Firstly I would like to thank Manoj Raut for the honour of being invited to be with you today. Also I wish to thank The 40 Foundation for hosting my visit to London from Australia.

Corporate governance is “at the crossroads” because investigations into the 2008 financial crisis have concluded that failure in governance was core cause of the crisis. Many firms failed with little warning. Like Enron before them, they failed with so-called “best” practices in place. However, many governance gurus and regulators are in denial because this challenges their beliefs, practices, reputations, business models, income, power, status and influence. Likewise other gurus are denying the failure of economic analysis and the irrational structure of money and banking.

LAWS OF NATURE

Over billions of years nature has evolved sustainable systems of governance based on survival of the fittest. Living creatures cannot sustain their existence without self-regulation and self-governance. This was achieved before the existence of humans, their governments, laws, regulations, regulators, codes, auditors, independent directors, rating agencies, law courts and manifold layers of experts, advisors and even meetings like we are having today!

We must conclude that “good”, “best” and/or “sustainable” governance would follow the laws of nature. In other words good governance is self-governance.

Good governance must be sustainable governance. So self-governance offers most efficient and political desirable method for achieving the aims of this conference.

The role of government would change. It would reduce: (a) the need for regulators; (b) the size and costs of government while (c) enriching democracy at the grass roots level to sustain society and the environment. The role of government would become indirect. In the words of US Vice President Al Gore its role would be “to imprint the DNA” of institutions so they could become self-governing.

Space probes and robots must be self-governing. They could not be designed to be self-governing without the discovery of the science of governance. It is a new science identified years after the discovery of relativity or quantum mechanics. In 1948 a MIT mathematician described it as “cybernetics” and defined it as the “science of control and communications in the animal and the machine”. My PhD research showed how this definition could be extended to social organizations to become the “science of governance”, and specifically, “a science of corporate governance.”

DNA in social biota only survives if it hard wires its host to possess contrary behavior with manifold ying/yang characteristics such as approach/avoidance. Contrary behavior introduces a “requisite variety” of responses with checks and balances to permit the selection of the most appropriate reactions in uncertain, dynamic complex life threatening environments. While small-brained insects can survive in such environments, the 2008 crisis revealed that large brained highly intelligent so-called “masters of the universe” could not. The problem is that most large corporations are governed through top down command and control hierarchies rather than as an authority system resists contrary views, bottom up initiatives or checks and balances.

There are some firms who have adopted an ecological form of network governance with outstanding results. These firms have sustained their existence over business cycles and generations of CEOs. Examples include the John Lewis Partnership, Visa International and the Mondragón Corporacion Cooperativa (MCC). They are located respectively in the US, UK and Europe to prove that no changes in laws are required to re-invent corporate governance.

FAILURE OF TOP DOWN ONLY GOVERNANCE

The failure of current laws, regulations and regulators to protect stakeholders arises because each relies on a top down approach. The science of governance reveals that a bottom up approach is also essential to regulate
complexity. Lawmakers and their regulators cannot control firms if firm directors and/or executives in turn rely on a top down control and communication system. Network governance introduces bottom up control and communications from the very people governments and regulators are trying to protect. As illustrated by the John Lewis Partnership and the MCC, it is plain common sense for stakeholders to be included in the governance architecture of firms. Michael Porter recommended this approach in his report to the US government on competitiveness\textsuperscript{xvi}. But his ideas were not adopted because stakeholders would introduce conflicts of interest. It is by including contrary views that network governance provides additional advantages than those seen by Porter.

Network governance separate conflicting interest and uses different viewpoints to create checks and balances to establish more mutually effective and resilient operations. Also, by separating the governance and management powers of directors, governance and management functions can be integrated throughout the firm. This in turn introduces self-regulation and self-governance as found in nature. How this provides a way to overcome the built in problems with current ideas of “best” practices is indicated in TABLE 1.

<table>
<thead>
<tr>
<th>Systemic problems of “best” practices for directors</th>
<th>Systemic solutions from introducing network governance used by nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Suspicion by outsiders that the absolute power of directors to identify and manage their own conflicts of interest might corrupt the directors and/or the business.</td>
<td>Corporate charter establishes a governance board of NEDs and a management board of executives. Executives elected by cumulative voting with one vote per NED and NEDs with one vote per investor. NEDs control internal/external auditors, director nomination and pay with veto powers when conflicts exist for executives.</td>
</tr>
<tr>
<td>2. No creditable systematic process for directors to determine when their trust in management might be misplaced.</td>
<td>Corporate charters makes provision for any class of stakeholders to elect a representative board to meet with governors independently of management to provide feedback and/or feed forward competitive intelligence to them and/or managers.</td>
</tr>
<tr>
<td>3. Exposure to personal liabilities and loss of reputation from management misdeeds.</td>
<td>Misdeeds of executives are the responsibility of the executives, as NEDs (Governors) do not have power to manage business operations. (Governors)</td>
</tr>
<tr>
<td>4. No systemic access to information opposing management views and so for evaluating management independently of managers.</td>
<td>Feedback from establishment of one or more “Employee Assemblies”, “Creditors Councils” and “Debtors Forums” who may appoint a “Stakeholder Congress” to advise on KPI’s used to determine executive appointments and their remuneration.</td>
</tr>
<tr>
<td>5. No diversity of information sources to cross check integrity of management information or obtain second or more opinions</td>
<td>Diversified feedback provided from specialized stakeholders groups and their Boards with informal access to Government regulator who chairs their Stakeholder Congress. Congress manages AGM that determines the pay and election of NEDs &amp; Executives.</td>
</tr>
<tr>
<td>6. Coping with data and information overload</td>
<td>Compliance information and liabilities transferred to executives with option of strategic analysis transferred to a supervisory board as found in Europe.</td>
</tr>
<tr>
<td>7. Difficulties in detecting biases, errors and omissions in reports from managers.</td>
<td>Access to a requisite variety of independent cross checking sources of information to obtain accuracy as much as desired as demonstrated by Shannon and Weaver (1949).</td>
</tr>
<tr>
<td>8. Inadequate knowledge for complex decision making</td>
<td>Simplification of decision making by decentralization into a requisite variety of centers described by Von Neumann (1947).</td>
</tr>
<tr>
<td>9. Board decision-making subject biases in its membership – Gender biases, etc.</td>
<td>Exposed to multiple diverse and contrary viewpoints raised by stakeholders to force consideration of taboo topics and avoid culture of don’t ask don’t tell.</td>
</tr>
<tr>
<td>10. Lack of will to act against management</td>
<td>Governors (NEDs) no longer captive to management information and/or powers and influence with independent power and/or influence on executive pay and tenure.</td>
</tr>
<tr>
<td>11. Lack of a systemic way to safely blow the whistle on errors, misdeeds, etc.</td>
<td>Provided privately by network of boards connected to the government regulator and/or firm specific employee ombudsman.</td>
</tr>
<tr>
<td>12. Impossibility of directly controlling/countering complex variables/risks</td>
<td>Control amplified indirectly through requisite variety of stakeholders acting as co-regulators (Ashby 1957: 265).</td>
</tr>
</tbody>
</table>

Network governance empowers NEDs with the information and the means to monitor management. Without network governance, common sense suggests that the more a director is independent then the more the director lacks authority and knowledge to monitor and evaluate management and the business operations.

The proliferation of governance codes arises because corporate lobbyists argue that to remain competitive they need governments to adopt a “light touch” to allow self-regulation. However, self-regulation only becomes possible if stakeholders become empowered to assist in protecting themselves. As noted above stakeholder engagement also provides a way to increase competitiveness. So self-regulation and competitiveness can be achieved together in addition, improving corporate social and environmental accountability.

The law of requisite variety for regulating complexity requires the existence of a requisite variety of controllers. Reliability in regulating complexity cannot be improved by making controllers stronger. What is required in greater variety of controllers through introducing supplementary co-regulators\textsuperscript{xviii}. Likewise it is impossible to directly amplify the weak energy of a TV signal without introducing a supplementary source of power.

The fact that direct amplification of reliable control or regulation is impossible has profound and widespread implications for the structure of complex organizations in the public, private and/or non-profit sectors. It means that all complex organizations need to include stakeholders as co-regulators to supplement the variety of control to improve their regulation. It also reveals the futility of top down proposals to improve corporate governance and business regulation. Legal scholars\textsuperscript{xx} have recognized this and are now proposing, “network regulation”.

**NETWORK GOVERNANCE**

Network governance can be introduced by changing corporate constitutions\textsuperscript{xxi}. A basic requirement is the introduction of a division of powers. This allows checks and balances to exist as found in nature, our bodies and in
our brains. My PhD research revealed how the constitution of the MCC and its member firms exemplifies “the architecture of life” that follows the architecture of the universe.

However, before reaching my PhD research epiphany, it seemed like just plain common sense, rather than rocket science, to introduce elements of network governance into the constitutions of start-up-firms that I founded. I had two motives: (1) to raise millions of dollars at the lowest cost, and (2) protect my reputation as a serial entrepreneur in the event the business did not exceed. Both objectives were achieved.

Three changes I introduced were: (1) removing the absolute power of directors to manage their own conflicts of interests to avoid the possibility of corrupting themselves and/or the business; (2) removing the unethical conflicts of interest that arise (a), for directors when they appoint and pay the auditor who judges them and (b), for auditors when they are selected and paid by the directors whose accounts they judge. Judges cannot claim to be independent when they are selected and paid by the people they are judging. If the judge then attested that he was “independent”, as auditors do, then it would be the judge that would be sent to jail. (3) Removing the power of any director to chair a meeting of shareholders where shareholders were holding directors to account and determining their pay. Instead, the chairman of a shareholders’ audit committee chaired the AGM.

The constitutional changes I introduced were the same type of arrangements that venture capitalists and bankers typically introduce in financing contracts. These first steps in introducing network governance do not represent radical precedents nor would they inhibit the ability of businesses to add value and grow. Network governance protects the reputations of directors by removing suspicion and questions from stakeholders and the media that directors could be feathering their own nests rather than creating nest eggs for others.

UNDERSTANDING NETWORK ADVANTAGES

Company directors, scholars and governance gurus typically reject the idea of network governance when they first consider the complexity of networked governed firms. While it may be counter intuitive, the tasks of individuals can be simplified by greater organization complexity. This is currently mostly achieved through hierarchies. For many years I had puzzled hard and long on how to: (a) simply describe the complexity of the MCC and (b) explain how it has produced such outstandingly successful outcomes. I was only able to solve this puzzle after I had: (a) developed a methodology for analyzing and comparing all sorts of complex organizations; (b) read “The architecture of complexity” that explains the logic of evolutionary complexity and (c) realized that different researchers were using different words to explain similar complex phenomena that also occur in nature. It was then that I realized that the governance architecture of the MCC was simply following the laws of nature.

For those interested in learning more, I have added a number of citations in the endnotes. But what is really required is for professional organizations and/or universities to present my 40-hour MBA governance design course to provide
an education on how changes in corporate constitutions can provide operating advantages. The course is relevant for organizations in the non-profit, public and private sectors. Unlike director education courses it does not accept the current flawed system as a given. Grades are based on how well flaws can be designed away in specific organizations selected in the public, private and non-profit sectors.

Centralized governance through hierarchies are now well past their “use by date” for large complex financial institutions. In our latest published article\textsuperscript{xxvii}, Michael Pirson and I explain how firms judged too big to fail are likely also to be too big to be managed, governed or regulated without network governance. In a forthcoming article\textsuperscript{xxviii} we raise the question “Could the 2008 US financial crisis have been avoided with network governance?”

Some of the benefits for directors, managers, investors, stakeholder and regulators from network governance are outlined below:

**NON-EXECUTIVE DIRECTORS (NEDs):**
- Role simplified and information overload reduced by the decomposition of decision-making labor that also minimizes compliance responsibilities;
- Monitoring and supervisory role legitimatized by obtaining access to a rich variety of rich information to evaluate management and the business independently of management;
- Ability to cross check management reports for errors, biases, omissions and spin;
- Formal and informal access to industry, product and competitive intelligence and/or whistle blowers from systematized stakeholder engagement;
- Creditable processes established on an independent systemic basis for learning when trust in management might be misplaced;
- Exposure to most financial liabilities transferred to full time executives;
- Unethical conflicts with financial auditor eliminated with exclusive control of internal auditor;
- Residual conflicts on their own pay and tenure taken over or mediated by stakeholder congress;
- Intelligence on Key Performance Indicators (KPIs) provided by stakeholders who management service.

**AUDITORS:**
- Unethical conflicts removed by no longer being selected, appointed and remunerated by the individuals whose accounts they are judging;
- Removing questions about auditors not really being independent of directors and/or management and so the need to introduce audit partner or audit firm rotation;
- Access obtained to a rich variety of alternative communication channels to cross check the integrity of data independently of management;
- Remove unconscious bias in audit judgments as revealed by researchers;

**MANAGEMENT:**
- Formal relationships established to facilitate and/or arbitrate Total Quality Management (TQM) and Just in time (JIT) processes with relevant stakeholders;
- Process for accessing innovational, operational and competitive intelligence from stakeholders that might not otherwise be provided on a systematic basis;
- Facilitate stakeholder loyalty and engagement to constructively support the firm;
- Systematic process to quickly learn about problems and take corrective actions before governors;
- Harness pro-bono stakeholder resources for continuous improvements;
- Compliance processes integrated into management.

**STAKEHOLDERS:**
- Formal access to contribute to continuous improvement programs for mutual benefits;
- Direct access to correct poor quality goods/services and relationships;
- Direct, quicker and more responsive access to protect and further their own interest than regulators, courts of public protests;
- Strengthen constructive working relationships and mediate others.

**REGULATORS:**
- Amplification of regulation through stakeholder supplementation as co-regulators;
- Higher integrity of monitoring communications through multiple stakeholder feedback;
- Improved formal and informal access to monitor and control firm compliance;
- Role changes to promoting and supervising the integrity of firm self-governance.

**CLOSING REMARKS**

I am looking forward to learning from others at this conference how current so called “best”, “good” and/or “sustainable” governance laws, regulations, codes and practices can be defended by theory, analysis, empirical evidence and/or by common sense.
It would seem that there is no underlying unifying theory, analysis or practice? There are manifold definitions of director “independence” and debates on improving so called “audit independence” by limiting non-audit services, rotating partners and/or rotating auditors. Corporate governance codes are proliferating from new corporate failures revealing their impotency. New laws and regulations are also being introduced but they are also proving to be impotent as the complexity of businesses increases.

The re-invention of corporate governance could be introduced on an incremental basis. In Australia I negotiated with the regulator to avoid the cost of calling an AGM to change the auditor. The exemption was granted because the regulator accepted that the democratically elected shareholder audit committee protected minority shareholders better than shareholders voting with usual plottocratic basis of one vote per shareholder. By such processes corporations could negotiate incremental de-regulation. Might anyone here today be interested in developing this approach? The UK Financial Reporting Council supported it when they sponsored me to present my paper on ‘The Theory and Practice of Government De-regulation’ to other regulators attending a conference at the Judge Business School in 2008.

My contribution today is following the example of nature to facilitate the emergence of contrary approaches that could provide superior survivability. This is how nature develops and tests more efficient and sustainable outcomes. My views are gaining traction in the academic community as is evident by publications that further develops my points. These include my article ‘Stakeholder Governance: A cybernetics and property rights analysis’ that was republished with the seminal contributions of scholars in the Corporate Governance volume of The History of Management Thought.

My contrary views are also supported by a growing literature about the problems with NEDs and Audit Committees as cited in the endnotes below. These provide evidence of various so-called “best practices” being unethical, conflicted, counterproductive, naive and dangerous for directors, shareholders and regulators. This also makes them counterproductive for a sustainable society.

END NOTES

1 Dr Shann Turnbull obtained a MBA from Harvard and became a serial entrepreneur founding many enterprises with three becoming publicly traded. As Chairman and/or CEO he re-organized a number of companies. In 1975 he co-founded the first director educational qualification in the world. He has advised UK Hermes Focus Funds.
2 Governance failure as the source of the 2008 crisis
3 OECD 2009, Corporate governance and the financial crisis, Directorate for Financial and Enterprise Affairs, posted at: http://www.oecd.org/document/48/0,3343,en_2649_34813_42192368_1_1_1_1,00.html.
13 Contrary characteristics create “tensional integrity” described as “tensegrity”, a word coined by Buckminster Fuller.
20 Ashby, W.R. 1956, cited in note 11
RE-INVENTING GOVERNANCE USING THE LAWS OF NATURE

xxiii For example, refer to Figure 6.1, ‘Mondragón Corporation Cooperative: With dates of establishment’ page 207 of Turnbull 2001 cited in note 7.
xxv The various terms used were: “wholes”: Jan Smuts (1926); “systems”: Ludwig von Bertalanffy (1955); “org”: Ralph Gerard (1957); “sub components”, “stable intermediate forms” “nearly decomposable systems, in which the interactions among the sub-systems are weak, but not negligible”: Simon (1962); “Holons”: Koestler (1967); “relatively independent subtotals”: David Bohm (1980); “viable system”: Stafford Beer (1985); “cooperative heterarchy”: Jozef Hatvany (1985); “Chaord”: Dee Hock (1999); “module”, “capsules”: Carliss Baldwin & Kim Clark (2006).
xxvi The complexity of the MCC is parsimoniously summed up in the four columns and five rows of “Table 6.1, Holon typology of Mondragón” on page 221 of Turnbull 2001 cited in note 7. Table 6.1 allows the complexity of the MCC to be revealed as a consistent continuum of how the complexity of life and the universe emerges as shown in “Table 3.8, Holarchy: Hierarchy of Holons” on page 130.
xxx 2nd Cambridge University Conference on Regulation, Inspection & Improvement, Centre for Business Research’, 12 September 2007.
xxxi Contrary views to ‘Best’ practices:


Role of NEDs:


Role of Audit Committees: