**Title**

*Solving the Problem of the “Gender Offenders”: Using Criminal Network Analysis to Optimize Openness in Male Dominated Collaborative Networks.*

**Authors**

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**Abstract**

**Background**

Statistics describing inequitable conditions for women in global film industries have been gathered and circulated for more than 30 years. These statistics have barely deviated despite the development and application of a range of equity policies. In some instances the participation rates for women have become marginally worse.

Statistical analysis of women’s participation in various workplaces has typically taken the form of retrospective aggregate description. Instead, this article uses new forms of data in order to assess the effectiveness of different strategies for redressing bias against women in three “merit based” film industries. Using data derived from the Australian, Swedish and German film industries we propose, compare and evaluate several approaches to controlling collaborative network evolution in order to increase network openness. Our approach is informed by the conclusions of a major longitudinal study which found that “female actors have a higher risk of career failure than do their male colleagues when affiliated in cohesive networks, but women have better survival chances when embedded in open, diverse structures.” (Lutter 2015)

Our data, on the formation of teams of filmmakers, contains not only information about the characteristics of projects and the people involved but also, equally importantly, relational data that enables us to look into the structural connections within and across teams working on film projects. Social network analysis (SNA) provides methods for visualising these group relationships, and through quantitative measures that characterise network structure, provides methods for identifying strategically important components and participants in the network. It also therefore points to ways in which these networks can be most effectively “dismantled” or opened up.

This research rests on two inter-related manoeuvres. Firstly, it flips the object of analysis. If we are going to make these industries a better place for women and other under-represented cohorts then we need to understand the specific operations of gatekeeping that maintain the dominance of white, cis men. The second aspect of the project is to use the data we have collected about specific collaboration networks to propose an innovative course of action to change these male dominated environments. In this sense, this article deviates from previous descriptive accounts of women’s marginalisation by offering an assessment of different strategies for producing change.

Specifically, this article presents the project’s findings on the application of two possible strategies for dismantling domination patterns and behaviours in collaborative networks, [insert summary of findings here]

**Gender, Gatekeeping, and Networks**

Gender inequality in the creative or knowledge industries, and particularly the film industries, is persistent and consistent. Fields like film, television, the music industry and the arts more broadly, are marked by stark, longstanding and in many cases worsening inequalities relating to gender, race, ethnicity, class, age and disability (Paydar 2017; Conor, B., Gill, R., & Taylor, S. 2015, Launzen 2017). Just looking at the film industry alone is instructive. The British Film Industry’s Statistical Yearbook (2013) records that only 7.8 per cent of films were directed by a woman and 13.4 per cent written by a woman – figures that resonate with Lauzen’s annual *Celluloid Ceiling* report auditing the top 250 films made in Hollywood. Lauzen’s US research is valuable in offering not only a snapshot of the blatant inequalities in key creative roles but, crucially, in highlighting how little these fluctuate year on year. According to her research, overall, women comprised only 18 percent of directors, writers,