The inverse CSI effect in the age of digital crime

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The "CSI Effect" has been described as being an increased expectation from jurors that forensic evidence will be presented in court that is instantaneous and unequivocal because that is how it is often presented for dramatic effect in television programs and movies. Of course, in reality forensic science, while exact in some respects is just as susceptible to the vagaries of measurements and analyses as any other part of science. In reality, crime scene investigators often spend seemingly inordinate amounts of time gathering and assessing evidence and then present it as probabilities rather than the kind of definitive result expected of a court room filled with actors rather than real people.

However, while suggesting this CSI Effect is perhaps not quite as widespread as one might imagine among jurors, informatician Richard Overill of King's College London believes it might have a positive effect on reducing the tendency to criminal behaviour among some individuals. He offers details of his analysis of the "Inverse CSI Effect" in a forthcoming issue of the *International Journal of Electronic Security and Digital Forensics*. This would be manifest, he says, particularly among so-called cyber-criminals, fearing the instantaneous and definitive forensic evidence from the imagined cyber-sleuths.

If this inverse CSI effect exists then one might imagine that a proportion of cyber-criminals would modify their behaviour in one of three ways. They might go straight by withdrawing from their nefarious activities altogether. They might attempt to go "under the radar", restricting their crimes to ones with lower impact and less "profit" that would not necessarily warrant costly police resources for investigation. Alternatively, they might expend large amounts of effort or money to obfuscate their modus operandi with multiple layers of concealment and stealth to make their crimes invisible to even the slyest cyber sleuth.

Overill points out that there are three trends that might emerge if this inverse CSI effect emerges in the realm of cybercrime. First, we might see a reduction in the incidence (frequency) of economic cyber-crimes over time, second there could be an increase in the impact (value) of economic cyber-crimes over time and finally there will be a rise in the use of anti-forensic techniques by cyber-criminals over time. His analysis of crime data stretching back eleven years in the US suggests that these trends have been at play and that there is an inverse CSI effect.

Of course, there might be other explanations such as improved awareness among the public of security issues and identity theft and the like as well as more effective and so protective software and security systems on putative targets of cybercrime including as email phishing attacks on bank account, for example. He also points out that cybercrime is much bigger "business" than it ever was and petty activity may well have been subsumed by much bigger crime organisations. Nevertheless, the inverse CSI effect stands out as a plausible explanation of changes in cyber crime activity over the last few years. In conclusion, Overill suggests that the TV and movie viewing habits of incarcerated criminals perhaps intent on self-education ought to be monitored closely with a view to understanding how behaviour might be "adjusted" following their release.

More information: "The 'inverse CSI effect': further evidence from e-crime data" is published in the *Int. J. Electronic Security and Digital Forensics*, 2013, 5, 81-89.

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