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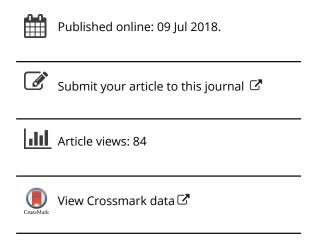
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COMMUNICATION ARTICLE



Open source preventive diplomacy and complexity

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ABSTRACT

Limits of intelligence services in identifying opportunities for preventive diplomacy are identified. These limits are then used to suggest an open source preventive diplomacy wiki strategy for armed conflict prevention. A complexity theory analysis lays a foundation for arguing that a good theory of preventive diplomacy is less useful than a good meta theory. In a complex world of diplomacy it is wrong to argue that there is nothing as practical as a good theory; but a good meta theory may be a practical path to saving lives. A responsive theory of peacebuilding is proposed that layers and sequences preventive strategies.

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Introduction

Braithwaite and D'Costa's Cascades of Violence argues that war and crime are cascade phenomena. War cascades across space and time to more war; crime to more crime; crime cascades to war; and war to crime. As a result, war and crime become complex phenomena. That does not mean we cannot understand how to prevent crime and war simultaneously. Indeed, Braithwaite and D'Costa argue that prevention often cascades and they show how nonviolence can be encouraged to cascade, shunting cascades of violence into reverse. This article is an abbreviated, revised version of part of the final chapter of that book on how to face up to complexity by opening new paths to preventive diplomacy.

Complexity theory implies a conclusion that the pursuit of strategies for preventing crime and war is less important than understanding meta strategies. These are meta strategies for how to sequence and escalate many redundant prevention strategies. These themes were explored across seven South Asian societies during eight years of fieldwork for *Cascades of Violence*. The meta strategy challenge of how to discover and layer strategies of prevention of violence is the topic of this article. First it conceives complex systems as pregnant with prevention opportunities. Then it considers the idea of responsive prevention that layers redundant strategies as sequenced responses to complexity in peacemaking. Finally it advocates an open source preventive diplomacy that

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¹John Braithwaite and Bina D'Costa, Cascades of Violence: War, Crime and Peacebuilding across South Asia (Canberra: ANU Press, 2018).

harnesses university and lay researchers to the cause of discovering productive new ideas for layering violence prevention. It proposes a preventive diplomacy wiki.

Complexity and violence transformation

How do we nurture peacebuilding that is a complex adaptive system rather than a maladaptive system trapped in its own templates? One reason peacebuilding systems are complex is that leadership from below and above accomplishes forms of learning that make deterministic understandings no longer true. Indeed, we can define a complex adaptive system as one that learns about its own diversity of interacting components. Change in any subsystem can flip the circumstances confronting every other part of emergent systems that self-organise and evolve. In peacebuilding, complexity is alive with possibilities of breakdown and 'breakup', of self-organising transformation that adept practitioners of the craft learn to catalyse.

The challenge for positive social science is that complex systems interact with so many moving parts and so many nonlinear feedback loops

that they cannot be predicted by standard linear equations: so many variables are at work in the system that its overall behaviour can only be understood as an emergent consequence of the holistic sum of all the myriad behaviors embedded within.³

The chaos theory version of complexity adds the challenge that very small differences in initial conditions can produce dramatically variable outcomes. This article advances a proposal for an open-source preventive diplomacy wiki as a response to the complex challenges Braithwaite and D'Costa revealed in preventing cascades of violence and nurturing cascades of nonviolence. Adapting responses to cascading violence requires peacebuilding policies that fail fast, learn fast and adapt fast. When that proves elusive, they must learn and adapt more slowly. A sequenced epistemology is proposed: first, examine simple lessons from quantitative social science such as the finding that, on average, UN peace operations reduce the recurrence of violence quite a lot. When this proves too simple a conclusion in the face of the unpredictability of emergence, layer probes that enable qualitative research on adaptation. Finally, the focus of evaluation research shifts to meta-analyses of meta-strategies. It shifts to the question of which are the most effective theories for how to layer iterated responses to policy failure?

Consider the Cynefin framework as just one approach to complexity and chaos.⁵ Cynefin partitions the social world into the known, the knowable (but unknown), the complex and the chaotic. This article simplifies by collapsing contexts for understanding violence into the known, the knowable and the complex. The complex and the chaotic are collapsed not because the theoretical differences between the two are minor. Rather, they are combined because the theoretical prescriptions considered here for

³Steven Levy, *Artificial Life: A Report from the Frontier Where Computers Meet Biology* (New York: Random House, 1993), 34. ⁴Braithwaite and D'Costa, *Cascades of Violence*.

⁵Cynthia F Kurtz and David J Snowden, 'The New Dynamics of Strategy: Sense-Making in a Complex and Complicated World', *IBM Systems Journal* 42, no. 3 (2003).; David J. Snowden and Mary E. Boone, 'A Leader's Framework for Decision Making', *Harvard Business Review* 85, no. 11 (2007).; Leoni Warne et al., 'The Network Centric Warrior: The Human Dimension of Network Centric Warfare', (Defence Science And Technology Organisation Salisbury (Australia) Info Sciences Lab, 2004), 47.



responding to the unknowability of chaos are the same as those for responding to the unknowability of complexity.

Even if Snowden and Boone's Cynefin strategy⁶ differences were convincing in application to violence, the ability of peace researchers to distinguish complexity from chaos on the ground is questionable. What chaotic and complex systems have in common is that they are fragile and hard to comprehend. Yes, they are fragile for different reasons. For chaos theory, fragility arises from extreme sensitivity to minor differences in initial conditions. For complexity theory, fragility arises from the indeterminate way cascades of violence work. Sometimes dynamic networks cascade into network-wide domino effects; on other occasions, modest shocks do not cascade – the system wobbles a bit and pulls itself back together. The peacebuilding ambition, conceived in this framework, is to help them become complex adaptive systems that pull peace back together in this way.

Emergence distinguishes complex from chaotic systems. Emergence means that the impact of a shock is inherently unpredictable. Macrosociological change shares this emergence feature of complexity theory. Macro changes occur that we cannot causally trace back to any particular event or agent. Whether uncertainty arises from the practical unknowability of unmeasurable tiny variations in initial conditions, or from emergence, our prescription is for peacebuilders (be they the United Nations or rural villagers) to be ready with a strategy for how to layer probes into the system one after the other. Probing peace researchers of complexity do not know which probe might have an impact. They monitor the consequences of the probe; then with the probes that make a difference, they adapt them in ways responsive to the nature of the feedback.

Towards responsive intervention

Normal social science assumes that the patterning of violence is knowable. It also tends to privilege the probes of one kind of actor, the state, as the most relevant kind for controlling violence. To transform social science into something more useful, we must radically loosen both the knowability and the statist presumptions. That said, the responsive intervention theory advanced here has as its first layer an evidence-based strategy that presumes knowability. Yet it is presumed that because worlds of cascading violence are mostly not knowable, all evidence-based strategies mostly fail. Braithwaite and D'Costa showed that cascades to unlikely wars repeatedly recur in human history. Complexity implies seeing outliers as sometimes more important than averages, tails more important than Gaussian bell-curve dogmas for a world where evolution occurs in jerks. This article does not embrace any optimism about complexity theory that it can help us to explain diverse phenomena with the same few rules of emergence of patterns; we can be open to that as a possibility, while never expecting that complexity science will deliver this. We must then have a policy design (which is more plural than just a state policy design) for how to layer further probes into the unknowable.

'Best practicitis'⁸ and evidence-based policy can be public policy curses. They indoctrinate private and public policymakers to persist with evidence-based policy when it is

⁶Snowden and Boone, 'A Leader's Framework for Decision Making'.

⁷Braithwaite and D'Costa, Cascades of Violence.

⁸Ben Ramalingam, *Aid on the Edge of Chaos: Rethinking International Cooperation in a Complex World* (Oxford: Oxford University Press, 2013), 33.

demonstrably failing in new contexts. Some argue that evidence-based templates might work when local contexts are well understood. Even that is too simple because it is unknown whether an evidence-based practice will work in the recurrent situation where the context is known to be different from the one in which the strategy was tested. Westendorf's qualitative comparison of Why Peace Processes Fail finds that a technocratic approach is the main culprit because, at heart, peace processes are political and they fail without responsiveness to the warp and woof of local politics. A politically and socially attuned approach is found by Westendorf to be more likely to succeed than technocratic best practice.

The kind of responsiveness to context articulated here begins by trying to make standard operating procedures or evidence-based best practice guidelines work only as a first layer of strategy. They can work in areas that are low in complexity, like peace operation logistics, rebuilding schools or payroll management. There are tried and true methods for detecting when employees have been overpaid or underpaid.

Boundaries between the known, the knowable and the complex cannot be seen to be clear. The complex spaces of peacekeeping will have a minority of spaces that are known. Indeed, it can be best to start by fixing what is known because these minority contexts of the known are usually in play in violence control – where checklists, templates and standard operating procedures allow us to categorise and act successfully. There is no sense in failing to cash in on knowability where the known is robust. Why stumble around with probes in those worlds where a good checklist would get us on track?

There is little doubt that, compared with peace studies, medicine has made larger strides in moving the knowable into the realm of the known. This has helped human beings live much longer. Of course, individual patients may be complex, but less so than social systems of millions of human beings and the institutions emergent from their interaction. Medicine has achieved success by iteration between randomised controlled trials and clinical method. When we experience cancer at close quarters in our families, we learn that doctors may prescribe an intervention, backed by randomised controlled trials, that works in slowing a malignancy. Then one day the doctor announces that a tumour has doubled. The complex system surrounding the cancer has passed some unknown threshold beyond which the clinician believes this therapy no longer works. She then suggests a new layer of therapy in which she has less confidence than the therapy of first choice. The family eventually participates in the difficult clinical judgment as to whether a quicker but more peaceful death might be better, or whether to try to probe with more speculative third or fourth therapies that work infrequently or are yet to be properly evaluated.

A good clinician improves the quality of these judgments with problems more tractable than cancer, such as infections, by trying one theory after another until the infection goes away. The clinician never has a scientific warrant for knowing that the infection disappeared because of her intervention. The fact that the infection stopped immediately after an intervention is a kind of evidence that her theory was right, but poor-quality evidence. What we do know is that by being well-trained detectives

⁹Duncan Green, *How Change Happens* (Oxford: Oxford University Press, 2016).

¹⁰Jasmine-Kim Westendorf, Why Peace Processes Fail: Negotiating Insecurity after Civil War (Boulder, CO: Lynne Rienner Publishers, 2015).

¹¹lbid.

within complex systems, by being a doctor who is a good clinician rather than a clairvoyant, and being detectives who run down checklists based on some degree of evidence, we cure more infections on average. Theory provides reflective practitioners with generative metaphors. Conversations among clinicians through clinical rounds provide new lenses, new ways of seeing or framing the problem. 12 The existence of one symptom leads the doctor to do detective work checking other symptoms associated with a certain syndrome. They look for side-effects. In the body/environment system, they watch for and seek to understand feedback loops that can render the cure worse than the disease, or that can take the patient up to a new level of wellbeing. We have all experienced how good clinicians do this detective work to diagnose the often complexly interacting root causes of our health.

Plural lenses push us to ask questions about the similarities and differences between the clinical problem and the metaphorical scenario of the theory. The good clinician asks about (family) history: context and background become important for the diagnosis. Clinicians are detectives who ask a lot of journalist's questions – what, who, how, when, where, why - to get the time line of the story clear. Excellent clinicians 'think in a stream of time¹³ to develop contextual, integrated, joined-up, multiple-mechanism strategies to fix the problem. But because this beneficent new equilibrium in the system will eventually break down, monitoring (regular check-ups) is required. The excellent clinician is also regenerative, seeking to use each bout of illness not merely to restore the status quo, but also as an opportunity to move the patient to a higher level of wellbeing. Complexity enables excellent clinicians to prioritise pursuit of opportunities as well as management of risk. This is also true of good regulators of violence who seize opportunities to create the good society out of catastrophic wars.

Good clinicians of health or violence control are neither determinedly deductive theorists nor determinedly inductive. They are skilled at shuttling backwards and forwards between deduction and induction.¹⁴ Complexity science has taught us that many systems adapt over time, without a global equilibrium, perhaps with multiple equilibria. Evolution happens by switching equilibria, generating perpetual novelty. That is why we should seek a doctor to treat our disease who is both knowledgeable about the known and clinically gifted in how to probe and adapt within the uncertainties of complexity. Randomised controlled trials allow us to be more credibly evidence based. Their problem is that they allow us to look at just one or a few causes at a time and do not help us understand the dynamics of how these causal factors push system effects across tipping points.¹⁵ For all these limitations, the responsive theory of peacebuilding proposed here starts first with trying what is known from evidence-based social science. Responsive peacebuilding probes cautiously at first with strategies that are evidence based. It monitors feedback to glean qualitative information about why a strategy like holding an election fails when it does fail in a particular context. That may even inform the design of a subsequent probe into the unknown with a strategy that evidence-based peacebuilding shows on average to be a failure.

¹²Gareth Morgan, *Images of Organization*, 2nd ed. (Thousand Oaks, CA: Auflage, 1997).

¹³Richard E. Neustadt and Ernest R. May, Thinking in Time: The Uses of History for Decision Makers (New York: The Free Press,

¹⁴Thomas J. Scheff, *Microsociology: Discourse, Emotion, and Social Structure* (Chicago: University of Chicago Press, 1994). ¹⁵Jeffrey Sachs, *The End of Poverty* (London: Penguin Books, 2005).

Because many domains of practice are quite well known, evidence-based standard operating procedures are invaluable as first cuts at problem solving. We know from the history of business empires, however, that standard procedures like Henry Ford's production line can generate great wealth for long periods of history until what is required for excellence becomes too complex for those standard operating procedures. Corporate graveyards are full of firms that stuck too long with templates that used to work. As capitalism and its governance became more radically dynamic and complex, the pace of obsolescence for best practices quickened. Likewise with peacebuilding, we are rather good at building peace for the last war. That said, the danger of assuming complexity and rejecting knowability up front is that we miss opportunities for violence control within the realms of the known and the knowable.

Layering strategies

Evidence-based social science shows how much can be achieved by further strengthening what is already strong, such as strengthening functioning education systems. The language of Harvard's Problem Driven Iterative Adaptation model - step, learn, adapt, take another step – has virtues. 16 When the fruits of intervention are disappointing, the responsive peacebuilder makes two moves. The first is qualitative process evaluation of why the intervention failed. The second is to probe with new layers of strategies that are as evidence-based as they can be. The second and third layers of strategy are almost certain to be less evidence-based than our first choice. New targets for measurement are also selected at that point.

Unfortunately, evidence-based guidance on what to do in real-world policy dilemmas is usually thin and misleading. It will often be the case that the best evidence we have on which strategy to layer next will be grounded in feedback on what went wrong with our first layer of strategy. Layering assumes that, in a complex world, we must step, learn, adapt and take another step. Each layered strategy is a safety net covering the failure of the strategy before it. We design redundant diversity into our layers of strategy so that we might cover the weaknesses of one strategy with strengths of another.

Critics of this approach to business regulation, called responsive regulation, say that it expects too much of street-level regulators to learn how to fail, learn and adapt to failure. One reply is that this is how ordinary people learn to be good gardeners or good parents.¹⁷ Parenting and gardening may be tasks ordinary people can learn, yet they are complex: a second child follows a different trajectory and turns out differently from the first. In contrast, sending rockets into space is not something ordinary people without a deep understanding of mathematics can do; yet it is a complicated rather than a complex problem. With sufficient knowledge, the rocket can be sent on the same trajectory to the same destination every time. Biologists have a word for describing the process of how solutions to complexity emerge from failure, of how to reject the majority of adaptations that fail and adapt the tiny few that make things better. It is achieved without an organisational genius in charge. It is called evolution. 18 'Cross the river by feeling the stones', Deng Xiaoping is

¹⁶Matthew Andrews, Lant Pritchett, and Michael Woolcock, *The Challenge of Building (Real) State Capability*, Hks Working Paper No. 074 (Cambridge, Mass: Harvard Kennedy School, Harvard University, 2015).

¹⁷John Braithwaite, 'The essence of responsive regulation', UBC Law Review 44, no. 3: 475–520.

¹⁸Tim Harford, Adapt: Why Success Always Starts with Failure (London: Hachette Digital, 2011).

claimed to have commended. Feel your way forward in an uncertain world you are not smart enough to understand, Deng advised; stay grounded as you probe incrementally. A key task of peacebuilders is to help peace operations acquire an improved capacity to adapt as systems – that means nurturing variation and selection, just as in evolution. It means ensuring that overly clever, overly managerialist, templates do not kill off variation and selection.

There are alternative theories about how to order the layering of strategies. Economic thinking can counsel attempting the cheapest strategies first in iterated search for costeffectiveness. The approach suggested here puts more emphasis on first trying evidence-based theories from the realm of the known. Successive layers then become progressively less evidence-based. Even as this is executed, evidence-based theories provide an array of generative metaphors to guide disparate, redundant attempts to improve things. Republican political theory has attractions in the way it suggests that we should attempt less dominating, more procedurally fair strategies before we attempt more punitive and dominating strategies such as war or locking alleged criminals in prisons. 19

Ambiguate in adapting to failure

As each layer of strategy fails, process evaluation suggests adaptations. These are discussed in conjunction with layers of a regulatory pyramid, collaboratively designed in advance, as layered safety nets to catch failures at earlier layers of strategy. Good peacebuilders also try many different lateral moves to adapt a strategy that is failing in the face of complexity before they consider escalation.²⁰ An extra ingredient may be added or a counterproductive piece excised from the strategy. Andrews et al. emphasise the importance of strengthening the authorising environment to 'push problem-driven positive deviance'.²¹ Conservative UN bureaucracies need reform to authorise positive deviance that adapts in response to failure. The most generically useful strategy of adaptation is to widen networks of collaborative engagement for solving the problem.

Ambiguation of objectives and strategies is imperative in a complex world. In a known world, ambiguity is bad. Positive science requires clear definition of concepts to be tested with precision about where they explain and where they do not. The known world of this normal science is one we can categorise. When a situation fits the clearly defined category, science tells us what policymakers can do with what effects. It can reveal what best practice is and which policy template or standard operating procedure will work.

In the world of complexity, such 'flight from ambiguity' is dangerous.²² As we are tossed hither and thither on the winds of complex social climates, it can be best to adapt our definition of what a sail is so that we can deviate and adapt with new kinds of sails that catch winds of social change in innovative ways. Premature closure is a pathology of the way liberal peace templates have failed to progress. Most social theory is banal in

¹⁹Philip Pettit, Republicanism: A Theory of Freedom and Government (Oxford: Oxford University Press, 1997).

²⁰John Braithwaite, Regulatory Capitalism: How It Works, Ideas for Making It Work Better (Cheltenham, UK: Edward Elgar, 2008), 97-100.

²¹Andrews, Pritchett, and Woolcock.

²²Donald N Levine, The Flight from Ambiguity: Essays in Social and Cultural Theory (Chicago: University of Chicago Press,

its first iterations; peacebuilding theories tend to stay banal because peacebuilders are weak at savouring and tweaking ambiguities of theories to develop them into less banal variants. Theorists who view their contributions as mostly provisional and mostly wrong are excoriated for constantly shifting the goalposts by normal scientists interested in testing a theory. Responsiveness to complexity requires iterative shifting of goalposts. Through the process of adaptation, we learn that it is impossible to kick goals with most static theories of intervention. If we iteratively adjust the goalposts, on the other hand, it becomes possible to kick increasingly valuable goals. Normative theory (ordered sets of propositions about the way the world ought to be) can invite redefinition of explanatory theory (ordered sets of propositions about the way the world is) and vice versa. Normative-explanatory adjustment becomes part of the iterated goalpost-shifting response to complexity.²³

Productive social science has both moments of ambiguation that play with the utility of new theoretical concepts and moments of disambiguation when the community of scholars decides to settle on a conceptualisation, which, for now, seems most fertile. Then scholars collect systematic comparable data on the efficacy of the theory conceptualised in that way. The careerism of scholars who dislike the thought that the data collection they have devoted their lives to was based on a now obsolete conceptualisation drives theory development to periods of excessive disambiguation. Static, banal theories with concrete goalposts that fail to give birth to fertile policy innovations survive too long.

To improve the responsiveness to complexity of peace research, we must work harder at techniques for improving ambiguation. Organisation theorist Gareth Morgan has a sweeping strategy for ambiguating how we see organisations.²⁴ Morgan views organisational action simultaneously through multiple organisation theory lenses. One of the great social science books, Graham Allison's Essence of Decision illustrates Morgan's method.²⁵ Allison accomplished brilliant insight from seeing through three different lenses how Kennedy and Khrushchev saved the world from catastrophe at the time of the Cuban Missile Crisis.

Assess meta-strategies for layering strategies

Responsive peacebuilding is an example of a meta-strategy. It is a strategy about how to layer strategies. There have been some encouraging evaluations of responsive regulation in domains ranging from securities regulation to tax enforcement.²⁶ Responsive regulation comes in variants that involve pyramids of enforcement strategies (such as Figure 1) and pyramids of networked escalation where more and more network partners are engaged with the regulation challenge at different layers of the pyramid.

The social sciences are replete with examples of meta-strategies. Motivational interviewing is a kind of iterative meta-strategy: it gives rise to many different change strategies that are chosen by counselling clients rather than a counsellor; it is a flexible, contextual

²³John Braithwaite and Philip Pettit, 'Republicanism and Restorative Justice: An Explanatory and Normative Connection', Restorative Justice: Philosophy to Practice (2000).

²⁴Morgan, Images and Organization.

²⁵Graham T. Allison, Essence of Decision; Explaining the Cuban Missile Crisis (Boston: Little, Brown & Company, 1971).

²⁶John Braithwaite, 'In Search of Donald Campbell', *Criminology & Public Policy* 15, no. 2 (2016); *Restorative Justice and* Responsive Regulation: The Question of Evidence, Regnet Working Paper 2014/51 (Canberra: School of Regulation and Global Governance, The Australian National University, 2016).

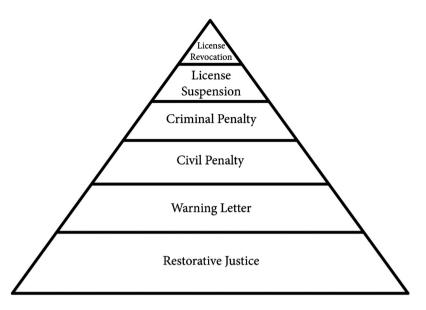


Figure 1. Example of a responsive regulatory enforcement pyramid.

and responsive practice that unfolds differently in every case depending on how the client frames what motivates them as an individual. Meta-analyses of 119 studies, half of them randomised controlled trials, have shown that motivational interviewing is effective as a meta-strategy for selecting what individuals do about health objectives such as cleaning their teeth properly, losing weight or conquering an addiction.²⁷ Likewise, problemoriented policing is a kind of meta-strategy for street-level selection of diverse problems for police to tackle and how to tackle them. It, too, has been a subject of encouraging meta-analyses, showing that problem-oriented policing reduces crime.²⁸ Randomised controlled trials show that 'positive deviance' in development practice - for example, searching for positively deviant rural village nutrition practices and encouraging modelling of those practices by others in the village – works better in comparison with village education programmes on nutrition best practice.²⁹ Positive deviance, again, is something that can work even though it is unknown and highly variable because it is 'deviant'.³⁰ Partly it works by the power of localism; partly because it appeals to tastes adapted to unique contexts. It energises because someone in the community has identified the solution. Its strengths-based focus is on a community's assets and knowledge rather than its deficits.

²⁷Brian L. Burke, Hal Arkowitz, and Marisa Menchola, 'The Efficacy of Motivational Interviewing: A Meta-Analysis of Controlled Clinical Trials', *Journal of Consulting and Clinical Psychology* 71, no. 5 (2003); Brad Lundahl et al., 'Motivational Interviewing in Medical Care Settings: A Systematic Review and Meta-Analysis of Randomized Controlled Trials', *Patient Education and Counseling* 93, no. 2 (2013); Brad Lundahl et al., 'A Meta-Analysis of Motivational Interviewing: Twenty-Five Years of Empirical Studies', *Research on Social Work Practice* 20, no. 2 (2010).

²⁸David Weisburd et al., 'Is Problem-Oriented Policing Effective in Reducing Crime and Disorder? Findings from a Campbell Systematic Review', *Criminology & Public Policy* 9, no. 1 (2010).

²⁹E.g. Elizabeth H. Bradley et al., 'Research in Action: Using Positive Deviance to Improve Quality of Health Care', *Implementation Science* 4, no. 1 (2009).

³⁰Green, How Change Happens.

When a responsive regulator addresses a problem with a layered sequence of responses, or when a problem-oriented police organisation attempts one strategy after another until it cuts the crime rate, or a clinician tries one treatment after another to fight a cancer; if the crime or the cancer falls away, we have no idea what stopped it. What we did was too complex to permit that kind of scientific knowability. It may have been a lagged effect of something lower in our pyramid of responses that we wrongly thought had failed. It may be the last layer of our response before the problem is solved, as we tend to presume. Quite likely, it will actually be a complex interaction between what we did in our last layer of intervention and certain aspects of all the previous layers. It may even be a simple linear cumulative (additive) accomplishment of all the layers together.

Responsive peacebuilding means that policymakers have a meta-strategy that is committed to probing with one strategy after another, starting with evidence-based strategies and moving to progressively less evidence-based, but more contextually attuned strategies as each layer seems to fail. It sticks with that process until the problem goes away. The empirical prediction about such a meta-strategy is that systematic reviews (meta-analyses) will show it to succeed, without revealing why it succeeds. All we get to know from that iterated process is that we stuck with the problem until it went away. We can see convergence on a paradoxical insight in the meta-analyses that suggest that problem-oriented policing works, that motivational interviewing works at the end of its iterated reframings of motivation, that positive deviance strategies for improving village nutrition work, that a multidimensional mix of strategies works in controlling corporate crime³¹ and that multidimensional UN peacebuilding works (as discussed below). This is that, in a world of complexity, it is more possible to discover the meta-strategies that work than it is to move single strategies from the realm of the knowable to the realm of the known. For example, the meta-strategy of 'search for positive deviance' may be more useful than learning what are the particular forms of positive deviance that worked in particular villages. To use another example, it is easier to know that a vague, heterogeneous concept such as problem-oriented policing or motivational interviewing works than it is to know that it works because it fixes the street-lighting at hotspots or discovers some specific motivation for losing weight. This is a methodologically impressive paradoxical finding because it is harder to muster the statistical power to show the efficacy of heterogeneous than homogeneous interventions.

A cascades imaginary for complexity

We now turn to the challenge of how to invent the many different preventive ideas needed to layer into any responsive strategy for peace. We come in the final section of the article to conceive an open source preventive diplomacy wiki as one meta-strategy for generating a rich diversity of good and not-so-good preventive diplomacy ideas to layer into a pyramid of strategies.

Braithwaite and D'Costa showed that there is little that is linear about cascade effects.³² Long periods of stability followed by sudden tipping points into seeming chaos recur

³¹Natalie Schell-Busey et al., 'What Works? A Systematic Review of Corporate Crime Deterrence', Criminology & Public Policy 15, no. 2 (2016).

³²Braithwaite and D'Costa, Cascades of Violence.

repeatedly. Can we present readers with a theory of tipping points? No. All we are smart enough to say is that quantitative analyses using only linear methods are certain to mislead. Yet there is no need for analysis paralysis because the big risks to societies cannot be read off from the size of coefficients on long lists of variables plugged into linear regression analyses. There is no need for paralysis because peacebuilding can become a complex adaptive system. Critics rightly assert that it is currently a simpleminded maladaptive system ensnared by overly parsimonious frameworks such as liberal peace theory templates and theories of rebuilding failed states.³³ It fails very frequently in the longer run. Autesserre is insightful in showing that peacebuilding is also insufficiently responsive to local complexity.³⁴ For all those flaws of oversimplification, on average UN peace operations have contributed a great deal to creating a more peaceful world, 35 as has mediation of peace agreements. 36 These quantitative effect sizes are mostly surprisingly large. Moreover, as Lise Howard has shown, the failure rate can be further reduced for peace operations that learn and adapt after failure.³⁷

The cascades of violence described by Braithwaite and D'Costa were resiliently complex and no one was wise enough to predict the complexity of how they would cascade.³⁸ The lesson was to look that complexity in the eye before the eyent rather than after it. It was to humble the arrogance of power that seeks to use its hammer on many imagined nails. Carpentry is a subtle craft, not one of brute force. The carpenter who makes a chair does not follow a known recipe of how much sawing, hammering, planing, sanding and gluing to do. Rather, the gifted chair-builder looks at the grain of the timber as it appears in the process of the chair's emergence, going with the grain, reinforcing the beauty and strength of the timber as it emerges.³⁹ Securing peace is likewise mostly not amenable to recipes and templates; it is a craft of complexity, particularly of watching and listening for unpredictable ignition points.

³³Roland Paris, At War's End: Building Peace after Civil Conflict (Cambridge: Cambridge University Press, 2004).

³⁴Séverine Autesserre, Peaceland: Conflict Resolution and the Everyday Politics of International Intervention (New York: Cambridge University Press, 2014); The Trouble with the Congo: Local Violence and the Failure of International Peacebuilding (New York: Cambridge University Press, 2010); 'International Peacebuilding and Local Success: Assumptions and Effectiveness', International Studies Review 19, no. 1 (2017).

³⁵Charles T. Call, Why Peace Fails: The Causes and Prevention of Civil War Recurrence (Georgetown University Press, 2012); Michael W. Doyle and Nicholas Sambanis, Making War and Building Peace: United Nations Peace Operations (Princeton University Press, 2006); Virginia Page Fortna, Does Peacekeeping Work?: Shaping Belligerents' Choices after Civil War (Princeton, NJ: Princeton University Press, 2008); Virginia Page Fortna and Lise Morjé Howard, 'Pitfalls and Prospects in the Peacekeeping Literature', Annual Review of Political Science 11 (2008): 288-94; Michael J. Gilligan and Ernest J. Sergenti, 'Do UN Interventions Cause Peace? Using Matching to Improve Causal Inference', Quarterly Journal of Political Science 3, no. 2 (2008); Desirée Nilsson, 'In the Shadow of Settlement: Multiple Rebel Groups and Precarious Peace' (Doctoral Dissertation, Institutionen för Freds-och Konfliktforskning, 2006); J. Michael Quinn, T. David Mason, and Mehmet Gurses, 'Sustaining the Peace: Determinants of Civil War Recurrence', International Interactions 33, no. 2 (2007); Catherine Riordan, 'Post-Conflict Governments 1975-2004: Designing Effective Assistance' (PhD Dissertation, University College Dublin, 2013); Nicholas Sambanis, 'Short- and Long-Term Effects of United Nations Peace Operations', The World Bank Economic Review 22, no. 1 (2008); Barbara F. Walter, Committing to Peace: The Successful Settlement of Civil Wars (Princeton: Princeton University Press, 2002).

³⁶Human Security Research Group, Human Security Report 2013: The Decline in Global Violence—Evidence, Explanation and Contestation (Vancouver: Human Security Research Group, 2014), 174-5; Susanne Karstedt, 'Scaling Criminology: From Street Violence to Atrocity Crimes', in Regulatory Theory: Foundations and Applications, ed. Peter Drahos (Canberra: ANU Press, 2017); Patrick M. Regan, Richard W. Frank, and Aysegul Aydin, 'Diplomatic Interventions and Civil War: A New Dataset', Journal of Peace Research 46, no. 1 (2009).

³⁷Lise Morjé Howard, *UN Peacekeeping in Civil Wars* (Cambridge: Cambridge University Press, 2008).

³⁸Braithwaite and D'Costa, Cascades of Violence.

³⁹The debt owed here is to Malcolm Sparrow's (2011) metaphor in *The Regulatory Craft* (Brookings Institution). Business regulation, woodwork and the regulation of war are very different kinds of activities but each is evidence-based in ways that make it more a craft than a science.

My hypothesis is that the effect sizes in the above quantitative studies are so large because so many peacebuilders reject the recipes and templates thrust at them and prefer to diagnose clinically the context they confront. Peacebuilding is also a craft of participatory multilevel meta-governance by and of states, markets and civil society. 40 And it is a craft of watching for surges to replace militarised politics with the politics of nonviolence, as Braithwaite and D'Costa found to happen in unpredictable ways in many places.41

Open-source preventive diplomacy

A here-and-now contribution we might make to world order would be improving preventive diplomacy. 42 Braithwaite and D'Costa advanced an open-source approach to that challenge as one way to go in a complex world prone to the kind of cascades revealed in the book.⁴³ A starting point was to consider how and why our understanding of international affairs has failed us in the past. Robert Jervis's Why Intelligence Fails is instructive. 44 He diagnosed why US intelligence agencies failed to warn of the Islamic Revolution in Iran in 1979, for example. Jervis was in the privileged position of being a CIA consultant with wide access to their intelligence on Iran (and other cases of intelligence failure). Jervis began with the reality check that the CIA had only two political analysts for a country as geopolitically important and diverse as Iran and two economic analysts (working almost exclusively on OPEC oil cartel issues). Other Washington intelligence agencies had no Iran experts in 1979:

Like many people who did not know the government from the inside, I had assumed extensive coverage of every country. In fact this was out of reach, and remains so ... I was also surprised that the CIA in particular and the government in general did not engage in more thorough and detailed research.

Until the crisis, intelligence on Iran did not receive much of an audience. This also surprised me, although it should not have. Top officials are incredibly busy, and even thirty years ago, when they probably read more than is the case now, intelligence about a country that did not require immediate decisions could not attract many readers. This not only lowered the analysts' morale but meant that their reports did not get the kind of questioning and critical scrutiny that could have helped keep them on their toes.

I had expected, again naively, that even if policymakers did not read long intelligence papers, the members of the intelligence community would constitute a sort of intellectual community, with people probing, commenting on, and criticizing one another's work. In fact, this was not the case, and contacts among the people working on Iran were relatively infrequent.45

⁴⁰Bob Jessop, 'Promoting "Good Governance" and Concealing Its Weaknesses: Reflection on Political Paradigms and Political Narratives in the Sphere of Governance', Public Governance 2, no. 2 (2007).

⁴¹Braithwaite and D'Costa, Cascades of Violence.

⁴²Gareth Evans, Cooperating for Peace: The Global Agenda for the 1990s and Beyond (London: Allen and Unwin, 1993).

⁴³Braithwaite and D'Costa, Cascades of Violence.

⁴⁴Robert Jervis, Why Intelligence Fails: Lessons from the Iranian Revolution and the Iraq War (Ithaca: Cornell University Press, 2010).

⁴⁵lbid., 21–2.

To make all this worse, Jervis found that the CIA had a vertical orientation rather than a horizontal approach to learning. In particular, CIA analysts expected a chilly reception if they reached out to academics. Their ethos meant they felt uncomfortable even talking with people without clearances about questions that puzzled them. This added up to a culture of evidence gathering without peer review. The culture of short briefing notes that could be fitted on a page or two meant that footnotes that cited sources for assertions (and sources that refuted them) that might be checked by peers came late to the US intelligence community. One example of an upshot of all this was that no one 'understood the role of religion or [Ayatollah] Khomeini ... and did not see the beginnings of what we would now call radical or fundamentalist Islam'. 46 A widespread problem was that intelligence agencies could get away with the basic methodological error of searching on the dependent variable - for example, searching for when something resulted in war without searching with equal diligence for cases where that same phenomenon resulted in peace.

An unhealthy saying of Australian academics about quick and dirty research is that it is 'good enough for government work'. This can mean inattentiveness to citing sources and unaccountability to peer review. It can also mean the timidity of style and aversion to bold analysis that Jervis has not been alone in discerning in government writing. This is the biggest difference between university research and policy analysis by state officials. University researchers are rewarded for being 'out there' with bold and interesting analyses. If they are wrong in them, mostly they are simply ignored; if their ideas are widely cited as insightful, their careers flourish. For government policy analysts, in contrast, their incentives are to use cautious language and stay with the pack. If they go out on a limb with their analysis, bureaucratic rivals who have an opposing analysis might inflict damage on their careers when they are proven wrong. Consider the intelligence community's 'slam dunk' conclusion that Saddam Hussein was lying about having ended his production of weapons of mass destruction (WMD) in 2003. Even when president Bush expressed surprise at how little evidence the CIA could share with him, no one thought it would be good for their career to contest the groupthink:

Most strikingly, no one proposed a view close to the one we now know to be true. Indeed, as the president's WMD Commission put it in its post-mortem, 'Failing to conclude that Saddam had ended his banned weapons program is one thing—not even considering it as a possibility is another.'47

In light of Jervis's insights, it might be argued that university academics have a comparative advantage for developing ideas for preventive diplomacy that respond to complexity and challenges of distinguishing the knowable but unknown from the unknowable. Even for the most geopolitically insignificant of countries, there are dozens of good scholars around the world who are genuine experts on that country – of course, concentrated particularly in the universities of that country itself, but also in think tanks beyond universities, such as the International Crisis Group, and significant numbers even today in media organisations. The community of scholars and the commentariat for any country is bristling with bold ideas regarding the risks that country faces and poses. It may be that a high

⁴⁶lbid., 25.

⁴⁷lbid., 128.

proportion of those provocative ideas are wrong or trivial in practice. Structurally, however, the community of university scholars and the commentariat are horizontally rather than vertically organised and have an open culture of contestation of provocative ideas. When it comes to seizing preventive diplomacy initiatives, political leaders must be helped to be bolder. Jervis, intriguingly, quotes former US secretary of state Dean Acheson saying to presidential scholar Richard Neustadt: 'I know your theory [that presidents need to hear conflicting views]. You think Presidents should be warned. You're wrong. Presidents should be given confidence'. 48 Perhaps they need both warning and confidence in good measure.

While the scholarly community can be afflicted with disciplinary blinders, interdisciplinary scholars and the commentariat are a check on that. At the end of the day universities are not afflicted with the kind of siloing between Federal Bureau of Investigation (FBI) and CIA intelligence that contributed to the failure to prevent the 9/11 terrorist attacks on the United States. ⁴⁹ So, it should be possible to harness the international scholarly community to help compensate with preventive diplomacy ideas that counter the five key weaknesses of intelligence agencies identified above (with thanks to Jervis for stimulating them). The intelligence weaknesses are:

- (1) Thin early warning capability
- (2) Siloing
- (3) Timid clinging to the middle of the road
- (4) Weak peer review
- (5) Sloppy cultures of accountability for sources and research standards.

If we could manage to achieve this, it would not be the only domain where humankind has learnt that a move from closed bureaucracies to open contestation of ideas in universities is the better way to innovate in problem-solving. We have seen this in domains that range from solar technologies, to the conquest of diseases, breakthrough information technologies and policing strategies that reduce crime.

A preventive diplomacy wiki

Braithwaite and D'Costa's proposal to stimulate debate is that a leading university establish a Preventive Diplomacy Wiki. Researchers from anywhere in any language could propose a preventive diplomacy idea that should be seized (by any, or many, levels of governance). The proposal would explain why seizing it would be a good preventive response to uncertain risks. State-of-the-art electronic translation from one language to any other might be used – a technology expected to improve dramatically. Then human minds could wiki nuance into translated texts if the idea proved important. Normal citation of sources and empirical evidence would be expected on the wiki.

As soon as the preventive diplomacy strategy was posted, it would be open to other scholars to insert footnotes that contest its evidence and conclusions. These contestations could/should be signed. While commentators would be encouraged to give as much

⁴⁸lbid., 166.

⁴⁹lbid., 185.

information about their identity as possible, it might be better to allow a Russian intelligence officer who wants to contest something to do so anonymously, rather than give them no choice but to create a fictitious identity for the purpose. It would actually be important to encourage intelligence agencies to assert that certain claims were false according to evidence available to them, the nature and source of which they might be unwilling to disclose. Such information can be valuable and can be misleading. The crucial thing is to have a method of analysis, such as subjective logic,⁵⁰ that weighs the trustworthiness of a particular assertion by a particular anonymous source, a semi-anonymous source, or a covert source with a provenance that might be guessed. Evidence that is clearly detailed by identified and respected sources who engage in systematic fact-checking would, of course, be given more weight by readers of the wiki.

Each year a panel of distinguished scholars and retired diplomats would decide the 10 best novel preventive diplomacy ideas for that year. They would be announced and honoured with publicity and modest monetary prizes. The Preventive Diplomacy Wiki might then send each of these proposals to separate panels of distinguished experts on the country/region concerned. This expert panel would produce a critique and evaluation report on the promise of the preventive strategy. They could work as a team to code a matrix of the probability of the claims made about each risk and the confidence in each of those probabilities, both in fuzzy verbal categories (see Table 1). Such analysis of contested facts could be entered into subjective logic software such as Intelfuze developed by Veriluma⁵¹ to estimate which are the biggest risks and how promising are the different elements of the preventive diplomacy proposal, in the judgment of these experts, for treating those risks.

Subjective logic software was developed by researchers at the Distributed Systems Technology Centre, a University of Queensland Cooperative Research Centre that engaged participation from many Australian universities and research institutions and leadership from many minds, 52 including Simon Pope (now with Microsoft), Audun Jøsang (formerly of Alcatel, now Professor of Informatics at the University of Oslo) and David McAnally (a mathematician from the University of Queensland and University of Melbourne). Together, this large team developed the algorithms and concepts that are already being used by at least two national intelligence agencies. Subjective logic does not assume linear relationships between variables;⁵³ it allows some variables to be coded quantitatively and in an uncontested way, other variables to be coded in a granular and contested way, and some important conjectures to be noted qualitatively, but coded 'don't know'. Put another way, these software developers are advancing methods for dealing with radically mixed data of variable knowability and with many holes. It is

⁵⁰Audun Jøsang, *Subjective Logic: A Formalism for Reasoning under Uncertainty* (Springer International Publishing, 2016).

⁵¹Chris Pash, 'Defence Intelligence Software Maker Veriluma Debuts on the ASX at a 25% Premium', Business Insider Australia, 27/09/2016 2016; Simon Kevin John Pope, Audun Jøsang, and David Scott McAnally, 'Intelligence Analysis Method and System Using Subjective Logic', (Google Patents, 2010); Ray Shaw, 'Veriluma Brings Predictive Analytics to DOD', IT Wire, 19/12/2016 2016. See also: www.veriluma.com (accessed March 4, 2017). The original patent cites the earlier software, ShEBA (Structured Evidence-Based Analysis of Hypotheses).

⁵²Cited in Jøsang, Subjective Logic.

⁵³Linearity or nonlinearity of effects is managed 'subjectively' inside the heads of analysts. For example, based on whatever evidence about the nature of the relationship between inflation and war is known to the analyst, the analyst might judge that rising inflation in a particular country will only very slightly increase the risks of war; but, after a tipping point where it cascades to hyperinflation, it will greatly increase risks of war.

Table 1. Likelihood and confidence in fuzzy categories.

Likelihood categories:	Confidence categories	No confidence	Low confidence	Some confidence	High confidence	Total confidence
		E	D	С	В	Α
Absolutely not	9	9E	9D	9C	9B	9A
Very unlikely	8	8E	8D	8C	8B	8A
Unlikely	7	7E	7D	7C	7B	7A
Somewhat unlikely	6	6E	6D	6C	6B	6A
Chances about even	5	5E	5D	5C	5B	5A
Somewhat likely	4	4E	4D	4C	4B	4A
Likely	3	3E	3D	3C	3B	3A
Very likely	2	2E	2D	2C	2B	2A
Absolutely	1	1E	1D	1C	1B	1A

Source: Jøsang. 56 Jøsang, Subjective Logic, 49.

therefore one possible systematic approach to a vast amount of information in conditions of cascading complexity.

Again, subjective logic is just one of many options for responding to complexity and subjecting each of the most worthwhile proposals on a preventive diplomacy wiki to more detailed and rigorous analysis. There is undoubtedly wisdom also to be drawn from decades of experience with refining details of the Delphi method, for example, since it was first developed for the Pentagon by the Rand Corporation in the 1950s and 1960s.⁵⁴ DelphiCloud has given much thought to the problems of overconfidence and groupthink. DelphiCloud has been adapted in an evidence-based way by giving people an opportunity to express opinions privately without pressure from a group, but following that with discussion sessions where participants trade evidence and share analyses. In aggregating to a collective view, DelphiCloud gives more weight to the analyses of analysts whose assessments have proved robust in the past on that kind of question.

The 10 best proposals each year and the analyses of them by expert panels could be published in an annual review of preventive diplomacy, which could be provided free to all institutions involved in Track II diplomacy. The problem with the social science academy that this proposal seeks to remedy is that our incentives are to publish either empirical findings or social theory. The remedy advanced here is to make it also academically prestigious (prize-winning, income-generating, citation-generating) to come up with novel, well crafted, preventive diplomacy ideas based on one's detailed knowledge of a particular country. The other thing that appeals about it is that, as we have seen with the prevention of disease, 55 universities taking back leadership in applied research excellence from closed bureaucracies can put applied research on a more ethical footing. While it is open to an intelligence agency like the CIA to propose to its political leaders that its best idea is to deploy drones on missions of extrajudicial assassination in countries against which the United States has not declared war, or to establish an institution like the School of the Americas in Panama, such proposals could not possibly win prizes on an opensource preventive diplomacy wiki led by university professors. They would be disinfected by the sunlight of open contestation.

⁵⁴See the DelphiCloud website: delphi.cloud/ (accessed January 20, 2018).

⁵⁵Graham Dukes, John Braithwaite, and James P. Moloney, *Pharmaceuticals, Corporate Crime and Public Health* (Edward Elgar Publishing, 2014).

Moreover, the test for excellence would not be to advance any single national interest. The test would be war prevention and/or violence prevention more broadly. If the Braithwaite and D'Costa analysis is right, many of the best ideas would actively prevent cascades of militarisation rather than promote new forms of militarisation (in the way drone warfare has). The wiki would come up with ideas on how to apply regulatory theory to making the nuclear non-proliferation regime more effective. Proposals could never win by lauding military interventions to smash Weapons of Mass Destruction. The wiki could develop many creative new layers of strategies to enrich meta-strategies that grapple with complexity.

As with ideas of social scientists generally, most novel layers of strategy would be duds. They would fail fast were the preventive diplomacy debate to embolden someone to try them. The proposal advanced in more detail by Braithwaite and D'Costa is for a meta-strategy called responsive peacebuilding that enables open source debate on how to order many layers of redundant strategies in the hope that not all will prove to be duds. The hope is also that some strategies that are thin reeds standing alone can be woven together into a pyramid of redundant strategies that is more resiliently effective.

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