

**COMPTRASEC**

Centre de droit comparé du travail  
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MISSION DE RECHERCHE  
**Droit & Justice**

# AVRES : analysis and visualisation of criminal networks

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19th *ALLIANCE AGAINST TRAFFICKING IN PERSONS*

Using Technology to Combat Trafficking in Human Beings: Turning a Liability into an Asset  
Vienna, Hofburg (Neuer Saal) 8-9 April 2019

# How does human trafficking work?

- Academic perspectives: Improve knowledge around criminal networks related to human trafficking / sexual exploitation
  - What is the social organization of the group? (rules and norms)
- Operational perspectives: Assist with the judicial decision
  - Which are the individuals whose removal from the network would produce the greatest fragmentation of the group (or those whose role within the criminal activity needs to be rethought) .

# Research projects

- **AVRES** : analysis and visualisation of criminal network : the case study of a Nigerian court file (314 actors)
  - Quantitative approach : formalisation of the network of the actors from the court file
  - Qualitative approach : content analysis of the phone intercepts
- **MINEXP** : sexual exploitation of underage women in the suburbs of Paris
- **TRAFOR** : forced labour from court file data

# The methodology : R.I.V.E.

In order to understand how human trafficking works:

## 1. *Rôle/Role*

- Who does what? The role of the actors

## 2. *Identité/ Identity*

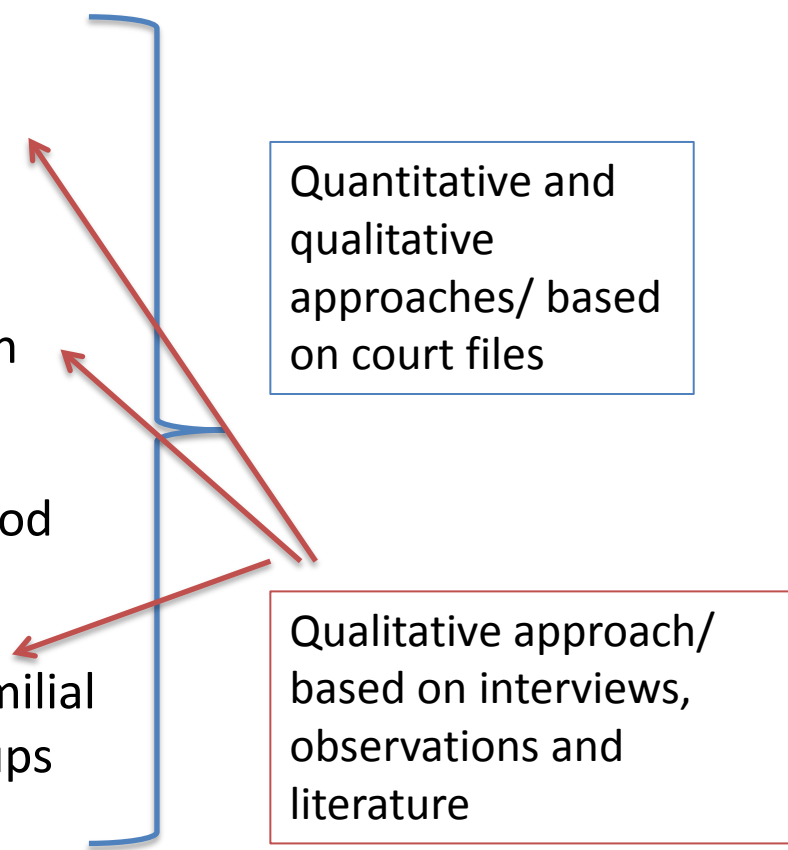
- Who are they? The social characteristics, individual context, trajectory and motivation

## 3. *Voisinage relationnel/ Relations*

- With whom? The relational neighbourhood

## 4. *Environnement/Environment*

- In which context? The social, cultural, familial and geopolitical contexts of the actors, groups and criminal activities



Quantitative and qualitative approaches/ based on court files

Qualitative approach/ based on interviews, observations and literature

# What the tool allows ? Collect

- Collect all the data in the same place:
  - Individual characteristics
  - Tasks/criminal roles
  - Links between the actors
  - Nature of the links (kindship, romantic and sexual relationship, roommates and host, financial flows, criminal activity and acquaintance)
  - Action based links

# What the tool allows ? Analysis

## 1. *Rôle/Role*

➤ Who does what? The role of the actors

## 2. *Identité/ Identity*

➤ Who are they? The social characteristics, individual context, trajectory and motivation

## 3. *Voisinage relationnel/ Relations*

➤ With whom? The relational neighbourhood

## 4. *Environnement/Environment*

➤ In which context? The social, cultural, familial and geopolitical contexts of the actors, groups and criminal activities

Descriptive analysis + CSV export

Statistical tests:  
multi-factorial  
analysis

+

Network analysis

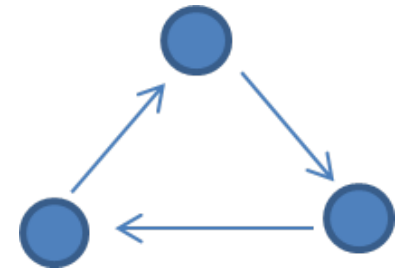
Advanced network  
analysis technique /  
QAP + ERGUM

# What the tool allows ? Visualization

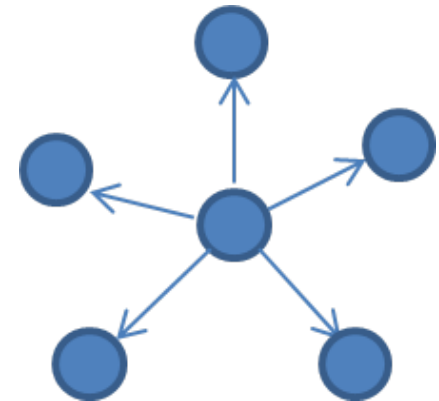
## Network approaches:

### ➤ 1-mode network : actors

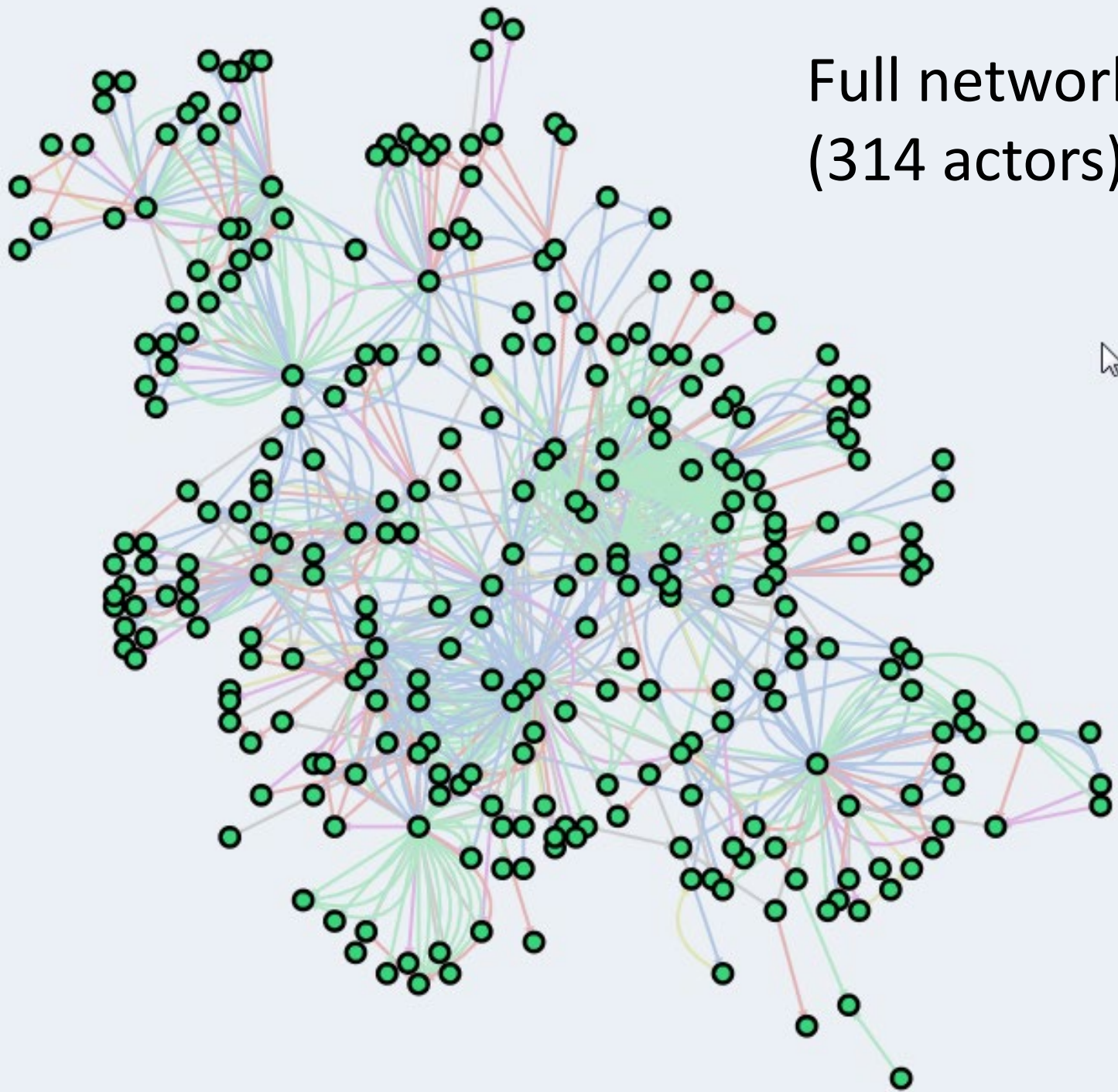
- Full network  
(minimum unit : triade)



- Personal network

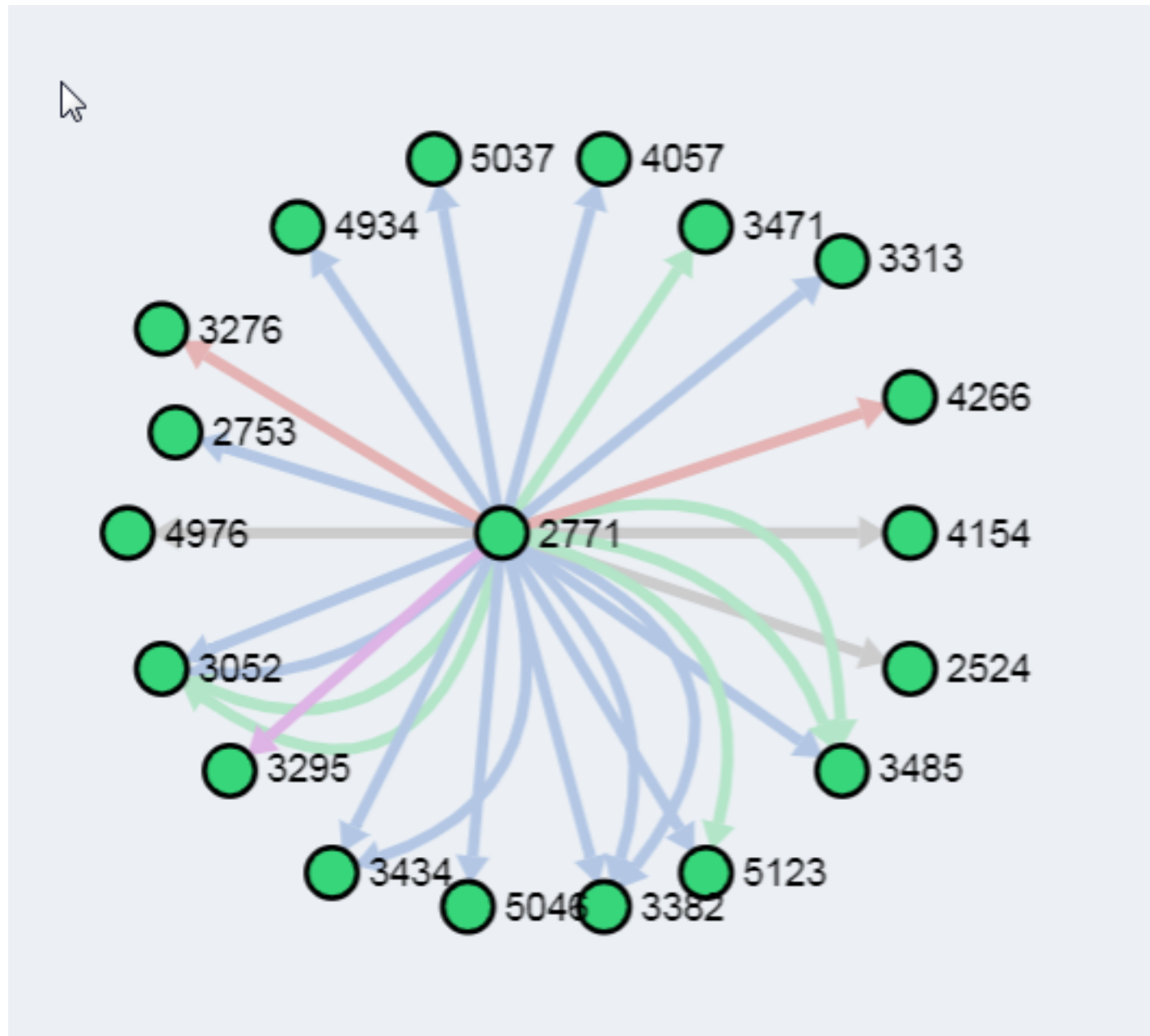


Full network  
(314 actors)





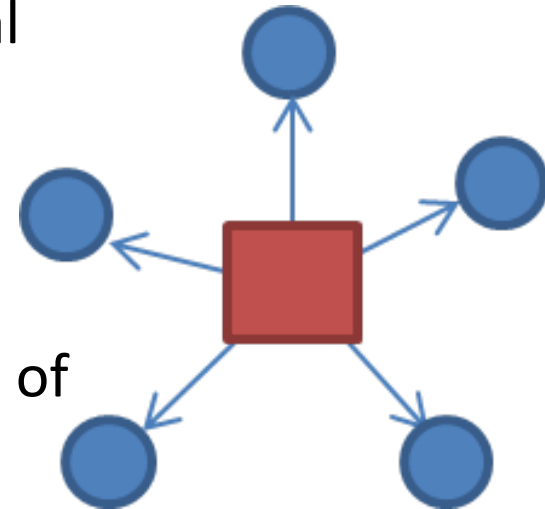
# Ego network



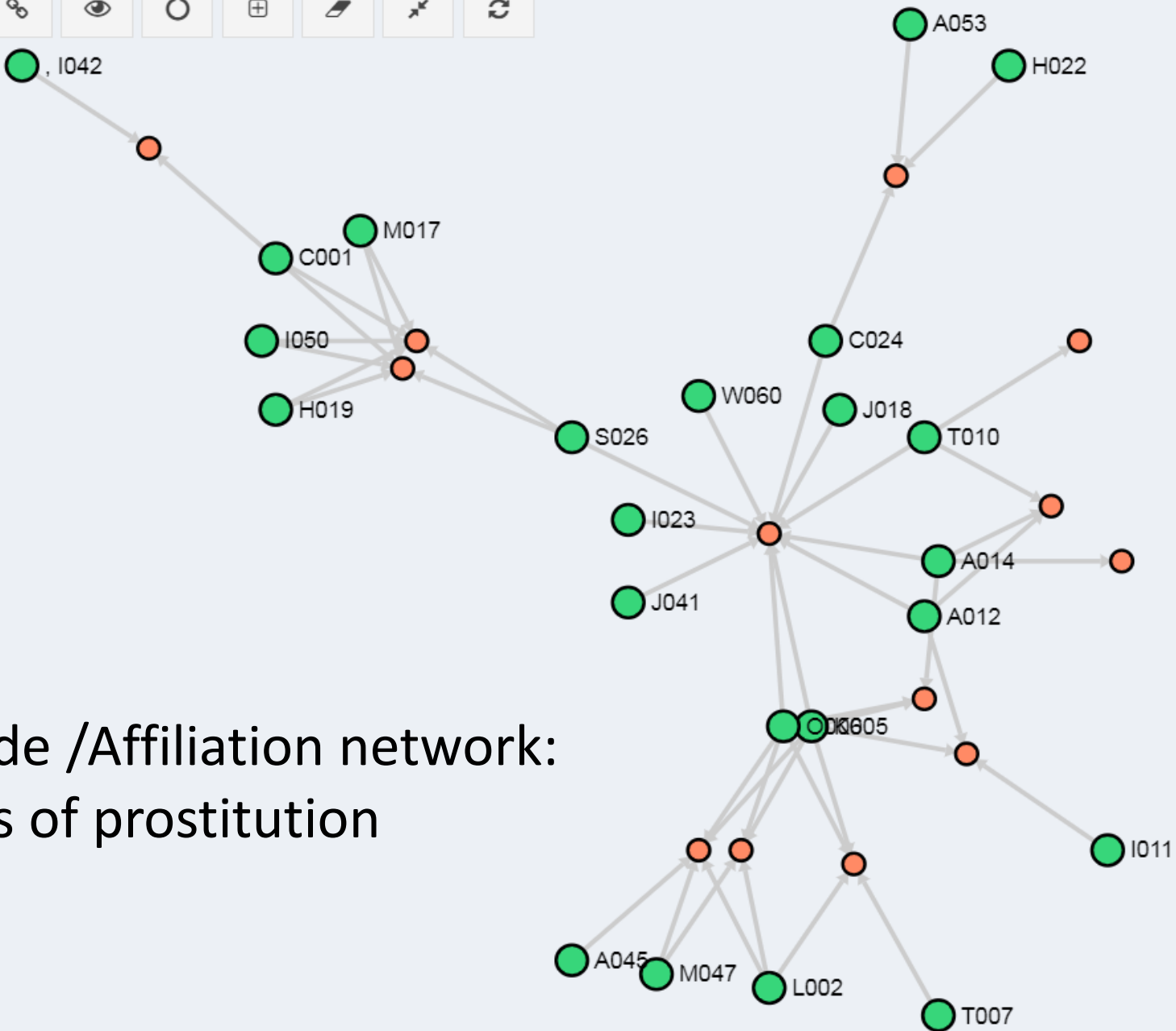
# What the tool allows ? Visualization

## ➤ 2-mode network : actors + non-actors

- Affiliation : events (oath for nigerian THB)  
places of prostitution (hotel, street, ...), social groups (mafia, clubs, ...)
- Role/Action based 2-mode network :  
proxenete, prostitute / recruit in the country of origin, Monitor



## ➤ 1-mode + 2- mode network

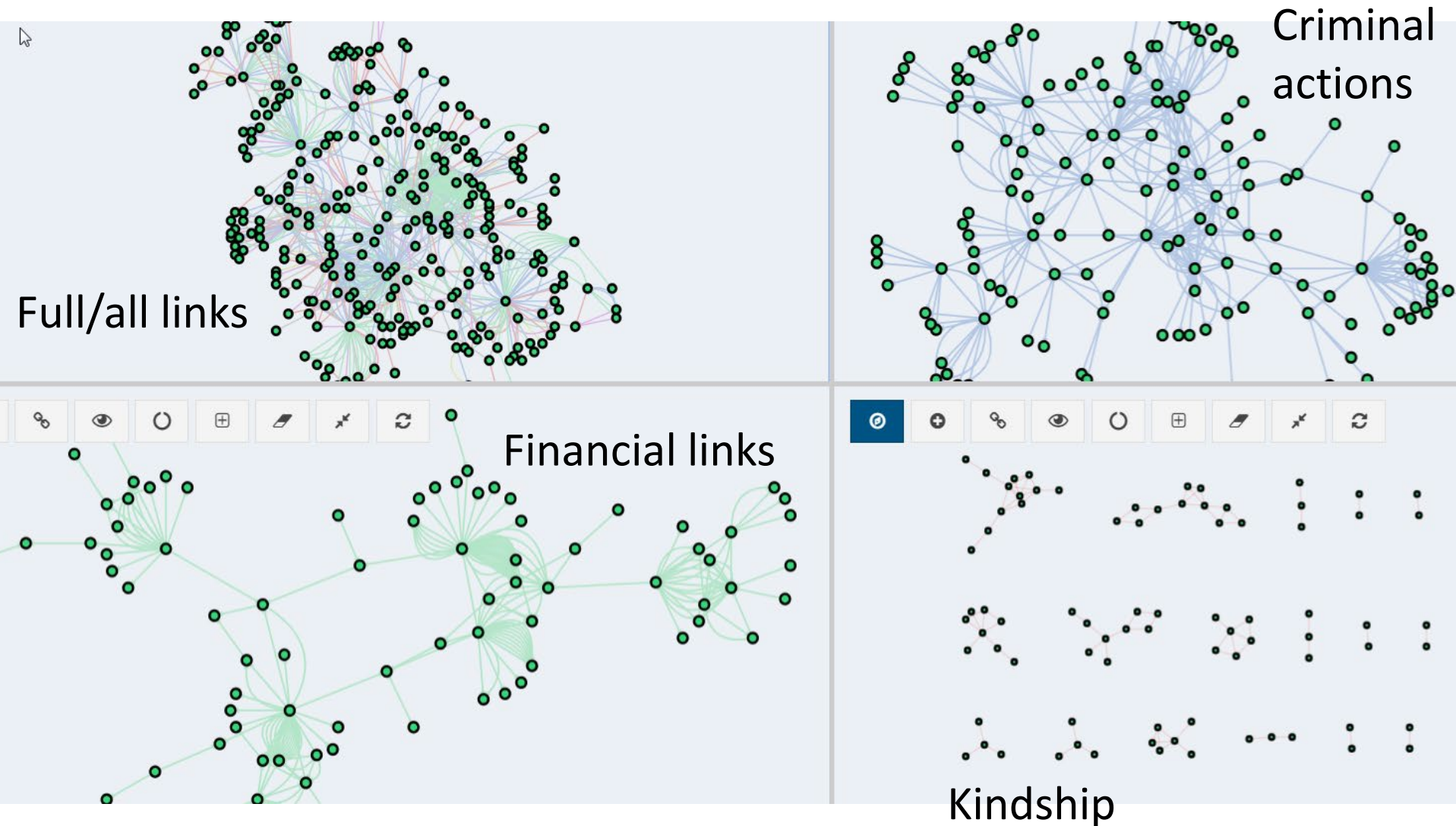


2-mode /Affiliation network:  
places of prostitution

# What the tool allows ? Visualization

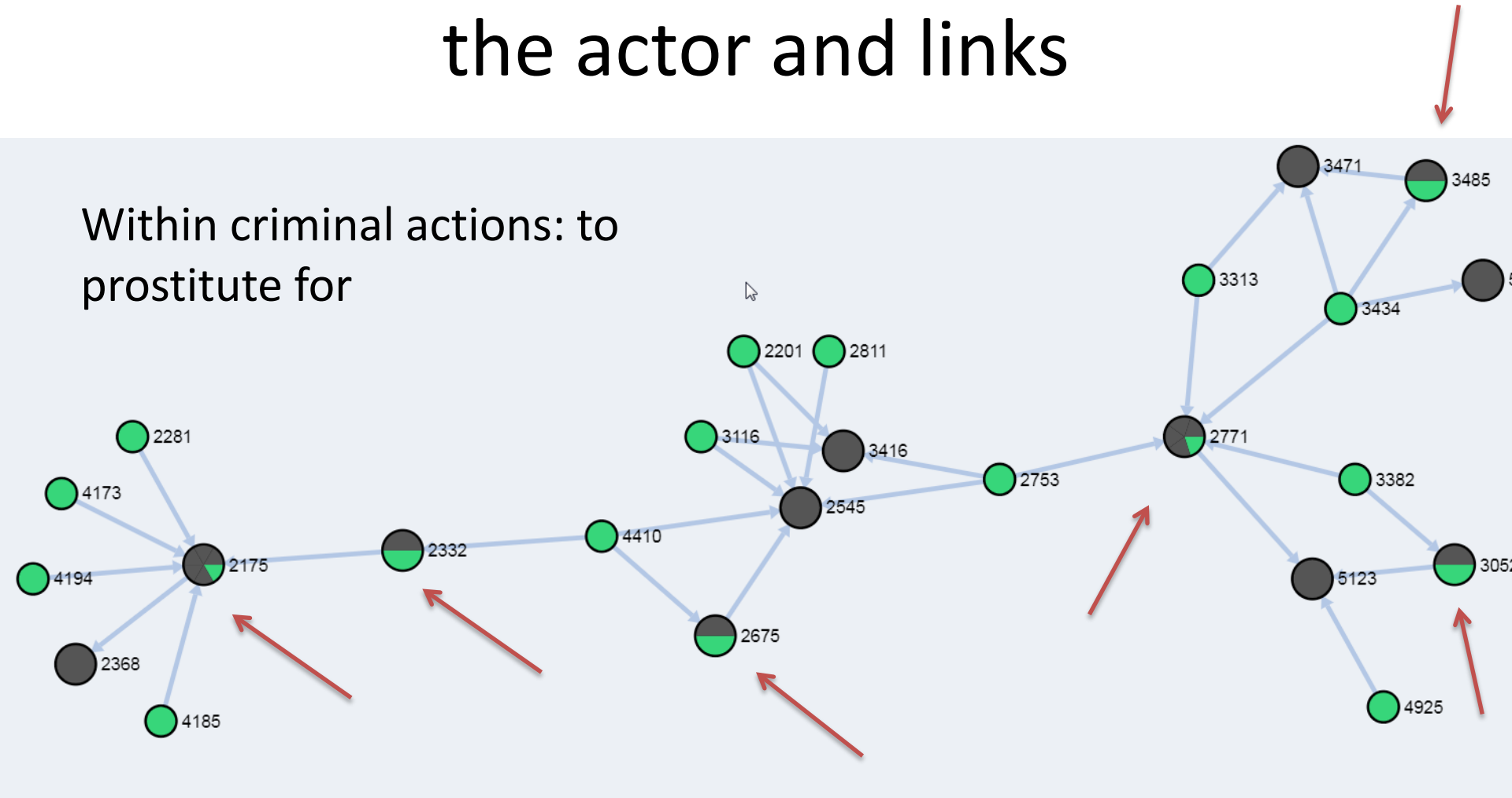
- Multiplexity of the links : different ties with the same person
  - Types : financial, criminal activity, accomodation, blood and sexual, acquaintance
  - The links are not mutually exclusive, except acquaintance
- Shows the complexity of the networks
- Shows the difficulty for victims to exit

# Multiplexity of the links (simultaneous view)



# Infinite queries based on attributes of the actor and links

Within criminal actions: to prostitute for



# Biais and limits of the tool

- Investigation purpose and not scientific purpose /heter
- The purpose of policemen is to arrest the perpetrators, not to describe the network
- Unreliable datas (wrong identity / false papers / variety of aliases for the same person ...)
- Cultural elements (blood ties / family links)
- This is not a criminal network: the boundaries are the court file : agregation of personal networks
- Time-consuming

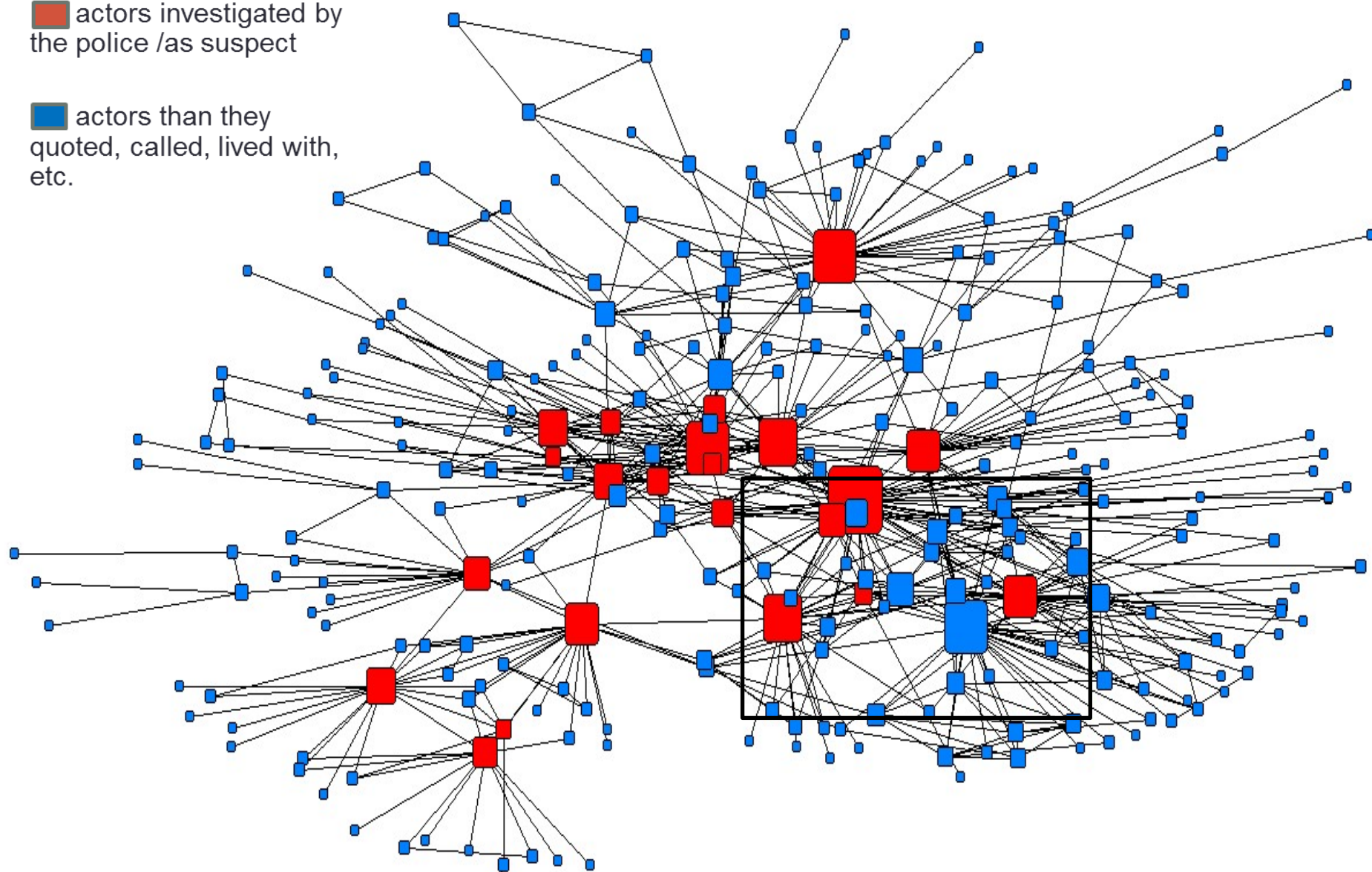
# The practical impact of the tool

- Prosecution support :
  - Structure and the strength of groups / organized crime
  - Understanding of the role (s) of individuals in the criminal organization
- AVRE<sup>P</sup>: Storage and Investigation Tools
  - Link information about individuals from one file to another
  - Identify individuals who have an important structural position without being prosecuted



■ actors investigated by  
the police /as suspect

■ actors than they  
quoted, called, lived with,  
etc.



# Merci de votre écoute !

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