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Exploring the Duality of Actors and Relational Events in Criminal Networks

We explore the duality between criminal actors and the relational events they engage in, specifically focusing on co-offending and communication (in-person or electronic) in the context of Italian mafia networks. The relational events can be distinguished into two types. Communication is the process of social organisation of crime, whereas co-offending represents the outcome of this process.

Both the communication and co-offending events frequently comprise more than two actors making these events polyadic. The newly developed relational hyper-event models (RHEM) offer a suitable framework for analysing polyadic relational events. By employing RHEM on data with high temporal granularity, researchers can analyse the distinct characteristics of co-offending and communication events and their interplay over time.

We test the main proposition that communication events should precede co-offending in multiplex relational mechanisms (triadic closure, interaction repetition, and interaction accumulation) together with modelling the uniplex variants of these mechanisms and exogenous mechanisms (related to age, leadership, affiliation, and kinship).

Preliminary results indicate that the network is held together by the communication ties as co-offending is highly fragmented. There is a considerable variance in event sizes of both types and in co-offending. RHEM results reveal that communication tends to precede co-offending in interaction repetition, while we find no evidence of the effect in opposite direction. We also find significant effects of interaction repetition, and age- and leadership-based activity and homophily.

We discuss the usefulness of RHEM and explain the lack of the effect of closure by overlapping interaction repetition. This may have consequences for research on criminal networks – the data is frequently relational hyperevent that upon projection and aggregation yields high transitivity as an artefact of the data collection processing rather than genuine tendencies towards closure.

Keywords/Topics

duality, criminal networks, relational events, co-offending, communication, methodology, statistical models

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