

Is Development Wicked?

Using a Wicked Problems Framework to Examine Development Problems¹

NZADDs Working Paper

Joanna Spratt

Introduction

“Water and sanitation is our job here, aiming to not take too much off the water lens, allowing for future population growth and not taking any water that is contaminated. But that’s not possible because the lens is contaminated already. And the future population growth projections look bad - a doubling of current population in a few decades. We could pipe from a northern island but that is political and we’ve been given strict instructions to not even go there, because the whole thing is so political if we go there we’ll blow it out of the water. And then there is the challenge of changing long-term behaviours regarding the use of the sea for the toilet and other practices around water and sanitation, none of these behaviours are easy or simple to change, and this will take time. Then there are the land ownership issues to deal with too and if we try to address those we won’t get anything done for the next five or more years. And the need is urgent. They had cholera five years ago. Now they’ve got high rates of Hepatitis A, diarrhoeal diseases and skin infections, and these are all associated with water and sanitation. We’ve read stacks of past analyses, feasibility studies, recommendations, from years before but nothing has changed. In the end, what we’re probably looking at is the quick fix – some small-scale desalination plants, taking into account the past failures with desalination plants.”

The above is a development worker’s description of the challenges they faced in their task to improve water and sanitation in a particular country. It is also a partial description of a wicked problem.

The idea of wicked problems dates back to the late 1960s and early 1970s (Churchman, 1967; Rittel and Weber, 1973). Rittel and Webber (1973), two urban planners, recognised the limitations of the dominant way of addressing complex human problems: systematic and rationale analysis followed by planned interventions no longer had the power to deal with human problems that were resistant to change and prone to fragmented responses. Rittel and Webber called these sorts of problems ‘wicked problems’^{2,3} and their presence has just as much, if not more, salience today, particularly for those of us concerned with building a world where all people enjoy the same opportunities.

In this Working Paper, I outline Rittel and Webber’s characteristics of wicked problems and then apply these characteristics to development. Following this, I summarise ideas from the literature about how to approach wicked problems. I then draw out key insights from examining development problems as

¹ NZADDs working papers do not necessarily reflect the views of NZADDs or its Steering Committee members. Views expressed within NZADDs papers are solely those of the paper’s author(s). NZADDs Working Papers explore ideas and issues relevant to NZ aid and development work. Your thoughts and comments on this Working Paper are welcomed. Send them to: admin@nzadds.org.nz

² A warning note: for those who like to use approaches based on strengths, this problem-based approach can provide some discomfort.

³ Wicked problems are closely related to the area of complexity. This document sticks solely to the concepts of wicked problems, as outlined by Rittel and Webber (1973). However, a vast range of reading on complexity thinking is available and interested readers can find some starting suggestions at the end of this document.

wicked problems. Finally, I suggest questions we can ask about the international aid and development work that NZ and NZers do.

What Are Wicked Problems?

First, it is important to state that not all problems are wicked problems. A non-wicked problem is known as a 'tame' problem. A tame problem has: a clear definition, a clear solution or discrete set of alternative solutions, a solution or solutions that can be achieved and assessed as true or false, similarities with other problems that can all be solved in the same way, and a solution or solutions that can be easily tried and abandoned with little harm done (Conklin, 2005). Tame problems are not necessarily easy – they can be challenging and complex. For example, constructing a new hospital is a tame problem. This is a multi-year project with many different elements to manage. It is not simple or straight forward. Similarly, developing a new medicine is a difficult and complicated problem. Yet neither of these problems are wicked problems, as they do not conform to the ten, interconnected characteristics of wicked problems as outlined by Rittel and Webber in 1973. These are described below.

1. There is no definitive formation of a wicked problem. It is not possible to fully describe wicked problem separate from ideas of how to solve it. As Rittel and Webber state: *"One cannot understand the problem without knowing about its context; one cannot meaningfully search for information without the orientation of a solution concept; one cannot first understand, then solve"* (1973, p. 162). Essentially, trying to arrive at a definitive definition of a wicked problem is part of the problem.

2. Another of Rittel and Webber's characteristics that every wicked problem is a symptom of another wicked problem. This highlights the interconnectedness of wicked problems and the challenges in arriving at a definitive formulation of the problem.

3. Wicked problems have no stopping rule. There is always something more that can be done to improve a wicked problem. This means that people stop addressing wicked problems because they run out of resources or time, not because the problem is completely solved. There is no stopping point.

4. Solutions to wicked problems are not true or false they are good or bad. In the case of wicked problems there are no absolute rights or wrongs, such as there are with a chemical formula or the construction of a building. Wicked problems involve a number of different stakeholders who are able to, and interested in and/or entitled to, assess various possible solutions. These varying assessments will be based on each individual's values and goals. So judgements of potential solutions will be assessed as good, bad, better than or good enough.

5. A "discrepancy representing a wicked problem can be explained in many ways... and the choice of explanation determines the nature of the problem's resolution" (Rittel and Webber, 1973, p. 166). For example, crime on the streets can be explained by too few police, too many criminals, weak laws, drug use, police doing the wrong things, not enough prison cells to house criminals so they get lighter sentences or let out early, etc. It is up to the individuals involved to make a judgment about which explanation to choose and therefore which solution to take. This judgment will rest on each individual's world-view and experience.

6. There is no immediate or ultimate test of an implemented solution to a wicked problem. Taking action to address a wicked problem generates consequences that can spiral off in unknown directions for an unknown period of time. It is not possible to anticipate these consequences and so it is not possible to make an accurate assessment of the outcome or impact, particularly not in the timeframe immediately following the action taken.

7. Every solution to a wicked problem is a 'one-shot operation': every attempt is significant. This relates to the eighth characteristic of wicked problems, that...

8. ...the planner has no right to be wrong. In chess or engineering design, it is possible to try a solution to see what happens. There are no significant adverse effects because of your attempt. In the world of science, the idea is to produce a hypothesis that can be tested and refuted. With wicked problems *“the aim is not to find the truth, but to improve some characteristics of the world where people live”* (Rittel and Webber, 1973, p. 167). It is not possible to learn by trial and error because every action taken will have consequences, and these may manifest themselves over a long time period. As Rittel and Weber state *“One cannot build a freeway to see how it works, and then easily correct it after unsatisfactory performance”* (Rittel and Webber, 1973, p. 163).

9. Every wicked problem is essentially unique and novel. Wicked problems are both a component and a product of the complex context within which they exist. They are context-specific. While some aspects of a wicked problem may be the same as other wicked problems, there will be at least one distinguishing factor that makes it quite different from any other wicked problem. Even if things look the same at first, you can never be certain that any wicked problem is the same as another.

10. This relates to the final characteristic, that **wicked problems do not have an easily describable ‘set’ of potential solutions or actions to take.** Because wicked problems are unique and novel so are the potential actions that could be taken to address them. There are no criteria available that show that all potential solutions to all wicked problems have been tried, with neat lessons learned for application elsewhere. There are no rules for the correct solution, as there are in chess or in programming a computer.

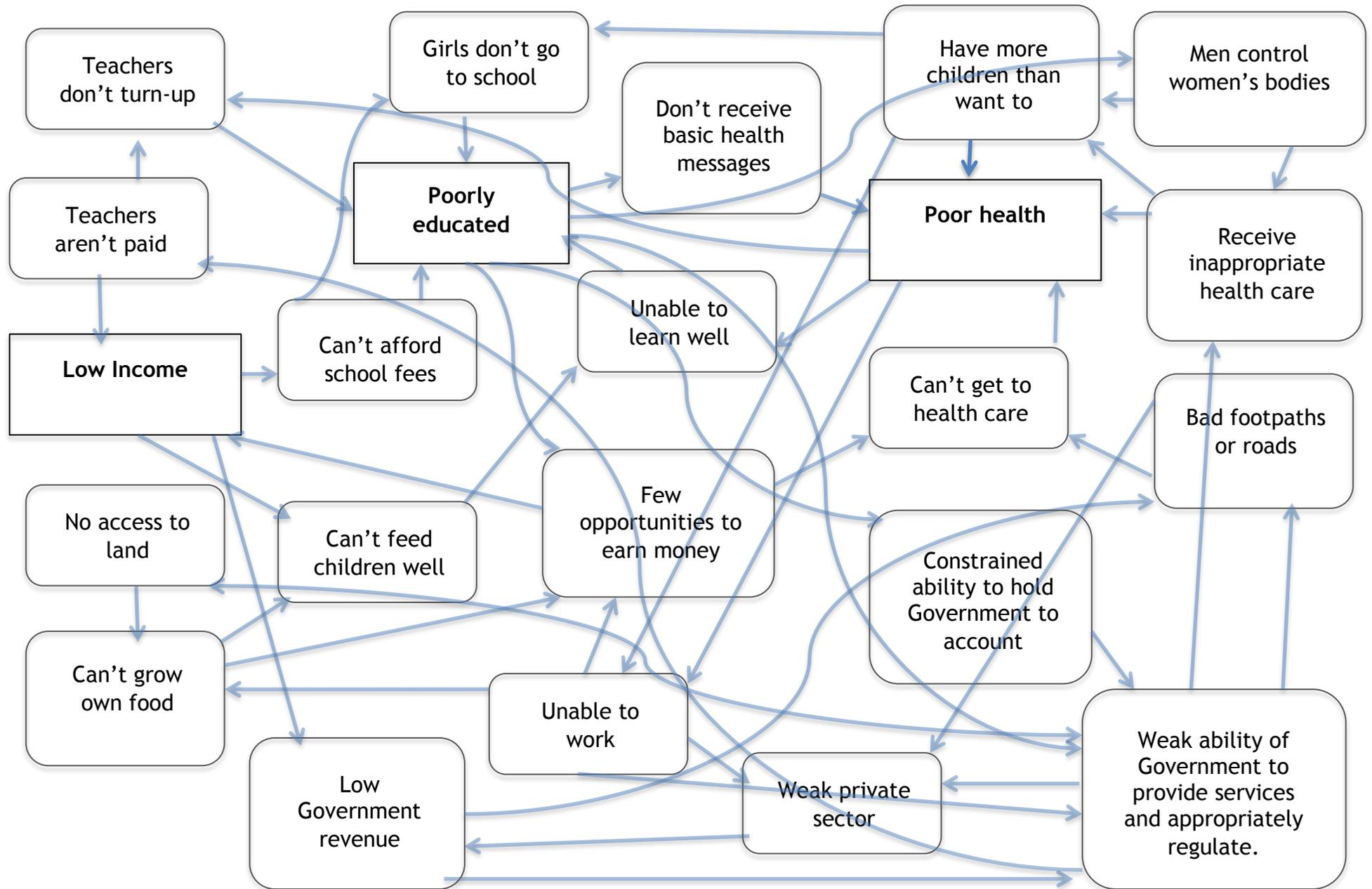
Problems can have elements of both tameness and wickedness. There may be a clear solution to a problem but just how to implement it could be full of wickedness. While there are some elements of tameness in development problems, such as the application of scientific knowledge or technology, the geographical, cultural, resource and power differentials in development problems, combined with the challenge of highly connected problems, make development problems quite wicked, as outlined below.

Development Problems are Wicked Problems

Development, in general, is a wicked problem. The question of exactly how we take action to build societies and nation states where all people enjoy a basic quality of life is complex, not to mention finding agreement on what a ‘basic quality of life’ consists of. A deep analysis of these questions is beyond the scope of this Working Paper. The aim in this section is to illustrate how development is a wicked problem.

The concept map below significantly simplifies development in order to begin to be able to illustrate the complexity of development. The concept map uses the Human Development Index (HDI) indicators of income, education and health to represent development. It is not possible to show diagrammatically all the linkages between the components of life at the levels of individual, family, community and country, and how challenges at each link contribute to, or constrain, progress towards improved quality of life. Similarly, not all the challenges in the concept map below are the same for all countries. The concept map is a simple representation of some of the common challenges that all countries face, or have faced, as they strive to improve the quality of life of their citizens.

This concept map illustrates the first, second and third characteristics of wicked problems – problems where a definitive solution cannot be found, where the challenges are interconnected and where there is no stopping point or final resolution. This concept map also highlights the fifth characteristic, that different people with different world views, values, knowledge and experiences will choose different problems and solutions, depending on their world views, values, knowledge and experiences.



Over 60 years of global action to build a human society where, at the least, all people enjoy an adequate income, and good education and health, has shown us that development involves challenges that defy simple definition and solution. Development problems resist change and our responses to these problems tend to be fragmented: we categorise our actions into thematic areas, as if human beings do this with their lives – health, education, income, transport, communications, governance – the list is long. Resistance to change, definition defiance and slippery solutions are the hallmarks of wicked problems. Below I describe how development problems, as illustrated above, conform to the ten characteristics of wicked problems.

1. No definitive formulation of the problem.

As the concept map above shows, if you were asked to precisely define the problem of trying to improve incomes, education and health, you would find it difficult. It is not until you engage with the problem and begin to try to address it, that you begin to understand it. You may decide to focus on one area but then realise that it is actually a different one that requires attention.

2. Every wicked problem is a symptom of another wicked problem.

Take any box in the concept map above and you can see that it is connected to at least one other box. Each of these boxes represents a wicked problem in itself, and is connected to others. For example, if we take the box of 'poor education', we can link this back to 'low income' through the problem that children have a physically constrained capacity to learn well because they are not receiving the nourishment they need to learn to their maximum because their parents cannot afford adequate food. Similarly, if we take the wicked problem of a weak private sector we can link this to the wicked problem that people have poor health and are therefore not able to work, or back to the wicked problem of poor roads and footpaths meaning people cannot reliably move around, including with their goods for market.

3. No stopping rule.

As we know from our own experience in New Zealand, there is no end to attempts at improving people's quality of life. There is always something more to do. There is always a group of people who are missing out on equity in relation to income, education, health and other opportunities. This is the same across the world, regardless of the country: there is always more that can be done to improve the wellbeing of people, and to achieve equality and equity. As the concept map above shows, transport to a clinic can be improved so people can physically reach it but then the issue of the quality of care may need to be addressed, and so on.

4. Good or bad, not true or false.

In trying to arrive at a solution or approach to improve income, education and health, it will not be true or false. This characteristic is not about the basics of scientific evidence. It is clearly true that when people eat an adequate diet their body is nourished and they are more likely to be healthy. This characteristic of wicked problems describes that there is no true or false in the *how* of educating people about their diet and translating this knowledge into the action of eating a wide range of healthy food. Every economic, political, cultural and social context will involve different factors and perspectives to add into the equation. For this reason, solutions or approaches for wicked problems can only be assessed as good or bad (or somewhere along a continuum between the two). There is no one true or false answer for development problems.

5. An array of different perspectives.

Development involves a wide array of different perspectives on how the world works, the nature of human beings and society, how change happens and what is important and

what is not. Countries are comprised of people who hold a variety of identities, such as religious, political, ethnic or gender, and who have varying (and sometimes competing) needs, experiences and knowledge. This is within a country. Add to this the fact that development involves geo-strategic politics and assistance to developing countries from people of other world-views, cultures, experiences and knowledge-sets. These varying identities, experiences and knowledge-sets combine to bring a diverse array of perspectives to any development problem. All these perspectives must be taken into account when intervening into development problems.

6. No ability to immediately test results or ultimately judge the impact of an action taken.

Development takes time: a long time. The impacts of the things we do to improve incomes, education and health are not necessarily testable in the immediate future. While it may be possible to measure how many women came to a health clinic and received contraception, it is not immediately possible to assess what impact this has on her life. Will she use the contraception? Will she use it correctly? Will it lead to her having fewer children and being able to get a job because she has free time to work for money rather than raise children? And how long will this take – a year, more? Perhaps she attended budgeting and floral-arranging courses just after starting to use contraception. If she gained a job, was it the education or the contraception that enabled her to gain employment? Or a combination of both? The outcomes and final impacts of the things we do in the name of development are extraordinarily difficult to judge. Indeed, outcomes and impacts may have multiplying properties that spread across an individual's entire lifespan.

7. Every attempt is significant; No 'one-shot' operation.

8. No right to be wrong.

Development problems are wicked problems because they involve action that involves human beings in specific political, cultural, social, geographic and economic contexts. This means that every attempt we make has an impact on the lives of individuals and families – every attempt is significant. To return to the concept map above, if we take action to improve people's access to land, we are not in a position to get this wrong. The action taken has to be as good as we can possibly make it, because the consequences of a 'bad' action could reverberate throughout individual's and communities' lives for many years to come, perhaps in the form of being subsequently run-off the land or caught-up in retrospective compensation payments, or having their produce stolen.

9. Unique and novel.

Development is context-specific. What works in one community or country may not work in another. We can, and must, draw on evidence of what works. We need to apply the knowledge gained from years of scientific inquiry. Yet in applying this evidence and knowledge, we also need to give equal priority to the specific context and the variety of perspectives on a particular problem within that context. While there are similarities, each political, social, cultural, economic and geographical context will present different barriers for families to overcome in getting their children to school, getting to health care, and obtaining and sustaining an appropriate way to make enough money. Each development problem is unique and novel.

10. No set criteria or rules.

Related to this, and as stated above, there are no set rules or criteria for how to approach development problems. Context, perspectives and resources all differ. We have not yet 'solved' the challenge of ensuring all people, everywhere, can get an adequate income, and enjoy good health and the benefits of a quality education. We do not know what works everywhere, all the time. We are not in a position to make or

apply a set of criteria for solving development problems. That is why they are wicked problems.

How to Approach a Wicked Problem?

There are different ideas as to how to address wicked problems (wicked problems are never 'solved' – the no stopping rule). Rittel and Weber do not provide answers as to *how* to address wicked problems, yet they do highlight that a radically different approach is necessary. Modern-day commentators have arrived at the same conclusion and ideas have emerged as to how to address wicked problems. I outline some of these ideas below.

Jeff Conklin (2005) describes how most often we approach wicked problems by either studying them, or attempting to 'tame' them. Our desire to do this stems from the fact that we are accustomed to thinking of every problem as one that can be solved through a step-by-step approach whereby we systematically define the problem, explore potential solutions, implement a solution and test the result. Conklin argues that wicked problems require an action-learning approach.

“Wicked problems demand an opportunity-driven approach; they require making decisions, doing experiments, launching pilot programs, testing prototypes, and so on. Study alone leads to more study, and results in the condition known as ‘analysis paralysis,’ a Catch 22 in which we can’t take action until we have more information, but we can’t get more information until someone takes action.” (Conklin, 2005, p. 10)

Conklin’s descriptions of how we attempt to manage wicked problems by ‘taming’ them will be familiar to all readers. Conklin argues that we attempt to tame wicked problems in at least six key ways. Three of these are highlighted in the example below.

One taming strategy we use involves *“locking down the problem definition”* (Conklin, 2005, p. 11), meaning that we simply choose a problem definition and no matter what evidence pops-up to the contrary, stick with it. This relates to another taming strategy of defining the problem by establishing indicators with which to measure the solution. For example, if we are trying to deal with the challenge of HIV, we can define the problem as one that involves the lack of testing and treatment facilities. People don’t know that they are HIV positive because they can’t get tested yet they don’t want to come forward to get tested because there is no treatment available. If we lock down the problem definition as this, our response will be to improve testing facilities and increase the availability of treatment, measured by the number of tests done and the number of people receiving treatment. This then confines how we approach the challenge of HIV and how we measure our efforts to take action. If we have been successful in improving testing and treatment, we can then declare that the problem is solved. Declaring that the problem is solved is the third way we attempt to tame a wicked problem, although this taming approach often requires somebody in a position of authority to announce that the problem has been addressed.

In the case of HIV, using these means to tame the wicked problem means we have neglected the issues of how to prevent HIV infections, related to power in sexual relationships, whereby people can be infected through rape and coercion, the use of sex to gain access to goods and cash, the fact that people enjoy sex and get caught-up in the moment, and a myriad of other associated issues. Attempting to tame wicked problems means that at best we fail to take meaningful action that can be sustained over the long-term, and at worst we can exacerbate the problem further.

Conklin's approach to addressing wicked problems involves overtly recognizing that the problem is wicked and then achieving coherence in approaching the wicked problem. Coherence involves working collaboratively with all those involved in the problem to agree on the way forward - building a shared understanding of what the problem is (ie: everybody involved agrees on the problem definition) and a mutual commitment to applying an agreed solution. This process necessarily means that all those involved are able to share their perspective and be listened to, to the point where each person has an understanding of the wicked problem from the variety of other individuals' perspectives. From this shared understanding, an agreement on the appropriate problem definition can be arrived at, leading to a subsequent choice of the best possible solution. As Conklin (2005, p. 19) so clearly states it:

“Coherence means that stakeholders have shared meaning for key terms and concepts, that they are clear about their role in the effort, that together they have a shared understanding of the background for the project and what the issues are, and that they have a shared commitment to how the project will reach its objectives and achieve success. Coherence means that the project team understands and is aligned with the goals of the project and how to reach them. Coherence means that a wicked problem is recognized as such, and appropriate tools and processes are constantly used to ‘defragment’ the project. With increased coherence, more collective intelligence becomes available to deal with change and complexity. Coherence means that despite social complexity there is a sense of ability and confidence in crafting shared understanding and negotiating shared meaning.”

Nancy Roberts (2000) also promotes the use of collaborative approaches to address wicked problems, but goes further to offer two other approaches: authoritative and competitive. Roberts argues that authoritative approaches can be useful in wicked problems when power to choose a suitable definition of a wicked problem and its solution lies in the hands of a few people, or can be given to a group or entity who can take action. An essential ingredient in this approach to wicked problems is that stakeholders concerned with and/or impacted on by the problem agree to allow this group of people to manage the problem (Australian Public Service Commission, 2007). This sort of approach is common in government, whereby a small group of experts are tasked with the challenge of assessing and managing a certain situation. This approach can be efficient and make good use of resources.

Roberts' (2000) second option for addressing wicked problems is using competitive approaches. Roberts sees competitive approaches as being useful when power is dispersed and contested. This approach involves a search for power, influence and/or market share. A win-lose situation is the expected outcome. The benefits of competition mean that innovation and creation of new ideas can occur, as well as potentially efficient uses of resources in addressing a problem.

Due to their disadvantages, Roberts' (2000) authoritative and competitive approaches do not offer particularly satisfactory approaches for truly wicked problems, such as development problems. They may be better for wicked problems that have stronger elements of tameness in them. The main drawback of authoritative approaches is that allowing a small group of experts to make decisions based on their area of knowledge and experience often relies solely on their technical knowledge. Wicked problems are by their nature context-specific, involving many different perspectives. Preventing a wide range of voices to be involved in the choice of problem definition and approach can lead to a 'bad' choice of solution, which means the 'one-shot' for addressing the wicked problem does not make the best attempt possible. The resulting challenges that arise will then require further intervention. Along with this, even if people initially acquiesce

to allow a small group of individuals to manage the problem, they may become disenchanted and alienated, particularly if the outcomes are not what they had hoped for. For example, allowing a group of education specialists to make decisions about how to increase school attendance may lead to decisions that do not include the perspectives of parents or children. It may be that there are very specific challenges that families face in getting their children to school that education specialists have no idea of, particularly if they do not come from the particular country or area.

Competitive approaches to wicked problems can consume resources, through competing, that are better spent on addressing the problem. Conflict and stalemates can occur (Australian Public Service Commission, 2007), as well as alienation of those who are unable to compete but who are affected by the problem. Roberts' (2000) analysis of power neglects that often when power is dispersed and contested, the interests of those who are in a position to compete may not match-up with the best interests of those most harmed by the problem. This is a central concern of development: ensuring that the most vulnerable and powerless are supported and engaged in processes that impact upon them. Further to this, in development problems conflicts often already exist, particularly based on identity. As Rittel and Weber state (1973, p. 168): "*many societal processes have the character of zero-sum games. As the population becomes increasingly pluralistic, inter-group differences are likely to be reflected as inter-group rivalries of the zero-sum sorts.*" Win-lose approaches create losers. In complex social challenges where improved quality of life and expanded equity are desired results, competitive approaches will, at best, offer little improvement. At worst, they can exacerbate the problem and lead to social conflict.

For these reasons Roberts' (2000) (and Conklin's (2005)) collaborative approaches appear to offer the best course of action for truly wicked problems. Roberts (2000) outlines how collaborative approaches can be useful in wicked problems where power is dispersed but not contested – there are multiple power-holders involved in the wicked problem. Roberts' collaborative approaches take a win-win perspective and a wide range of stakeholders are involved in jointly choosing a potential definition and solution(s) to the wicked problem. Collaborative approaches are helpful when sustained behavior change is necessary (a component of the majority of wicked problems) (Australian Public Service Commission, 2007). For development problems, power is often contested, yet a collaborative approach offers an improved approach to competition in working through the contest at the same time as protecting those who are less able to wield their power to win them the resources they need.

Weber and Khademian (2008) also argue the benefits of a collaborative approach. These two authors outline the value of networks in addressing wicked problems, as defined as "*the enduring exchange relations established between organisations, individuals and groups*" (Weber and Khademian, 2008, p. 335). These networks are, at their heart, collaborative efforts. Networks bring people from a diversity of backgrounds, perspectives, experiences and knowledge-sets together. Weber and Khademian focus on the importance of collaborative capacity building skills in our attempts to address wicked problems. Conklin (2005) also highlights the need for skills and tools to craft a shared sense of meaning amongst all those involved in a wicked problem.

Weber and Khademian (2005) outline that the "*fundamental challenges posed by wicked problems place critical emphasis on the tasks of knowledge transmission and integration*". These knowledge transmission tasks require the fundamental ability to forge and maintain constructive relationships across diverse actors with diverse interests and goals, along with the ability to communicate, and "*taking what is known among network actors, engaging the collaborative network dynamic so that new information is developed,*

and putting it all together into a practical, useful database for problem-solving purposes (Weber and Khademian, 2008, p. 344).

The Australian Public Service Commission (2007) bases its call for new skill sets on a comprehensive analysis of the literature on wicked problems. The conclusion they arrived at was that the majority of the literature advocates a collaborative approach to addressing wicked problems. In applying collaborative approaches, the Australian Public Service Commission outlines several areas where things need to be done differently within and across the institutions of government, (which can also be applied to other organisations). Collaborative approaches to wicked problems require:

- holistic and systems thinking and strategies
- innovation, flexibility and adaptability
- building a shared learning culture
- working across organizational and departmental boundaries (which requires supportive systems, budgets, skills and culture to enable this)
- the ability to tolerate uncertainty and take a long-term focus
- engaging a wide range of stakeholders and communities in meaningful ways
- reconfiguration of accountability frameworks and measures; and
- expanded or new skills sets for employees, including an improved understanding of behavior change.

This latter point – skill sets for employees – echoes the calls of Conklin (2005), and Weber and Khademian (2008) in that staff would need to be able to:

“facilitate cooperation and partnerships, build commitment to a shared agenda, manage and share information, manage change, engage stakeholders, and resolve conflict’ (Management Advisory Committee, Connecting Government, p. 53). People with connecting skills will be increasingly valued—people who can build up relationships across the public, private and non-profit sectors and leverage these relationships to build networks of mutual benefit. There is also a need for policy makers to be aware of and apply behavioural change theory.” (Australian Public Service Commission, 2007, p. 33)

The benefits of collaborative, or network, approaches to addressing wicked problems include greater participation and ownership by all involved, which contributes to the implementation of more comprehensive and effective solutions. Sharing of resources can also occur, meaning the burden does not fall on a few key stakeholders. Beyond this, as the majority of commentators view collaborative approaches as the *only* approach to wicked problems, and due to the challenges involved with Roberts’ (2000) authoritative or competitive alternatives, the costs of not taking collaborative approaches to wicked problems are high. Resources will be wasted and damage potentially done if we continue to attempt to tame wicked problems. Arguably, our lackluster record in achieving a good quality of life for all people is a result of inadequate approaches to wicked problems. We can’t afford to continue to use these inadequate approaches if they are not reaping the benefits we would like to see.

Having said this, meaningful collaboration to build shared understandings and mutual commitment, across a wide range of people, is far from simple. Attempting to manage this complexity in a way that leads to more effective interventions into wicked problems requires significant investment of resources to share information and create shared meaning, as well as an expansion of abilities and skills amongst the people involved in addressing wicked problems. For many organisations, it involves a fundamental shift in culture and therefore systems, budgets and staffing. Without these investments and

changes, collaborative approaches can disintegrate into conflict and stalemate (Weber and Khademian, 2008).

What Does this Mean for NZ Aid and Development Work?

There are several key insights that emerge by examining development problems as wicked problems. Most of these are already well-known by development practitioners but arguably the way we go about *doing* things does not reflect this knowledge.

- Relationship and people skills are crucial in development. Too often we focus on the technical ability of staff and development practitioners. Yet in dealing with development problems relationship and people skills are essential, such as the ability to make connections, build and maintain relationships, communicate cross-culturally and cross-linguistically, manage sometimes-conflicting sets of information and knowledge, build shared understandings and negotiate conflict.
- The interconnectedness and resistance of development problems remind us that development is a long-term endeavour. The two to three to four-year project (and political) cycles are too short to achieve any kind of meaningful social change.
- The best intentions and skills can be put to use designing a policy, programme or project, but these are often efforts at taming the problem. Once development practitioners begin to intervene in the particular problem to be 'solved', the situation evolves, other problems emerge and things do not look like they did when the design was conceived. Interventions in development problems need to have space for action-learning, adaptability and flexibility, rather than strict adherence to a pre-formed logframe or other project tool.
- Context matters. Development involves working across the diversity of humanity. What works in one place may not work in another. It is important to understand the local context and ensure interventions respond to that context and are appropriate in it.
- Building shared understanding of development problems and agreement on an intervention that is 'good enough' takes time and resources. And it is important to invest at this early stage to ensure that the intervention is as good as it can be because development is about human lives: we can harm people if we get it wrong. We need to invest much greater effort, focus and resources into engaging with communities, in all their diversity, and developing good interventions that have the greatest potential to positively change the situation.
- Risk is inherent in development problems. Because we do not fully understand the problem until we begin to intervene, not all risks can be identified and mitigated. Our approaches to managing risk, which tend to fall-back on maintaining control (of a situation we understand little about) tend to increase compliance costs and distract from addressing the problem. Building flexibility and adaptability into interventions may be a better approach to dealing with risk.
- Assessing the outcomes and impacts of development problems, and attributing our efforts to any given social change, particularly over the long-term, is challenging. Often evaluations are undertaken before a development intervention has even finished. It is impossible to assess the potential on-going consequences of interventions, both good and bad, in these sorts of evaluations. Greater thought needs to be given to how we assess success and failure of development interventions, and we need to build learning into our organisational structures.
- Development problems are resistant to change, prone to fragmentation and extremely difficult. They are some of the greatest challenges facing humanity.

We need to develop humility in what we are able to achieve. While working towards visionary goals and aiming high are laudable, being a little less ambitious about what can be achieved and a bit more humble about what we know, may make us more successful.

Finally, given that most of these insights are not new, perhaps the most important insight is that we must change the way we approach development problems if we wish to have greater success in our interventions. This is no easy ask.

More Questions Than Answers?

For most readers, these insights and the discussion thus far may raise more questions than provide answers. Providing us with good questions to ask about our work may actually be the most significant contribution of exploring development problems as wicked problems. Exactly how to deal with the wicked problems of development is almost a wicked problem in itself. While I do not wish to fall into the 'taming' strategy of perpetual study, at this point I believe offering more questions can contribute to a wider exploration of how well we manage the wicked problems of development.

1. What tools do we have to explore the problems that confront us and assess whether they are tame or wicked, or a mix of both?
2. What ways do we cope with wicked problems: are we caught-up in endless study or do we attempt to tame wicked problems by imposing set definitions or solutions, or by confining them with measurement, or doing what we have always done with similar problems in the past?
3. How can we avoid taming wicked problems in order to think and act more holistically and systemically, over the longer term?
4. How do we ensure that we engage in a meaningful way with all the people who are involved in, or impacted by, the problem?
5. How do we ensure that our interventions are as good as they can be? Do we allocate enough resources for the early stages of policy, programme or project design?
6. What competencies do our staff have for understanding behaviour change, building relationships across different groups of people, facilitating the sharing of different perspectives, building shared understandings and mutual commitment, and managing and sharing information?
7. How do our organisational culture, systems, budgets, results frameworks and leadership support staff to do the above things?
8. How do we approach risk and uncertainty in our work? Do we respond by increasing control and tightening the space for action?
9. How do we build space for innovation, flexibility and adaptability into the things we do?
10. How do we approach the idea of results and assessing our interventions?

Conclusion

Development is complex: “... the questions [faced by] aid agencies ... are perhaps the most complex and ill defined questions facing human kind. (Ellerman, cited in Roper and Pettit, 2002, p. 12)”. Development problems are wicked problems. They involve a high degree of uncertainty. Each problem is linked to another, and is unique and novel even if at first glance they look alike. There are multiple ways to define development problems and their potential interventions, and any intervention will morph the current situation and have effects that reverberate in ways we may not understand. Making an ultimate assessment of the final impact of any chosen solution is extraordinarily challenging. If we are honest with ourselves, we cannot state with 100 percent assurance that any one intervention in any particular context will be the definitive solution to a particular

development problem. In a world of uncertainty one thing can be assured. Certainty in international aid and development work must be treated with the utmost caution or risk harming those that we seek to assist. While the problems may be wicked, we are in a position to ensure our interventions are not.

References

Australian Public Service Commission, 2007, *Tackling Wicked Problems: A Public Policy Perspective*, Commonwealth of Australia: Canberra.

Churchman, C. W., 1967, *Wicked Problems*, Management Science, Vol. 14, No. 4, Application Series (Dec), pp. B141-B142.

Conklin, J., 2005, Revised 2008, *Dialogue Mapping: Building Shared Understanding of Wicked Problems*, p. 10, Accessed on 30 July 2010 at <http://www.cognexus.org>

Ellerman, cited in Roper and Pettit, 2002, cited in Ramalingam, B. et al., 2008 (2nd Ed), *Exploring the Science of Complexity: Ideas and Implications for Development and Humanitarian Efforts*, Working Paper 285, Overseas Development Institute: London, p. 12.

Rittel, H., and Webber, M., 1973, *Dilemmas in a General Theory of Planning*, Policy Sciences 4, pp. 155-169.

Roberts, R., 2000, *Wicked Problems and Network Approaches to Resolution*, International Public Management Review at <http://www.ipmr.net>, Vol. 1, Iss. 1.

Weber, E., and Khademian, A., 2008, *Wicked Problems, Knowledge Challenges, and Collaborative Capacity Builders in Network Settings*, Public Administration Review, March/April.

A Starting Point for Reading about Complexity Thinking

[Aid on the Edge of Chaos](#) provides “the latest, up-to-date information... related to complexity sciences and international aid”.

[Capacity.org](#) has a useful summary of complexity thinking with other resources.

Ramalingam, B. et al., 2008 (2nd Ed), *Exploring the Science of Complexity: Ideas and Implications for Development and Humanitarian Efforts*, Working Paper 285, Overseas Development Institute, London. Download this paper (pdf) [here](#).

Jones, H., 2011, *Taking Responsibility for Complexity: How Implementation Can Achieve Results in the Face of Complex Problems*, Working Paper 330, Overseas Development Institute, London. Download this paper (pdf) [here](#).