When Information Becomes Action:
How social and political factors affect information technology (ICT) use during crisis

Charles Patrick Martin-Shields
School for Conflict Analysis and Resolution
George Mason University

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Introduction: The thesis in three parts

What can we learn from ICTs in crisis prevention/ management?

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Part 1: Literature Review and the arc of ICTs in conflict management and peacebuilding

Part 2: ICTs in socio-political context: Comparisons of Kenyan and Samoan ICT use during crisis

Part 3: Institutions and the Political Economy of ICTs in response policy and operation

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Part I: The Literature Review and Argumentation

1: Understanding Conflict Generally

2: Conflict Risk and Conflict Prevention

3: Signaling and Communication for Violence Prevention

4: Identifying Role of ICTs in the Violence Prevention Cycle

5: Argumentation and Methods

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1: Understanding Conflict Generally

Classically we see conflict, namely war, as a modality of inter-state politics

Since the time of Clausewitz, through WWII, into the Cold War the patterns of war changed

Civil conflicts increased through the 1970s, a trend that continues today even as the gross number conflicts has decreased

Why is there conflict though? Gurr highlights exclusion of minorities, Collier and Hoeffler point to macroeconomic factors, Fearon and Laitin focus on inter-group information sharing

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2: Conflict Risk and Conflict Prevention

We'll focus on Fearon and Laitin's 1996 article "Explaining Interethnic Cooperation" to frame conflict risk and conflict prevention

Essentially, violence is prevented in two ways: either two leaders guarantee to one another that they will police their constituents, or local actors respond to potential violence at the local level before violence spirals.

In both cases we need bonding and bridging capital; Varshney's (2001) work on interethnic cooperation in India takes us a step further by exploring how communities that have representation in mixed ethnicity CSOs are more likely to maintain stability in the face of conflict risk.

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3: Communication and Credible Commitments in Violence Prevention

To have these kinds of bonding and bridging capital, we need reliable communication.

Axelrod's (1996) work on the evolution of cooperation helps us understand the role of information and time for preventing violence.

Essentially, if I have a long horizon of the future (many iterations of communication) and a counter party (or counter parties) that are willing to cooperate as a matter of strategy, then the actors in the system will be able to mend relations after a defection.

Another way we can look at this is in terms of collective action processes. Stability maintenance is a collective good, and it becomes a challenge to maintain when the threat of violence exists.

This means that violence can be the outcome of a number of things: political manipulation, natural disasters, food shortages...basically anything that's a communal stressor

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4: Identifying Role of ICTs in the Violence Prevention Cycle

The role of ICTs becomes important when we think about collective processes of stability maintenance during/after a crisis

The key problem that Lupia and Sin (2003) discuss is the issue of communication costs as groups grow in size.
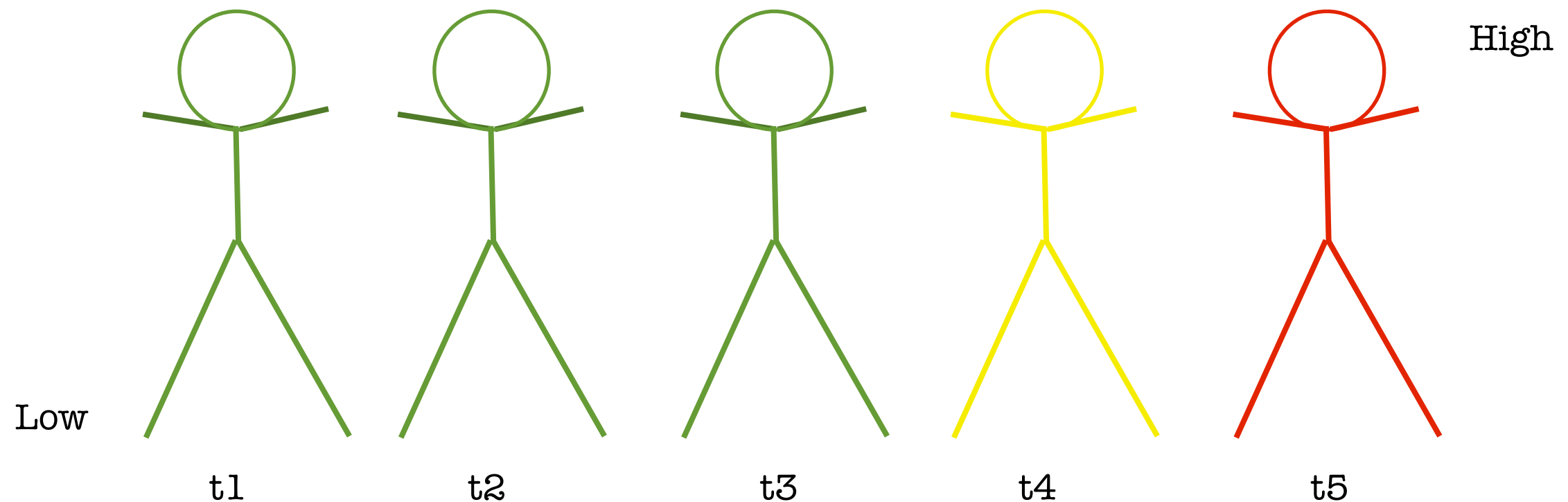
ICTs, such as mobile phones, radio, and internet-based social media negate the marginal costs of adding more people or wider geographic dispersion

We'll see how this looks visually...

(IMPORTANT: Technology is only a magnifier of human intent. These same tools can be used to organize violence in the same way they can be used to organize peace.)

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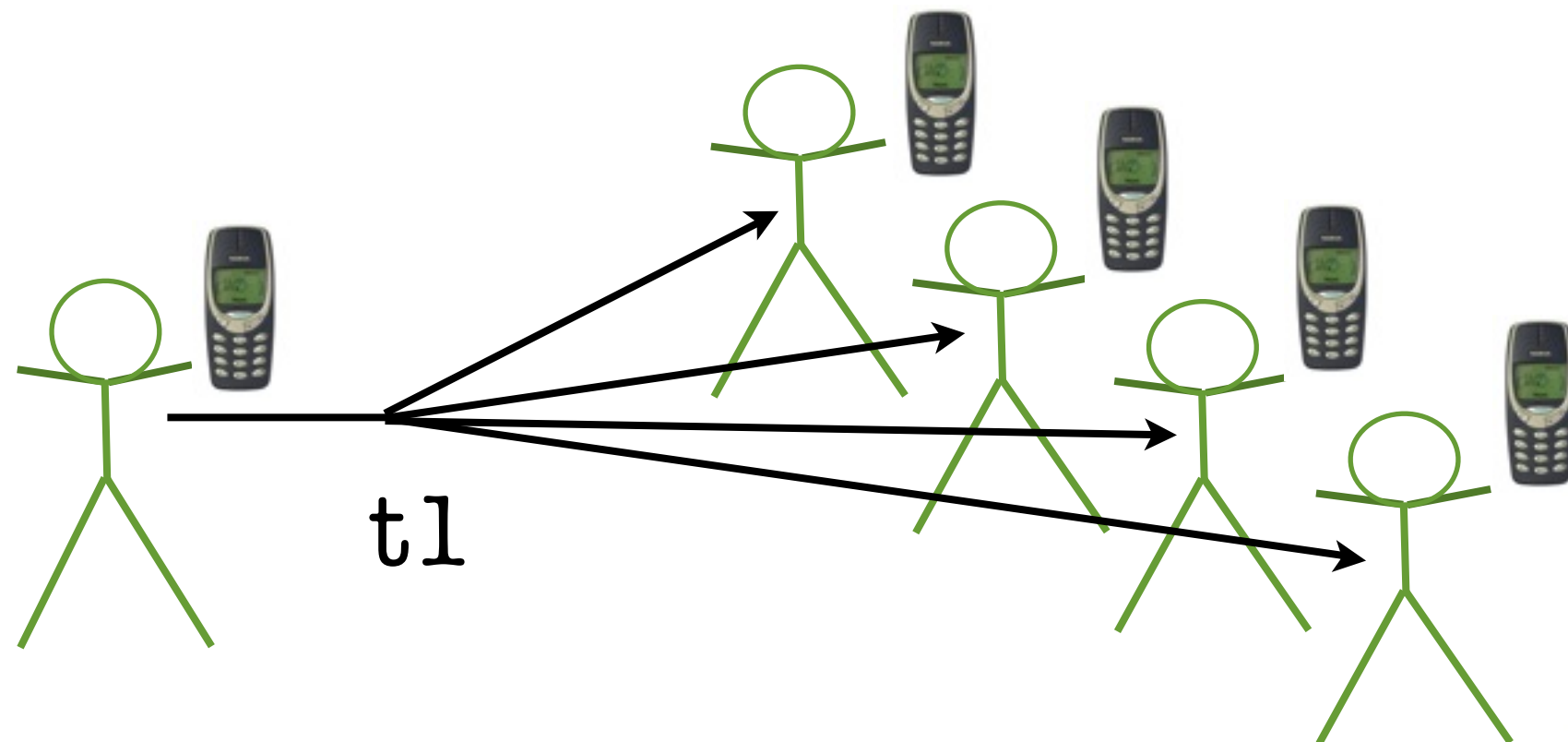# 4: Identifying Role of ICTs in the Violence Prevention Cycle (con't)

Main problem: As population/geography grows marginal cost of information sharing goes up and thus so too does risk of defection

High

Low

t1   t2   t3   t4   t5

4: Identifying Role of ICTs in the Violence Prevention Cycle (con't)

Solution: Using SMS the marginal cost of one more message is nil, and geographic distance is no longer a problem

t1

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5: Argumentation and Methods

Violence is the outcome of communication and information break downs in the collective process of maintaining stability

These breakdowns could be caused by man made or natural crises

ICTs can help lower the cost of managing the collective process of violence prevention, making it easier to include larger numbers of people across wider geographies

How does this happen? 1) People share information laterally and organize at the conflict touch point or 2) people share information and this is seen by elites who provide credible commitments to each other that they will manage their constituencies.

Methods: Comparative cases of Kenya and Samoa, with surveys of ICT use and preference

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Part II: Comparative Analysis of Socio-technical Behavior in Kenya and Samoa

1: Case Studies and Methods

2: Kenya and Political Crises

3: Samoa and Natural Disaster

4: Synthesis of Findings and Revisiting the Argument

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1: Case Studies and Methods

Comparing unlike cases to focus on ICT use, trust and action: Kenya and Samoa

Political crises versus natural disasters

Does context make a difference? Trust and action as functions of horizontal and vertical communication systems and information

Comparative surveys of how individuals use, assess, trust and act on information from different technical mediums and sources

2: Kenya and Political Crises

Kenya represents the case of political crisis, with election violence being the main driver of large scale violence

Kenya is large, continental, highly ethnically fractionalized, strategically important, and has high telecommunications uptake by the population

The narrative of ICT4D and ICT for peacebuilding is very established in Kenya; Ushahidi was developed here, and many organizations have used ICTs in their work in Kenya

Because of this, and a long history of corruption and bad governance, I hypothesize that people will be likely to use and trust horizontally integrated ICTs at least to the same extent as vertically integrated systems like radio

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3: Samoa and Natural Disaster

Samoa is my case focusing on natural disasters as a collective challenge to stability maintenance

Samoa is a very small island in the South Pacific, is almost completely ethnically homogenous, has no history of significant political violence since independence, is strategically unimportant, but does have high telecommunications penetration

It lacks any significant history with ICT4D or ICT for non-violence programs

With this in mind, I hypothesize that information use and trust could cut two ways. The first is that people trust centralized sources, since there is not a history of reasons not to. The second is that they will trust and act on horizontal information because of high social capital.

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4: Synthesis of Findings and Revisiting the Argument

This section will revisit the argument to frame a comparative discussion of the cases and survey results

Comparisons of the survey results will be explored, as well as deeper statistical analysis of trends and patterns

The results will be discussed in the context of the two different countries; how does political and social context affect information and ICT use? Does it?

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Part III: Institutional Use of ICTs for Crisis Response

1: Institutional Approaches to Tech and Violence Prevention

2: The Political Economy of 'Innovation'

3: Comparing Approaches: USAID and BMZ

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1: Institutional Approaches to Tech and Violence Prevention

Why do we need to evaluate institutional approaches to using ICTs in violence prevention work?

Wide overview of examples of institutional uses of ICTs, including UNDP, USAID, DFID

What are considered the best cases?

What institutional standards exist for how to use ICTs for violence prevention?

2: The Political Economy of 'Innovation'

Why do agencies and organizations use new technologies in their work? How does this explain institutional innovation and localization of efforts

What is the role of public/private partnerships (PPPs)?

How does the private sector effect the decisions of peacebuilding and development actors to use new technologies and tools?

Does this reflect a proper recognition of how local actors use these tools? If not, what are the potential problems that could arise when agencies and organizations try to use ICTs in violence prevention settings?

3: Comparing Approaches: USAID and BMZ

Serious difference: the 'Hub' versus 'Crosscutting' approach

USAID has the Global Development Lab, which is a 'hub'. The Lab acts as an internal consulting and institutional learning entity, that then works with the main operational pillars to integrate ICTs into their ongoing work.

BMZ includes ICTs in their larger economic development pillar, as opposed to treating them as a unique sector to be integrated into the pillar operations. Instead, we see an effort to invest in and develop the backbone technologies in-country, then let the pillars use them as appropriate.

Different political economies: the PPP versus the state backed investment

IV: Integrated Conclusions

1: Synthesizing Institutional Approaches with Individual Socio-technical Behaviors

2: Theoretical Insights for ICT and Violence Prevention Research

3: Implications for ICT Use in Violence Prevention Policy and Practice

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Questions and Comments

Thank you for your feedback!

Charles Patrick Martin-Shields
Email: cmarti17@gmu.edu
Twitter: @cmartinshields