

EMERGENCE OF INSURGENT INSTITUTIONS THROUGHOUT THE WAR IN AFGHANISTAN

ROBERT HAWKINS
MENTOR: SIMON DEDEO

The data released through WikiLeaks on July 25th, 2010 contain a comprehensive, day-to-day record of five years of NATO involvement in Afghanistan – the most detailed picture of a foreign occupation currently available. One question of particular interest to political science and military strategy concerns the process of self-organization of insurgent forces from scattered, disjoint cells at the beginning of the war to a resilient, coordinated force several years later. Since insurgent populations deliberately conceal their activities and communication, traditional avenues of investigation are closed, and we must rely upon methods of statistical inference from data.

To address this question, we take an information-theoretic stance: Insurgent attacks are viewed as signals directed at other insurgent groups or NATO forces. Our focus can then turn toward a search for coherent patterns in the noisy spatio-temporal distributions of these signals. The presence of institutional structure may be reflected in the data by convergence of regional signals at a single location or, alternatively, by the simultaneity of spatially dispersed regional signals as, for example, in an orchestrated terrorist attack. NATO forces entered the war with such higher institutions in place, so comparing the two should be informative.

More specific to the question posed above, there may be indicators of these inter-related institutional structures in the distribution of 2008-2009 events that contrast with, say, a Poisson distribution of events that would be expected at the onset of the war if small insurgent populations were independent of one another. The time-scale of this emergence, the size of the resulting institutions, and the mechanism by which the process occurs should provide insight into the political theory of conflicts and into the nature of human behavior in general.