

A Computer Simulation of Motivation and Behaviour in Police Patrol Systems

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In [1] we described our approach to modelling the management and behaviour of Police Community Support Officers (PCSOs). These police officers have limited powers and they are intended to provide greater police presence on the streets and relieve more highly trained police officers for other duties. One way of deploying PCSOs is for local team briefings led by a Neighbourhood Policing Sergeant before they go out on foot patrol, telling them the areas that should be visited and any particular things that should be done, e.g. revisiting victims of crime, or patrol identified areas suffering from antisocial behaviour. A previous study suggested some PCSOs were avoiding the more difficult high crime areas that they were supposed to patrol. Following this we began a project to try to understand how PCSOs could be better managed to achieve the policy objectives. This involves computer simulation of the agents involved in this policing system, including the Sergeants, PCSOs and other staff. It attempts to answer policy-relevant questions such as “do the briefing and debriefing processes affect the quality of the outcome of a PCSO patrol” and “could policies be introduced that would result in better motivated staff working together better to produce better outcomes”. Our presentation will show the results of our simulations and discuss individual and group motivation and behaviours, and how computer simulation can be used to plan and implement new management strategies to meet policy objectives.

Acknowledgements

This research was done within the Centre of Policing Research and Learning at the Open university. (<https://centre-for-policing.open.ac.uk>). We are grateful for the feedback from our academic and police colleagues in the Centre.

Reference

[1] Davies, P., Johnson, J., ‘Pursuing Validity in Agent-Based Simulations of a UK Metropolitan Police Service’, Conference on Complex Systems, CCS’18, Thessaloniki, September 2018.
https://www.researchgate.net/publication/333295830_Pursuing_VValidity_in_Agent-Based_Simulations_of_a_UK_Metropolitan_Police_Service