



UNRAVELLING **REAL** COMPLEXITIES
IN PURSUIT OF **WORLD** OUTCOMES

“Not to be absolutely certain is, I think, one of the essential things in rationality.”

Bertrand Russell

Reflections on real world complexities - especially in the context of culture and development - the importance of engaging with such complexities, and ways in which we may begin to unravel complexity in order to achieve positive, real world outcomes.

TOPIC V

“CLOSING THE GAP”

Addressing Indigenous disadvantage in Australia.

Panellists: Francesca Merlan, Sean Kerins, John Altman.

A Key points from the panel

- Our volatile history of indigenous affairs: we have come some way, but have a long way to go
- Eurocentric measures of wellbeing used for indigenous peoples are inadequate
- Collapse of due process and overriding of constitution and international laws
- Issues of substantive and formal equality: equal does not mean same
- Intervention singled out certain communities on the basis of claims of child abuse – highly discriminatory, race based
- Intervention was extremely rushed, reasons concocted and no consultation carried out
- Tension between wanting to declare that the intervention is not racist, but want to maintain racist measures
- “shock tactics” mean some benefits
- Steve opinion: closing the gap is bad terminology, ignores the value of diversity
- State tactics are to create broad universal solutions to deep wicked problems
- Communities need to be enabled to find own solutions: development such as that in the developing world, not an imposition on people’s that are not otherwise included properly in governance
- Need honest acknowledgement of our history
- Lots of money being spent on urban centres
- Lots of transient residents in Darwin
- Democracy fails minorities
- Blame game between races, but all part of the one rural community

Question: Would it be more effective to address indigenous disadvantage through more local governance? Especially if we are to acknowledge the diversity of indigenous groups all over the Australian continent, and then take account of the other variables of their location? Can the federal government really do anything apart from support and finance – can you have a federal strategy where the issue is geographically disparate and opinions are divided, often along geographical and cultural lines?

B Tutorial

- Identity as an Australian Aboriginal is about more than race – its about a shared tradition of dreaming, connection with the land, and many other concepts that white Australians find hard to understand.
- Health is a major issue, and the resources and effective programs are at hand to ‘close the gap’ within the next generation. The political will is lacking.
- State of indigenous health is even worse than some developing countries such as Bangladesh
- Programs are effective when jointly created and operated by indigenous communities. External intervention cannot work as well. There should be government support to expand successful programs that have come about through indigenous action, as indigenous people are best to identify their own problems.
- The painful past of relations between non-indigenous Australians and the indigenous peoples of Australian are constantly present.
- Australia may suffer from ingrained racism, not just towards indigenous peoples but all non-anglo peoples.
- Attitudes to the concept of ‘closing the gap’ differ even between indigenous populations. This is reflective of the fact that the indigenous peoples of Australia can not be treated as one homogenous community – firstly, they are many distinct groups of Aboriginal people throughout the landscape, with diverse and distinct customs and dreaming, and secondly, within any social group, no matter how much shared tradition and culture, people will have different opinions.

C Reflections and Connections

Balancing due process with action

There seems to be a real tension in addressing the issues of indigenous peoples between consultation and due process, as oppose to decisive and effective action. This is of course a challenge with any real world issue and in creating policy. This area is complicated further due to the added tensions of the volatile history between indigenous and non-indigenous Australians, which ranges from violence, oppression and genocide, to neglect, ignorance and isolation by both the public and a (more often than not) negligent government.

It is difficult to establish when to lean towards consultation and, alternately, when to lean towards action. For example, in many indigenous communities, there is immense frustration with the lack of action in response to what is deemed excessive consultation - the constant arrival of white bureaucrats to consult with community elders, year after year, is often seen as fruitless because no real change comes about. On the other hand, the Intervention has divided opinion (between indigenous and non-indigenous Australians alike) as to whether a ‘flashpoint’ was reached which necessitated aggressive action, or whether there were other methods for cooperation and that consultation was absolutely crucial where such a dramatic policy was implemented.

Another factor to consider is the importance of symbolism in many aspects of indigenous Australian culture. While the apology might seem superfluous to many Australians – especially when compared to the immense job that lies ahead of the Rudd government to practically improve the situation of indigenous Australians – it was a crucial symbolic moment for indigenous Australians (and of course much of the Australian public) because without the public apology of the Prime Minister, as representative of the state and thus all Australian governments of the past (including the governments which sanctioned atrocities against the indigenous peoples of Australia), it was culturally and symbolically difficult, indeed almost impossible, for many indigenous people's to move on.

But try not to generalise...

It is important not to lump all indigenous Australian's together. I cannot speak for all indigenous peoples of Australia and state that their response to the apology was unanimous – just as I cannot speak for all Australian's on their response to the Iraq War.

When addressing the issue of the intervention, this same issue arises. There is a wonderful episode of Insight on the SBS that gives insight into the varying reactions of indigenous Australians to the intervention. The inherent diversity of opinions on basically all aspects of the intervention (except of course that the legislation and executive action was formally, and probably substantively, discriminative and racist) makes the issue of responding to indigenous disadvantage a truly wicked problem. There cannot be a prediction of how people will react to the policies in this area. For example, even for those in the indigenous communities who acknowledge the racist nature of the intervention, some just simply do not care as their priority is the safety of children and the eradication of the 'grog-culture' in their communities. This of course does *not* mean that all aborigines are drunks and paedophiles, but for these individuals, child abuse and alcohol abuse are obviously challenges in their particular community, which means the benefits of the intervention are welcome. However there would be other communities that do not face either of these challenges, or have indeed found their own self determined ways to deal with the problem of alcohol abuse in their communities, and so the blanket policy of the Intervention is not at all welcome.

Connections...

There are definite themes within this issue akin to previously studied topics. The failure of the intervention is the same failure faced in other disciplines or policy responses – that is when complexity is ignored, or unrealistically simplified, the policy response will undoubtedly fail to address the issue in any effective way. It is convenient for governments and decision makers to appear to have a 'quick fix' available (and if you believe the reports on the Howard government's final months in power, the intervention certainly appears to be a rapidly concocted political ploy rather than a genuine redress of an age old issue) but inevitably, playing politics and addressing real world, real life issues just does not mix.

It appears to me that the best course of action for the new government and whomever follows after Rudd, is to look at the actions already being taken by indigenous and non government actors in the area of indigenous disadvantage. This will eliminate much of the

ineffective consultation that would otherwise be conducted by high-level bureaucrats attempting to develop their own blueprints for indigenous policy and programs. By supporting (financially and otherwise) effective programs that are already in place, the government can observe what can feed into an overall, comprehensive and federal plan for redressing the social imbalance between indigenous and non-indigenous Australians.

TOPIC VI

“ENVIRONMENTAL POLICY ISSUES”

Panellists: Steve Dovers.

A Key points from the panel

- Are environmental problems complex? A matter for the individual. In some respects the only ‘challenge’ comes from lack of political will – but does this inherently make the problem complex, as complexity is generated where not all parties are in agreement?
- The way environment is addressed has changed from addressing single problems (eg: litter) to a more comprehensive conception of the environment, the relationship between environment and society, the environment and the economy, how this all plays out in a temporal context, etc.
- Actions are required pretty immediately at this stage in history
- Environmental policy is not so much ‘managing’ the environment but managing all the other things that affect the environment
- It is important to look at the environment in a broader context

Question: Isn't this just inherent as the environment *is* everything ie: people, animals, buildings, society, the economy and how all these things interrelate? Why did we take so long to adopt this approach which seems so natural? How could humans ever imagine that they existed independently of their environment?

- What is it about sustainability, particularly with respect to the environment and poverty and development that we find so hard to deal with? Are they too vague concepts?

Question: Is it all about greed and the competition for resources?

Answer: The issue of redistribution seems to be a major challenge for richer countries. (NB: similarities to poverty, redistribution of economic wealth!)

- No one singular policy choice = best bet (think of bio-fuel!) as nothing suits all circumstance!

B Tutorial

- There are a number of different approaches that can be taken in addressing complex environmental problems
- Macro and micro approaches; responses involving international community, national governments, state and community level decision makers can all have positive outcomes, but the breadth of the impact may differ
- Lots of money and resources need to be invested in cases where success comes from ongoing regulation and law enforcement
- Utilising the economy can also be an effective way to regulate the environment (just look at the increasing popularity of carbon taxes as a response to climate change. This is a very unconventional use of a tax where the primary purpose is not revenue raising, but changing attitudes)
- Many of these solutions are designed for more developed nations – resource rich with strong governance and economic strength – what about solutions for countries that do not have the ability to implement solutions that require
 - Rule of law
 - Monitoring and regulation
 - Independent watchdogs
 - Strong economy
 - Fiscal and governmental capacity?

C Reflections and Connections




Environment and aid

The impacts of environmental problems are often greatest for the poor nations of the world (eg: Kiribati, the Maldives and other low lying areas are likely to fall victim to rising sea tides within the next 20 years). What obligations are then on governments of developed nations? Should global environmental policy be prioritising mitigation of climate change effects, or adaptation to the inevitable changes that are fast encroaching on our way of life?

Environment and modernity

Are there other ways to deal with environmental problems than modern concepts of law and order, regulation, economic incentives? We managed to live comfortably with the planet prior to industrialisation, and although the strain was less on the environment, environmental management was still necessary for humans to co-exist with nature. Surely there are useful practices from older traditions that we should look at to inform our environmental policy. 'Burning off' is essentially derived from the practices of indigenous Australians, and the Australian government has recognised their valuable input in part (see <http://www.environment.gov.au/indigenous/index.html>). However more needs to be done to look at traditional methods of environmental management, rather than relying purely on modern invention, which increasingly strays further away from any 'natural' origin. In the same way that different conceptions of the world influence international relations (as in the Pacific States panel) and the sociology of a country (see Close the Gap panel) it is naïve to ignore the implications of these conceptions, closely related to different cultures and peoples, for environmental management. Perhaps if the West redefined its relationship with the land, environmental policy could evolve in a positive and responsive way.

On the next page, I have contrasted Western Capitalist and Indigenous Australian perspectives on the relationship between the environment and people. There is a connection between Closing the Gap and environmental policy here, in that we must respect the unique relationship of indigenous Australians with the land, and value their expertise in environmental management. If we can incorporate Indigenous practices and systems into our environmental policy, we may be better able to counter challenges such as climate change, and we will be closing the intellectual gap in the process – by giving due acknowledgement to those closet to the Australian landscape.

	<p>What is the world?</p>  <p>The world is land and seas to be divided along state lines and agreed international boundaries. Land is divided for ownership.</p>	<p>How do people relate to the world?</p>  <p>People relate to the land in terms of 'ownership' – whether for residential, agricultural or commercial purposes, land is privately owned or owned by the 'crown'. The world is to be used for its resources and to support humanity.</p>	<p>What are possible responses to environmental problems?</p>  <p>People have responsibilities in relation to their own property, which means that indistinct aspects of the global environment get abandoned. Responses to environmental challenges attempt to tackle national and global issues by way of imposing laws and regulations on the rules of ownership. Responsibilities are created with respect to the global environment, based on the priorities of those in power.</p>
<p>Western Capitalist Perspective</p>	<p>The world – its lands and seas – have significance in the dreaming of different tribes. It is not owned but a part of indigenous peoples</p>	<p>People relate to the land by way of their dreaming – the land is a part of them, akin to Western conceptions of God and the spiritual world.</p> <p>“We bond with the universe and the land and everything that exists on the land. Everyone is bonded to everything. Ownership for white people is something on a piece of paper. We have a different system. You can no more sell our land than sell the sky. Our affinity with the land is like the bonding between a parent and a child, You have responsibilities and obligations to look after and care for a child. You can speak for a child but you don't own a child”¹</p>	<p>?</p> <p>The policy implications could be astounding!</p>
<p>Indigenous Australian Perspective</p>			

¹ Quote in L Behrendt, *Achieving Social Justice: Indigenous Rights and Australia's Future*, The Federation Press Sydney, 2003, 33.

“MODELS FOR COMPLEX SYSTEMS”

Panellists: Michael Barnsley.

A Key points from the panel

- Many decision makers carry foundational assumptions with them (specifically in this panel relating to mathematics of complexity)
- Simple systems can be sensitive to initial conditions, and chaotic although deterministic
- Fractals have relevance to all areas of life although they are, at first glance, simply mathematically generated pictures
- Focusing purely on known variables can be detrimental to analysis of a system, as initial conditions and other unknown variables (operating inside a “black box”) can have significant impacts on the actual operation of the system
- Assumptions about what we “know” are the foundation for much of our analysis – but do we really know? We don’t analyse the “black box”
- Complex systems may have very simple modelling (fractals)
- Complex behaviour can repeat itself in a deterministic manner
- Small changes in a system can completely change the system’s operation, or even the structure of the system.
- Only small changes in parameters are necessary to effect major changes: even one parameter changing can alter an entire system.

Question: How does one establish the parameters of the black box? If we accept that there are things that we cannot know, and thus fall inside the black box, how do we distinguish between these ‘unknowable unknowns’ and other ‘knowable unknowns’ that can be discovered with further learning?

B Tutorial

Feedback loops are a new discovery to me and a hugely useful tool. I have included the feedback loop I produced for the tutorial (on Culture and Corruption) in the section below.

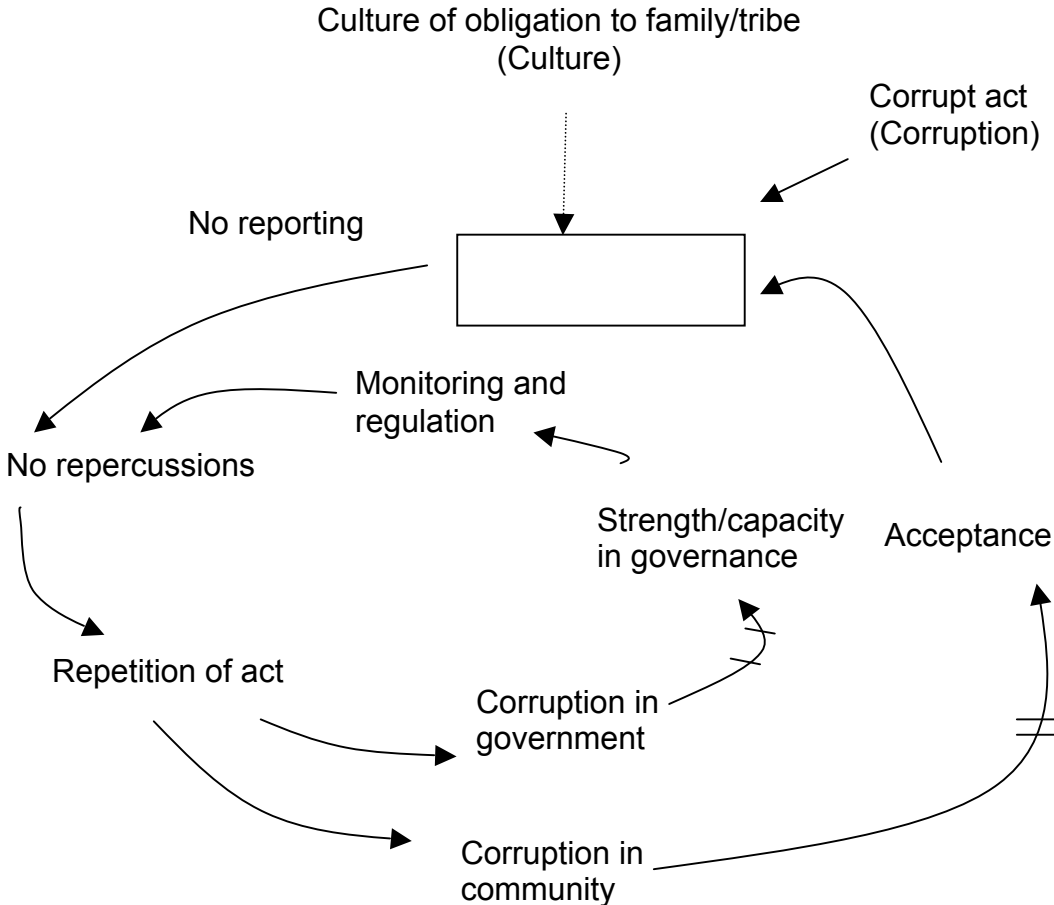
C Reflections and Connections

Use of feedback models

I have never used feedback models before, however I can see so much adaptability and use for them in documenting problems associated with development, in particular the human element of development, and how culture interacts with the development of a country. The best way for me to work through this reflection is to draw a feedback loops and explain how it assists in analysing the problem.

One of the biggest complicating factors in development is the effect of very different cultures and ways of life coming into contact as outsiders (governments and non government agents from the West) work with the governments and people of developing countries to achieve development outcomes. The model below attempt to model the interaction between culture and certain development problems or goals sought.

Culture and Corruption

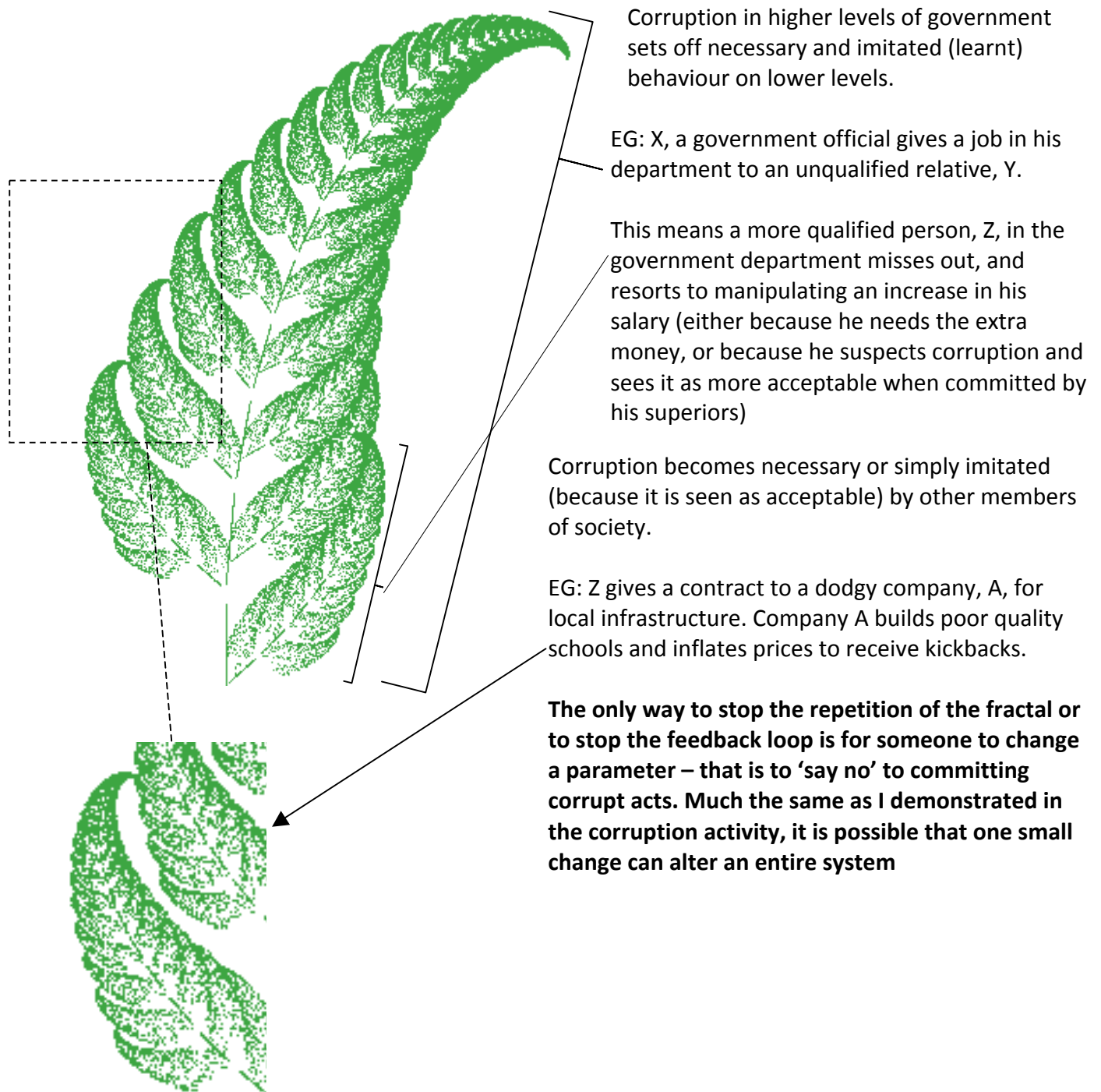


The development goal here is that of reducing endemic corruption in PNG. Culture and corruption is a major challenge in many Pacific Islands including PNG. It was of course the subject of a reading in an earlier panel by Peter Larmour. The line between what is acceptable cultural practice – gift giving and obligation to kinship groups, tribes and family – as oppose to unlawful and socially debilitating corruption, is often extremely blurred in the case of some Pacific countries.

The issue is also complex and hence it may be framed by others in a different way from how I have represented it here. However I believe that the problem is a lack of understanding around what the Papua New Guinean people themselves hold as acceptable cultural practice, what is clearly corruption, and what has been previously accepted as cultural practice but is acknowledged to be detrimental to society in that it is very similar to corrupt practice. In this way, the culture of obligation is somewhat a black box – it contains initial conditions and unknowns that directly affect the cycle of corruption in PNG. The cycle is deterministic, in

that (unless someone stands up to the act of corruption) corrupt acts perpetuate corrupt acts.

I can also visualise that this might represent itself in fractal form, as even though the pattern cannot be explained, it nonetheless repeats itself in the same form on different levels of society.



TOPIC VIII

“ENGINEERING, COLLAPSE IN SYSTEMS AND NETWORKS”

Panellists: Shayne Flint and Daniel Hill.

A Key points from the panel

- Engineering can assist us in understanding real world complexity by synthesising it into frameworks that are easier to understand
- Key areas of engineering: decomposition, abstraction, life cycle phases
- These fall into a separation of concerns, which maximises effectiveness BUT does not take account of real life (relationships)
- Engineering rests on assumptions about the nature of the problem they are confronting, and that solutions necessarily are good (but are they? Eg: the atomic bomb)
- Engineering can improve if it stops rejecting complexity (the human element, the environment and the things we don't understand about the real world) and embraces an ongoing process of learning and adaptation
- Complex systems all around us
- Global economy, IT systems traffic systems, banking systems, biology are all examples
- Biology perhaps the pinnacle of complexity
- Systems can be observed in terms of their behaviour
- Different frameworks exist for describing these systems
- The common theme is interconnectedness
- Network systems for transport show nodes and hubs
- Can we describe and explain these networks? Network science does this.
- Network science describes systems in nodes and links
- Origins of mathematical graphs from an attempt to cross bridges between landmass only once each and return to the same origin point: the number of bridges connected to each landmass (ie links to nodes) enabled a solution to this challenge.

Question: It seems as though the realisation of the relevance of engineering concepts and thinking to other disciplines has been somewhat accidentally discovered and not yet harnessed. Is there scope for the discipline of engineering to deliberately expand into other disciplines, in particular with relation to policy development? Are any definitive moves being made towards a more interdisciplinary use of engineering?

B Tutorial

A few reasons for climate change

- greed
- 'dirty development'
- lack of property rights
- lack of property law
- poverty
- wealth
- consumption
- hunger
- war
- peace
- inadequate regulation
- inadequate understanding of the environment
- ignorance

1. The Scenario Question: What is the issue?

Decisions on access to Papua New Guinean realty for foreign private enterprise and development.

2. The Proximate Environment: In what environment is this decision being made? What is well-defined?

There are already many foreign (and local) companies reaping the benefits of the mineral and oil reserves in PNG. There are many agreements between the government and private stakeholders, and the industry generates employment and income for the region. At this time, there is growing interest in the area, and may more oil and mineral companies see PNG as a good opportunity. Also, there are gas reserves in PNG that are largely untapped as yet.

3. What are the key forces driving this decision?

- Interests of government
- Interests of the community in disparate tribal groups
- Interests of foreign investors
- Interests of Australia and other proximate nations

4. Choose the most important and uncertain of these.

- Interests of foreign investors (this will determine a lot of the response of the government in PNG)
- Interests of PNG (the government changes with elections, and so too will its interests as the country develops)

5. Compose the stories.

In 2050 Papua New Guinea has increased its GDP considerably thanks to foreign investment in oil and mineral supplies. However due to dodgy dealings between the government and private investors, much of the landscape in the highlands regions has been decimated and there has been a 15% increase in IDPs across the country. A new government has recently been elected and has strong leadership, however the capacity of the government to monitor and regulate private investors is limited due to the widespread corruption in lower levels of government and within regional governing bodies.

To make matters worse, the government predicts a further 20% increase in IDPs as the sea levels have risen to threaten the coastal regions and many islands. One big tropical storm

could kill hundreds and displace many more. There has been an increase in resources for infrastructure due to the oil and minerals boom, but much of this housing would be privately contracted, and give foreign investors a monopoly over the realty market.

There have also been renewed outbreaks of ethnic violence in the highland regions, spurred on by the losses of land. This is causing division in the upper levels of government as ministers from conflicting tribes refuse to work together on each occasion that a new conflict erupts. PNG has been strongly advised by Australia to take considerable measures to quell the violence, or they will 'offer' assistance of troops again in the region. While this could be helpful in bringing about peace (however temporary) the country's leaders are concerned that the presence of the Australian military will heed development efforts and stagnate growth of the economy as foreign investors shy away...

C Reflections and Connections

Engineering is a hugely broad term which is relevant not only to physical constructs (for example the stereotypical symbol of engineering – a bridge) but to a broader field of complex problems, and – I believe - to social policy. The theories behind mechanical or chemical engineering offer a different and useful way to confront the complexities inherent to my field of study – development. As I have discovered throughout this course, frames of thinking derived from other disciplines – even surprisingly mathematics and engineering, which prima facie lie at the other end of the spectrum – can be effectively drawn on to elucidate problems and identify points for policy intervention.

While the feedback loops assisted in mapping a pattern of behaviour or actions by people, for example corruption, I believe that a network model is suited to illustrating the relationships which influence a development challenges. For example, a network map of the social and governance networks that are dominant in Papua New Guinea would be beneficial for development agencies and foreign investors trying to engage effectively with the system. This is because relationships between kinships groups, family ties, the influence of provincial and village governing bodies and the power relationships between hierarchies of family and traditional chiefs have major implications for any initiative, policy or program etc.

While I was in PNG I had the opportunity to meet with a mining company that was having immense success in the region because of the way it was dealing with the people in village areas where they needed local cooperation to be able to do their mining business. Instead of dealing mostly with the national government, it was dealing with the real power in the area they were working, which were the local governing bodies and traditional leaders or chiefs. They also established community development programs to give back to the community some amount of the profits out of the mining, and these were distributed according to local custom. The key reason for this was to ensure the ongoing viability of their mining sites across a large area. Had they not engaged with the local community they would have had to expend large sums of money building fences and paying security. By understanding the social and governance networks of the region they were able to save costs, and develop a sustainable relationship with the people of the region, as it was in their interest to preserve the mining sites which were a source of income for their villages.

TOPIC IX

“COMPLEXITY IN GLOBAL HEALTH”

Pandemics, health and development, intellectual property, patents and global health policy.

Panellists: Kamalini Lokuge, Peter Drahos.

A Key points from the panel

- Access to global public health goods a major issue
- Note developments in Australia’s pandemic response policy during swine flu
- Swine flu was a challenge as unpredictable (affected teenagers etc)
- Indigenous people in particular were vulnerable
- Interesting fact: Canberra has first human rights compliant detention centre for juvenile offenders
- Resource poor areas (ie: developing countries) are worst affected
- Containment is not really an option

Question: Are developed countries prioritising health enough in their aid allocations, for example in customs and border control of tourists (who may be carrying illness into the country) especially considering the boom in developed-developing country tourism? Do we have a responsibility to do so?

Question: Are a larger quantity of health programs or increased and improved health infrastructure more effective in addressing the health issues in developing countries?

Answer: (did not exactly answer question) The WHO has been very ineffective in addressing health issues in country. They do not take enough action but are subject to bureaucracy.

- Vaccines have a limited impact
- Antivirals are expensive
- Regions likely to have larger than 95% rate of infection have less than 1% of drugs
- Major issue of pharmaceutical markets, profit over people
- Is this a legacy of colonialism?
- TRIPS is a bad system!
- Attention and awareness of issue is very important

B Tutorial

- Role plays illustrated the impact of desire for profit making on the pharmaceutical industry

- Flu game illustrated the randomness and unpredictability of pandemics (and indeed epidemics) and indicated that a large loss of life is pretty much unpreventable.

C Reflections and Connections

Whose interests?

As with any complex or wicked problem, it appears to me that one of the major challenges in global health policy is competing interests, complicated further by a significant imbalance of power between parties concerned. While the greatest *need* for lifesaving drugs, strong health programs and health systems is in the developing world, the power – both political and financial – rests with the richer nations. In order to rectify this situation, it requires ultimately action on the part of the richer nations: the power holders. The developing nations can campaign for aid and international assistance, but as can be observed from the examples in the lectures and the tutorials, a more substantive and sustained effort to improve their health systems is the only thing that will see a significant reduction in preventable disease and death. This substantive and sustained effort cannot be produced by aid efforts alone, it requires a systemic change in the world order.

Obstacles...

It seems to me that the major obstacle to any change is TRIPS and similar global trade agreements which prevent ease of access to essential medicines. It may not require a complete abolition of these agreements, but there certainly needs to be a redress of the imbalance that these agreements perpetuate. Exceptions for developing nations need to be broadened, so that they can override TRIPS not only in the event of a ‘pandemic’ outbreak such as swine flu, but so that they can address health issues that (predominantly) plague only developing nations. The HIV/AIDS challenge and tropical diseases such as malaria are not a major cause for concern for developed nations, and thus are not heavily prioritised by pharmaceutical companies or at negotiating roundtables on the world stage. But they are some of the biggest health challenges facing the developing world, and thus as a collective, global community they need to be prioritised. Of course the major challenge in creating political will here is the self interest which appears to dominate world politics. But if it can be communicated clearly that these diseases can have major consequences globally – for example, climate change could perpetuate a major outbreak of tropical diseases – then developed nations will perhaps start to pay attention.

Climate change has (slowly) been recognised as a global challenge by developed nations. Of course, even with this knowledge, negotiation on a global agreement has been slow. So there is no guarantee that making health policy of developing nations a global issue will immediately intensify efforts to address the challenge. But at least putting it on the global agenda will increase the rate at which the issue is addressed, and empower developing nations with a greater voice to represent their people.

TOPIC X

“COMPLEXITY AND UNCERTAINTY IN LAW”

With case studies on nanotechnology regulation and refugee law regulation.

Panellists: Tom Faunce, Matthew Zagor.

A Key points from the panel

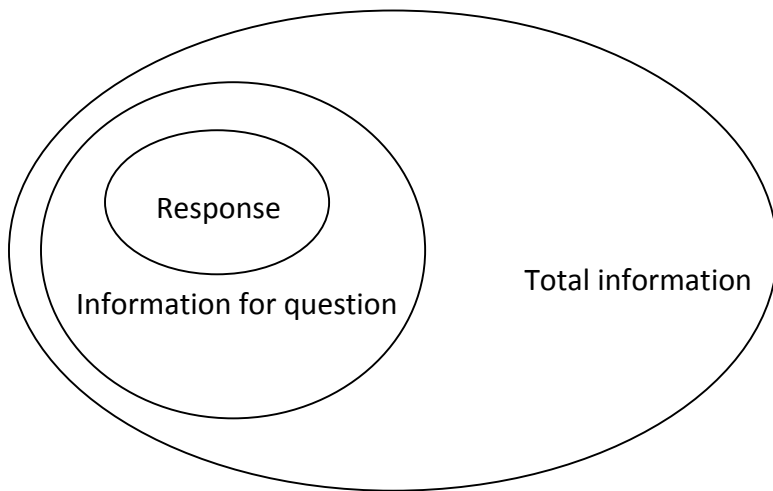
(note I have focussed on Tom Faunce’s talk as I have studied international law and thus gained less ‘new learnings’ from Zagor’s talk – although it was nonetheless enjoyable!)

- Law consists of norms/principles that are general statements of what should happen.
- Rules are much more specific, and laws are generally rules although they often evolve from principles
- Positivism:
 - Hart: one discovers what laws are by rule of recognition (rule is recognised as law by legislation in parliament) and there is a separability of norms of law and norms of morals
 - law exists only in the rules created by human beings (legislatures) and enforced by judicial bodies (courts and tribunals)
- Radbruch: Law is not always just, especially in the positivist theory which advocates that law is just rules created by humans, and does not have any higher or moral origin. Thus, law can easily be unjust because it is simply a rule that is enforced with a legal backing. For example the Nazi laws which Hart considered to still be laws, but Radbruch would challenge this.
- Australia had very few constitutional rights (**however, from my knowledge of constitutional law, this originates from a trust that parliament will not hurt us**)
- Different perspectives on future of nation states
- Law can be regulated in democracies by comparing with human rights and ethical standards, enforced by conscientious civil disobedience, conscientious non compliance and popular protest
- Difficulty in using law to regulate nanotechnology as it is not completely known and has both good and bad aspects. Regulation becomes complex when the impacts of a technology are unknown (good or bad).
- Use of regulatory pyramid, different levels of norms with different legal bite
- Dealing with complexity: meditation and not thinking is useful!
- Refugees is a term of art, semantics are controversial
- Many people in the field of international and refugee law baulk at the use of the term ‘climate refugees’
- Key terms in refugee law: definition of refugee, principle of non-refoulement
- Problems with Refugee convention (is it dated?), written by ‘white European men’ and motivated by their interests

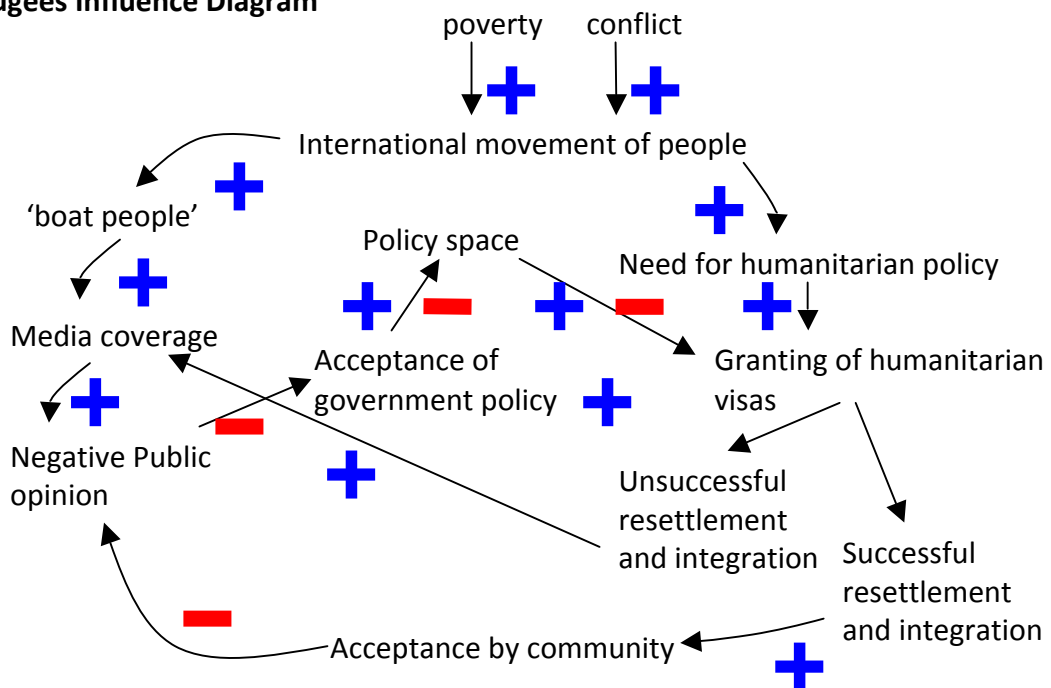
Question: Can law be utilised to establish frameworks for future unknown complexities that make it easier for policy makers to deal with the complexity of these unknowns when they become known?

B Tutorial

- As we define infinity more, uncertainty increases as we lose detail from our analysis



Refugees Influence Diagram



C Reflections and Connections

Law is a complex beast. On the one hand, law can enable us to regulate society in such a way that future unknowns are easier to tackle. Law means policy can have legal bite. On the other hand, law creates huge complexity and uncertainty in that it must constantly deal with a rapidly evolving world. Where the law of a certain country needed only to deal with the people of that nation, most of whom were of the same race, culture and religion, today our nations are increasingly multicultural, and the law of one country must arbitrate between a diverse and interconnected citizenry.

In a country like Australia, law must confront the clash between democracy and the rights of minorities. It has been observed that democracy is not suited to human rights, as the human rights enterprise is concerned with the control of power towards the vulnerable, and in a society like Australia, the power of the parliament ultimately comes from the people as sovereign. Thus, the voting majority in Australia has undue influence on minorities, for example immigrants, Aborigines and certain religions. Minister in parliament must ultimately act on behalf of the people who elected them, and this means that vulnerable people lose out. For example, the negative reaction of many Australians to asylum seekers means that the Rudd government ultimately has to prioritise keeping the majority happy instead of acting in the interests of the vulnerable minority. The government must maintain a balance between enacting policy for the benefit of humanitarian migrants and 'scaring the horses', or answer for it at the next election.

So what is the role of the courts in all this? I would argue that the High Court, as a check and balance institution, must keep in check the exercise of government power over vulnerable minorities. They must create certainty for minorities, that their basic interests will be protected even where the voting majority is against them. There is an ongoing debate about how deep into questions of policy and fairness courts should go. Many argue that the court is simply there to determine whether acts of the parliament are within the power of the constitution, and if so, to go no further in questioning whether the act is fair or necessary. But given the changing face of Australia, and the large array of religious, racial and cultural minorities that are either permanent residents or citizens of our country, I believe the High Court must enforce the rule of law stringently, not just over the government, but over improper exercises of power by the sovereign people.

One way to do this is to install a human rights act or bill of rights. The arguments in the past as to why we do not need a bill of rights are in abundance, including that we 'need not fear the parliament' and that rights are 'inherent in the individual'. While minorities need not fear the parliament, they certainly have cause to fear the exercise of power by the sovereign people, who ultimately control the parliament. The justification as to why Australia did not need a human rights act or bill of rights may have been legitimate 100 years ago, when the country was still very much an Anglo-society with much less cultural, religious and racial diversity than today. But a changing society creates new complexities and uncertainties. Thus the High Court must adapt to confront these new challenges, and ensure that the law is an instrument of justice and as much legal certainty as possible, especially for the vulnerable in society.

TOPIC XI

“POLICY MAKING AND LOBBYING”

Panellists: Jamila Rizvi

Reflections and Connections

Lobbying

A significant aspect of my work with the Oaktree Foundation is lobbying and policy work. Happily I have had the opportunity to meet with federal and local ministers regarding Oaktree’s policy and convened lobbying initiatives from one-on-one meetings to public petitioning and demonstration.

In line with the lobbying aspect of today’s panel, I have compiled the lobbying and policy techniques used in Oaktree, both to clarify for myself the work I do, and to see how this can relate to the group policy work later on. I have also identified where these aspects of Oaktree’s work align with the tips supplied by Vicki Manson and where they can be improved.

<p>Why lobby?</p>	<ul style="list-style-type: none"> ○ For funding of our projects ○ Because alone Oaktree and other NGOs cannot solve the problems of world poverty. The long-term power to create change lies with national governments and international financial bodies such as the World Bank and the International Monetary Fund. It is our mission to convince them to use this power to create lasting change. ○ To raise awareness within the federal government and also within members of the public ○ To keep public and government informed of Oaktree’s work ○ Our moral duty as global citizens ○ The government committed to increasing aid in both 2000 and 2007. We need to hold them accountable. 	<p>Tip 1: know what you want and don't be afraid to ask for it.</p> <p>Oaktree has a clear policy platform and has established good relationships with a number of ministers through a history of productive and efficient meetings.</p>
<p>How?</p>	<p>Oaktree</p> <ul style="list-style-type: none"> ○ Meets with politicians ○ Lobbies through media: published letters to the editor, television and news coverage, radio airtime ○ Petitions and engages with the public to 	<p>Tip 2: don't bring problems, bring solutions.</p> <p>In actively engaging with the public, Oaktree is increasingly providing the democratic platform and impetus for the government to commit to an increase in foreign aid. In fact, at the conclusion of a week long nationwide campaign in 2007, Kevin Rudd attended the</p>

	<p>educate them and provide an avenue for the public voice against poverty</p> <ul style="list-style-type: none">○ Campaigning and advocacy	<p>final event of the MAKEPOVERTYHISTORY ZEROSEVEN Road Trip and announced that the impact the campaign in raising awareness in the public and increasing the profile of the issue had provided the platform and opportunity for him to announce that the Labour Party, if elected, would commit to an increase in aid.</p> <p>Tip 3: don't fight the system, work with it</p> <p>All of Oaktree's lobbying and campaigning efforts are geared towards stimulating public support for aid and fighting global poverty in order for the parliament to act on the issue. We understand that violent protest does not achieve anything, and that we live in a democracy where the parliament can only act on behalf of its constituents. The people are sovereign, and so it is ultimately the people whom we have to convince.</p>
--	---	---

“THE NATURE OF UNCERTAINTY AND INTEGRATION AND IMPLEMENTATION SCIENCES”

Panellists: Michael Smithson and Gabriele Bammer

SYNTHESISED WITH EXTERNAL LECTURE

“1.4 BILLION REASONS”

Global Poverty Project

Summary of lecture:

1.4 billion reasons is trying to invigorate action against global poverty in much the same way that ‘An Inconvenient Truth’ sparked a global response to the threat of climate change. The presentation both engages audience by educating them about the facts of poverty, and calling them to action.

‘1.4 billion people continue to live in extreme poverty. Significant progress has been made already but more needs to be done to achieve the eight Millennium Development Goals by 2015.’

Global Poverty Project

The key message of the presentation are:

- *Extreme poverty and the issues around it are important, urgent and related to me.*
- *Our generation can end extreme poverty, and I can play a part in making this happen.*
- *To overcome these challenges, it's got to be a global movement, bringing together people from around the world.*
- *It's not going to be quick or easy, but I am committed to playing my part so we can achieve our global goals.*

Global Poverty Project

How does this relate to the course?

This lecture on global poverty and responses to it essentially epitomises the message of the Unravelling Complexities course – that complexity should not deter action. The key message

of the presentation was not ‘we have discovered the solution to global poverty’, but rather an acknowledgement that the global community has at their disposal the necessary tools and resources to tackle poverty head on and even eradicate poverty within this generation. It called on the audience to do two things: 1) learn more about global poverty, and 2) take action in whatever way they could to be a part of the movement to end global poverty.

Below I demonstrate how this presentation relates to unravelling complexity by highlighting the layers of complexity with respect to Millenium Development Goal 1.

MDG 1: Eradicate extreme poverty and hunger.

This goal can be broken down onto a number of levels.

First, consider the proposition – “Give a child enough to eat”.

On a scale of complexity, this sits at 1. We know the problem – the child is hungry, and if it doesn’t eat, it will die. We know the solution – feed the child.

Complexity ↓	Diversity →	Single party	Multiple parties, each having only some of the relevant knowledge	Multiple parties, conflicting in values/interests
	Both problem and solutions known (Heifetz Type 1)	Tame problem	1	2
Problem known, solution not known (relationship between cause and effect unclear) (Heifetz Type 2)		4	5	Wicked problem 6
Neither problem nor solution known (Heifetz Type 3)		7	Wicked problem 8	Very wicked problem 9

In terms of Smithson and Bammer’s knowledge graph, the proposition sits here:

<i>Primary level</i>	<i>Meta-level</i>		
Known	Known knows	Unknown knows (tacit knowledge)	
Unknown	Known unknowns (conscious ignorance)	Unknown unknowns (meta-ignorance)	

We know our problem (the child is hungry) and we know our solution (to give it food) based on assumptions about what is possible within an also assumed context. Even if we strictly do not know where the food is coming from, or how much to feed the child, these are unknown

simply because the proposition is framed simply without a lot of detail, and thus contains known unknowns – things that we can come to know through further learning.

Now, let’s add a layer of complexity to this.

Consider the proposition – “Give an African child enough to eat”. Immediately the proposition becomes complex, for two reasons.

1: Giving this child a nationality removes the proposition from the abstract and involves **value judgements** and **presumptions of fact** that mean we don’t know the entirety of the problem. This means there is **required learning**.

2: Is we assume the child is in an impoverished part of Africa – and given the **foundational assumptions** that are inherent in addressing this kind of question, this is most likely what someone will assume – there are facts we know about Africa and about the world that put limitations on our ability to offer a solution.

So, depending on our foundational assumptions, what we know about the world and about Africa, and any value judgements we make, this problem could now sit anywhere on our complexity chart.

Diversity →			
	Single party	Multiple parties, each having only some of the relevant knowledge	Multiple parties, conflicting in values/interests
Complexity ↓			
Both problem and solutions known (Heifetz Type 1)	Tame problem 1	2	3
Problem known, solution not known (relationship between cause and effect unclear) (Heifetz Type 2)	4	5	Wicked problem 6
Neither problem nor solution known (Heifetz Type 3)	7	Wicked problem 8	Very wicked problem 9

We cannot truly say we know the problem, because even if we say, for example, ‘the problem is that there is not enough food to feed all the children in Africa’, this lack of food is symptomatic of broader underlying problems, such as global inequalities and environmental imbalance. One cannot solve the ‘problem’ of the children of Africa not having enough to eat simply by giving them food – there are constraints on our solution. Thus the *problems* to be addressed are the *causes* of the *symptom* – that children in Africa do not have enough to eat.

Again, on Smithson and Bammer’s graph, the only **known known** is the *symptomatic evidence* of the problem.

<i>Primary level</i>	<i>Meta level</i>	
Known	Known knowns	Unknown knowns (tacit knowledge)
Unknown	Known unknowns (conscious ignorance)	Unknown unknowns (meta-ignorance)

The **known unknowns** in this more complex proposition relate to the causes of the symptoms and the factors we can identify as contributing to these causes. While we can observe, for example, that corruption in governance is one cause of African children not having enough to eat, we cannot **know** the solution to this. As we are conscious of this area of uncertainty where we require learning, it is a **known unknown**.

<i>Primary level</i>	<i>Meta level</i>	
Known	Known knowns	Unknown knowns (tacit knowledge)
Unknown	Known unknowns (conscious ignorance)	Unknown unknowns (meta-ignorance)

Then arises the controversy of whether we can **know** this **known unknown**, or whether it is merely inevitable, which complicates things further. This is especially so when it is considered that the ultimate determinant of how far a society is willing to pursue knowledge is how much they are willing to pay. It is a basic matter of budgetary priority. The pursuit of answers to the problem of children in Africa having enough to eat, and indeed global poverty more broadly, has frequently fallen down the list of priorities and thus we are arguably no closer to finding a solution. Uncertainty about the future of the world's developing nations continues to abound.

But this affirms Smithson's statements: that uncertainty (and thus, in many cases, complexity) are socially constructed. It is public and political will that will determine whether or not the known unknowns are discovered, and the collective resources of the nations of the globe are put to work in combating global poverty.

This demonstrates a number of things.

First, the lottery of birth determines whether a child can eat and live or starve and die. This involves **facts**.

Secondly, when considering a basic proposition such as "Give a child enough to eat", an individual will be influenced by their own circumstance. For the average Australian person, the foundational assumptions (even if they are subconscious) for responding to this proposition, where it has no other contextual detail, will be:

- I live in a developed country
- Most people in my country have an adequate income
- This child is in the care of someone who can provide for it's needs

- There is enough food to provide for everyone
- The basics of nutrition are known in deciding what to feed the child
- The child will be fed and fed adequately

Thirdly, a person's response to this proposition when set in a context *outside of their own circumstance* will also rely on foundational assumptions, but there is a greater likelihood that these assumptions will be ill informed or wrong. For example, a person may assume – the child in Africa does not have enough to eat and there is not much to be done about this fact.

If a person *learns* about the issue, then they will redefine their foundational assumptions, and be better able to engage with complexity.

What is intriguing about a complex issue like global poverty is that so much of the uncertainty and complexity is not a result of irreversible factual circumstance, but *perception* of the world order and what is acceptable. Acceptance of social constructs gives them the power of 'irreversible factual circumstance', but learning more about the various forces at work in our complex global social and economic order can empower people to challenge perceptions and thus change factual circumstance.

As seen in the example above, when a seemingly basic proposition was put in real world circumstance, the perceptions of what is acceptable with respect to the global social and economic order made the proposition so complex that it perceivably could not be solved. But it was not the proposition that became more complex, simply the context in which it was placed.

In the same way, the basic proposition that every person should have access to enough opportunity and resources to preserve their 'inherent dignity' and 'equal and inalienable rights'² only becomes complex if we accept the current world order. If we can alter our perceptions, challenge what we are willing to accept and change our behaviours, then we can reduce the complexity surrounding the achievement of the Millennium Development Goals and equal opportunity for all human beings, regardless of the lottery of birth. We should not fail in our efforts merely because there are those that make excuses of this basic human goal being a wicked problem.

Complexity in Global Poverty and the role of I2S.

Ultimately, it would be a mistake to view the problem of global poverty as anything other than a multi-disciplinary issue. What is at stake is entire societies, to which each discipline is highly relevant and, arguably, vital in order to establish or re-establish and maintain functioning societies where each individual retains their dignity and equality and has the opportunity to pursue a decent life. Failed development efforts have been ones where only one aspect of societal development is focussed on – more often than not this being economic development.

² Universal Declaration of Human Rights.

I will give an example based on real life events. Consider that a foreign company buys some land on a tropical island in the Asia Pacific. They intend to build a hotel, because it will provide jobs in the region and encourage foreign investment. Both of these goals are informed from an economist perspective – the foundational assumption being that injecting money into the region will stimulate growth, and that growth will fuel development. The construction of the site will involve engineering. At least two disciplines are here at play. The hotel is constructed. It soon becomes clear that the hotel is causing more harm than good: it uses nearly all of the islands electricity supply; the increase in tourists causes degradation of the islands flora and fauna; locals, used to working in subsistence fishing, only have basic levels of education and thus are only suited to work domestic level jobs in the hotel. The company who owns the hotel has to import staff. The staff require housing, and more construction takes place. The locals begin to resent the foreign workers and the tourists, as they are not really benefiting from the hotel.

Now consider an alternate reality. A foreign company buys a block of land on a tropical island in South East Asia. They consult with the locals as to what kind of business would benefit the region. The locals say that the island cannot sustain too many tourists residing on the island, but that it might work to run a business where tourists can learn about the local culture and the natural life on the island. The company then consults with some environmental scientists regarding the area and develop a sustainable business plan. The engineers collaborate with these scientists to plan eco-friendly infrastructure, and draw on the latest solar technology as part of a design for a zero-carbon emissions facility. The company employs local people as tour guides, and numbers of visitors are capped to the island to ensure sustainable practice. The island becomes a boutique holiday destination, and creates a niche market where tourists learn about the local culture, see the precious wildlife, and spend the day using luxurious, eco-friendly facilities.

In these two examples, different approaches were taken to the incorporation of different knowledge. In scenario one, the company presumed that establishing a hotel on an island would be exactly the same as in a developed urban location. They drew only on disciplines that they thought were relevant: economics, commerce and engineering. In the second example, a consolidated and integrated approach was taken, drawing on many disciplines including anthropology, enviro-science and sustainable engineering.

It makes basic sense. In just the same way that a holistic business plan approach creates better outcomes for all, integrated approaches to learning and policy making are far more beneficial for both learning in general and addressing complex problems. Something like I2S could reduce the need to contend with difference at the policy making stage by making it a part of higher learning from the beginning. Specialisation, while encouraging efficiency, also creates the risk of policy making which draws on only a few disciplines, usually the discipline of whoever happens to be making the policy.

I have learnt throughout this course that not only can a multi-disciplinary approach create better outcomes for tackling complex issues, but that people from diverse disciplines can benefit immensely from peer-to-peer learning. Gabrielle Bammer stated that, in dealing with complexity, it is crucial to get a picture of the 'whole', but also said that there are innumerable ways of getting there. Bringing together the brightest minds from all different

disciplines is essentially bringing together those diverse perspectives on an issue, and better enables us to work towards a solution. At a time when our world is so incredibly interconnected and complex, we need to seek new and innovative ways of tackling uncertainty and complexity. I2S just might be part of the answer.

“REFLECTIONS ON POLICY PROJECT AND PRESENTATIONS”

The policy proposals addressed some of the key issues confronting the Australian public and our government, from domestic issues such as junk food advertising and our ageing population, to issues of a more international tone such as the crisis of the international movement of people and Australia’s relationship with China. In any event, one thing was clear to me – that complexity will be inherent where issues are of great importance. This affirmed for me what Michael Smithson addressed: that anywhere there exists intellectual enquiry, complexity and uncertainty will exist also, thus anywhere there isn’t intellectual enquiry, there does not exist complexity and uncertainty.

Let me illustrate what I mean:

Sometimes I ride my bike to university. I ride my bike because

- a) I need to get to university for classes or study, or sometimes to meet someone.
- b) I don’t have a parking permit.
- c) I enjoy riding.

These are simple reasons as to why I ride my bike. This proposition is quite basic: that to get from A to B, I require transport, and I choose my bike as the method of transport.

This is from a perspective where I am not placing a whole lot of importance on riding to university. It is simply one aspect of my day. Because it is not something that I think a lot about, it remains a simple fact.

But if I delve deeper into this proposition and add more layers of detail and analysis, there are a range of issue behind this simple decision to ride my bike to university and these increase in complexity the more value or importance I place on them. For example:

I don’t have a parking permit because I made a decision not to buy one. I have a car which I could drive into university if I wanted to, and in fact I did drive my car up until this year. I decided not to buy a permit to encourage myself to ride and catch the bus. The reason I did this was because I wanted to reduce my carbon footprint and to get more exercise. I thought it was important to reduce my carbon footprint because the world faces some big challenges with the degradation of the environment and the impending problem of climate change.

While I acknowledge that just riding my bike will not have a huge impact, I think it is better than doing nothing. I have also reduced the amount of red meat in my diet, because I realise that the livestock industry is a big contributor to emissions. But this raises all sorts of complex ethical and practical questions.

Should everyone become vegetarians?

Can people sustain themselves properly without meat?

Can everyone afford to ride bikes or catch public transport?

What if the public transport system is not very efficient?

What if a person has a large family which they need to transport around?

What will be the impact on farmers if everyone stops eating cow and sheep products?

What green alternatives are there, like kangaroo, so that people can still eat red meat?

Do Australian's have problems eating their coat of arms?

Can our roads accommodate increased bicycle traffic?

How can government policy help?

Can government policy really change behaviours?

If an issue is considered important, then more detail is gathered. The more detail, the more problems are revealed and the more stakeholder interests are involved. The more stakeholders, the more conflicts of interest arise, which creates more problems.

And so on, and so forth.

So eventually, the simple matter of a bike ride becomes a representation for something more important and complex...

Diversity →		Multiple parties, each having only some of the relevant knowledge	Multiple parties, conflicting in values/interests
Complexity ↓	Single party		
Both problem and solutions known (Heifetz Type 1)	Tame problem 1 Problem: get from A to B Solution: ride bike	2	3
Problem known, solution not known (relationship between cause and effect unclear) (Heifetz Type 2)	4	5	Wicked problem 6
Neither problem nor solution known (Heifetz Type 3)	7	Wicked problem 8	very wicked problem Problem: climate change, transport planning, agribusiness, etc. Solution: ????

increasing importance = detail = complexity

What I am demonstrating here is an addition to a hypothesis Michael Smithson

Where intellectual enquiry exists, so too does uncertainty and complexity: the universe isn't uncertain, we are. Uncertainty is therefore a social construct. (Michael Smithson)



Where something holds value for humanity or a section of society, intellectual enquiry exists, and so too does uncertainty complexity. The universe isn't uncertain; we are by virtue of a desire to engage with something that is valued or important. Uncertainty is therefore a social construct as a result of the pursuit of answers, outcomes or a changed situation which is alternate to or does not exist in our current conscious or reality. Stability is certain and simple, change is uncertain and complex.

(Cat Stephens)

As such, *ideally* policy-making should not be a *reactive* mechanism for dealing with complexity. Rather it should be a *proactive* mechanism for

- identifying issues that are important
- gathering more detail
- acknowledging complexity
- identifying and planning for knowns (eg: problems, stakeholders, resources and limits on capacity)
- identifying and planning for unknowns (eg: changes in political and social landscape, possible future developments that might impact scenario planning)
- producing coherent but adaptable responses
- monitoring the effectiveness of policy responses and being willing to change tact

This attitude was reflected in the presentations last Wednesday. Much of the suggested policy responses were based on long-term implications of the issue at hand. Both short and medium term actions were suggested and many of these had potential for immediate implementation. But the value lay in the fact that the actions were directed towards preparing for future uncertainty: preparing the current system for unknown pressures (a feature of both the Refugees and Ageing groups), shaping foreign relations according to possible trajectories of future international relations (the China group and Refugees group) and planning for ongoing monitoring of the situation, with policy alternatives to enhance flexibility were policy mechanisms geared towards strengthening the capacity of government to deal with complexity and uncertainty in the future.

I was speaking to several members former public servants and policy 'wonks' in my family about the policy options that had come out of my Refugees group. They were impressed with both the innovation and practicality that was evident in my group's work. Not being able to make an informed opinion about how policy making occurs in the public service, I

cannot presume that planning for uncertainty and complexity does not feature. But from what I have learnt in this course, it seems that the general trend for decision makers is to pay attention to what they know rather than what they don't know.

If indeed this is the case, then I can say with confidence that better policy will come out of a willingness to embrace complexity and uncertainty in policy and decision making, whether at a local council level or in the highest levels of international institutions. As I stated in the introduction to the first part of my learning portfolio:

“Modern civilisation today faces a huge web of complexities – social, economic, environmental, political, technological challenges that arise on a global scale and, I would argue, have arisen for the most part out of humanity's own design to advance, evolve and better itself in general. The ultimate consequence of these efforts is that, in 2009, we live in an increasingly interconnected world with global, shared and, of course, complex challenges to face. The decisions made in respect of these challenges also have global consequences, and this **places a greater onus on decision makers to confront issues in honest acknowledgement and acceptance of the inherent complexities therein.**”

Being a part of policy making in this group project was of course challenging. It involved the diverse ideas of a group of vibrant, intelligent and (admirably!) stubborn people, convinced of their beliefs but also willing to learn from each other. Together we considered a vastly complex issue, with a great many stakeholders, but one that indeed has global consequences. But we worked hard at producing an outcome because we believed in the importance of addressing the issue, complexity, uncertainty and all.

I realise that policy makers facing this and other important issues face the same and many more challenges. But I am also convinced that by involving the ideas of many people from different fields and whole-heartedly embracing complexity and uncertainty, they can and *must* confront the greatest challenges of the modern world.