Social network analysis in illicit drug markets: an innovative methodology

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Public discourse re drug markets operations

That efforts to disrupt market or seize drugs are directly related to:

A) The no. arrests/amount of drugs seized

B) The no. arrests of "king pins"
Record ecstasy seizure: Operation Inca

“4.4 tonnes, $440 million street value”

“(In) our belief and our estimate, the work of customs, the state and territory police and ourselves has saved the Australian community something in the order of $2 billion worth of harm.”
Drug hierarchies to drug networks?
Quandaries re drug market operations

- How many players are involved in drug trafficking in Australia?
- How do people get recruited?
- How do they avoid detection?
- To what extent do drug networks differ from location to location or drug to drug?
- To what extent can and do players deal with multiple drugs or commodities?
- To what extent can and do they adapt to internal or external pressures e.g. policing?
- What are their weaknesses and strengths?
Drug markets and dark networks

- Inherent difficulties collecting data on drug trafficking:
  - inherent challenges studying “dark networks”
  - increasing restrictions on access to drug traffickers

- Challenges in finding a theoretical framework to guide the research and enabled *applied* understandings
Why social network analysis (SNA)?

• Method for analysing patterns of relationships and the interactions between social actors
• Potential tool for to identify
  — Nodes of power (key players)
  — Level of inter-connectedness
  — Extent of specialisation of roles
  — Potential weaknesses /areas for intervention
• Application to other criminal networks and to lesser extent drug networks suggested feasibility
  — Natarajan (1998)
  — Morselli and Pettitt (2007)
  — Heber (2009)
Aims

• To map and understand a top level (not street level) drug distribution network

Challenges

• 1. Need to develop our expertise in SNA
• 2. Data (lack of):
  — Ethnographic street approaches - not relevant
  — Imprisoned drug traffickers – not accessible
  — Wiretaps or DPP records – not accessible at this stage
  — Court transcripts – accessible
Current project

• Feasibility study of use of SNA to:
  — Examine structure of a methamphetamine trafficking market in Australia
  — Using court sentencing data
• Potential extension re data or application

Core questions

• Is SNA a worthwhile methodology for illicit drug market research?
• Can it/should it be conducted using court sentencing data alone?
Pilot study: Method

  - Date range: 1999-May 2009
  - Courts: Supreme, Criminal Appeal, District
  - Search terms: “methamphetamine” (337), “methylamphetamine” (46)
  - Inclusion criteria: cases involving manufacture, dealing, trafficking, importing
  - Exclusion criteria: cases involving possession, and property/violent crimes committed while intoxicated
Cases selected

• Total of 61 cases met criteria
  — District court: 4
  — Supreme court: 3
  — Court of Criminal Appeal: 54

• Read all cases for the purpose of another project; comments include summary of the “facts”

• Identified a drug distribution operation; main players mentioned in several cases; detailed descriptions of players and connections (“Kalache syndicate”)
The network

• “Kalache syndicate”:
  — Extracted all information regarding this syndicate
    · Cases in which syndicate mentioned
    · Examined cases for recurring names/connections
  — Identified 36 individuals from 11 separate cases
• Extracted information on: roles, relative status, activities, connections
• Constructed grid to map connections/relationships
• *Ucinet 6 for Windows/Netdraw*:
  — analyses
  — network map
Roles

- Manager/assistant manager
- Clan lab manager
- Wholesale dealer
- Resources provider
- Specialist
- Worker
- Corrupt official
Network Map

Roles:
- Manager (n = 2)
- Clan lab manager (n = 3)
- Wholesale dealer (n = 7)
- Resource provider (n = 8)
- Specialist (n = 2)
- Worker (n = 10)
- Corrupt Official (n = 3)
- Unknown (n = 1)
Density and centrality

- **Percent density**: 9%
  - suggests many isolated individuals, and little contact between groups responsible for major tasks

- **Degree centrality**:
  - El Azzi (branch manager) and Kalache (principal) have highest number of connections

- **Betweenness centrality**:
  - El Azzi (Branch manager) and Parker (Assistant manager) are important channels for information/transactions
Conclusions

• Network is comprised of “loosely connected” individuals

• High risk tasks (e.g., transporting drugs, attending clan lab sites) designated by managers to others

• Some evidence of specialisation

• Several small cells (plus a ‘satellite’ network); if one cell is detected, others can continue
Issues - 1

• Feasibility vs. meaning
  — To what extent can SNA be meaningfully conducted with forensic data (e.g., court data)

• Missing data
  — No way of knowing what is missing or how important it is
  — Is this simply inevitable or does it create additional flaws with court data?
**Issues – 2**

- Potential bias in data:
  - Perhaps those detected by police = weaker/atypical networks
  - May emphasise “highest” roles
- No information on change over time:
  - Indicator of roles at particular time point (not dynamic)
  - No history on previous roles of players/relationships

- Are these problems fatal to our endeavour?
Thank You!

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