Game theory backs crackdown on petty crime

Robert Matthews

CLAIMS that “zero tolerance” policing—where even the most minor criminal act is pursued by the police—can cut overall crime rates have been bolstered by psychologists using “game theory”.

Zero tolerance has been credited with drastic reductions in crime in New York, and it is now being tried out in Britain in Middlesborough. But critics have argued that the fall in crime seen in New York was already under way.

Now an analysis of criminal behaviour suggests that zero tolerance may indeed be responsible for falls in crime. In research published in the current issue of Legal and Criminological Psychology (vol 2, p 23), Andrew Colman and Clare Wilson of the University of Leicester focused on the behaviour of criminals with a personality profile known as antisocial personality disorder (APD).

Loosely defined as “sociopaths”, such individuals reject social norms, are deceitful, aggressive and feel little remorse. Studies suggest that while only 2 per cent of the population exhibit APD, it is extremely common among criminals. Around half of people in prison exhibit its symptoms.

To model the behaviour of sociopaths, Colman and Wilson used game theory, the mathematical study of situations where there is a choice of strategies but a conflict of interest. Those with APD can either do what they like or they can conform. Similarly, society as a whole can either tolerate those with APD or act in the same way.

Colman and Wilson found that these choices and their respective payoffs and costs bear striking similarities to the game of “chicken”, where two drivers head towards each other at high speed in the hope that the other will swerve first. Both sociopaths and society would benefit if the other party “chickened out” first and cooperated with their wishes, while the worst possible outcome would be if everyone adopted sociopathic attitudes, leading to an inevitable collision.

Their model explains the otherwise puzzling fact that the prevalence of sociopaths in society has remained static, despite efforts to lock them up. “If antisocial individuals are removed from society, the strategic vacuum that results can be filled very quickly,” says Colman. “Potential thugs can turn into actual thugs as soon as they realise that there’s a ‘manor’, to use the criminal jargon, with no one else exploiting its criminal potential.”

But, says Colman, the analysis suggests that the prevalence of sociopaths in society is kept constant only because their victims typically lose more than the sociopath gains. “For example, a mugger may gain only a small amount from assaulting or even killing a passer-by,” says Colman. “But the consequences for the victim may be catastrophic.”

This suggests that the way to reduce the number of sociopaths is to make their activities less worthwhile than cooperating, by introducing measures like zero tolerance. “Forms of antisocial behaviour that are currently not unlawful could be brought within the criminal justice system, and efforts made to maximise the likelihood of being caught and punished if one behaves antisocially,” says Colman.

He adds, however, that the analysis shows that crime reduction can also follow from fostering a sense of community: “Any social interventions that improve people’s sense of community should also increase the payoffs for cooperation.”