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27 Systems-Based Governance

For a Complex Sustainable Future

Interview With Ray Ison

Introduction

How can we explain the collective failure of our institutions to respond to the global climate emergency and crisis, and why can't our institutions seem to respond for the collective good and sustainable future? This is an important and systemic question.

Keywords: adaptive learning; anthropocene; biosphere; climate emergency; command and control; complex adaptive systems (CAS); constitutional conventions; corporate lobbying; COVID-19; COVID-19 travel bubbles; crisis management; emergent properties; end-state fallacy; first-order change; governance; incremental change; ICAC; IFSR; institutional failure; integrity ecosystem; Landcare; requisite variety; river catchment management; royal commissions; SDG 11; SDG 13; SDG 16; SDG 17; second-order change; self-organising; separation of powers; stationarity; subsidiarity; sustainability; systematic change; systemic change; systems thinking; technosphere; tracking and tracing; transformative change

Interviewee Profile

Ray Ison (**RI**) is Professor of Systems at the Open University in the UK and spends time regularly in Australia on university exchanges. He is an Australian-British cybernetician and systems scientist known for his work on systemic governance and the design and practice of learning systems. Formerly Professor of Sustainability Systems at Monash University, he is also President of the International Federation for Systems Research (IFSR). Ray and his colleague, Ed Straw, recently published an insightful new book, *The Hidden Power of Systems Thinking: Governance in a Climate Emergency*.¹ It is a critique of institutional governance failure and the need for institutional innovation and a new way of managing our institutions in the Anthropocene.

The Interview

ML: Ray, what is the nature of this institutional governance failure, particularly in the context of the climate change emergency? What are the symptoms of this failure?

RI: Good question Michael. Let me start by unpacking the word ‘institution’. That word gets used and abused somewhat. I use it in the sense that institutional economists use it, which is about the norms and rules of the game that we humans have created.²

These can be formal rules like you drive on the left-hand side of the road, and that we have a three-year Parliament and we vote in particular ways. Or they can be informal rules like our family has dinner at six pm and if you’re late, you could be in trouble. Those are institutions in the sense that I use them and I differentiate them from organisations, but both ideas are central to why our governance systems are failing today.

To get to the nub of the question, you’ve got to begin to imagine how or what a governance system might look like and many people find it hard to talk about the different elements of a governance system. The one we have come up with and talk about in our book is that we identify five high-level elements.

One, of course, is the state and I should say here that we differentiate between the term governance and government. We’re not talking about government, but governance. It’s within the state. It can be a one-party state, it can be a federation, it can be a democracy. There are various forms of operating the state and the different elements within states like the executive, the bureaucracy, and the Parliament, the Communist Party of China if you’re talking about China, and all of the other things that the state owns and controls.

Then you have the judiciary, the law of the legal system, which has many components as well, such as courts, barristers, justices, etc. And historically, we tended to confine the idea of our governance system to what in Latin was known as the political. The relationship between the executive, the Parliament and the law.

But if you want to understand how we’re governed today, and particularly in the context of an emerging Anthropocene,³ then you have to add into the state and the law, the private sector. We live in a world now where some of the large multinationals are more powerful than 70% of nation states. We can no longer leave them out of our governance.⁴

The other element is the civil society. We all belong to different civil society organisations, and often innovation comes largely from civil society.⁵

The final governance system element is the media which tends to float around historically but is now very much aligned with the private sector. Certainly in this country, there is a big debate about where the

private sector sits, where the media sits, and if the power rests within the News Corporation.⁶ In China, where there's a one-party state the media power sits there and the news is aligned with the state.

Those are the key elements of the governance systems that we talk about in our book and we make the argument that all of the institutions, the norms, the rules of the games that we humans have invented and invested in our governance systems are really up for grabs in the Anthropocene. The idea that we humans are a force of nature and changing whole earth dynamics means that what we've done in the past has to be up for critical scrutiny.

There is a set of innovations that we have built into our governance systems that are probably not suiting us all that well. I've talked about the power of the private sector and multinationals. When we built our institutional arrangements, we didn't see the rise of global connectivity through technology, the rise of the technosphere. For example, the social dilemma about the power of social media and how social media tends to use us rather than us use it.

There are other distortions in the thinking that sits behind many of our institutional arrangements. For example, it's almost impossible with a three-year political election cycle for Parliament to deal with the complexity of most of the issues with which we have to deal. We have a constitution in this country that was invented in 1900 or thereabouts and it has rules that are no longer 'fit for purpose'⁷ and yet we have a poverty-stricken way of reinventing our Constitution.⁸ As in the US, for example, there's a great struggle between the executive and the judiciary over the appointment of a Supreme Court judge. These are some of the examples of our dysfunctional systems of governance.

ML: Why do you refer to the 'systems thinking' approach as the 'hidden power'? How does this help us understand in an analytical sense, some of these governance failings of which you've given examples? And how does this approach differ from the way in which we've constructed our institutions and rules of the game in the past?

RI: Well again, a good question. Let me give two recent examples with which your listeners may be familiar. As we speak, we are experiencing the after-effects of the so-called COVID-19 'travel bubble' established between New Zealand and Australia.⁹ Although apparently this was done in consultation between states and communities, there's contestation over what was agreed and what wasn't. Quite clearly what wasn't done was the design or the building of a system in which everyone had a stake, a common understanding and a clarity of purpose because the arrangement broke down. For example, what happens if suddenly there's a series of outbreaks of COVID-19 in New Zealand? When does the plug get pulled? There's a failure to design a system that is 'fit for purpose'.

The inquiry in Victoria again exemplifies a classic case of systemic failure and lack of clarity of purpose.¹⁰ Why were security guards brought in? Who was responsible? What was the purpose? Was it an oversight? How do you make sure it's effective and fit for purpose? These are all questions related to systems thinking, systems design and the enactment of systemic governance. Unfortunately, there is too much of what we call 'systematic thinking' rather than 'systemic thinking' within our body politic and in society in general.¹¹

ML: As you say, there are many examples, and COVID-19 is a case in point, where a crisis has challenged many of the 'rules of the game' and the associated organisational forms and behaviours, and have opened up new possibilities and opportunities for change.¹² Could one characterise the previous ways of thinking and organising as essentially a form of 'command and control' and hierarchical efficiency based, and might a 'systems' way of thinking create different rules and structures to tackle crisis?

RI: Absolutely. You've put your finger right on the nub of the issue. The concept 'systemic' or the idea of being 'systemic' means that things have to be in relationship with each other and fit together for a purpose. By contrast, the 'command-and-control' model is the classic, simple cause-and-effect idea of power model that has dominated, particularly in the Westminster system. For example, there's a classic power struggle going on at the moment in Britain, between the Prime Minister of Britain, on the one hand, and the Mayor and local government of Manchester in respect of COVID-19 responses.¹³ It is a struggle over centralised command and control that has played out in Britain as a complete failure of governance at a central level as against a more distributed decision-making and action around tracking and tracing that has had more success.¹⁴

COVID-19 'tracking and tracing' is a really interesting application for systems and cybernetics thinking. To monitor and control effectively in this system, you need timely feedback, and the best way of getting that is for the feedback and actions to be distributed and localised.¹⁵ And there was a lovely example reported a few weeks ago of citizens in Colac, Victoria.¹⁶ A COVID-19 outbreak occurred around the meat works and the citizens created their own isolating regimes and tracking and tracing systems being aware that the centralised system in Melbourne was not capable of doing the job quickly enough. That is a great example of a systems theory known as Ashby's law of 'requisite variety', which says that 'only variety, can manage variety'.¹⁷

ML: We're dealing here with very complex systems such as the biosphere,¹⁸ societies and the technocracy that are highly unpredictable and uncertain.¹⁹ Are we trying in a sense to control or govern them using

‘command-and-control’ approaches that are not up to the job? Isn’t our very notion of ‘the job’ part of the problem? It is based on what, I believe, is referred to as an ‘end-state fallacy’²⁰ in the way we think about how to manage these ‘complex adaptive systems’.²¹

Don’t we need to think in a different way about what we’re trying to achieve in managing and changing these large-scale, complex systems?²² Not just in terms of ideal, unique end states that we set up as our policy objectives and then try to implement?

RI: Absolutely. Unfortunately, much of the thinking on which our contemporary governance arrangements are made is based on this end-state fallacy. I’ve done work in water and river catchment governance in which the hydrology profession and discipline have been central.²³

That work has been built on the concept of ‘stationarity’; the idea that you can use data from the past to model and predict what’s going to happen in the future.²⁴ However, within the Anthropocene, what is absolutely certain is the certainty of uncertainty and we can no longer rely on ‘stationarity’. There’s a well-known paper published in *Science* magazine titled ‘Stationarity Is Dead’,²⁵ which means that we have to ‘learn’ our ways into the future.

We’ve got to have localised ways of knowing, as well as being open to much more rapid change and innovation; and it’s why we can’t be tied down to static constitutional forms. It’s why, for example, three-year parliamentary cycles are totally inadequate; and why the pursuit of party interests within our government systems are not necessarily in the interests of a nation, as typified by the climate debate and the carbon taxing issue.

ML: This suggests the need to reinvent and reimagine the institutions for governance with a systems thinking approach. That path seems to require a move away from command and control to a distributed model that you’ve mentioned involves notions of self-regulation and learning, rather than current ideas of governance based on compliance with a set of rules that are supposed to lead us to a desired end state. Is this what is involved in moving to the systems thinking approach to governance that you have in mind?

RI: Well, you’ve just described a tremendous amount of the content of our book because it has those ideas right throughout it. You’re absolutely right. A good example that we talk about in the book is the distortion of our governance systems at government, corporate and other levels by the fallacy of target or goal setting. This is often done with the idea that the particular target or the goal is going to stay static, and that you can optimise its pursuit centrally. Alternatively, it’s the example I mentioned earlier, of responding to COVID-19 in Colac. While the high-level, collective imperative was to survive and do the best we can for the economy,

it was left to localised action to devise the means adopted. This was a self-organising, bottom-up innovation process that capitalised on variety management.

ML: How can we effect that sort of change within our very entrenched institutions with their strong hierarchical power relationships? What skills and capacities are required at the leadership, organisational and community levels to implement the systems thinking and social learning that you're talking about?

RI: Well, there are some. There are different examples that can operate in different domains of our governance systems. We could imagine the creation of a constitutional committee, or deliberative institution that inquired into how we were going to govern ourselves as a nation into an Anthropocene future, and that this inquiry was set up in perpetuity.²⁶

It's amazing how often we set up royal commissions and commissions of inquiry and their sheer number in recent years is itself a measure of how bad our governance systems are. But the problem with inquiries is that their recommendations are often not given institutional effect or even not acted upon, and their potential impact is often dissipated; as is happening, for example, with the Banking Royal Commission.²⁷

This means that we've got to invent new institutions. Starting with high-level ones like constitutions,²⁸ we have to change practices at all levels, in various organisations and arms of government. We really do have to think about whether the Westminster system of government, which gives power to the minister based on a command-and-control design, is fit for purpose. What rules would we have to invent to allow a greater sharing of power with citizens and more citizen-based power?

We have some good experience to draw on in Australia. Citizens came together to build a federation and construct the first constitution.²⁹ We also have a lovely example in Landcare in Australia which was a citizens' driven initiative to cooperate across countryside and river systems to build greater sustainability.³⁰ It was unfortunately then, albeit with good intentions, taken up by the government and institutionalised and appropriated by the government which felt because it owned it and was going to pay some of the bills, that it should dictate what happened. So rather than a bottom-up, self-organising, adaptive-learning system that it was initially, it became co-opted into a command-and-control institution.

ML: The issue of power and its location and distribution are at the centre of trying to effect the sort of changes and innovation required by systems thinking and constitute a barrier to institutional reform. It is an often-observed phenomenon that people on the frontline of organisations compared to their leaders can often see and acknowledge the systemic implications and need to change things more clearly than their more remote leaders. The pathway to institutional change needs to

confront power and leadership issues and your book sets out 26 principles for systemic governance. What's at the core of those principles?

RI: They fit into groups and the very first principle that has to be addressed, and I haven't perhaps paid enough attention to it in this interview thus far, is that our governance systems are missing three essential elements. The first is the centrality of the bias.

In the Anthropocene, we have to re-admit the biosphere as the central feature of our ongoing existence. Unless we invent institutions that place the biosphere as essential to our ongoing existence then the quality of our life and our coevolution with the biosphere is really questionable.

David Attenborough has ignored this over a long period, but in his last programme he has at last come out publicly and said that it's not the earth we're trying to save but ourselves in relation to the earth.³¹ That's the central thing that we have to design to build into our future governance systems.

The second group of principles relates to democracy and subsidiarity,³² as we have been discussing.

The other group of principles is what my co-author Ed Straw calls the 'fourth separation of powers' and, that is, that the world can't be allowed to run on lies, which tends to be happening in many parts of the world at the moment. One of the emergent failures of our current government system is what is known in some circles as 'state capture',³³ or preferential 'lobbying',³⁴ and there's a lot being written about that.³⁵ For example, the discussion about the federal ICAC is about the prevalence of preferential lobbying in this country.³⁶ However, that discussion is not following the principles of building a systemic approach to governance. Focusing solely on a single institution, as it does, doesn't take account of where that fits in the different relations with other parts of government and governance, and it is accordingly unlikely to succeed. It may only become a band aid.³⁷

ML: How do you see the prospects for reinventing our governance in this more systems-based way? The current COVID-19 crisis seems to be overturning many of our governance norms and practices in the short run emergency.^{38,39} Does that crisis afford an opportunity for change?⁴⁰ Are you optimistic about the prospect for systemic governance reforms?

RI: I wish I could say I was really optimistic. Certainly, crises present opportunities, but there's a great danger that comes out of crises. People merely use the same ways of thinking and acting to do what the systems community would say is to keep 'doing the wrong thing, righter' rather than reinventing a new thing.

We would talk about coming out of COVID-19 as demanding 'second-order change' to change the whole system. It's not about 'first-order change' which is just about trying to make the current system better.⁴¹ We need to have a conversation about this and this is what

our book is designed to do,⁴² in the way that citizens talked about making this nation they eventually called Australia – unfortunately, without Indigenous people as part of that conversation.

We need to have another national conversation about who we are and what we want to be in the post-COVID-19 world in which the systemic consequences of a virus pandemic point to the breakdown of human relationship with the biosphere, with each other and with many other species.

Conclusion

Systems thinking offers an innovative approach to respond in a sustainable manner to the institutional and governance failures in the face of the global climate change emergency in the Anthropocene era. The COVID-19 viral pandemic crisis has shown both the need and opportunity for transformational changes to prevailing governance approaches with respect to our relationship both to the biosphere and to the kind of institutions within which we operate.

The existing rules and norms of governance based on notions of command-and-control hierarchy are not sufficiently adaptable to cope with the emerging complexity and uncertainty of the existential sustainability challenges that we face. They are premised on an ‘end-state fallacy’ that envisages a single solution or point of equilibrium drawing on projections of historic experience and data in the face of the ‘death of stationarity’. The future is not simply and uniquely deterministic and is on a scale that requires decentralised data gathering, feedback and responses that can adapt continuously through adaptive learning.

The scale and nature of institutional and governance changes needed in response to the global climate crisis need to move beyond ‘first-order’, systematic changes that do the same things incrementally better; to second- and third-order transformational changes that conceive and deliver systemically new ways of thinking and acting.

Decentralised, distributed and empowered governance at the local and community levels can better deliver the ‘requisite variety’ and ‘subsidiarity’ required to meet the challenges of the ‘complex adaptive systems’ of the biosphere, technocracy and political governance. Redistribution of constitutional and institutional power and control in response to the ‘path dependence’ of vested interests in corporations, the media and in government means a move towards a ‘fourth separation of powers’ with more transparency, accountability and empowerment of civil society, communities and citizens.

Systemic governance offers an innovative approach to an emergent path to a sustainable future for the biosphere and society as a complex adaptive system characterised by learning and self-organisation.

Notes

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