



**POLITICAL
INSTABILITY AND
GENOCIDE IN
THE ASIA
- PACIFIC:
RISKS AND
FORECASTS**

POLITICAL INSTABILITY AND GENOCIDE IN THE ASIA-PACIFIC: RISKS AND FORECASTS

Charles R. Butcher
Benjamin E. Goldsmith
Dimitri Semenovich
Arcot Sowmya



Australian Government

AusAID



Asia Pacific Centre for the
Responsibility to Protect



THE UNIVERSITY OF SYDNEY

THE UNIVERSITY OF
NEW SOUTH WALES





We gratefully acknowledge support from AusAID's Australian Responsibility to Protect Fund via the Asia-Pacific Centre for the Responsibility to Protect, University of Queensland. We thank associates of the Political Instability Task Force project for valuable feedback on our analysis and academic papers, and we also acknowledge our debt to them for the dataset they created and have made publicly available. However, the content of this report is the sole responsibility of the authors.

Introduction and Background

The Asia-Pacific has witnessed some of history's most horrific occasions of mass murder.¹ A generation of people were lost at the hands of Pol Pot's regime in Cambodia. The separation of East Pakistan in 1971 may have cost 3 million civilian lives and displaced another 10 million. Mao's 'Cultural Revolution' and the suppression of the Tibetan independence movement involved systematic murder on a comparable scale. Less well-known instances of genocide and politicide include the murder of communist sympathisers in Indonesia after an attempted coup in 1965, and the massacres that accompanied counter-insurgency campaigns against the Moro in the Philippines from 1972 to 1976. Genocide, however, is not an inevitable feature of the Asia-Pacific region. Indeed, the incidence of genocide has fallen sharply since the end of the Cold War. Nor, when the killing has started, is the process inexorable. Genocides can be prevented, or, at least, stopped soon after they begin. Accurate and reliable forecasts of genocide can act as a 'force multiplier' by increasing the efficacy of prevention and intervention strategies, and, where these fail, improving the chances of successful prosecution to deter other leaders from committing these crimes in the future.

This policy report provides an estimate of the present risk of genocide in the Asia-Pacific region. Although the risk of genocide appears to be appreciably lower than it was 20 to 30 years ago, Myanmar, Sri-Lanka, and Afghanistan still appear in our top 15 states at risk of genocide. In this report, we discuss the design, results, and usefulness of a quantitative model to forecast genocide for the Asia-Pacific region. Adopting a widely used definition, we take genocide to mean the 'promotion, execution, and/or implied consent of sustained policies by governing elites or their agents - or in the case of civil war, either of the contending authorities - that result in the deaths of a substantial portion of a communal group or politicized non-communal group'.² This definition includes the targeting of groups because of their ethnic or communal identity as well as the targeting of groups based upon political beliefs, or 'politicide'. For brevity, we use the term 'genocide' to refer to events of both genocide and politicide in the remainder of this report. We discuss definitional and coding issues in more detail in the Appendix to this report. We begin by detailing how an 'early warning' system capable of identifying those countries at the highest risk of genocide might enhance prevention, intervention and prosecution efforts. We then outline historical trends in genocide incidence within the Asia-Pacific. This is followed by a discussion of how the forecasting model was designed and how these forecasts should be interpreted. The register of fifteen 'at risk' states for the years 2011-2015 is then presented in two tables, also including some of the most important predictive factors in our model. A brief discussion of those cases from the Asia-Pacific that make this list then follows. We conclude by reflecting upon future directions for forecasting events of massive human rights violations.

1 We take the Asia-Pacific region to include the following states Afghanistan, China, Mongolia, Taiwan, North Korea, South Korea, Japan, India, Bhutan, Pakistan, Bangladesh, Myanmar, Sri Lanka, Maldives, Nepal, Thailand, Cambodia, Laos, Vietnam, Malaysia, Singapore, Brunei, Philippines, Indonesia, East Timor, Australia, Papua New Guinea, New Zealand, Vanuatu, Solomon Islands, Kiribati, Tuvalu, Fiji, Tonga, Nauru, Marshall Islands, Palau, Micronesia, Samoa. It should be noted that the forecasting model in this paper does not produce estimates for states with populations less than 500,000.

2 Marshall, Monty G; Ted Robert Gurr, and Barbara Harff (2010) *PITF – State Failure Problem Set: Internal Wars and Failures of Governance, 1955-2009. Dataset and Coding Guidelines.* (<http://www.systemicpeace.org/inscr/inscr.htm>), Pg 14. See also Harff, Barbara (2003) No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955. *American Political Science Review* 97(1): 57-73. For an early formulation of this definition, see Barbara Harff and Ted Robert Gurr (1988) Toward Empirical Theory of Genocides and Politicide: Identification and Measurement of Cases Since 1945. *International Studies Quarterly*, 32(3): 359-371

Why Are Forecasts Useful?

Early Warning for Long-Term Prevention, Short Term Intervention and Prosecution

As with many of the blights upon humanity that one would want to eradicate, so it is with genocide: proactive prevention is better than reactive treatment and the earlier that risks can be identified the more effective prevention can be. States have a raft of policies at their disposal that might plausibly reduce the chances of genocide when applied early. These include: the promotion of civil and political rights, reducing corruption, security sector reform, development projects, arms controls, and programs that attempt to reconcile grievances between at-risk groups.³

Genocide prevention, by definition, saves lives and can be expected to be much cheaper than United Nations (UN) or regional peacekeeping interventions,⁴ and has the potential to reduce other forms of political instability, such as civil or ethnic wars and coups.⁵ Infant mortality, for example, is a powerful predictor of civil wars, ethnic wars, adverse regime changes and genocide.⁶ Successful measures to reduce poverty may therefore dampen the prospects of these varying forms of large-scale violence, not just genocide.

For prevention strategies to be effective however, they need time to work. Reducing levels of poverty or changing political institutions is often a slow and incremental process, with no guarantee of success. This is the most obvious way that a forecasting tool would be useful. States are usually willing

3 See Evans, Gareth (2008) *The Responsibility to Protect: Ending Mass Atrocity Crimes Once and For All*. Washington D.C: The Brookings Institute, Chapter 4; Ervin Staub (2000) Genocide and Mass Killing: Origins, Prevention Healing and Reconciliation. *Political Psychology* 21(2): 375. It must be recognised that it is difficult to assess the specific causal impact of prevention policies upon the risk of genocide. This is because there are few cases (that we are aware of) where a genocide would have occurred but for the intervention of a particular policy. We also acknowledge that an additional pillar in any genocide prevention strategy will be finding ways to translate early warning into early action. In this sense, the recent initiative by the Obama administration to make mass-atrocity prevention an important aspect of national security planning is encouraging. See: <http://www.whitehouse.gov/the-press-office/2011/08/04/fact-sheet-president-obama-directs-new-steps-prevent-mass-atrocities-and>.

4 The African Union and United Nations Hybrid Operation in Darfur (UNAMID), for example, cost roughly \$1.8 billion in 2010. Michael Fleshman (2010) Darfur: An Experiment in African Peacekeeping, Is African Union-UN Hybrid a Model for the Future? *Africa Renewal Magazine* December: 19.

5 A recurring finding from the social science literature is that genocide does not erupt from stable or harmonious political settings. Some form of 'serious political instability' appears to be a necessary, although not sufficient condition, for genocide. Policies that reduce the chances of genocide, therefore, would typically reduce the chances of political instability as well, and vice versa. See Krain, Matthew (1997) State-Sponsored Mass-Murder: The Onset and Severity of Genocides and Politicides. *Journal of Conflict Resolution* 41(3): 331-360; Melander, Erik (2009) Selected To Go Where Murderers Lurk? The Preventive Effect of Peacekeeping on Mass Killings of Civilians. *Conflict Management and Peace Science* 26: 389-406; Valentino, Benjamin, Huth, Paul and Balch-Lindsay, Dylan (2004) 'Draining the sea': Mass killing and guerrilla warfare. *International Organization* 58(2): 375-407; Colaresi, Michael and Sabine C. Carey (2008) To Kill or to Protect: Security Forces, Domestic Institutions, and Genocide. *Journal of Conflict Resolution* 52: 39-67; Harff, Barbara (2003) No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955. *American Political Science Review* 97(1): 57-73.

6 Goldstone, Jack. A; Robert.H. Bates, David.L. Epstein, Ted Robert Gurr, Michael B. Lustik, Monty G. Marshall, Jay Ulfelder, and Mark. Woodward (2010) A Global Forecasting Model of Political Instability. *American Journal of Political Science* 54(1): 190-208. See also J. Joseph Hewitt (2009) The Peace and Conflict Instability Ledger: Ranking States on Future Risks, 2008-2010'. In J. Joseph Hewitt, Jonathan Wilkenfeld and Ted Robert Gurr, *Peace and Conflict 2010*. Boulder and London: Paradigm Publishers.

“Accurate and reliable forecasts of genocide can act as a ‘force multiplier’ by increasing the efficacy of prevention and intervention strategies”.

to commit only a small part of their national budgets to foreign assistance and reliable forewarning would enable these resources to be directed to the most dangerous situations.⁷ In addition, there is no one-size-fits all model for genocide prevention. Policies do not work equally well in all cases and some policies may enflame some situations. As Kathman and Wood point out, policies that increase the perceived level of threat faced by the government may incite the regime to more extreme policies of mass killing to counter that threat.⁸ Demobilisation of parts of the regular army, for example, might push a government to rely upon paramilitaries for security, and, by creating an armed force unfettered by the institutional constraints of the regular military and answerable directly to the executive, might actually increase the chances of genocide.⁹ Prevention strategies must be tailored for specific political, social and economic contexts and for prevention to be designed in this way, decision-makers must know for which countries they are to be tailored. A forecasting tool would increase the effectiveness of prevention strategies by affording them more time to work and aligning them more closely with the specific situation faced by at-risk groups.

Given that prevention strategies may only be effective in the long-run and that states face major difficulties converting foreign assistance packages into policy-outcomes abroad (translating development projects into sustainable economic growth in countries including Bangladesh, the

7 Australia, for example, spent \$5.2 billion in 2011-2012 on foreign aid and \$24.2 billion on defence. See AusAID (2012) Summary of Australia’s Overseas Aid Program 2012-13, available from <http://www.ausaid.gov.au/Publications/Pages/summary-budget-2012-13.aspx>; Parliament of Australia (2012) Defence Budget Overview. Available from http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/BudgetReview201213/DefenceOverview

8 Kathman and Wood see the likelihood and severity of genocide as a function of both the perceived level of threat faced by a government committing or prepared to commit genocide and the costs of implementing that policy. A prevention policy that increased the level of threat faced by the regime would not necessarily increase the likelihood or severity of genocide if it were offset by policies that increased the costs of committing genocide, according to this model. Jacob D. Kathman and Reed M. Wood (2011) Managing Threat, Cost, and Incentive to Kill: The Short and Long-Term Effects of Intervention in Mass Killings. *Journal of Conflict Resolution* 55(5): 735-760

9 Colaresi, Michael and Sabine C. Carey (2008) To Kill or to Protect: Security Forces, Domestic Institutions, and Genocide. *Journal of Conflict Resolution* 52: 39-67.

Philippines, Pakistan, and Sri Lanka, for example, has proven to be especially difficult, even in a high-growth region such as Asia) stopping ongoing or impending genocides will remain a major focus. Military deployments are the most visible form of intervention, but there are a range of policies from economic and military sanctions to diplomatic intervention and the jamming of radio communications that can be utilised in the short-term.¹⁰ Indeed, prevention and non-military forms of intervention take on additional importance in the Asia-Pacific region. Many states in South and East Asia are militarily strong and unlikely to consent to any international deployment in the case of an impending or ongoing genocide. Association of Southeast Asian Nations (ASEAN) member states remain strongly focused on norms of sovereignty and non-intervention (unlike, for example, members of the African Union). China's growing military capabilities are well known, but North Korea maintains a standing army of over 1 million, Myanmar nearly 400,000 and Pakistan over half a million. China, North Korea and Pakistan all possess nuclear weapons. An unsolicited foreign military intervention would likely come at such substantial costs that this option is not realistic in most cases.¹¹ Intervention in Sri Lanka in 2009, for example, appeared never to be considered as a serious option, even though the scale of civilian death was known to be large.¹²

A forecasting tool could improve the efficacy of short-term, non-military and military intervention strategies in two important ways. First, states that are identified to be at risk of genocide can be the focus of intensive monitoring for the 'triggers',

10 David Yanagizawa-Drott, for example, finds that 10% of participation in the Rwandan can be explained by Radio Television Libre des Mille Collines broadcasts that dehumanised the Tutsi and encouraged people to join in the killing. David Yanagizawa-Drott (2012) *Propaganda and Conflict: Evidence from the Rwandan Genocide*. *Unpublished paper*, Harvard University March 10. Available from: <http://www.hks.harvard.edu/fs/dyanagi/Research/RwandaDYD.pdf>

11 Libya intervention costs? Use of air-power?

12 See Weiss, Gordon (2011) *The Cage: The Fight for Sri Lanka and the Last Days of the Tamil Tigers*. Sydney, Australia: Pan MacMillan, pp. 198-226, 264.



‘accelerants’ or catalysts that occur close to a genocidal event. Initiatives such as the Satellite Sentinel Project, (<http://satsentinel.org/>) could be harnessed to monitor these countries and provide critical information on activities of armed forces and the vulnerability of civilian populations. Other potential partners include Genocide Watch, the International Crisis Group (ICG), country analysts and the intelligence communities of concerned states. Many of these monitoring projects are, however, expensive, or limited in their resources (the Satellite Sentinel Project, for example, only presently monitors the Sudan). Combining a small but comparatively reliable watchlist of states at highest risk of genocide with close-monitoring would ensure that the attention is focused where it is most likely to be needed. No such list could provide perfect prediction, of course, but the goal of this project is to develop the most reliable list we can.

We believe that such collaboration can have two important ‘force multipliers’. If evidence of an impending genocide or genocidal intent is established for a particular case, relevant financial and troop contributors and potential veto-players can be lobbied early and a package of sanctions and (potentially) inducements tailored to the case at hand can be implemented. It is, perhaps, overly optimistic, but it remains our hope that states will be reluctant to obstruct efforts to avert an impending genocide or arrest an ongoing one in the face of credible evidence provided by such monitoring efforts. At the very least, the ability of state leaders to claim a level of plausible deniability would be greatly reduced. Second, as evidence regarding short-term triggers and signals of genocide surfaces, states may use policy-interventions short of military force to deter a genocide and focus appropriate efforts on the potential victim and perpetrator groups. At each of ‘Genocide Watch’s’ eight stages of genocide, for example, a policy prescription is provided.¹³ A correctly targeted and sequenced combination of sanctions, inducements and diplomacy may adequately communicate resolve to punish any instigation of genocide, and obviate the need for a foreign military to protect civilians.

Finally, states may be reluctant to address genocide with military intervention (in part) because the requisite attention from political leaders, policy-makers, and the media is only generated once mass-killing is imminent or underway. As such, peacekeeping missions (whether unilateral or multilateral) must be assembled quickly, with fragmented intelligence and little space for military planning tailored to local conditions.¹⁴ John Heidenrich concludes, in his book *How to Prevent Genocide*, that:

‘The lesson [from Kosovo] is this: having three or four months of early warning, while better than no warning at all, is not much time to prevent a genocide. For instance, to arrange a multinational peacekeeping force typically takes the UN at least 3 months of planning and preparation – and that is after the Security Council has debated the issue and agreed to act. Ideally, therefore, a genocide early warning system should forecast a genocide, or at least genocidal trouble, several months or even years in advance.’¹⁵

An ability to identify states at high risk of genocide over the next 1 to 5 years would enable defence departments and the UN to draw up plans for a military deployment to protect vulnerable civilians and gather the necessary intelligence on the strength and strategies of combatants and important geographic and logistic factors long before any such deployment is required.

13 These include the blocking of hate-speech, banning international travel of state or militia leaders, freezing foreign assets and the provision of military assistance to groups of potential victims.

14 Some difficulties of such military operations are explored in: Carr Center for Human Rights Policy, Harvard Kennedy School and US Army Peacekeeping and Stability Institute. 2010. *MARO Mass Atrocity Response Options: A Military Planning Handbook*. N.p. The main authors are Sarah Sewall, Dwight Raymond, and Sally Chin.

15 John Heidenrich (2001) *How to Prevent Genocide*. Westport CT: Praeger. Pg 80

Where states fail to arrest atrocities, information gathered through a combination of forecasting and monitoring may serve as evidence to prosecute offenders in the International Criminal Court (ICC) or specially convened international tribunals. Kang Kek Iew, who administered the Tuol Sleng prison in Phnom Penh was convicted of genocide by the Extraordinary Chambers in the Courts of Cambodia and is serving life in prison (perpetrators from Rwanda and Serbia/Bosnia have also been convicted by tribunals dealing with those events). Four other senior members of the Cambodian regime responsible for the deaths of 1.7 million Cambodians from 1975-1979 are presently on trial for genocide.¹⁶ Outside of Asia, the president of Sudan, Omar al-Bashir, is under indictment by the ICC and there are cases before the court relating to conflicts in Uganda, the Central African Republic and the Democratic Republic of Congo.¹⁷

However, the ICC in 2009 ruled that insufficient evidence existed to charge Bashir with genocide. It took one more year before sufficient evidence could be presented. Similarly, in 2012 the ICC dropped all 13 counts of war crimes and crimes against humanity allegedly committed in the DRC in 2009 by former Rwandan rebel leader Callixte Mbarushimana due to insufficient evidence. Early warning which leads to monitoring of at-risk countries should lead to better and more evidence being available at earlier stages for speedier justice.

Successfully convicting and punishing perpetrators of genocide and mass killing in the present, will, over time, raise the perceived costs of such responses to domestic instability in the future. Indeed, one of the founding visions of the ICC was that the ‘guarantee that at least some perpetrators of war crimes or genocide may be brought to justice acts as a deterrent and enhances the possibility of bringing a conflict to an end’.¹⁸ Justice may also be crucial to successful post-conflict transformations and is a moral imperative that should be pursued both at the level of individuals, and at the level of states.

There is also the possibility that large, powerful states might appear on the at-risk list. In such instances, while intervention or diplomatic pressure might be unlikely or ineffective, public attention could be the best option. In Asia, China does appear on some recent genocide watchlists, and has appeared in our analysis for at-risk states in past years.¹⁹ Public knowledge that instability in Tibet or Xinjiang regions could descend into genocidal violence has the potential to make the PRC leadership more aware that the outside world is alert to this danger, and thus more likely to avoid such extremes

16 These four are: Nuon Chea, Khieu Samphan, Ieng Sary and Ieng Thirith

17 The definition of genocide in international law and the definition used in our study differ, mainly on the extent to which ‘intent’ to eradicate a specific group must be established. Therefore, some cases that are coded as genocide in our forecasting model may not satisfy the criteria for genocide in international law. It is our hope that focused monitoring efforts can assist in gathering evidence of intent where it exists.

18 United Nations (1998-1999) Rome Statute of the International Criminal Court: Overview, available from (<http://untreaty.un.org/cod/icc/general/overview.htm>). Last accessed 15 June 2012. We acknowledge that there exists a debate between those whose see justice and peace as coterminous and those arguing that, sometimes, the price of peace must be justice. See Catherine Lu (2009) *The Politics of Legal Accountability and Genocide Prevention*. In: Rene Provost and Payam Akhavan (eds.) *Confronting Genocide*. London: Springer. See also Alex de Waal and Gregory H. Stanton (2009) Should President Omar al-Bashir of Sudan Be Charged and Arrested by the International Criminal Court: An Exchange of Views. *Genocide Studies and Prevention* 4(3):329-353

19 See Barbara Harff (2012) Assessing Risks of Genocide and Politicide A Global Watch List for 2012” in. J. Joseph Hewitt, Jonathan Wilkenfeld and Ted Robert Gurr (eds.) *Peace and Conflict 2012*, College Park MD: University of Maryland; and Goldsmith, Benjamin E., Charles Robert Butcher, Dimitri Semenovich and Arcot Sowmya (2012) Forecasting the Onset of Genocide and Politicide: Annual Out-of-Sample Forecasts on a Global Dataset, 1988-2003. *Social Science Research Network* March 20 Available at: <http://ssrn.com/abstract=2027396> or <http://dx.doi.org/10.2139/ssrn.2027396>

Asian and Global Trends in Political Instability and Genocide Onset, 1948-2010

of violence.

Figure 1 – Ongoing Instances of Political Instability Globally and in Asia, 1946-2010

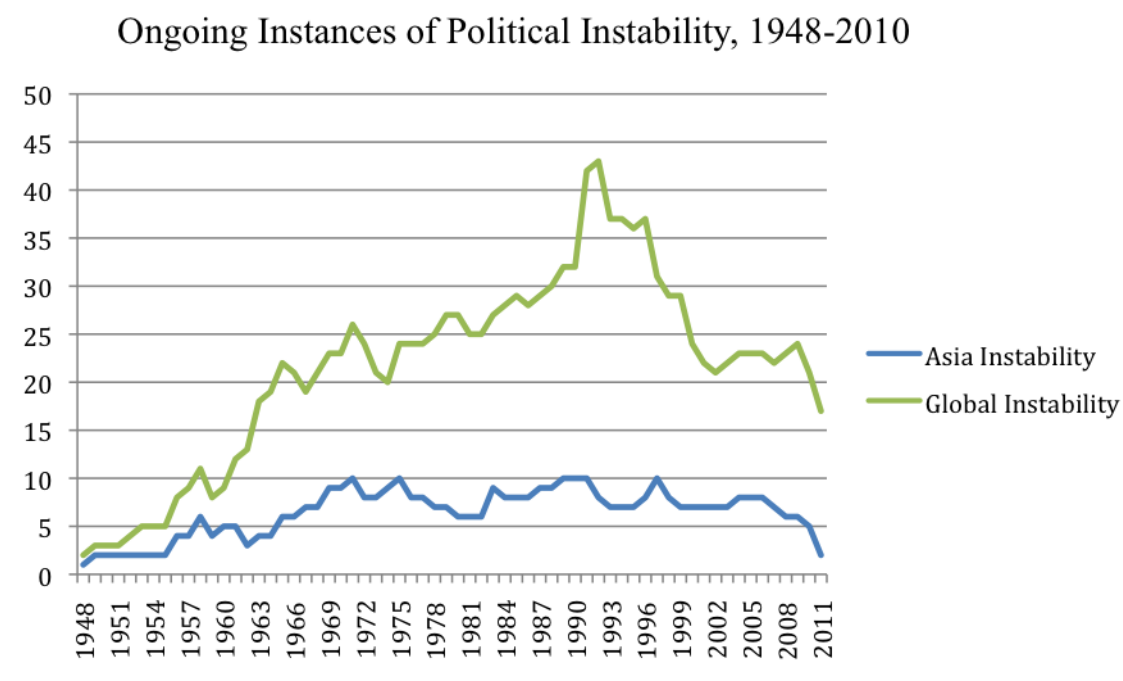
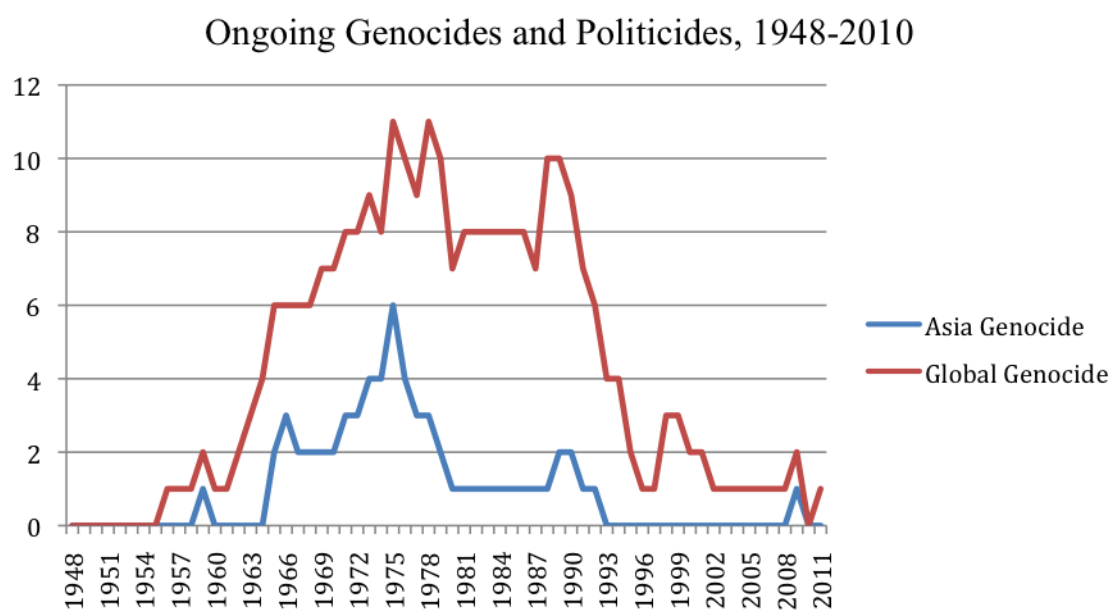


Figure 2 – Ongoing Genocides and Politicides, 1948-2010



“It is possible that greater constraints upon the government executive’s decision-making power, or increased standards of living, have engendered the lower risk of genocide onset and incidence in Asia”.

Asia has experienced a striking decline in the incidence of genocide and politicide from the beginning of the 1980s. In 1975, one of the two highest years of global genocide incidence, more than half (6) of the cases were from South or South-East Asia. While genocide incidence outside of Asia was stable through the 1980s and even increased at the end of the 1980s and early 1990s, within Asia it fell sharply, especially as the killings in Cambodia and the Cultural Revolution in China came to an end in 1975. With the exception of Sri Lanka in 2009 (by our coding) there has not been a single case of (recorded) ongoing genocide in Asia since 1992.²⁰ Figure 1 suggests that the fall in genocide incidence is not the product of a sharp fall in political instability. The incidence of political instability (civil wars, ethnic wars and adverse regime changes) in Asia was stable at around 10 ongoing episodes per year for over 30 years from 1970 through to the mid-2000s, due mostly to long civil wars in Myanmar, the Philippines, India and Indonesia. This suggests that changes within Asia have made it more costly or less feasible to use genocide as a response to domestic instability. It is possible that greater constraints upon the government executive’s decision-making power, or increased standards of living, have engendered the lower risk of genocide onset and incidence in Asia. Both the Philippines and Indonesia, for example, have moved from extremely high levels of autonomy for the decision-making elite (the Philippines is coded as having ‘Unlimited Authority’ in 1975 under Ferdinand Marcos) to much more institutionally constrained executives in 2010.²¹

20 Although events surrounding East Timor’s 1999 independence vote might deserve reconsideration as fitting the PITF definition (cf. Komar, Debra A. and Lathrop, Sarah. 2012 “Patterns of Trauma in Conflict Victims from Timor Leste,” *Journal of Forensic Sciences* 57, 1: 3-5).

21 Both the Philippines and Indonesia score a “6” on the executive constraints measure for 2005. This rating is an intermediate category between ‘substantial constraints’ upon the executive (5) and ‘Executive Parity or Subordination’ (7). Monty G. Marshall, Keith Jagers and Ted Robert Gurr (2011) Polity IV Project Dataset Users Manual. *Centre for Systemic Peace*, Pg 24. Available from <http://www.systemicpeace.org/inscr/p4manualv2010.pdf>

Forecasting Method and Interpretation

Using quantitative analysis to forecast genocide is a recent development in the literature. In 2003, Barbara Harff published a seminal study in the *American Political Science Review* that was able to predict, with a statistical model fit to data from 1955-2001, 74% of genocide onsets correctly, whilst also classifying 73% of non-genocides correctly.²² Harff's work was pioneering, but her model (which forms the basis of some existing early warning lists)²³ might have difficulty providing policy makers with the kind of lead time that effective prevention and intervention strategies require (there is an active scholarly community presently working on new forecasting approaches for mass killing).²⁴ Harff's forecasting model, and a number of subsequent models, have restricted their sample of cases potentially 'at-risk' of genocide to states already experiencing some form of political instability. This decision is based upon a key finding from the literature that state failure or some form of serious political instability -- defined as ethnic or civil war, or a reversion to authoritarianism -- is a necessary, but not sufficient condition, for genocide.²⁵ That is, genocide does not erupt from stable or harmonious political settings, but fragmented and violently polarised polities. Policies of mass-murder, for example, often accompany counter-insurgency campaigns to eradicate guerrilla forces.²⁶

We prefer a two-stage modelling approach. One reason is that there are a number of cases where genocide commenced not long after the beginning of serious political instability (as was the case in East Pakistan in 1971). If part of our aim is to create an 'early warning' system, then a lead time of months, or even weeks, is not early enough. A second reason is that 'conditional' models restricted to currently unstable states face severe forecasting limitations. Restricting the sample to cases of ongoing political instability excludes those cases where regimes may be predisposed to genocide, but at a lower risk of instability. Conditional models are, we feel, especially inappropriate for forecasts over longer time periods, such as 2, 3, 4, or 5 years into the future. The group of currently unstable states is not likely to include all states that will experience

22 Harff, Barbara (2003) No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955. *American Political Science Review* 97(1): 57-73.

23 See, for example, Barbara Harff (2012) Assessing Risks of Genocide and Politicide A Global Watch List for 2012" in. J. Joseph Hewitt, Jonathan Wilkenfeld and Ted Robert Gurr (eds.) *Peace and Conflict 2012*, College Park MD: University of Maryland.

24 See Hazlett, Chad (2011) New Lessons Learned? Improving Genocide and Politicide Forecasting [online] Available from: <http://www.usmmm.org/genocide/analysis/details/2011-10-05/Chad%20Hazlett%20Early%20Warning%20Final%20Long%20Paper.pdf>; Ulfelder, Jay (2012) 'Forecasting Onsets of Mass Killing' *Paper prepared for presentation at the annual Northeast Political Methodology Meeting*, New York University, May 4th; Heldt, Birger (2012) Mass Atrocities Early Warning Systems: Data Gathering, Data Verification and Other Challenges, *Working Paper Series*, available from: <http://ssrn.com/abstract=2028534>.

25 Krain, Matthew (1997) State-Sponsored Mass-Murder: The Onset and Severity of Genocides and Politicides. *Journal of Conflict Resolution* 41(3): 331-360; Melander, Erik (2009) Selected To Go Where Murderers Lurk? The Preventive Effect of Peacekeeping on Mass Killings of Civilians. *Conflict Management and Peace Science* 26: 389-406;; Colaresi, Michael and Sabine C. Carey (2008) To Kill or to Protect: Security Forces, Domestic Institutions, and Genocide. *Journal of Conflict Resolution* 52: 39-67; Harff, Barbara (2003) No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955. *American Political Science Review* 97(1): 57-73.

26 For the logic and evidence to support this argument, see Valentino, Benjamin, Huth, Paul and Balch-Lindsay, Dylan (2004) 'Draining the sea': Mass killing and guerrilla warfare. *International Organization* 58(2): 375-407

instability in coming years. A third reason is that some factors may have qualitatively different, even completely opposite, effects on the likelihood of instability and genocide. If, for example, a stronger military both deters instability and facilitates genocide, a two-stage approach would capture both dynamics clearly and effectively. These factors' effects and forecasting potential would not be fully realized in a single-stage model.

We believe our forecasting model takes important steps towards addressing these issues and improving the accuracy of forecasts. Our model estimates the probability of genocide in two stages. In the first stage, the probability of a country experiencing ethnic war, civil war or a reversion to authoritarianism is calculated. For this first stage, we have drawn heavily from the literature on political instability and civil war.²⁷ This estimate of the probability of serious political instability is then incorporated into the second stage, along with a second set of covariates to estimate the likelihood of genocide.²⁸ States do not, therefore, have to be *experiencing* political instability to show up in our lists as being at a high risk of genocide onset. It may be that a state is at a high risk of political instability and this risk increases the risk of experiencing genocide as well. In this way our model is capable of forecasts for all countries during a given year. A large number of variables correlated with political instability and genocide were tested for their predictive power.²⁹ Broadly, we have included variables that capture aspects of a country's conflict history, political institutions, economic conditions and time-specific events such as assassinations and elections. The focus on such time-specific variables is, we believe, another important aspect of our approach (see Table 2). Our model uses only publicly available data, reflecting the practical constraints of real-time forecasting.³⁰ To produce the forecasts for 2011-2015 displayed in Table 1, the model takes data from 1974-2005 to estimate the relationships between predictor variables and genocide. It then 'plugs in' data from 2010 to produce the five-year forecasts.

27 Some prominent works in the literature include: Goldstone, Jack. A; Robert.H. Bates, David.L. Epstein, Ted Robert Gurr, Michael B. Lustik, Monty G. Marshall, Jay Ulfelder, and Mark. Woodward (2010) A Global Forecasting Model of Political Instability. *American Journal of Political Science* 54(1): 190-208; Fearon, James D. and David D. Laitin (2003) Ethnicity, Insurgency and Civil War. *American Political Science Review* 97(1):75-90; Collier, Paul and Anke Hoeffler (2004) Greed and Grievance in Civil War. *Oxford Economic Papers* 56(4):563-595. Broadly, we have included variables that capture aspects of a country's conflict history, political institutions, economic conditions and time-specific events such as assassinations and elections. For a detailed explanation of the final variables chosen and their respective data sources, see Goldsmith, Benjamin E., Charles Robert Butcher, Dimitri Semenovich and Arcot Sowmya (2012) Forecasting the Onset of Genocide and Politicide: Annual Out-of-Sample Forecasts on a Global Dataset, 1988-2003. *Social Science Research Network* March 20 Available at: <http://ssrn.com/abstract=2027396> or <http://dx.doi.org/10.2139/ssrn.2027396>

28 For a discussion of the estimation process of the Heckman probit model that we, primarily, use see Jeffrey A. Dubin and Douglas Rivers (1990) Selection Bias in Linear Regression, Logit and Probit Models. *Sociological Methods and Research* 18(2&3): 360-390; William H. Greene (2011) *Econometric Analysis* (7th Edition) New Jersey NJ: Prentice Hall, Chapter 24, "Truncation, Censoring and Sample Selection".

29 Variables were included/excluded based upon AUC and AIC measurements for in-sample forecasts.

30 There are some factors that may be correlated very closely with genocide, but are not useful for forecasting purposes. The psychological disposition of state-leaders may be one, for example, but without psychological profiles of every state leader in every given year, this variable could not be included in a forecasting model.

Our model has a good record of accurately classifying historical cases of genocide. Overall the model was able to classify 82% of onsets correctly, whilst also correctly classifying 79% of non-onsets in an out-of-sample test from 1988-2003.³¹ We point out that Harff's forecasts apply only to those countries already undergoing some form of political instability and are in-sample. That is, Harff's model estimates the effects of explanatory variables on the sample within which the predictions are made. As King and Zeng point out, in-sample predictions run the risk of over-fitting to the data and may not be robust outside the sample.³² Our model forecasts for all countries in all years and are out-of-sample – that is, the model does not 'see' the data it is trying to predict. This better simulates the actual future forecasting task which the model is designed for. Our results are robust to randomly partitioning the data and re-forecasting out-of-sample and our model classified 7 out of 11 genocide onsets (64%) correctly from 1988-2003 when predicting one year into the future. The AUC statistic is 0.8482.³³

Table 1 displays our genocide forecasts for the period 2011-2015. The most useful way to interpret the table is as a roster of those states at the highest risk of experiencing a genocide during the five-year period. The table also includes values for our six most potent predictors. Most of these reflect underlying structural conditions that do not exhibit high year-on-year variability. In Table 2, we present the values of six of our more time-sensitive variables for each of the fifteen states. More detailed discussion of the states in the forecast and the variables presented in each table can be found in the companion report to this one, *Understanding and Forecasting Political Instability and Genocide for Early Warning* (see: <http://sydney.edu.au/arts/research/r2pforecasting>).

The tables are followed by a discussion of three key factors in the model – previous genocides, state-led discrimination and the 'human defence burden' – with reference to the Indonesian occupation of East Timor in 1975. Following this, we reflect on the factors currently placing states from the Asia-Pacific region at high risk of genocide onset.

At this stage we also emphasize an important aspect of forecasting models such as ours: their intention is to maximize forecasting power, rather than to assess causal relationships. As such, the predictors listed in Tables 1 and 2 should not be understood as factors necessarily *causing* genocide onset. Rather, they are better understood as risk indicators *somehow* associated with an increased likelihood of genocide. An appropriate analogy might be to symptoms of medical conditions. High blood pressure is associated with a higher risk of heart disease, and it is also a cause. But chest pain too is a predictor of heart trouble, although it is not a cause. A good example is the identification of the presence of peacekeeping troops as a predictor of genocide (Table 2). Of course we do not believe that peacekeepers cause genocide. Rather they are a useful predictor because of an empirical correlation: their presence tends to precede genocide onsets in some cases. The causal story is almost certainly spurious in that the same factors which increase the likelihood of peacekeepers being present also increase the likelihood of genocide onset. But our model points to risk indicators only, rather than directly pointing to causal factors which might be 'policy targets'. We do make reference to other social scientific evidence in this report, however, which informed the inclusion of factors in our models, and points to causal relationships which we feel are relevant for their policy implications.

31 By lowering the threshold somewhat, it also classified 91% of genocide onsets correctly while still classifying 69% of non-onset years correctly. The prototype model had special difficulty predicting genocide onsets in the former Yugoslavia, likely due a combination of poor data and the substantial effect of poverty (proxied by a measure of infant mortality) on the risk of both instability and genocide.

32 Gary King and Langche Zeng (2001) Improving Forecasts of State Failure. *World Politics* 53(4): 623-658

33 The 95% confidence interval around this is 0.7102 to 0.9862.

Table 1

Top 15 At-Risk States for Genocide/Politicide, 2011-15: Most Powerful Predictors

	Years Since Previous Genocide / Politicide	Political Instability	Executive Constraints * <i>ln</i> (Human Defense Burden)	State-led Discrimination	Infant Mortality Rate	Neighboring State Conflicts	
1 Central African Republic	50	1	-14.2	0	106.0	3	
2 Democratic Republic of the Congo	12	1	-34.3	1	111.7	2	
3 Chad	29	0	-18.3	0	63.0	3	
4 Somalia	21	1	-13.8	0	108.3	2	
5 Angola	11	0	-18.8	1	97.9	1	
6 Myanmar	31	1	-9.7	1	50.4	2	
7 Sri Lanka	0	0	-19.1	1	14.2	0	
8 Ecuador	62	0	-21.3	1	17.6	1	
9 Burundi	16	0	-32.7	0	87.8	1	
10 Afghanistan	31	1	-6.5	0	103.0	1	
11 Syria	28	0	-13.9	0	13.8	4	
12 Guinea	52	0	-33.6	0	81.2	0	
13 Cameroon	50	0	-12.0	1	84.4	3	
14 Uganda	29	0	-18.3	0	63.0	3	
15 Libya	59	0	-3.6	0	13.4	2	
<i>Full data set for 2010:</i>	Mean	50.6	0.1	-24.9	0.2	33.0	0.8
	Min	0	0	-96.7	0	2.1	0
	Max	62	1	-2.5	1	113.7	5
	Standard Deviation	13.0	0.3	12.6	0.4	30.4	1.0

Table 2

Top 15 At-Risk States for Genocide/Politicide, 2011-15: Time-Variant Predictors

	Guerrilla Tactics	Internation- alized Internal Conflicts	Interstate Conflict	Regime Change Last 3 Years	Assassinations	Election Period	Executive Constraints * <i>fd</i> (<i>ln</i> (Human Defense Burden))	Peacekeeping Forces	
1 Central African Republic	1	0	0	0	0	1	-0.10	1	
2 Dem. Rep. of the Congo	0	0	0	0	0	1	-0.12	1	
3 Chad	0	0	0	0	0	1	-0.31	1	
4 Somalia	1	3	0	0	0	0	0.00	0	
5 Angola	0	0	0	0	0	0	-0.11	0	
6 Myanmar	0	0	0	2	0	0	-0.02	0	
7 Sri Lanka	0	0	0	-2	0	1	-0.02	0	
8 Ecuador	0	0	0	0	0	1	-0.21	0	
9 Burundi	0	0	0	0	0	1	-0.15	0	
10 Afghanistan	1	3	0	0	1	1	-0.03	1	
11 Syria	0	0	0	0	0	0	-0.08	0	
12 Guinea	0	0	0	6	0	1	-0.11	0	
13 Cameroon	0	0	0	0	0	1	-0.09	0	
14 Uganda	1	2	0	0	0	1	-0.12	0	
15 Libya	0	0	0	0	0	0	-0.01	0	
<i>Full data set for 2010:</i>	Mean	0.08	0.12	0.03	0.25	0.05	0.46	-0.17	0.11
	Min	0	0	0	-8	0	0	-13.63	0
	Max	1	3	1	12	1	1	6.76	1
	Std. Dev.	0.28	0.54	0.16	2.15	0.22	0.50	1.22	0.31

Key Factors in the Model – Indonesia and East Timor, 1975

Indonesia's campaign of terror following the invasion of East Timor in 1975 illustrates the role of three key variables: previous genocides, the human defence burden and state-led discrimination. We first give a brief description of the genocide in East Timor, then focus on some of the reasons why our model might classify Indonesia as a high-risk case for genocide in the mid-1970s.

From the 16th century, East Timor was a small Portuguese colony. The Dutch and Portuguese split the island of Timor before West Timor became a part of Indonesia during the decolonisation movement in the 1960s. It was not until the overthrow of the Salazar dictatorship in 1974 that Portuguese colonies were granted independence, although, in most cases, decolonisation was akin to abandonment with none of the institution-building that accompanied British or French decolonisation. East Timor was no different and amid the turmoil in Lisbon and cross-border incursions and de-stabilisation from Indonesia, the most powerful domestic group in East Timor, Fretlin, declared independence in November 1975.

Indonesia invaded and annexed East Timor a month later. The first days of the invasion saw thousands of Timorese executed, or physically and sexually abused. One reported massacre in 1975 involved up to 2000 deaths. Following the invasion, Fretlin continued its resistance from Timor's mountainous interior. Areas under Fretlin control were subjected to continuous aerial bombardment and ground assault. A campaign of deliberately destroying farms and cropping areas put the nearly 100,000 people that fled with Fretlin on the brink of mass-starvation. In areas of Indonesian occupation, James Dunn writes that human rights abuse was a 'daily occurrence'.³⁴

Fretlin's resistance continued into the early 1990s when the Santa Cruz massacre in Dili re-focused the world's attention on Indonesia's occupation. It was, however, the Asian financial crisis and the fall of the Suharto regime that led President Habibbe to offer East Timorese a plebiscite on the question of independence. On August 30, 1999, 80% of Timorese rejected the option of autonomy and voted for independence. A wave of violence led by Indonesian-armed militias followed the vote, killing up to 2000 people and destroying over 70% Timor's surviving infrastructure.³⁵ Violence ceased with the deployment of a UN-authorized and Australian-led intervention (International Force for East Timor - INTERFET). Under UN tutelage, East Timor became a sovereign state in 2002. There are few reliable figures on the total number of Timorese killed during the Indonesian occupation, but one estimate suggests that 12% of the population perished, nearly 250,000 people.³⁶

34 James Dunn (2009) The Genocide in East Timor. In: Samuel Totten and William S. Parsons (eds.) *Century of Genocide: Critical Essays and Eyewitness Accounts*. New York N.Y: Routledge. Pg 224

35 The East Timor genocide is coded as ending in 1992 by PITF. We believe that events surrounding East Timor's 1999 independence vote deserve reconsideration as potentially fitting the PITF definition as a distinct genocide event (*cf.* Komar, Debra A. and Lathrop, Sarah. 2012 "Patterns of Trauma in Conflict Victims from Timor Leste," *Journal of Forensic Sciences* 57, 1: 3-5).

36 James Dunn (2009) The Genocide in East Timor. In: Samuel Totten and William S. Parsons (eds.) *Century of Genocide: Critical Essays and Eyewitness Accounts*. New York N.Y: Routledge. Pg 225

Countries with past experiences of genocide are at a substantially higher risk of experiencing future genocides, and our model places high predictive capacity on the potential for ‘repeat offenders’. East Timor was not Indonesia’s first experience of mass-murder. A failed coup attempt by elements of the Communist Party of Indonesia (PKI) in Jakarta in 1965 provoked a military campaign to purge the archipelago of communism. Government soldiers and government-armed and inspired vigilantes carried out most of the murders, which were especially brutal and intense in Central and East Java, Bali and Northern Sumatra. By 1966 the PKI were practically eliminated. Between 200,000 and half a million Indonesians were killed in the purges.³⁷

Second, states that systematically discriminate and repress minority groups are more likely to use genocide when faced with armed threats from within. Put simply, states that abuse their populations during periods of stability are more likely to abuse them on a large scale during periods of instability.³⁸ Throughout the early 1970s, Indonesia is coded as practising state-led discrimination, especially towards Chinese Indonesians and West Papuans.

Third, the ‘human defence burden’ interacted with ‘executive constraints’ consistently predicts genocide over time. The human defence burden measures the proportion of a population in the regular military in a given year. ‘Executive constraints’ measures the extent to which political institutions limit the decision-making autonomy of the executive. Legislatures often fulfil this function, but a nobility or strong judiciary can also check the power of the executive.³⁹ Michael Colaresi and Sabine Carey have shown that the probability of genocide increases with the proportion of a population under arms, but only in states where the executive faces few constraints upon their decision-making.⁴⁰ In our models, it is also the *change* in the human defence burden from the previous year that has high predictive power.

Indonesia’s score on the human defence burden placed it at a high risk of genocide onset. In 1974, Indonesia’s military stood at 270,000 soldiers for a country of 130 million people, about 21 soldiers per 10,000 people (although the number of military personnel had actually fallen from 356,000 in 1972). Importantly, however, the regime of President Suharto faced very few constraints upon its decision-making power. Opposition parties were severely limited in their ability to check government power and Suharto’s party, Golkar, won ‘landslide’ majorities in the People’s Constitutive Assembly, limiting the extent to which the legislature could override the power of the executive. Indonesia’s military was the main institution capable of providing a check upon Suharto’s power, but it is, of course, the military’s actions that are, ultimately, to be constrained if genocide is to be prevented. Indeed, it is often argued that the Indonesian military, rather than the executive in Jakarta, hold primary responsibility for the genocide in East Timor.⁴¹

37 Robert Cribb (2009) *The Indonesian Massacres*. In: Samuel Totten and William S. Parsons (eds.) *Century of Genocide: Critical Essays and Eyewitness Accounts*. New York N.Y: Routledge., Pg 197

38 For a discussion of the state-led discrimination variable see Victor Asal and Amy Pate (2005) “The Decline of Ethnic and Political Discrimination” In: Monty G. Marshall and Ted Robert Gurr (eds.) *Peace and Conflict* Maryland MD: Centre for International Development and Conflict Management

39 Monty G. Marshall, Keith Jagers and Ted Robert Gurr (2011) *Polity IV Project Dataset Users Manual*. *Centre for Systemic Peace*, Pg 23. Available from <http://www.systemicpeace.org/inascr/p4manualv2010.pdf>

40 Colaresi, Michael and Sabine C. Carey (2008) To Kill or to Protect: Security Forces, Domestic Institutions, and Genocide. *Journal of Conflict Resolution* 52: 39-67.

41 Encyclopaedia Britannica (2012) “Suharto”. *Encyclopaedia Britannica Online Academic Edition*. Accessed 22 June 2012.



Asian States at Risk of Genocide – 2011-2015

Afghanistan

Afghanistan is one case that our model identifies as being at-risk of genocide onset over the next 4 years, while Harff's early warning list does not.⁴² Afghanistan might seem to be an improbable candidate given the presence of over 100,000 U.S. or NATO-led troops of the International Security Assistance Force (ISAF).⁴³ However, Afghanistan scores highly on several of the variables that place societies at high risk of genocide. Given that this international presence will be greatly reduced with NATO troop withdrawals scheduled for completion by the end of 2014, we highlight Afghanistan as a cautionary case. Our model suggests the risk of genocidal violence will be great, and probably increase as the foreign troop presence decreases. NATO leaders and other countries involved, such as Australia, should be cognizant of this danger. Afghanistan finds its way onto our list due to several factors (see Tables 1 and 2). The size of the Afghan national army increased from around 50,000 soldiers in 2007 to 165,000 in 2010,⁴⁴ but the Afghan government remains, essentially, unconstrained in its decision-making power (other than by the Taliban, of course, which still controls or is active in large portions of the country). In 2010 Afghanistan scored a '1' for 'unlimited authority' in the measure used in our data.⁴⁵ This combination of a large, and increasing, number of people under arms and an executive with few constraints on its decision-making power are, historically, important correlates

42 There is considerable variation between our list and two other publicly available genocide watch-lists. Of these 15 cases the Genocide Watch list agrees with just 8 among its two highest-risk groups. Barbara Harff's 2012 twenty-state genocide watch list also agrees with 8 cases. Of all three watch-lists, ours uniquely identifies Angola, Ecuador, Burundi, and Guinea.

43 International Security Assistance Force (2012) Troop Numbers and Contributors. Available from <http://www.isaf.nato.int/troop-numbers-and-contributions/index.php>

44 These troop numbers are actually not included in our dataset, due to missing values for this indicator from the data source used. This required us to impute data for some years in the latter 2000s for several variables (see appendix).

45 The data for executive constraints comes from the PolityIV dataset.

of genocide. In addition, *Human Rights Watch* released a report in 2011 documenting abuses of the civilian population practiced by government sponsored and created armed militias, or civilian defence forces, including the US-funded Afghan Local Police.⁴⁶ These groups often sit outside the formal legal structure in Afghanistan and, as such, there are fewer institutional guarantees that violence will not be used against the local population.

An enduring challenge for the U.S. and ISAF will be to not only build a large and capable military, but build the political institutions capable of limiting ways in which these forces are used. It also remains a risk that the Taliban will use ethnically or politically based mass-killing to consolidate its control, particularly if the areas under Taliban control were to expand. This risk is considerable given the Taliban's record of state-led discrimination when it was in control of Kabul from 1992-2001, especially toward the Hazaras.

Second, Afghanistan has experienced a past genocide. Soviet and Afghan government military forces massacred large numbers of Afghan civilians both from the air and by ground assault in their counter-insurgency campaign against the *mujahedeen*. Benjamin Valentino notes that, because the Soviets had extreme difficulty identifying supporters of the mujahedeen, entire villages were often slaughtered. These were not the actions of 'rogue elements' but a top-down strategy of what Helen Fien has argued, was genocide against the Afghan nation. The Pathan ethnic group were severely affected by the killings. It is estimated that the Afghan population declined by 9% from 1978-1988.⁴⁷ As has been mentioned, prior genocides increase the chances of future genocides. While little can be done about the past (and scholars know little about how past genocides make future genocides more likely⁴⁸) the creation of both political *and* military capabilities such that the Afghan National Army protects, rather than preys upon, the people of Afghanistan must be a priority for preventing the recurrence of mass killing.

Myanmar

The factors that place Myanmar at risk of genocide are similar to those in Afghanistan, although the international community has a much smaller presence, and probably less ability to influence the direction of Myanmar's political system. Myanmar continues to face armed resistance from Kachin, Karen and Shan insurgents⁴⁹ and has experienced one prior genocide. In 1978 the government unleashed the military on the Rohingyas in 'Operation Dragon King', ostensibly to counter an insurrection. The Rohingyas are a predominately Muslim group that reside along the border region with Bangladesh that, to this day, the government in Myanmar does not recognise as a distinct ethnic group.⁵⁰ According to Amnesty International, the campaign 'resulted in widespread killings, rape and destruction of mosques and further religious persecution'.⁵¹ Two-hundred thousand Rohingyas fled to Bangladesh. Since 1978

46 Human Rights Watch (2011) "Just Don't Call it a Militia". New York N.Y: Human Rights Watch, Pg 2.

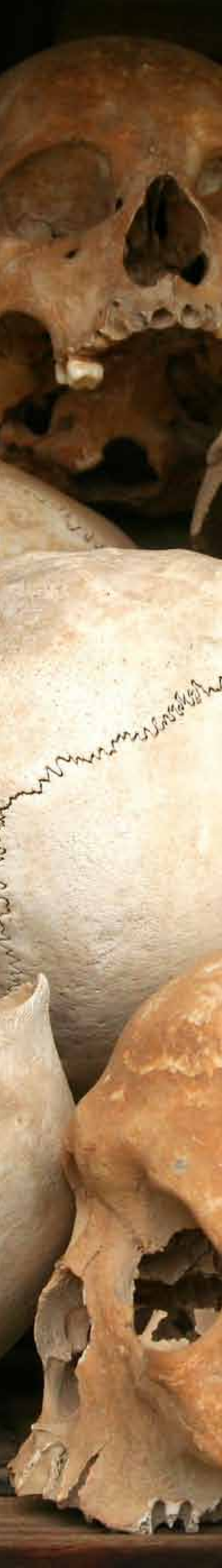
47 For the case that Soviet actions in Afghanistan constituted genocide, see Helen Fien (1993) *Discriminating Genocide and War-Crime: Vietnam and Afghanistan Revisited*. *Denver Journal of International Law and Policy* 22: 29-62. See especially Pg 58. See also Benjamin Valentino (2004) *Final Solutions: Mass Killing and Genocide in the 20th Century*. Ithaca N.Y: Cornell University Press, Pg 222

48 Cf. Semelin, Jacques (2007) *Purify and Destroy: The Political Uses of Massacre and Genocide*. New York: Columbia University Press.

49 Uppsala Conflict Data Program (Date of retrieval: 12/06/21) UCDP Conflict Encyclopedia: www.ucdp.uu.se/database, Uppsala University

50 See Genocide Watch (2012) *Genocide Emergency: Western Myanmar, Rakhine State: The Rohingya*. Available at <http://www.genocidewatch.org/myanmar.html>. Last accessed 21 June 2012.

51 Amnesty International (2004) *Myanmar The Rohingya Minority: Fundamental Rights Denied*. Available from <http://www.amnesty.org/en/library/asset/ASA16/005/2004/en/9e8bb8db-d5d5-11dd-bb24-1fb85fe8fa05/asa160052004en.pdf>: Pg 6



the Rohingyas have continued to face systematic discrimination and abuse at the hands of the government and army, such that the government of Myanmar continues to fall into the class of regimes that practice state-led discrimination of minority groups. Myanmar's military junta continues to have few limitations on its decision-making power and maintains one of South-East Asia's largest standing armies (375,000 soldiers on active duty, about 78 per 10,000 population). If the recent relaxation of political restrictions on opposition parties in Myanmar eventually translates into the creation of political institutions that are capable of checking the centre's decision making power, then the risk of genocide in Myanmar will likely fall, but in the present it might even increase the risk.

Sri Lanka

Sri Lanka is something of an anomaly as the only institutionally democratic state to have committed genocide.⁵² Indeed, in our study, Sri Lanka is a 'repeat offender' having targeted left-wing political opposition (Janatha Vimukthi Peramuna or JVP) in 1989-1990 and Tamil separatists during the siege of Jaffna in 2009.⁵³ These past genocides place Sri Lanka at a high risk of using large-scale mass murder in response to future instability. Sri Lanka is also one of the most militarised countries on the planet with 174,000 active military personnel in a country with a population of just 21 million, about 83 soldiers per 10,000 population. In addition, the executive in Sri Lanka, under the leadership of Mahinda Rajapaksa, is steadily releasing itself from the constraints imposed by accountability mechanisms in the parliament and judiciary. In April 2010 a constitutional amendment was passed that abolished presidential term limits and the Constitutional Council – an independent body overseeing the civil service, police, human rights, corruption and state finances. The powers of the Constitutional Council passed over to the 'Parliamentary Council' to be appointed by the President. The president now also has the power to appoint Supreme Court justices and the attorney general.⁵⁴ As such, the measure of executive constraints fell from 5 in 2009 to 4 in 2010. This is a worrying trend given Sri Lanka's high proportion of people under arms. Sri Lanka's Tamil population continue to face state-led discrimination. In 2012, *Human Rights Watch* noted that Tamils were subjected to torture and forced to participate in pro-government rallies. The fate of suspected LTTE supporters in the East and North of Sri-Lanka remains uncertain and the Sri Lankan government has failed to establish an independent investigation of war crimes committed in the final stages on the conflict during 2009.⁵⁵

52 Sri Lanka had a rating of "6" on the widely used Polity scale in 2009. Six or 7 are commonly used minimum threshold for a categorization as "democratic" (<http://www.systemicpeace.org/polity/SriLanka2010.pdf>).

53 In the case of Sri Lanka in 2009, our coding contradicts that of the PITF, but we believe we have solid recent evidence to support this judgement. In particular, we rely on three reports investigating crimes against humanity, mainly against Tamils: United Nations. 2011. *Report of the Secretary-General's Panel of Experts on Accountability in Sri Lanka*, accessed 28 April 2012 at http://www.un.org/News/dh/infocus/Sri_Lanka/POE_Report_Full.pdf; International Crisis Group. 2010. *War Crimes in Sri Lanka*, Asia Report N°191 – 17 May 2010, accessed on 5 July 2012 at [http://www.crisisgroup.org/~media/Files/asia/south-asia/sri-lanka/191%20War%20Crimes%20in%20Sri%20Lanka.pdf](http://www.crisisgroup.org/~/media/Files/asia/south-asia/sri-lanka/191%20War%20Crimes%20in%20Sri%20Lanka.pdf); and Permanent People's Tribunal. 2010. *People's Tribunal on Sri Lanka*, accessed on 28 April 2012 at <http://warwithoutwitness.com/images/stories/news/25851626-people-s-tribunal-on-srilanka-final-report-jan-2010.pdf>. We note that the definition of genocide in international law is considerably different from the definition we use here, developed by Harff and the PITF. Thus the conclusions of these reports about "genocide" specifically are not as relevant as whether they contain evidence that would fit the PITF definition of "genocide" or "politicide" for Sri Lanka or Libya.

54 Neil DeVotta (2011) Sri Lanka: From Turmoil to Dynasty. *Journal of Democracy* 22(2): Pg 138. In addition to these institutional changes the Mahinda Rajapaksa has installed family members in key government positions. It is estimated that Rajapaksa and two of his brothers (Gotabaya and Basil) exercise direct control over 94 government departments and 70% of the national budget.

55 Human Rights Watch (2012) "Statement on the Human Rights Situation on Sri Lanka at the Human Rights Council". Available from: <http://www.hrw.org/news/2012/03/02/statement-human-rights-situation-sri-lanka-human-rights-council>

Conclusion

We believe that the forecasts presented in this report are an important step forward. Our statistical model produces a systematic and data-driven assessment of genocide risk and, we believe, our global, dynamic, two-stage approach is a theoretically informed way of capturing the processes that lead to genocide onset. Our model is tailored as an early warning tool of use to policy-makers and, to this end, can produce 5-year risk assessments for all countries in the world. Importantly, when tested upon past events, the model has a good record of correctly identifying states that experienced an onset of genocide. In combination with other watchlists and more finely grained monitoring efforts, such as those undertaken by the Satellite Sentinel Project, ICG, country-specialists and government departments, the model presented in this paper can, we believe, significantly enhance the capacity to prevent genocide in Asia, and globally, in the long- and short-term.

The risk-assessments presented here suggest that, while the Asian region has experienced a marked decline in the incidence of genocide, a handful of states remain at risk of genocide onset. In a region where economic development has spurred enormous improvements in public health and infrastructure, the spectre of past campaigns of mass-killing and the presence of highly militarized societies led by regimes with few checks on how violence is used, means the risk that future instability will erupt into sustained political or ethnic murder, nevertheless remains real.



Appendix 1 - Discussion of Definitions


In this appendix we discuss definitional issues relating to genocide, and related potential extensions of our model. The definition of genocide used in this report also includes the phenomenon of politicide – the mass killing of individuals based upon their identification (or perceived identification) with a political group or view. One objection to this move, and one potential objection to the findings of this study, is that genocide and politicide are distinct phenomena with different causal pathways. It could be argued that the archetypal genocide – the Holocaust – is qualitatively different in the nature and objectives of the ruling group than the campaigns of political killing in Guatemala or El Salvador during the 1980s.

We believe, however, that this is unlikely to be the case. Genocide and politicide are difficult to distinguish in practice. Ethnicity is regularly used by genocidal regimes as a proxy for political beliefs. Even in the two extreme cases of genocide and politicide since the end of World War Two, in Rwanda and Cambodia respectively, there was significant admixture between killing based upon ethnic identity and killing based upon political identity. In Rwanda, both politically moderate Hutu and Tutsi were murdered and the Tutsi were murdered in part because extremists in government were able to cast the Tutsi as supporting the insurrection of the Rwandan Patriotic Front (RPF). There was, therefore, both an ethnic and a political element to the genocide. Cambodia is cast as an archetypal politicide; people were murdered because of their perceived political beliefs, especially urban-dwellers and those with education. However, Ben Kiernan argues that there was an important racial and religious element to the killing in Cambodia. Vietnamese (the largest ethnic minority group in Cambodia prior to 1970) were targeted as they were seen to be contaminating the ‘pure’ Cambodian ‘race’. Nearly 100,000 Cham Muslims were massacred in 1975. Buddhists were almost completely eradicated from 1975-1979.⁵⁶ The blending of genocide and politicide in practice makes it extremely difficult to separate the two phenomena. As so long as actors that perpetrate genocide continue to use ethnicity or race to infer political beliefs, it is questionable whether this will ever be possible. It also suggests that the causal process underpinning both genocide and politicide is similar enough for these to be considered parts of the same phenomenon.

The main alternative concept to ‘genocide’ in the literature is ‘mass killing’. Ulfelder and Valentino code mass killing when ‘the actions of state agents result in the intentional deaths of at least 1000 non-combatants from a discrete group in a period of sustained violence’.⁵⁷ The 1000 deaths can be accumulated over the course of an episode and an episode ends when the killing drops below 100 deaths per year for three years. Ulfelder and Valentino’s definition certainly corrects some problems with Harff’s definition of genocide/politicide. The threshold of 1000 deaths, while arbitrary, relieves

56 Ben Kiernan (2009) *The Cambodian Genocide 1975-1979*. In: Samuel Totten and William S. Parsons (eds.) *Century of Genocide: Critical Essays and Eyewitness Accounts*. New York N.Y: Routledge, Pg 471.

57 Jay Ulfelder and Benjamin Valentino (2008) *Assessing the Risks of State-Sponsored Mass Killing*. *Unpublished Manuscript Available at SSRN: <http://ssrn.com/abstract=1703426> or <http://dx.doi.org/10.2139/ssrn.1703426>*. Another definition of mass killing comes from Valentino, Huth and Balch Lindsay that requires the much higher threshold of 50,000 deaths. These authors, however, only collect data for 147 wars and, therefore, cannot yet be used for forecasting purposes. Benjamin Valentino, Paul Huth and Dylan Balch-Lindsay (2004) “Draining the Sea”: Mass Killing and Guerrilla Warfare, *International Organization*, 58(2), Pg 377-378



some of the uncertainty associated with identifying what a ‘substantial portion’ of a communal or political group is. It is not clear how a ‘substantial portion’ is measured in Harff’s study and, therefore, it is not clear how this list would be replicated. Ulfelder and Valentino also claim that their definition does away with the difficulties of identifying political or communal groups, especially given that political identification is a very fluid and subjective characteristic.

However, by loosening the definition to include ‘discrete groups’ (that is, ethnic, political, social, communal or geographic groups, such as individual villages) and lowering the death threshold to just 100 per year, the authors may solve one problem by creating a bigger one. Ulfelder and Valentino’s definition is so broad, that it is not clear what the difference between mass killing and state repression is. Scholars interested in ‘mass killing’ and ‘mass atrocity’ are usually interested in understanding and predicting episodes in which large numbers of non-combatants are murdered with high *intensity* as distinct from lower levels of government oppression that may persist for many years. Some cases are included in the Ulfelder and Valentino data that are probably not of primary interest to scholars of ‘mass killing’. These include South Africa from 1976 to 1994, Malawi from 1964 to 1994 and Haiti from 1958 to 1986.

In addition, the inability to distinguish between instances of high intensity mass killing and persistent repression means that a number of episodes of ‘mass killing’ endure for extraordinarily long periods of time. Iraq is coded as experiencing a period of mass killing for 40 continuous years, 1963-2003, Ethiopia from 1961 to 1991, Iran from 1979 to 2008 and Uganda from 1986 to 2008. Such inclusiveness means that a forecasting model using country-years as a unit of analysis could not distinguish between the more serious cases of mass murder that occurred in Iraq between 1963 and 1975 and 1988-1991 from Hussein’s oppressive style of rule. In addition, the genocide in Rwanda is indistinguishable from the civil war that began in 1990 by this definition of mass-killing.⁵⁸ We believe that raising the death threshold might alleviate some of these problems, but that would require going back over the coded cases and changing the start and end dates to indicate periods of higher intensity. And of course, important mass atrocities claiming 1000 or only marginally more lives would then be excluded. For the above reasons, we think that the Harff definition and universe of cases is the closest among existing definitions and datasets to what we are interested in analysing, the types of crime that we are focused on predicting and preventing.

58 These aspects cast some doubt over the findings in Ulfelder and Valentino’s 2008 paper. For example, the finding that 77% of mass killing episodes begin in the first year of instability might reflect the inability to distinguish repression from mass killing. Unsurprisingly, many governments violently crack down on segments of their population when faced with internal armed resistance.

Appendix 2: List of Variables and Data Sources

We use annual time-series data for all (available) countries in the world in each year. The time period covered is 1974-2010 for the independent variables and 1975-2011 for the outcome variables. In some instances, missing data have been imputed to allow for a fuller set of countries and years to be included (for example, some data for the first years of the newly independent states of the former Yugoslavia, and data for military personnel for years after 2008, were not available from our data sources). In addition, for some variables listed, the main data source is given while other data sources were also used to supplement missing observations or years. Details of imputation procedures and supplementary datasets are available in the academic studies which underpin this report, listed at: <http://sydney.edu.au/arts/research/r2pforecasting>.

Outcome Variables (Stages 1 and 2)

Political Instability and Genocide / Politicide: Monty G. Marshall, Ted Robert Gurr, and Barbara Harff. 2010. *PITF – State Failure Problem Set: Internal Wars and Failures of Governance, 1955-2009. Dataset and Coding Guidelines* (<http://www.systemicpeace.org/inscr/inscr.htm>). See also Jack A. Goldstone, Robert.H. Bates, David.L. Epstein, Ted Robert Gurr, Michael B. Lustik, Monty G. Marshall, Jay Ulfelder, and Mark. Woodward. 2010. “A Global Forecasting Model of Political Instability,” *American Journal of Political Science* 54,1: 190-208; Barbara Harff. 2003. “No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955,” *American Political Science Review* 97, 1: 57-73, and earlier work by her and co-authors.

Independent Variables

Regime Type, Mixed Regime, Change in the political system in the previous three years, and Executive Constraints: Monty G. Marshall, Keith Jagers and Ted Robert Gurr. 2010. *PolityIV Project: Political Regime Characteristics and Transitions, 1800-2010, Dataset Users’ Manual*, Centre for Systemic Peace (<http://www.systemicpeace.org/polity/polity4.htm>).

Political Assassinations and Guerrilla Conflict: Arthur Banks’s archive: Arthur S. Banks. 2011. *Cross-National Time Series Data Archive*. Binghamton, NY: Binghamton University-State University of New York.

Neighboring States with Internal Conflicts: Monty G. Marshall. 2010. *Major Episodes of Political Violence (MEPV) and Conflict Regions, 1946-2008* (<http://www.systemicpeace.org/inscr/inscr.htm>).

Election Periods: Patrick M. Regan, Richard W. Frank, and David H. Clark. 2009. New Datasets on Political Institutions and Elections, 1972-2005. *Conflict Management and Peace Science* 26(3): 286-304; see also Patrick M. Regan and David Clark (2009) “Users Manual for the IAEP Dataset,” *The Institutions and Elections Project, Binghamton University* (<http://www2.binghamton.edu/political-science/pdf/IAEPusersmanual.pdf>).

Ethnic Fractionalization: James D. Fearon. 2003. "Ethnic and Cultural Diversity by Country," *Journal of Economic Growth* 8: 195-222.

Infant Mortality Rate: M. Rodwan Abouharb and Anessa L. Kimball. 2007. "A New Dataset on Infant Mortality Rates, 1816-2002," *Journal of Peace Research* 44, 6: 743-754

State-led Discrimination: Minorities at Risk Project. 2009. *Minorities at Risk Dataset*. College Park, MD: Center for International Development and Conflict Management (<http://www.cidcm.umd.edu/mar/>).

Total Population and Military Personnel: Correlates of War Project (<http://correlatesofwar.org>), National Military Capabilities dataset Version 4.0 (2010), as described in J. David Singer. 1987. "Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816-1985," *International Interactions* 14: 115-32.

Peacekeeping Missions: Mark Mullenbach. [n.d.] *Third-Party Peacekeeping Missions data set (1946-2006)*, Version 2.1, University of Central Arkansas.

Interstate Conflict and Internationalized Internal Conflict: Nils Petter Gleditsch, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg and Håvard Strand. 2002. "Armed Conflict 1946–2001: A New Dataset," *Journal of Peace Research* 39, 5: 615–637.



References

- Alvarez, Alex. "Militias and Genocide." *War Crimes, Genocide and Crimes Against Humanity* 2 (2006): 1-33.
- Asal, Victor, and Amy Pate. "The Decline of Ethnic and Political Discrimination." In *Peace and Conflict*, edited by Monty G. Marshall and Ted Robert Gurr. Maryland MD: Centre for International Development and Conflict Management, 2005.
- Birger, Heldt. "Mass Atrocities Early Warning System: Data Gathering, Data Verification and Other Challenges." *SSRN Working Paper Series* (2012) <http://ssrn.com/abstract=2028534>.
- Colaresi, Michael, and Sabine C. Carey. "To Kill or Protect: Security Forces, Domestic Institutions, and Genocide." *Journal of Conflict Resolution* 52 (2008): 39-67.
- Collier, Paul, and Anke Hoeffler. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56, no. 4 (2004): 563-95.
- de-Waal, Alex, and Gregory H. Stanton. "Should President Omar Al-Bashir of Sudan Be Charged and Arrested by the International Criminal Court: An Exchange of Views." *Genocide Studies and Prevention* 4, no. 3 (2009): 329-53.
- DeVotta, Neil. "Sri Lanka: From Turmoil to Dynasty." *Journal of Democracy* 22, no. 2 (2011).
- Dubin, Jeffrey A., and Douglas Rivers. "Selection Bias in Linear Regression: Logit and Probit Models." *Sociological Methods and Research* 18, no. 2&3 (1990): 360-90.
- Evans, Gareth. *The Responsibility to Protect: Ending Mass Atrocity Crimes Once and for All*. Washington D.C: The Brookings Institute, 2008.
- Fearon, James, and David Laitin. "Ethnicity, Insurgency and Civil War." *American Political Science Review* 97, no. 1 (2003).
- Forges, A. Des. *Leave None to Tell the Story: Genocide in Rwanda*. New York, N.Y: Human Rights Watch and the International Federation of Human Rights Leauges, 1999 www.hrw.org/legacy/reports/1999/rwanda.
- Goldsmith, Benjamin E., Charles R. Butcher, Dimitri Semenovitch, and Arcot Sowmya. "Forecasting the Onset of Genocide and Politicide: Annual out-of-Sample Forecasts on a Global Dataset, 1988-2003." *SSRN Working Paper Series* March (2012) <http://ssrn.com/abstract=2027396> or <http://dx.doi.org/10.2139/ssrn.2027396>.
- Goldstone, Jack, Robert H. Bates, David L. Epstein, Ted Robert Gurr, Michael B. Lustik, Monty G. Marshall, Jay Ulfelder, and Mark Woodward. "A Global Forecasting Model of Political Instability." *American Journal of Political Science* 54, no. 1 (2010): 190-208.
- Greene, William H. *Econometric Analysis (7th Edition)*. New Jersey NJ: Prentice Hall, 2011.
- Harff, Barbara. "No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955." *American Political Science Review* 97, no. 1 (2003): 57-73.
- . "Assessing Risks of Genocide and Politicide: A Global Watch List for 2012." In *Peace and Conflict 2012*, edited by J. Joseph Hewitt, Johnathan Wilkenfeld and Ted Robert Gurr. College park, MD: University of Maryland, 2012.
- Harff, Barbara, and Ted Robert Gurr. "Toward Empirical Theory of Genocides and Politicide: Identification and Measurement of Cases since 1945." *International Studies Quarterly* 32, no. 3 (1988): 359-71.
- Hazlett, Chad. "New Lessons Learned? Improving Genocide and Politicide Forecasting." *The United States Holocaust Museum* (2011) <http://www.ushmm.org/genocide/analysis/details/2011-10-05/Chad%20Hazlett%20>

References...

- Early%20Warning%20Final%20Long%20Paper.pdf. .
- Human Rights Watch. *Human Rights Watch World Report 2002: Events of 2001*. London UK: Human Rights Watch, 2002.
- International Crisis Group. "War Crimes in Sri Lanka." *International Crisis Group Asia Report*, no. 17 May 2010 (2010) [http://www.crisisgroup.org/~media/Files/asia/south-asia/sri-lanka/191%20War%20Crimes%20in%20Sri%20Lanka.pdf](http://www.crisisgroup.org/~/media/Files/asia/south-asia/sri-lanka/191%20War%20Crimes%20in%20Sri%20Lanka.pdf) last accessed 5 July 2012.
- Kathman, Jacob D., and Reed M. Wood. "Managing the Threat, Cost, and Incentive to Kill: The Short and Long-Term Effects of Intervention in Mass Killings." *Journal of Conflict Resolution* 55, no. 5 (2011): 735-60.
- Kiernan, Ben. "The Cambodian Genocide: 1975-1979." In *Century of Genocide: Critical Essays and Eyewitness Accounts*, edited by Samuel Totten and William S. Parsons. New York NY: Routledge, 2009.
- Komar, Debra A., and Sarah Lathrop. "Patterns of Trauma in Conflict Victims from Timor Leste." *Journal of Forensic Sciences* 57, no. 1 (2012): 3-5.
- Krain, Matthew. "State-Sponsored Mass-Murder: The Onset and Severity of Genocides and Politicides." *Journal of Conflict Resolution* 41, no. 3 (1997): 331-60.
- Lu, Catherine. "The Politics of Legal Accountability and Genocide Prevention." In *Confronting Genocide*, edited by Rene Provost and Payam Akhavan. London: Springer, 2009.
- Marshall, Monty, Ted Robert Gurr, and Barbara Harff. "PITF - State Failure Problem Set: Internal Wars and Failures of Governance, 1955-2009. Dataset and Coding Guidelines." (2010).
- Marshall, Monty G., Keith Jagers, and Ted Robert Gurr. "Polity IV Project Dataset Users Manual." *Centre for Systemic Peace* (2011) Available from <http://www.systemicpeace.org/inscr/p4manualv2010.pdf>.
- Melander, Erik. "Selected to Go Where Murderers Lurk? The Preventative Effect of Peacekeeping on Mass Killings of Civilians." *Conflict Management and Peace Science* 26 (2009): 389-406.
- Permanent People's Tribunal. "People's Tribunal in Sri Lanka." (2010) <http://warwithoutwitness.com/images/stories/news/25851626-people-s-tribunal-on-srilanka-final-report-jan-2010.pdf> last accessed 28 April 2012.
- Semelin, Jaques. *Purify and Destroy: The Political Uses of Massacre and Genocide*. New York: Columbia University Press, 2007.
- Sewall, Sarah, Dwight Raymond, and Sally Chin. "MARO Mass Atrocity Response Option: A Military Planning Handbook." *Carr Centre for Human Rights Policy, Harvard Kennedy School and US Army Peacekeeping and Stability Institute* (2010).
- Staub, Ervin. "Genocide and Mass Killing: Origins, Prevention, Healing and Reconciliation." *Political Psychology* 21, no. 2 (2000).
- Totten, Samuel, and William S. Parsons, eds. *Century of Genocide: Critical Essays and Eyewitness Accounts*. New York: Routledge, 2009.
- Ulfelder, Jay. "Forecasting Onsets of Mass Killing." *Paper Prepared for Presentation at the Annual Northeast Political Methodology Meeting, New York University, May 4th* (2012).
- Ulfelder, Jay, and Benjamin Valentino. "Assessing the Risks of State-Sponsored Mass Killing." *SSRN Working Paper Series* (2008) <http://ssrn.com/abstract=1703426> or <http://dx.doi.org/10.2139/ssrn.1703426>.
- United Nations. "Report of the Secretary-General's Panel of Experts on Accountability in Sri Lanka." (2011) <http://>

References...

www.un.org/News/dh/infocus/Sri_Lanka/POE_Report_Full.pdf last accessed 28 April 2012.

United Nations Human Rights Council. "Report of the International Commission of Inquiry on Libya." (2012) http://www.ohchr.org/Documents/HRBodies/HRCouncil/RegularSession/Session19/A_HRC_19_68_en.doc last accessed 5 July 2012.

Uppsala Conflict Data Program. *UCDP Conflict Encyclopedia*: Uppsala University, 2012 www.ucdp.uu.se/database.

Valentino, Benjamin, Paul Huth, and Dylan Balch-Lindsay. "'Draining the Sea': Mass Killing and Guerrilla Warfare." *International Organization* 58, no. 2 (2004).

Yanagizawa-Drott, David. "Propaganda and Conflict: Evidence from the Rwandan Genocide." *Unpublished Paper: Harvard University* March 10 (2012) <http://www.hks.harvard.edu/fs/dyanagi/Research/RwandaDYD.pdf>.

© Copyright August 2012

Charles R. Butcher

Benjamin E. Goldsmith

Dimitri Semenovich

Arcot Sowmya

Contact: Benjamin E. Goldsmith, Department of Government & International Relations,
University of Sydney, NSW 2006, Australia, ben.goldsmith@sydney.edu.au