

Dramatic (catastrophic) regime shifts in socio-political systems

Harald Waxenecker

MUNI

Masaryk University | Faculty of social studies

Department of Environment Studies

A: Jostova 10 | 602 00 Brno

E: waxenecker@fss.muni.cz

ESR 4:

This project applies **network-based approaches** to multiple systems using secondary data to explore how **shifts in network topology result in novel systems**.

The data:

Transactional network between public and private actors: contracts
= 2-mode network
= undirected ties
= weighted ties
= over time

This project will focus on Mexico, Colombia and Guatemala, using secondary data provided by the States themselves; estimating some 200,000 contracts in Guatemala, 1.4 million contracts in Mexico and 260,000 contracts in Colombia.

Social capital



It is assumed that the **maximum relational performance** (of closure and betweenness) is the **highest social capital**. And the highest social capital gets the **maximum economic outcome** in the market.

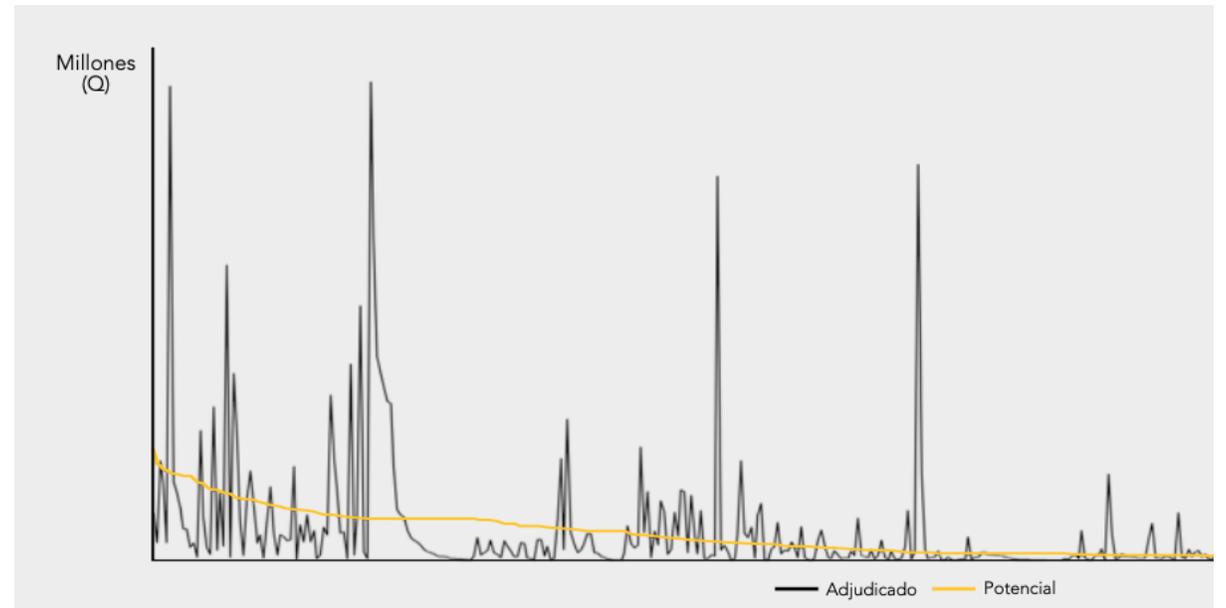
So, the contrast between social capital and economic success allows us to study the **regularities and irregularities** in the transactions between State and companies.

Economic outcome (companies)

Potential economic outcome (according to social capital)

versus

Real monetary success in the market



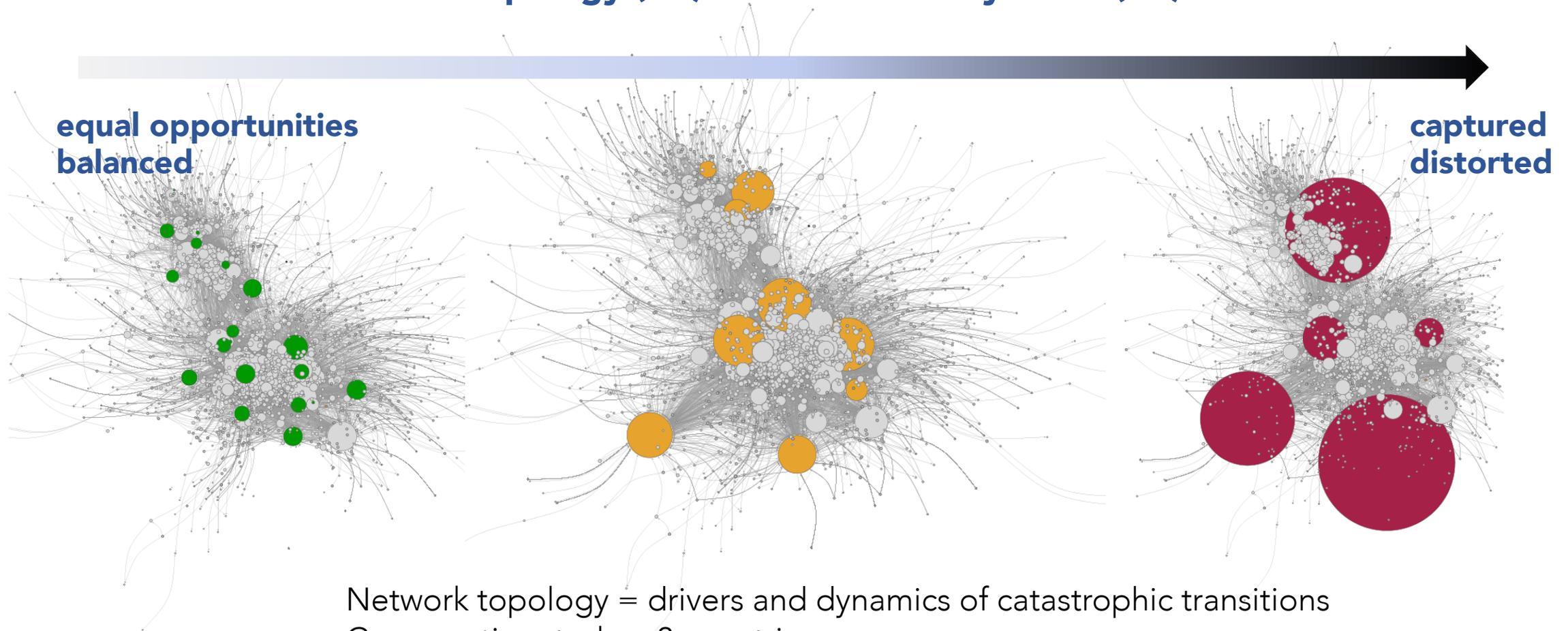
Waxenecker, Harald, 2020: Economía de Captura en Guatemala: desigualdad, excedentes y poder; Guatemala: Paraíso Desigual

At what point does an irreversible systemic change occur?

When does a democracy stop being democracy?

How does this relational power distort or disfigure (free) markets?

How shifts in network topology (FC) result in novel systems (SC)?



Network topology = drivers and dynamics of catastrophic transitions

Comparative study = 3 countries

Over time = 2004 – 2020

In context...

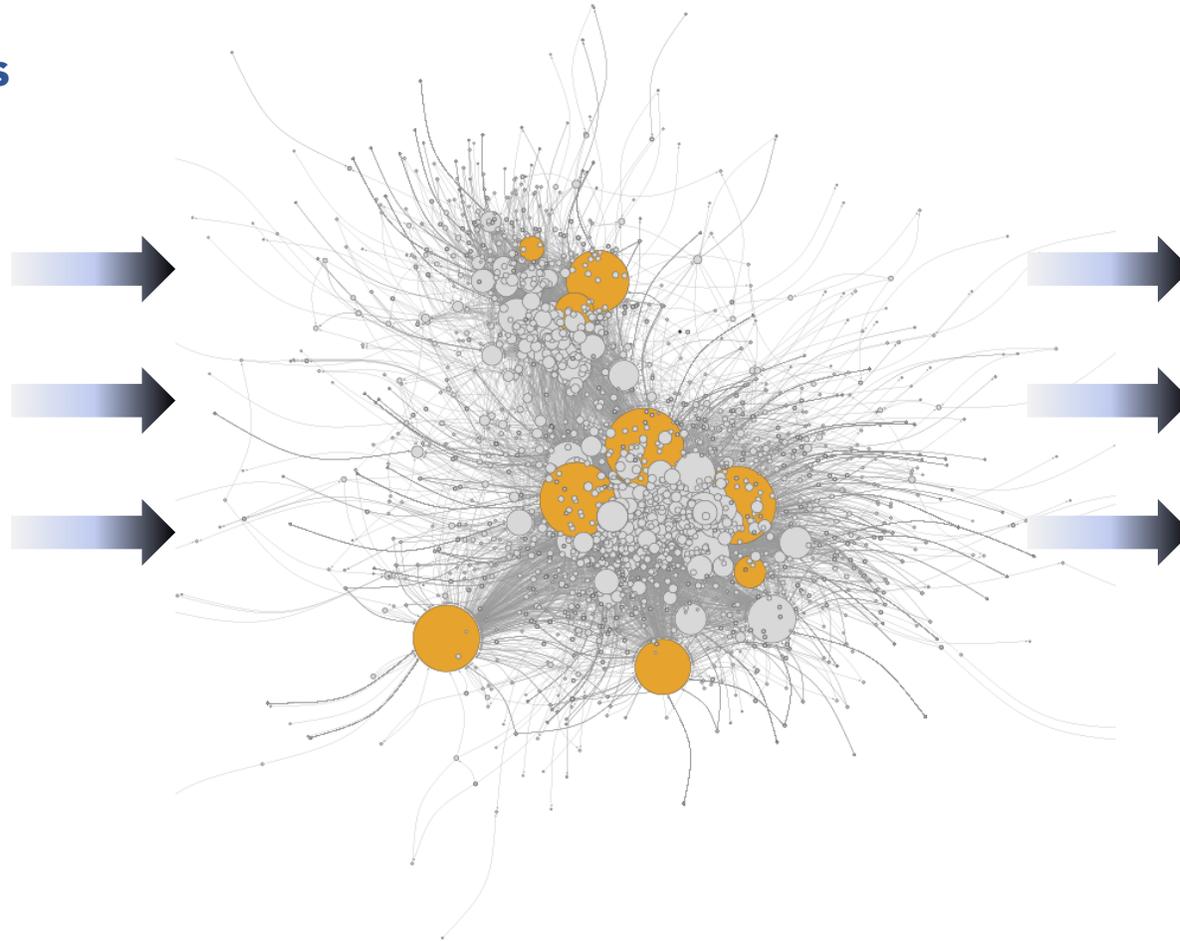
Driver and triggers

Internal:

Network topology
(FC)

External:

Legal framework
Who is who?
(power network)



Outcomes and impacts

Economic system (SC)
= input-output network
= inter-industry flows

Quantify (estimate) the
monetary impact of market
distortion (corruption)

Political system (SC)
= democracy

Characterize the concentration
of resources and power