

# OPINION: Solving 'wicked problems' linked to disasters, risk and uncertainty—children are truly our future

Professor Kevin R Ronan looks at reframing 'disaster' and 'threats' as 'challenges' to build resilience in adults and children.



**In public policy terms, disaster management across the Prevention, Preparedness, Response, Recovery (PPRR) spectrum would qualify as a 'wicked problem' (Australian Public Policy Commission 2007). In 'wicked problem' terms, problems cannot be clearly defined nor do they have straightforward, simple cause-effect solutions. Rather, trying to solve one problem can invite others, including those that are unforeseen.**

Disasters reflect numerous problems of this sort. With flooding and fires as two common hazards in Australia, problems linked to these reflect a good deal of complexity (Ronan 2013). In floods, the 'levee syndrome' is a useful example of the idea of solutions that simultaneously produce both benefits and opportunity costs, and accompanying tipping points (eg, New Orleans after *Hurricane Katrina*, Adams, Hattum & English 2009). In fires, Ashe, McAneney and colleagues at Risk Frontiers document a cascading set of linkages between phenomena linked to the interface of the physical world of fires and the social world. This includes political decisions and public policy solutions solving some problems while raising others problems linked to social equity, lack of motivation in high risk communities to prepare effectively, and a host of other issues (eg, Ashe *et al.* 2009, 2012, see also example from British Columbia, Clare *et al.* 2012, McCormick 2009).

## Characteristics of 'wicked problems' as defined in APCC 2007 include:

They are difficult to define.

They have interdependencies and often are multi-causal.

Attempts to solve them often lead to unforeseen consequences.

They are often not stable.

They have no clear solution.

They are socially complex.

They rarely sit conveniently within the responsibility of any one organisation.

They involve the need to change behaviour of citizens and of government for long-term sustainability versus relying solely on increasing the regulatory environment.

Some are characterised by chronic policy failure.

It is also worth noting that the APCC (2007) publication cites the problem of the causes and solutions to climate change as an illustration of these characteristics.

In solving 'wicked problems', academics in public policy discuss advantages and disadvantages associated with various problem-solving approaches, including authoritative strategies, competitive strategies, and collaborative strategies.<sup>1</sup> Research supports authoritative strategies in some instances, including those relevant to disasters (during a peak crisis, APCC 2007). However, overall, the bulk of research and expert opinion (eg, Conklin 2006, Roberts 2000) support collaborative strategies, including tackling those types of problems where longer-term behaviour change is necessary (APCC 2007). Another essential

<sup>1</sup> Authoritative strategies involve power invested in a group, or individual, who take responsibility and others agree to abide by its solutions; competitive strategies rely on a win-lose approach that has advantages (e.g., aspects linked to tendering processes and increased quality of products) and disadvantages (conflict and stalemates that use up resources); collaborative strategies rely on networks of stakeholders across whom responsibility and decision-making power is dispersed and tend to focus on a win-win metaphor.

element necessary to solve 'wicked problems' includes the need to analyse the problem from a holistic viewpoint, getting an understanding of such a problem in systemic, interconnected and non-linear terms.

Given this backdrop, one idea threading its way through this special issue of the *Australian Journal of Emergency Management* is the role of children in promoting more collaborative and systemic solutions to problems linked to hazards and disasters. Across these papers is an underlying idea of children as vulnerable but also children being empowered through being part of collaborative, community-based solutions to a range of problems that disasters invite. Of course, educational programming and other initiatives that equip children and youth with increasingly sophisticated competencies for managing problems like disasters are part of the 'engine room' of this empowerment process. Education itself that involves horizontal (across curricula) and vertical (across years in school) integration, that helps children understand the inter-connectedness between the physical and the social, societal worlds and that helps them to develop increasingly systemic problem-solving capacities would be thought to help (Ronan 2013).

In addition to educational approaches equipping children with increasingly sophisticated knowledge and skills, a systemic approach to education would also help equip them with socio-emotional competencies. This would include helping them understand the links between thoughts, feelings, and behaviours and the links between various phenomena, people and groups. For example, when a potentially stressful event is framed as a challenge versus a threat, research shows pretty convincingly that this framing leads to increased mobilisation of inner resources that invites more motivation and 'approach behaviour' (versus avoidance) and leads to more successful resolution of the stressor (see review by Blascovich 2008). Thus, children can begin to learn that disasters and, more generally, risk and uncertainty in life are challenges and represent individual and community-based 'problems to be solved' versus insurmountable threats.

In this way, children's status as the most vulnerable in disasters (Norris *et al.* 2002) can be turned on its head. Given the reality of children's vulnerability status, including in disasters (Ronan & Johnston 2005), if we want to empower children, our first job as adults is to protect, nurture and guide them. As they grow, and as we as adults increasingly nurture, empower and help equip them with knowledge, strategies, and the confidence to approach and manage a range of 'wicked problems' including disasters, the more they will thrive and the more our society will benefit.

As the papers in this special issue attest to, this includes an increasing set of possibilities and pathways for empowering today's children that can ultimately translate into the challenge of disasters not being nearly as wicked a problem during their own adulthoods as they have proven to be at times during ours (Ronan 2013).

## References

- Adams, V, Van Hattum, T & English, D 2009, *Chronic disaster syndrome: Displacement, disaster capitalism, and the eviction of the poor from New Orleans*, *American Ethnologist*, 36(4), pp. 615-636.
- Ashe, BSW, McAneney, KJ & Pitman, AJ 2009, *Total cost of fire in Australia*, *Journal of Risk Research* 12(2), 121-36.
- Ashe, BSW, McAneney, KJ & Pitman, AJ 2011, *'Is the allocation of resources towards mitigation and response to fire in Australia optimal?'*, *Journal of Risk Research* 14(3), pp. 381-395.
- Ashe, B & McAneney, J 2012, *The real cost of fire in Australia*. *World Fire Statistics Bulletin*, 28, pp. 1-3.
- Australian Public Policy Commission (APPC) 2007, *Tackling wicked problems: A public policy perspective*. Australian Government: Australian Public Service Commission.
- Blascovich, J 2008, *Challenge and threat*. In AJ Elliott (Ed.), *Handbook of approach and avoidance motivation*. New York: Psychology Press.
- Clare, J, Garis, L, Plecas, D & Jennings, C 2012, *Reduced frequency and severity of residential fires following delivery of fire prevention by on-duty fire fighters: Cluster randomized controlled study*. *Journal of Safety Research*, 43, pp. 123-128.
- Conklin, J 2006, *Dialogue mapping: Building shared understanding of wicked problems*. Chichester, West Sussex: Wiley.
- Norris, FH, Friedman, MJ, Watson, PJ, Byrne, CM, Diaz, E & Kaniasty, K 2002, "60,000 Disaster Victims Speak: Part I. An Empirical Review of the Empirical Literature, 1981-2001." *Psychiatry*, 65(3), pp. 207-260.
- Roberts, N 2000, *Coping with wicked problems*. Monterey: Naval Postgraduate School, Department of Strategic Management.
- Ronan, KR 2013, *Systems education for a sustainable planet: Preparing children for natural disasters*. *Special issue manuscript under review (Systems)*.

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This article reflects the opinions of the author and are not necessarily those of this publication.