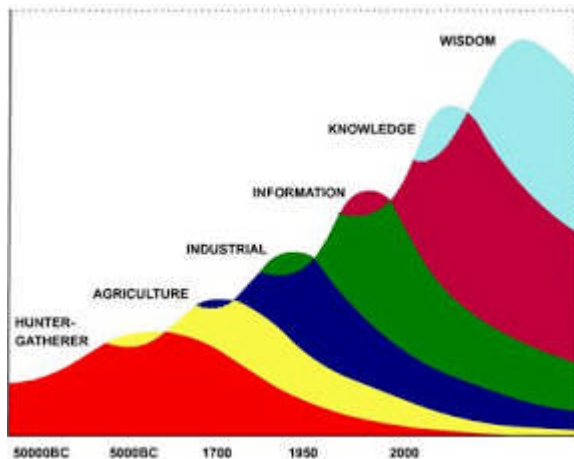
Fortunately there is a simple explanation for the contradictions and the chaos, and some good news as well.

Just around the corner, if we make the right choices, tens of millions of new, more amazing and interesting jobs are on the verge of being created, jobs that go hand-in-hand with positive change.

These new jobs will be needed so business, government and social entrepreneurs can develop and deliver a new generation of products and services with greater intelligence built in. These will help people live more lightly on the planet, work better together, be more productive and efficient and do things for themselves that, until recently, only experts could do.

### The Complexity Model of Change

According to a new theory of social and technological change (Findlay & Straus, 2011), the chaos we are experiencing is symptomatic of a shift to a new stage of human development, the Wisdom Age. Similar shifts have happened before in the 1700s, the 1930s and the 1980s. Only when we look at the long term picture can we see the patterns in the change.



During the 20th Century (and at the start of the 21st), our world has been shaken by three huge waves of social and technological change: the tail end of the Industrial Age (1700-1950), the entire Information Age (1950-2000) and most of the Knowledge Age (2000-2010).

The new era that is just starting to emerge, the Wisdom Age and its business equivalent, the Wisdom Economy, is characterized by “the wise application of knowledge”. It is the next step up the data hierarchy: activity, data, information, knowledge and wisdom, a model from computer science that explains how data is transformed and applied.

Era	Onset	Period	Ratio	
Wisdom	2010	Emerging	Emerging	
Knowledge	2000	10	1 - 5.0	
Information	1950	50	1 - 5.0	
Industrial	1700	250	1 - 5.0	
Agriculture	8000BC	Mining & building	1,200	1 - 5.0
		Agriculture	8,500	1 - 4.9
Hunter-gatherer	50000BC	42,000	1 - 4.3	

The technologies, products and services of each new wave automate and/or eliminate the dominant work of the previous era and further enrich and automate the work of all previous stages of development. The emerging technologies are often four to ten times more efficient and/or productive than the predecessor technologies they displace.

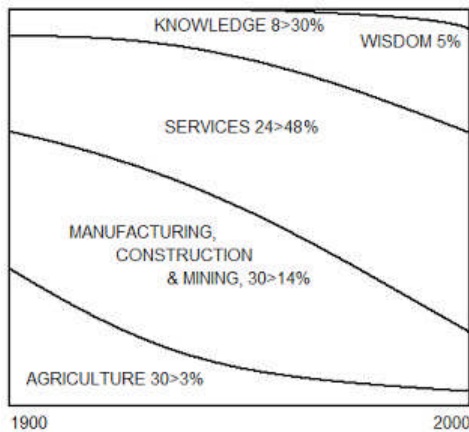
Some of the shifts have been dramatic, for example, the transition from the horse and buggy to the automobile, the displacement of the typewriter by the computer and the succession of music delivery systems: vinyl-to-tape-to-CD-to-smart phone.

Changes in the job market confirm the new model. In 1900 in the USA (and similarly in other OECD countries), 30% of people were employed in agriculture, which dropped to 3% by 2000. Manufacturing, mining and construction employed about 30% of all

people in 1900, but declined to about 14% in 2000. During the same period, knowledge work rose from 8% to 30% of all jobs.

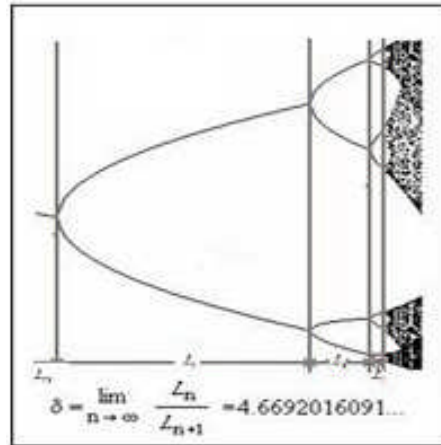
A century ago, 5% of homes and 10% of factories had electricity. Eighty percent of farm production was used to feed horses for transport. Fast forward less than a hundred years and we live in a world where the computer, the Internet and the smart phone have totally transformed the way we live, work and play.

A new category the authors call "wisdom work" has appeared involving the creation of jobs such as global governance director, chief cultural officer and organic food auditor, which reflects a focus on ethics, interdependency, sustainability and meaning making. And the earlier farming, manufacturing, office and retail jobs are changing as well. Much higher levels of skill are now needed to more wisely and reliably produce, store and ship raw materials and products all over the world, to maintain our increasingly integrated energy, information and telecommunications systems, to develop safer, healthier communities and to reduce our impact on the planet as a whole.



The waves of change follow a predictive pattern, which, as it turns out, obey the laws of complex systems. These are paradigm shifts, which form what is known as a period doubling cascade. Each new wave is about

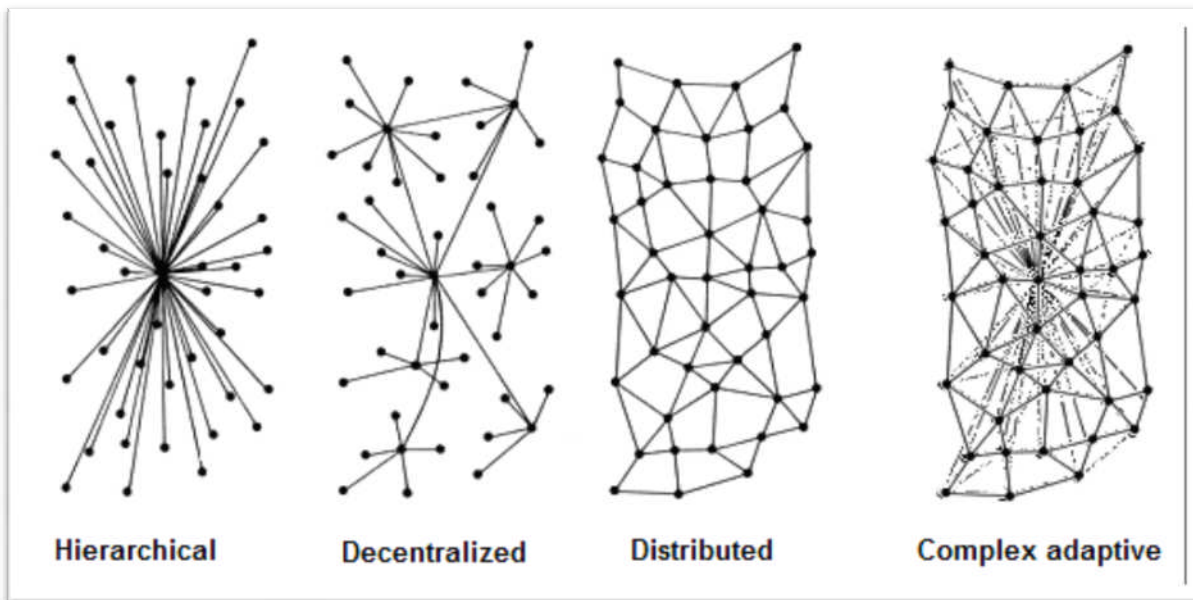
one-fifth the length of its predecessor, approaching a limit, the Feigenbaum number: 4.669.



There is a chaotic period between paradigms, called "phase transitions", where the system re-organizes itself automatically. All kinds of complex systems including brains, markets, ecologies and the weather behave in this predictable way. In nature, the shift to a new level of order results in the loss of some species that die out (think the dinosaurs) and the emergence of new species (think mammals and us).

This phenomenon applies equally to organizations. In the transition from one era to the next, organizations face unexpected competition from new products and services and discover that they need to develop similar offerings just to stay in the game. They must make investments in new equipment and methods, and help people acquire the skills to do things in more productive ways. If they don't adapt fast enough, they can be wiped out by what the Austrian economist Schumpeter called "creative destruction".

At each transition, there is also a fundamental shift in the way work is organized and information needs to flow, which results in dramatic changes to the structure of the organization system.



In the Industrial Age, the optimal structure was the hierarchy with a few people in charge and many people performing simple repetitive tasks.

As corporations grew nationally and internationally, they became more decentralized. Control remained at the center, but some autonomy was delegated to work teams and regional offices. Then, as organizations developed into complex webs of highly specialized, autonomous teams, the network became the dominant form.

In the current environment, we are discovering that organizations are, in fact, "complex adaptive systems", where the parts interact and transform each other over time. They behave less like a network and more like an ecosystem, where all of the species depend on each other for their existence and adapt to changing circumstances. When we think of organizations this way, it helps us to more effectively navigate ambiguity, complexity and rapid change, today's "new normal" that thought leader Peter Vail called "permanent white water".

As we make the transition to the Wisdom Economy, there will be some bumps along

the way. And it's not just ordinary people who are affected by the change. The CEOs of the world's biggest corporations are also caught up in the whirlwind. In 2009, they told the IBM CEO Global Survey that rapid change was the No. 1 problem facing business leaders. In 2011, complexity topped the list.

The drivers of the current round of increased complexity include:

- The globalization of business and relationships, influenced especially by the ubiquity of the Internet and social media, the availability of low-cost travel and the interactions between diverse cultures.
- The evolution of organization systems and supply chains into complex webs.
- The growing interdependence of complex technological, economic and information systems, including logistics, transportation, energy, communication and distribution systems, where a minor glitch anywhere can bring the entire system to a standstill, e.g. the BP oil spill or the European sprouts contamination scare.

- The divergence and diversity of religious, professional, activist, sporting and cultural interests and how they interfere or intersect with other systems.
- The democratization of the knowledge creation process involving rapidly expanding numbers of "citizen" reporters, researchers and academics. A proliferation of "producers" who both make and consume content.
- Big data: the explosion in information collected about financial, personal and social transactions.
- The requirement for systems that satisfy our needs and desires instantly.

A new science of management based on the laws of complexity is showing promise as an approach to "dynamically steer" organizations in new "emergent" ways. It makes use of the features and predictable patterns of complex adaptive systems, which are renowned for behaving chaotically but also for self-organizing into higher levels of order.

It is early days, but here are some of the things we can do:

- Recognize that all human systems are complex adaptive systems and can be dynamically steered. They cannot, however, be "controlled" like machines.
- Ensure we have the requisite variety (Ashby's law)—more complexity than the complexity of the system itself—so we are able to exert leverage or influence over the system (Conant & Ashby, 1970). For example, few complex problems can be solved unless we bring multiple minds and multiple points of view together to bear on the issue.
- Develop a robust or superb model of the system (Conant's Theorem) so we have a clear picture of how the whole system

operates and can design useful ways to intervene (Conant & Ashby, 1970).

- Ensure that the tools or methods we use are applied at the appropriate scale (Bar-Yam, 2004). The greater the complexity of a system, the finer the scale required, i.e. you can't use infantry to fight a guerilla war, or an axe to perform brain surgery.
- Intervene at the most optimal leverage point in the system, the most powerful being a level that enables people and organizations to recognize and transcend mental models and paradigms (Meadows, 2008).
- Establish simple rules of interaction at an interpersonal and human-tool interface level to produce desirable emergent outcomes, e.g. a shift from reactive to proactive thinking, from "you must" to "what if we?" interactions with others.
- Recognize patterns of activity in a system (known as attractors), amplifying the ones we want and shifting the ones we don't to a new, more productive state.
- Develop improvisational skills, especially the agility and flexibility to build on what's working well and dampen down what's not.
- Deal with "wicked" problems and paradoxical issues as polarities to manage (both/and), rather than problems to solve (either/or). For example, maximize the upsides from both centralized and decentralized operations rather than trying to choose between them.
- Transcend and include past successful activities so that the newly emergent, entrepreneurial and innovative can live alongside mature product production and distribution. The goal is to maximize the highest possible returns and, at the same time, enable the organization to

constantly renew itself by rapidly adapting to new market and technological conditions.

- Develop the capacity for people everywhere in the organization to lead from wherever they are and whenever leadership is required.
- Co-create new knowledge with staff, suppliers and customers.
- Strategize on the fly so planning is dynamic, not static.
- Undertake continuous *and* breakthrough innovation to create ecologies of products and services.
- Design better meeting, production and distribution processes that are a better fit with the emerging environment.

## Conclusion

Organization development icon, Peter Block (2008), points out that while we are desperate to “take the uncertainty out of the future”, when we do, we don’t have the future at all. We just have more of today.

The science of complexity provides a reliable way to understand and work with the future we are creating, rather than against it. It helps us discover “simplicity in the complexity” and suggests how we might thrive in the “new normal” of ambiguity, uncertainty and accelerating change.

If we can successfully make the shift to the Wisdom Economy, many of the social, political, technological and cultural challenges we face will be consigned to history. And we will have created the tomorrow we want, today.

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