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Assessing Police Perceptions of Cybercrime and the Law Enforcement Response in England and Wales

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Call for More Research on Policing Cybercrime

- Bossler and Holt (2016, January). On the need for policing cybercrime research. *ACJS Today, Volume XLI* (1), p. 14-24.
- Holt, Burruss, and Bossler (2015). *Policing cybercrime and cyberterror*. Carolina Academic Press: Durham, NC.
- Holt and Bossler (2016). Chapter 5. Issues in the prevention of cybercrime. *Cybercrime in progress: Theory and prevention of technology-enabled offenses*. Crime Science Series. Routledge: Oxford.



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Challenges for Law Enforcement in US

- 1) Jurisdictional issues caused by the victim and offender not living in the same municipality or county;
- 2) Lack of standard definition for cybercrime;
- 3) Little public outcry in comparison to traditional crime, particularly violent crime;
- 4) Difficulty in investigating an invisible crime;
- 5) Difficulty in maintaining the technologies required to investigate these resources;
- 6) Difficulty in training and retaining trained officers;
- 7) Lack of managerial and police support for the investigation of cybercrimes



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US Officers' Views of Their Roles

- Officers do not view their role the same way as scholars and administrators (not first responders)
- Place low priority on cybercrime
- Do not believe that police management and prosecutors have the adequate resources
- Do not believe that local law enforcement should be primarily responsible
- Best strategies to deal with cybercrime is for citizens to be more careful and for changes to the legal system



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Methodology

- Web-based survey regarding the perceptions of cybercrime and the law enforcement response administered to England and Wales police forces.
- 36 forces were included in the analyses
- 2,834 overall surveys
- For the current presentation:
 - Focus on first responders
 - Role: only examined Response, CID, Neighbourhood, and Specialist Unit (not Force Intelligence Bureau or Public Contact)
 - Rank: Examined Constables, Sergeants, and Community Support Officers (excluded administration, inspectors, and police staff)
 - Led to final sample of 1,643 (including missing data for role and rank)



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Agencies Participating

- **Avon and Somerset**
- Bedfordshire
- Cambridgeshire
- Cheshire
- Cleveland
- Cumbria
- Derbyshire
- **Dorset**
- Durham
- **Dyfed-Powys**
- Essex
- Gloucestershire
- Gwent
- **Hampshire**
- Hertfordshire
- Humberside
- Kent
- **Lancashire**
- **Lincolnshire**
- Merseyside
- **Metropolitan**
- North Yorkshire
- Northamptonshire
- Northumbria
- **Nottingham**
- South Wales
- South Yorkshire
- Suffolk
- Surrey
- Sussex
- Thames
- Warwickshire
- West Mercia
- West Midlands
- **West Yorkshire**
- Wiltshire



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Descriptives of Officers Participating

- Rank
 - Constable 69.9%
 - Sergeant 20.1%
 - Police Community Support Officer 10.0%
- Roles
 - Specialist Unit 28.7%
 - Response 25.5%
 - Neighbourhood 23.9%
 - CID 22.0%
- Sex
 - Male 71.8%
- Race
 - White 95.1%
- Age:
 - Modal category of 35-44 37.7%
- Total years of experience
 - Modal category of 11-14 years 26.5%



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Descriptives of Officers Participating

- Size of Agency

	Size	n	%
0	739 - 1,395	519	33.2
1	1,569 – 2,102	250	16.0
2	2,587 – 3,188	372	23.8
3	3,514 – 7,133	310	19.8
4	31,877	112	7.2



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Cybercrime Perceptions: Uniqueness

	Mean	SA (%)	A (%)	Neither (%)	D (%)	SD (%)
Online crime is mostly traditional crime using a computer.	3.43	2.1	16.7	26.1	46.5	8.6
Digital evidence can be a feature of all types of crime.	1.96	28.8	51.4	14.9	4.3	0.6
Crimes that used to be offline now increasingly have online elements.*	2.10	16.6	60.2	20.1	2.8	0.4
1 = SA; 2 = A; 3 = neither; 4 = D; 5 = SD						



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Cybercrime Perceptions: Seriousness

	Mean	SA (%)	A (%)	Neither (%)	D (%)	SD (%)
Online crime is a serious problem in society today.	1.90	40.0	45.6	4.9	3.5	6.0
Most types of online incidents are minor annoyances.*	3.24	4.9	23.7	23.7	38.1	9.6
Harassment online is less serious than traditional harassment.	3.74	2.7	13.1	13.2	49.7	21.2
Stealing £100 electronically is equivalent to pick-pocketing £100.	2.38	24.1	42.7	9.0	19.7	4.5
1 = SA; 2 = A; 3 = neither; 4 = D; 5 = SD						



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Cybercrime Perceptions: Risk

	Mean	SA (%)	A (%)	Neither (%)	D (%)	SD (%)
The local community does not recognize the threats posed by online crime.	2.14	20.4	54.4	16.9	7.0	1.3
The public understands the risks of being online.	3.95	1.3	8.3	9.8	55.4	25.2
Citizens are probably aware of the risks about the Internet use for commerce and financial transactions.*	3.12	1.0	28.4	31.9	34.9	3.8
Online bullying and harassment can be avoided by victims changing mobile phone numbers or email addresses.	2.67	10.2	41.4	23.4	21.2	3.8
Online fraud victims lose money because they do not pay attention to what they read.	3.07	5.1	24.9	32.6	32.9	4.5

1 = SA; 2 = A; 3 = neither; 4 = D; 5 = SD

Preparedness: Computer Skills

Comfort with Computer in Daily Activities (mean 4.68, ranges from 1-6)

- Very uncomfortable 7.8%;
- Uncomfortable 1.0%
- Somewhat uncomfortable 4.3%
- Somewhat comfortable 19.2%
- Comfortable 37.3%
- Very comfortable 30.5%

Skill level with computers (mean 2.56; ranges from 1-4)

- I don't use computers or smart devices unless I absolutely have to. 1.4%
- Can use Internet, common software, but cannot fix computer problems 49.7%
- Can use variety of software and fix some computer problems 40.4%
- Know some computer programming languages and can fix most computer problems 8.5%



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Familiarity with Terms

Familiarity with terms	Mean	SD	1	2	3	4
Facebook	3.87	0.37	0.1	1.1	10.8	88.1
Twitter*	3.72	0.55	0.1	4.4	18.9	76.6
WhatsApp*	3.71	0.61	0.4	7.2	13.4	79.0
Spam*	3.60	0.63	0.4	6.7	25.1	67.9
Firewall	3.60	0.65	0.7	6.8	23.9	68.6
Snapchat	3.44	0.80	2.4	12.2	24.2	61.1
Spyware*	3.43	0.81	2.9	11.8	25.2	60.2
Phishing*	3.25	0.91	5.4	16.1	26.3	52.2
DDoS Attack*	2.20	1.27	45.9	15.3	11.7	27.1

1 = I have never heard the term; 2 = I have heard the term but not sure what it means; 3 = I have heard the term and have a rough idea; 4 = I have a good idea of what the term means

Preparedness: Training

Ever received?	Yes (%)	Mean	Usefulness				
			Not at all	A little	Somewhat relevant	Relevant	Very Relevant
Online incidents and crime*	38.3						
General awareness of digital crime	95.2	3.68	3.2	15.2	15.2	43.6	22.8
Use of open source intelligence*	67.3	4.06	1.9	8.4	11.8	37.4	40.5
Digital investigation techniques*	59.1	4.04	2.4	7.0	13.5	38.8	38.3
Digital forensics methods	43.5	4.07	1.5	8.0	12.0	38.7	39.8*
Computer Misuse Act legislation	75.7	3.81	1.3	12.3	15.1	46.4	24.9*
College of Police cyber training*	57.1	3.66	4.5	11.8	21.0	38.4	24.4

Preparedness: Responding

- Confidence in own ability to respond to online crime effectively (mean 2.70)*
 - Not confident (4) 20.2%
 - A little confident (3) 36.6%
 - Fairly confident (2) 36.4%
 - Very confident (1) 6.8%
- Feel prepared to respond to online fraud incident (mean = 2.98; std. dev. = 1.138)*
 - SA 6.6%; A 36.3%; Neither 19.1%; D 28.5%; SD 9.6%
- Feel capable to respond to computer hacking incident (mean = 3.60; std. dev. = 1.19)*
 - SA 4.8%; A 18.8%; Neither 13.7%; D = 37.2%; SD = 25.4%



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Experience with Online Incidents

When is the last time that you:							
	Mean	Never	Over year ago	W/in last year	W/in last several months	W/in last several weeks	W/in last week
Responded to an online crime or incident*	3.75	10.1	17.6	15.9	17.6	21.5	17.3
Heard of fellow officer responding to online incident or crime*	4.73	3.9	5.4	10.5	13.1	28.0	39.1
Discussed in departmental meeting*	3.12	33.7	9.6	13.1	13.1	15.1	15.3
Discussed an online case with fellow constable*	4.16	11.2	10.1	12.4	13.6	23.6	29.1
Discussed an online case with citizens*	3.46	20.1	15.1	13.3	15.4	22.3	13.9

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Av. Hours Spent on Online Incidents Per Week

	Mean	< 1 hr.	1-4 hrs.	4-8 hrs.	8-12 hrs.	12-16 hrs.	> 16 hrs.
Online crimes and incidents overall*	2.26	46.4	24.5	10.4	5.3	2.7	10.7
Physical theft from person	2.05	52.8	18.3	12.2	8.6	4.2	3.8
Online harassment*	1.89	49.9	27.8	11.7	5.7	3.1	1.7
Online abuse*	1.72	57.1	26.1	9.0	4.3	2.0	1.4
Online CSE*	1.65	68.3	16.9	6.1	2.5	2.5	3.7
Contact sexual offenses against children*	1.61	71.8	14.0	5.7	2.6	2.3	3.7
Electronic theft of money*	1.52	74.3	14.3	4.6	2.0	1.2	3.5
Identity fraud/theft*	1.50	75.8	14.0	3.7	1.7	0.9	3.9
Hacking of social media/email*	1.39	78.0	13.7	4.0	1.7	0.9	1.7
Malware infections*	1.18	90.9	5.3	1.2	1.1	0.2	1.2

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Law Enforcement Response

	Mean	SA (%)	A (%)	Neither (%)	D (%)	SD (%)
Internet has drastically changed police work.	1.68	51.6	37.5	4.9	3.1	2.9
Internet has caused more problems for LE than it has helped.	2.26	28.2	31.5	28.6	9.9	1.8
Online crime is not taken seriously enough by LE.*	3.24	6.9	22.2	20.4	41.5	9.1
Agency has clearly posted information on policies and procedures related to online incidents.*	2.90	3.1	37.5	31.1	22.6	5.7
Agency has readily available educational materials and resources for victims of online incidents.*	3.16	2.7	26.1	31.9	31.3	8.0
My agency provides agreed upon practices to tell online crime victims how to minimize the risk of further harm.*	2.83	3.1	37.9	36.1	18.2	4.7

Law Enforcement Response

	Mean	SA (%)	A (%)	Neither (%)	D (%)	SD (%)
Controlling online crime in the local area is the primary responsibility of the local police.	3.48	2.1	14.9	29.8	39.5	13.8
Most online crime incidents or crimes should be responded to by a specialized high-tech crime unit.	2.49	20.5	35.9	20.5	20.4	2.7
Most negative online experiences do not require a police response.*	2.77	6.8	33.3	38.2	19.3	2.4
	Mean	Not	A little	Fairly	Very	
How confident are you that the current police response to online crime is effective?*	1.84	39.4	37.7	21.7	1.1	

Importance of LE strategies	Mean	SD	Min	Max
Working with Internet businesses to “police” the Internet	4.46	.760	1	5
Increased funding for training officers and staff in online crime.*	4.45	.736	1	5
Further investment in specialized high-tech crime units	4.44	.752	1	5
Increased resources for digital forensic tools and technologies.*	4.42	.720	1	5
Further development of regional and national capabilities for tackling online crime.*	4.38	.752	1	5
Better education for the public about staying safe online.*	4.37	.752	1	5
Clearer legislation against online crimes to increase the success of prosecution and investigations	4.25	.841	1	5
More severe penalties for online criminals.*	4.16	.869	1	5
Cooperation with the businesses that are victims of online crime to improve crime reporting.*	3.98	.821	1	5

1 = not important; 2= a little important; 3 = somewhat important; 4 = important; 5 = very important

Importance of ME (the respondent) strategies	Mean	SD	Min	Max
Better access to digital forensics and tools and resources.*	4.34	0.81	1	5
Further training in online crime investigation.	4.25	0.84	1	5
More resources for educating the public about staying safe online.*	4.14	0.88	1	5
Improved links with high-tech crime units in my force.	4.10	0.89	1	5
Increases awareness of the role of regional/national agencies	4.04	0.90	1	5
Greater awareness of online activities (e.g., apps) in order to be able to identify online crimes and incidents.	3.96	1.03	1	5
Better understanding of the scale and nature of online crime in my area.	3.82	1.00	1	5

1 = not important; 2= a little important; 3 = somewhat important; 4 = important; 5 = very important

Future Directions

- Further examinations with these data
 - Roles (including Intelligence Bureau)
 - Rank
 - Force
 - Amount of time they spend on online incidents



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Other Questions

- What other types of online crimes or incidents have you experienced?
 - Sexting, sextortion, CSE, revenge porn, terrorism, scams/fraud/theft, online harassment, bullying, DDOS/hacking, traditional cases
- What challenges have you faced in trying to resolve online crime?
- What resources would help you the most in responding to online incidents?



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Other Questions

- **More questions on average hours per week**
 - 1) Writing up the initial allegation
 - 2) Writing crime scene report at the scene
 - 3) Writing report(s) on evidence found
 - 4) Completing paperwork to take the case to the CPS for a charging decision
 - 5) Determining that an offense is cyber/online crime and flagging it as such
 - 6) Reviewing information available from existing and accessible system
 - 7) Triaging seized devices (i.e. quick/dynamic risk assessment to decide the likelihood of there being something on the device and completing the paperwork for that)
 - 8) Seizing devices, and completing associated paperwork to document the seizure
 - 9) Interpreting results of forensic analysis/reports from digital forensics
 - 10) Putting safeguarding arrangements in place for victims (or offenders)
 - 11) Providing advice/guidance to victims/their supporters following an offence
 - 12) Determining which open sources should be investigated (e.g., facebook, emails)
 - 13) Determining which other sources should be investigated
 - 14) Taking statements from victims and/or witnesses
 - 15) Taking statements from suspects/offenders



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