

**Navigating ‘wicked’ problems in development**

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Articles and blogs

Last month saw the publication of an [unusually frank admission](http://www.imf.org/external/pubs/ft/fandd/2014/09/blanchard.htm) by the International Monetary Fund’s Chief Economist, Olivier Blanchard. Blanchard argued that his profession needs to pay more attention to ‘dark corners’ and challenge dominant methodologies – and stop assuming that the world and its economies are much simpler and more linear than they are in reality.

**Challenging dominant methodologies in the development sector**

Although our focus was wealth creation and not macroeconomics, the starting point in the Department for International Development (DFID) [Complex Systems Tools project](http://r4d.dfid.gov.uk/Project/61065/Default.aspx), which Miguel Laric, John Primrose and myself ran over the last two years, was identical to Blanchard’s.

One of the motivations for the work was DFID’s plan to [double its expenditure on wealth creation from 2013 to 2016](http://icai.independent.gov.uk/wp-content/uploads/2014/05/ICAI-PSD-report-FINAL.pdf). For this expansion to be successful, the methods and approaches being used for design and delivery would need to be ‘fit for purpose’. With this in mind, we sought ways for DFID staff working on wealth creation issues to better understand and navigate the ‘wicked’ or complex problems they would inevitably face.

Wicked problems are difficult or impossible to solve because of incomplete, contradictory, and changing requirements. These are often difficult to recognise. Moreover, interdependencies mean that the effort to solve one aspect of a wicked or complex problem may reveal or create other problems.

Here’s a more in-depth comparison between wicked and tame problems:

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| **Characteristic** | **Tame problems** | **Wicked problems** |
| **Problem formulation** | The problem can be clearly written down. The problem can be stated as a gap between what is and what ought to be. There is easy agreement about the problem definition. | The problem is difficult to define. Many possible explanations may exist. Individuals perceive the issue differently. Depending on the explanation, the solution takes on a different form. |
| **Testability** | Potential solutions can be tested as either correct or false. | There is no single set of criteria for whether solutions are right or wrong; they can only be more or less acceptable relative to each other. |
| **Finality** | Problems have a clear solution and end point. | There is always room for more improvement and potential consequences may continue indefinitely. |
| **Level of analysis** | It is possible to bound the problem and identify its root cause. There is no need to argue about the level at which to intervene; the parts can be easily separated from the whole. | Every problem can be considered a symptom of another problem. There is no identifiable root cause and it is not possible to be sure of the appropriate level at which to intervene; one cannot easily separate parts from the whole. |
| **Replicability** | The problem may repeat itself many times; applying formulaic responses will produce predictable results | Every problem is essentially unique; formulae are of limited value.  |
| **Reproducibility** | Solutions can be trialled and excluded until the correct solution is found. | Each problem is a one-shot operation. Once a solution is attempted, you cannot undo what you have already done. |

**DFID’s ‘relevance gap’**

What did DFID staff think? Interviews with some forty people around the world revealed that although dealing with wicked problems is seen as one of the biggest challenges the organisation faces, there’s a mismatch between DFID’s understanding of such problems and its ability to deal with them. Much of DFID’s – and indeed the broader development sector’s – toolkit is designed with ‘tame problems’ in mind (the left-hand column of the table above). This is deeply problematic because, as Blanchard put it, ‘the techniques we use affect our thinking in deep and not always conscious ways’.

This led to what some called a ‘relevance gap’ between what DFID was trying to achieve, and the methods they used to achieve it it. Flexible, adaptable approaches happen despite DFID’s corporate processes, not because of them.

**Experimenting with new techniques**

We were keen to develop clear alternatives to the typical DFID techniques, and find ways to apply this in a systematic and evidence-based fashion. Our four pilots tested how methods used outside of development to understand complex systems could be brought into development planning processes, using techniques ranging from system dynamics to network analysis.

For example, a project designed to strengthen private sector development in the Democratic Republic of Congo (DRC) involved working with DFID staff and partners to design a theory of change for a new programme that wasn’t based on the linear, reductionist assumptions of the logical framework. This was necessary because the dynamic and fluid context of the DRC demanded a more adaptable, context-aware, and innovative approach than the logical framework typically allows.

Through consultations and workshops in DRC with DFID and its partners, the team was able to develop a robust approach to programme design which would fulfil DFID accountability requirements but allow for greater flexibility and innovation. This has subsequently been trialled in other areas of work, and this pilot led to the design and approval of a [new £60 million programme incorporating the ‘complexity theory of change’](http://devtracker.dfid.gov.uk/projects/GB-1-203161/).

You can read more about all four pilots in the [Working Paper](http://www.odi.org/publications/8571-complexity-wiked-problems-tools-ramalingam-dfid) we’ve just published, but overall they revealed significant appetite for new and more sophisticated methods and principles to help DFID deliver against its goals – and generated tangible findings that directly informed a range of corporate and programmatic decisions. This ranged from design of a new trade facilitation programme, re-thinking DFID programme management, and strengthening approaches to girls’ empowerment. All for a modest project budget of just over £100,000.

**We can’t ignore complexity**

Our overarching recommendation is simple: that aid agencies needed to do more to engage with and not ignore complexity. As Olivier Blanchard concludes in his piece:

“…the message should be to let a hundred flowers bloom. Now that we are more aware of nonlinearities and the dangers they pose, we should explore them further theoretically and empirically…”

I would wholeheartedly agree. This project has been a modest, initial step in this direction, but much more work is needed. Development efforts have continued to evolve and expand over the past thirty years, and we now work on some of the most dynamic, challenging and multi-faceted problems in the international arena. The need to expand our ability to understand and navigate complexity – and the potential gains from doing so – has never been greater.

Source: Ben Ramilingam (2014) <http://www.odi.org/comment/8801-wicked-problems-development-aid-complexity-ramalingam>, ODI (last accessed: 24 September, 2015)