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CCTV ANALYSIS OF VIOLENT EMERGENCIES

Systematic analysis of CCTV footage of violent and dangerous emergencies can help us understand how people behave during times of heightened security threats.

Whether it is incidents of street violence or marauding terrorist attacks, the fact that these events are invariably captured on public space CCTV means we can build a robust evidence base about behaviour in real-life emergencies.

However, CCTV data can be complex, incomplete and lacking both sound and wider contextual information. One way to get around this (and in doing so, extract the most reliable evidence from the CCTV data) is building an appropriate ethogram — a list of relevant behaviours in a particular context.

Using an ethogram approach we analysed CCTV footage of street violence in the UK, the Netherlands, and South Africa and were able to show that contrary to conventional wisdom, bystanders intervened in more than 90% of aggressive public incidents.

These tended to be coordinated interventions, with three to four bystanders working together to calm the violence.

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Bystanders were also at low risk of victimisation when intervening to help (Liebst et al., 2021).

In another micro-behavioural analysis of CCTV footage of an explosion in a single railway carriage (Philpot & Levine, 2021), we also showed how emergency response behaviours can be shaped by the actions of immediate others — but that the behaviours themselves can be different in different places. Proximity to the explosion site is seemingly less important than the behaviour of the people around you.

The kinds of analysis that can be done is often shaped by data availability. It's not always possible to collect data systematically, and access to CCTV footage from some incidents might be limited by ethical, legal or security concerns.

The strength of analysing CCTV data is that it not only provides a richer understanding of behaviour in emergencies (compared to research which uses self report methods), it also allows us to test the assumptions of existing models that underpin emergency preparedness. As more footage becomes available, we will continue to develop important new insights that improve security and resilience planning.

Dr Richard Philpot is a lecturer of Psychology at Lancaster University. Applying digital data, his research examines how citizens and emergency services behave and interact during spontaneous public space emergencies.

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