ON THE STRUCTURAL DETERMINANTS OF CORRUPTION

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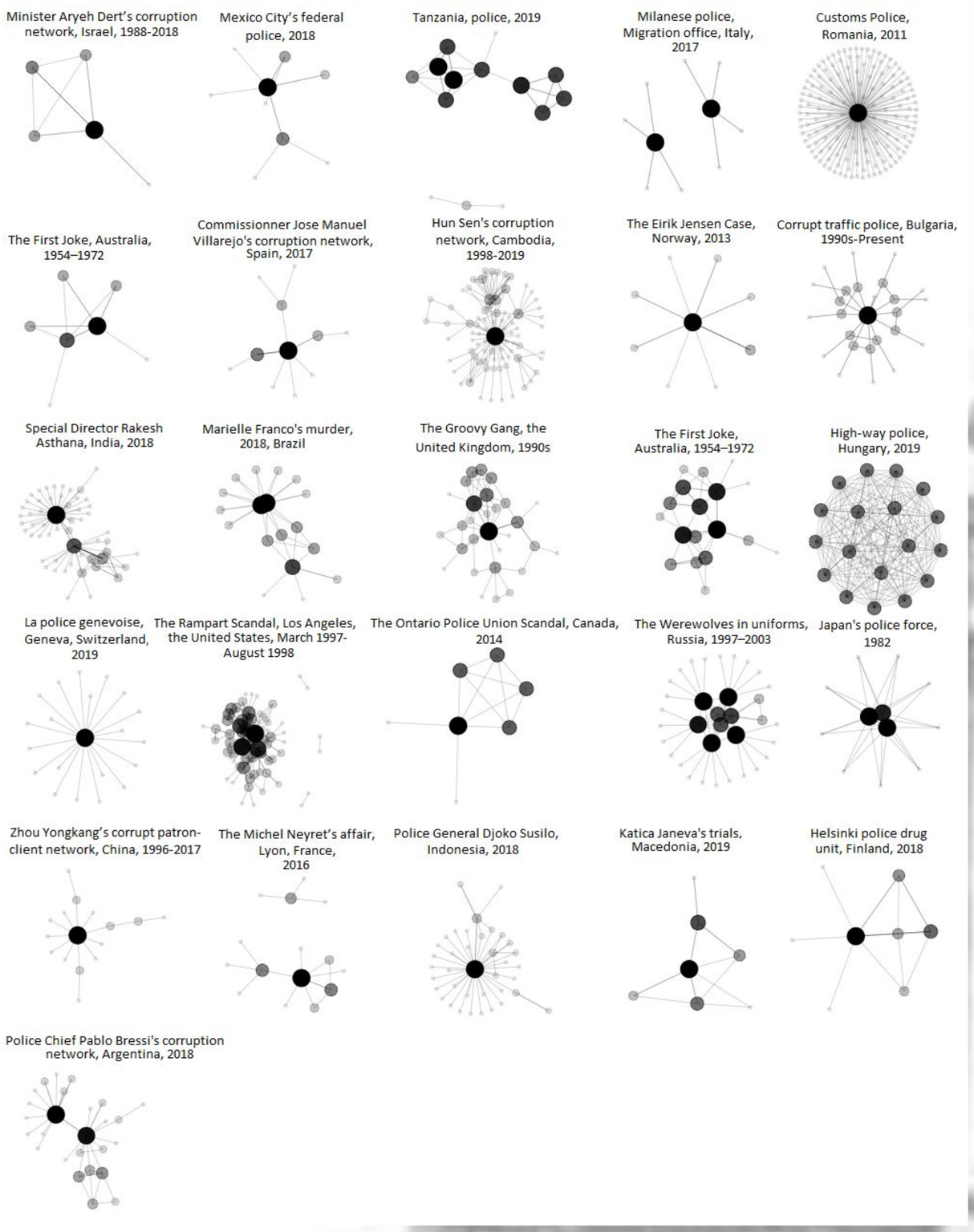
ABSTRACT

While economists have studied the micro and macro-level factors for the variation in individuals' perceptions of corruption, they have not examined its hidden social order. This article addresses three interrelated questions on the stochastic processes in corruption networks: What network topology smooths consumption in corruption? How do corrupt ties form? What prior and concomitant ties follow corrupt relations? We draw upon Diego Gambetta and Federico Varese's theoretical framework of corruption and test it using triad census, conditional uniform graph tests, OLS network regressions and exponential random graph models on a cross-sectional dataset comprising forty police corruption networks (N = 693, ties = 1,360) across the globe in the period 1957-2019. Precise images and measures of network structure are reconstructed from reports of police (il)legal relationships in over 1,500 historical documents. Regularities in the structural patterns across the networks are traced using cluster analysis.

Keywords: corruption networks, covert networks, dark networks, co-offending networks.

FIGURE 1. Structures of police corruption.



Note: Figure 1 plots a cross-sectional dataset of twenty-seven out of forty corruption networks in police. The police corruption networks are from twenty-six different developed, transitioning and developed nation-states. The cliques are plotted as one-mode, directed, multiplex networks using the Kamada-Kawai algorithm in *ggraph* which separates more from less connected clusters in the graph space. The nodes represent crook police and their clientele and the ties—multiplex corrupt relationships (N = 693, ties = 1,360). Node size is a function of actor degree centrality.

INTRODUCTION

Since antiquity kings, rulers and other leaders had to solve the problem of finding an optimal network architecture to hide their wealth from adversaries and find hidden treasures. Daedalus invented the Labyrinth in order to hide the monstrous Minotaur (Jones 2007). Tunnels and underground chambers in Medieval castles and fortress were built to conceal treasures or prisoners (Bloch, Dutta and Dziubiński 2019).

Despite socioeconomic transformations, reforms and scandals, corruption networks have been tremendously successful enterprises at the expense of the public good; returning and evolving with new elements (Punch 2009; Lauchs *et al*. 2011). For corruption cliques to be financially successful, they must possess a sophisticated production technology organized around talented leadership, allowing them to maintain internal stability and survive over time.

This work seeks to address the following research question on the stochastic processes of tie and network emergence in corruption: "What network topology smooths consumption in corruption?"

DATA & METHODS

The subjects of research are crook police, their romantic partners, relatives, clientele and victims. Our tie concept corresponds to the question: "Who cooperated with whom in corrupt transactions?" We conceptualize co-offending in a multiplex way, where actors are related with each other repeatedly and commit different types of crime (e.g., Grund and Morselli 2017). As in Krebs' (2002) study, we manually extracted the data from historical archives, official investigation reports, news, and court transcripts, searching for online or print documents on the Internet containing the names of each pair of actors simultaneously.

RESULTS

Diverse structural manifestations of corruption are observed including *orphaned nodes* implying the presence of rotten apples (e.g., Ivković 2005), *k-stars* reminding of authoritative leaders, *line graphs* implying blat-like transaction chains rich in brokers, tolkachi, middlemen, bagmen or beatman, *cycles* suggesting the presence of krugovaya poruka (e.g., Meyer 2007), *complete graphs* suggesting the presence of the wall of silence (e.g., Ivković 2005), *branches* reminiscent of corruption embedded in family trees, *hierarchies* mirroring corruption's pecking order and embeddedness in state bureaucracies (e.g., Lauchs *et al*. 2011), and *core-peripheries* revealing strategic, risk-averse criminal behavior (e.g., Lauchs *et al*. 2011). Corruption is rather polycentric and hierarchical reminding of multi-party democracy, rich in loosely connected compact cliques through a handful brokers (e.g., Gambetta 2000; Varese 2000; Jancsics 2015). Corruption was measured as fragmented, incomplete networks measured with undeterminable error from publicly accessible online or print media sources. As such these corruption networks may represent spurious structures, mimicking or mirroring social happenings on the Internet rather than actual deviant behavior. Topological analysis shows that corruption is a small elite club with scale-free properties.

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