Institution: University of Essex		
Unit of Assessment: 21		
Title of case study: Improving the oversight and regulation of advanced digital surveillance		
Period when the underpinning research was undertaken: 2013-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Pete Fussey	**Role(s) (e.g. job title):** Professor of Sociology	**Period(s) employed by submitting HEI:** September 2010 - present
Period when the claimed impact occurred: 2017-2020		
Is this case study continued from a case study submitted in 2014? N		

1. Summary of the impact

Fussey's research on digital surveillance has directly shaped policies of national (UK) and transnational governmental bodies (UN and EU), national oversight practices (covering both overt and covert surveillance), was instrumental in a Court of Appeal judgement on the legality of facial recognition, shaped public debate and provided an independent research basis for civil society advocacy and litigation. Empirical research tracing through the human rights implications of operational uses of advanced surveillance has been reproduced in policies issued by UN Office of the High Commission for Human Rights and EU Fundamental Rights Agency. The research has informed UK Government deliberations (having been discussed in Parliament multiple times), has directly shaped national guidance, and was pivotal in framing the national debate with coverage in over 300 news stories.

2. Underpinning research

The research draws from several overlapping research activities. Professor Fussey has a research leadership role in the ESRC Human Rights, Big Data and Technology (HRBDT) project [G1], established in 2015, where he leads the work on surveillance, and where he produced foundational research in this area [R1, R2, R3, R4]. HRBDT is novel as one of the first research programmes in the world to address overall human rights implications of big data and emerging technologies. It comprises an interdisciplinary team of sociologists, human rights scholars, philosophers and computer scientists. The work has shifted the debate from privacy-related concerns to interrogate the wider human rights implications brought by such technologies. Professor Fussey also serves as overall research director for the project.

Through HRBDT Fussey conducted the only existing independent study of police operational uses of live facial recognition (LFR) surveillance technology, having been invited by Metropolitan Police Service (MPS) to lead the independent review of their public trials [R2, R3]. Combining ethnographic research of surveillance operations, interview data and socio-legal analysis of MPS documentation, the research revealed significant limitations in the current legal basis for LFR, whereby common law provisions were insufficient to protect citizens from arbitrary state interference, and therefore was deficient from a human rights standpoint. Significant inadequacies in existing oversight regimes to mitigate the societal harms of this technology were also identified. The research also revealed limitations in necessity planning including, but not limited to, inadequate regard for community engagement, bias and the public sector equality duty. The research also challenges industry and police evaluations of LFR performance, finding the algorithm verifiably correct in only 19% of cases.

The ethnographic component provided unique insights into how police decision-making is framed and primed by technology and invites presumptions of suspicion. While, in policing contexts, human adjudication of algorithmic decision-making is required by law, findings revealed the

limitations of such scrutiny in practice and processes of human deference to computational decisions [R2, R3]. The unique empirical data on operational uses of LFR contributed to new analysis of existing issues, revealed specific and vital regulatory gaps and, in shifting the emphasis from data protection and privacy issues, interrogated the range of potential harms brought by this technology, including freedoms of expression, assembly, association and protection from discrimination [R2, R3].

Drawing on rare empirical access to overt and covert police surveillance actors, [R4] interrogated how advanced digital policing techniques furnish security agencies with potent new surveillance capabilities. Analysis of extant governance instruments detailed shortcomings in adequate oversight, where regulatory gaps exist and how operators renegotiated and reinterpreted these regulations through practice through a 'surveillance arbitration role'. Such practices hold significant implications for compliance with human rights standards and safeguards against arbitrary state interference. Conducted through socio-legal analysis of how intelligence agencies are regulated, and through collaborative workshops with relevant oversight bodies (such as the Investigatory Powers Commissioner's Office), [R1] established core human-rights informed principles on accountability, oversight processes and remedies for effective mitigation of harms on individuals during bulk online surveillance practices. Deploying sociological analysis to trace through the wider harms of mass surveillance – including impacts on 'chilling effects', social justice and democratic participation – [R1] revealed significant limitations in existing 'data protection' and Article 8/privacy lenses as well as 'ethical oversight' approaches to address advanced AI-driven surveillance practices.

Other research [R4, R5, R6] developed from long-term engagement with critical surveillance studies revealed the implications of intensified surveillance practices on marginalised communities. Shifting the debate from binary frames (particularly privacy versus security), the work reveals how intrusive technologies have generated additional (intersectional) implications for already disadvantaged and marginalised groups.

3. References to the research [can be supplied by the HEI on request]

[R1] Murray, D. and Fussey, P. (2019) Bulk Surveillance in the Digital Age: Rethinking the Human Rights Law Approach to Bulk Monitoring of Communications Data. Israel Law Review. 52 (1) https://doi.org/10.1017/S0021223718000304

[R2] Fussey, P., and Murray, D. (2019) Independent Report on the London Metropolitan Police Service's Trial of Live Facial Recognition Technology. Essex Human Rights Centre.

[R3] Fussey, P., Davies, B., and Innes, M. (2020) 'Assisted Facial Recognition and the Reinvention of Suspicion and Discretion in Digital Policing', *British Journal of Criminology*, advance online publication https://doi.org/10.1093/bjc/azaa068

[R4] Fussey, P., and Sandhu, A. (2020) 'Surveillance Arbitration in the era of Digital Policing', *Theoretical Criminology*, Online First: https://doi.org/10.1177/1362480620967020

[R5] Coaffee, J. and Fussey, P. (2015). Constructing resilience through security and surveillance: The politics, practices and tensions of security-driven resilience. Security Dialogue. 46 (1), 86-105 https://doi.org/10.1177/0967010614557884

[R6] Fussey, P. (2013). Contested topologies of UK counterterrorist surveillance: the rise and fall of Project Champion. Critical Studies on Terrorism. 6 (3), 351-370 http://doi.org/10.1080/17539153.2013.823757

[G1] Fussey, P. Human Rights and Information Technology in the Era of Big Data. ESRC. October 2015 – September 2021, £4.7m

4. Details of the impact

Fussey's research has significantly impacted public policy, legal regulation and the governance of overt and covert surveillance by law enforcement and security agencies.

Shaping surveillance policy at UK, EU and UN levels

The research directly shaped policy on effective governance and regulation of surveillance technologies at both national (**UK**) and transnational (**EU** and **UN**) levels. LFR research revealed absent effective governance structures for public trials of intrusive surveillance; key operational differences, and hence regulatory requirements, between LFR and other surveillance tools; detailed outlines for proportionality considerations and purpose limitation [R2, R4]; and limited human discretion in AI-driven policing decisions [R3]. These insights were directly integrated into two national oversight frameworks issued to all police forces in England and Wales by the Surveillance Camera Commissioner: *Police Use of Overt Surveillance Camera Systems Incorporating Facial Recognition Technology* (2020) and *Police Use of Automated Facial Recognition Technology,* governing public trials of the technology (2019).

The Commissioner [S1a] states*: "your work has had a significant influence on the national guidance on Police Use of Overt Surveillance Camera Systems... issued… to provide a national framework to govern police uses of these surveillance systems… Your research offers rare empirical evidence of how police authorisation procedures are followed, the need to emphasise specific provisions within legislation to legitimate operations and the ways necessity and proportionality are conceived in operational contexts. Your research on the human rights impacts of facial recognition technology supported our ambition to foreground human rights considerations throughout… These insights assisted me in clearly formulating human rights compliant guidance in an accessible and unambiguous manner… and are strongly reflected in sections three, four, six and seven of the policy."*

These policy frameworks were developed following the outcome of national legal proceedings, which were themselves influenced by Fussey's research [R2, R3]. During 2019 **Liberty** launched a judicial review challenging the legal basis for South Wales Police's use of LFR (*R (Bridges) v Chief Constable of South Wales Police*). The case went to the Court of Appeal in June 2020 where Fussey's research had many direct impacts. Several of Liberty's legal arguments were directly shaped by research [R2, R3] and upheld by the court, particularly those revealing excessive officer discretion around the deployment and use of this technology [S2]. Additionally, by invitation from the national Surveillance Camera Commissioner and his legal team, Fussey contributed to a formal *Amicus Curiae* submission to the court, which drew upon the research throughout [R2], and is reflected in the Court of Appeal's judgement on the insufficient legal basis for LFR surveillance and deficiencies in police necessity calculations [S1a].

Research into uneven impacts of police surveillance across social groups [R1, R5, R6] and breadth of human rights implications [R1, R2, R3, R6] significantly shaped international policy. Fussey worked with the **United Nations Office for High Commissioner for Human Rights (UN OHCHR)** to inform policy on Rights to Freedom of Assembly and Association (FoAA) in the digital age. Working with UN FoAA Special Rapporteur, Fussey contributed to two expert consultations (Geneva and Nairobi) and research-led written reports [S3a]. The final UN Thematic Report dealing with aspects of state surveillance [S3b], explicitly relies on and cites Fussey's work on the chilling effects of surveillance [R1], and was formally approved by the 41st session of the UN General Assembly Human Rights Council in New York in 2019 [S3b]. Fussey's research on LFR directly shaped the work of **the EU Fundamental Rights Agency (EU FRA)**, the EU's centre for human rights expertise and the body responsible for developing human rights policy for member states. Fussey was invited to EU FRA's headquarters in Vienna to help shape their policy agenda on LFR, and his empirical study of police operational LFR uses [R2, R3] is heavily quoted, referenced and relied on in their related policy overview [S4a]. The contribution is further outlined in the testimonial from EU FRA's Head of Research and Data [S4b].

Improving national oversight of covert surveillance

Fussey's research [R1] was integrated into work of the regulator for UK intelligence agencies and over 600 additional public bodies authorised to conduct covert surveillance, the **Investigatory Powers Commissioner's Office (IPCO)**. A series of University of Essex-IPCO workshops, informed policy framework development, guided covert surveillance oversight, evaluated the necessity/utility of particular measures and assisted relationship-building with public bodies to facilitate transparency and public legitimacy. Essex-IPCO workshop participants included UN Human Rights Committee members, intelligence agencies, Investigatory Powers Tribunal head Sir Michael Burton, Liberty, Amnesty International and intelligence oversight bodies from across the

EU.

While the nature of intelligence oversight limits public acknowledgement, the Investigatory Powers Commissioner identifies the impact on their thinking and practices. Commissioner Lord Justice Fulford states [S5], *"these events have provided insight into… intrusive powers such as bulk collection of communications data, as well as the sharing of intelligence with overseas agencies and the perceived lack of accountability around the authorisation of warrant applications, and the impact this may have on the public. IPCO… used the learning from the workshops to aid our understanding on issues such as the recent consultation on the review of the Consolidated Guidance to Intelligence Officers and Service Personnel… the workshops have informed the development of our policies, including how we evaluate necessity and utility, and they have assisted us in developing our relationship with other organisations, in order to secure transparency and legitimacy. The Essex research [R1] demonstrates the role human rights law can play in such debates and the potential clarity it can offer."*

Influencing parliamentary debate and providing briefings to Government departments

The LFR research and report [R2] was discussed in **Parliament** three times (3/6/2019, 10/6/2019, 27/1/2020) with reference to future MPS uses of this technology and issues of overall compliance with human rights standards [S6]. UK government's main institution for data ethics, The Centre for Data Ethics and Innovation (CDEI) in the **Department for Digital, Culture, Media and Sport,** drew on Fussey's research for their facial recognition policy [R2]. Fussey's analysis of wider human rights implications and methodological approaches to assessing efficacy and utility (and hence necessity) of LFR, is directly referenced in their policy paper [S7].

Fussey's research shaped public policy on the regulation of surveillance through his leadership of the Human Rights Strand of National Surveillance Camera Strategy [S1b], for the **Surveillance Camera Commissioner's Office (SCC),** the regulator responsible for overt video surveillance oversight in England and Wales. Fussey's contribution is recorded in the 2019 national report that was laid before both Houses of Parliament. The report incorporates findings on surveillance harms and shortcomings in extant regulation, particularly around the authorisation of overt surveillance [R1, R2, R3, R4].

The Commissioner confirms [S1a], *'Your leadership of this strand of the national strategy (since 2018) has ensured a visible presence to issues of ethics and human rights to surveillance oversight… this work has informed several distinct areas of policy… [Y]our ongoing research …further informed… a review of existing advice and policy debates associated with the development of new surveillance technologies… [and] proved important for the development of policy around surveillance oversight. These contributions included: attention to increasing accountability gaps arising from new unanticipated capabilities of new technologies at the time in which surveillance oversight legislation was authored; the need to future-proof policy and regulation to anticipate the use and impact of new technologies; increasing erosion of boundaries between categories of surveillance practices, such as covert and overt forms; the need for oversight to apply across the lifecycle of surveillance uses; and increasing complex relationships between public bodies and private users of surveillance.'*

Fussey presented research findings [R2, R3] as evidence to the **Home Office** Biometrics and Forensics Ethics Group, an intervention cited in their final guidance document [S8]. Recommendations from Fussey's surveillance research [R2, R3, R3, R5, R6] were taken up by policymakers through membership of a government advisory committee. Fussey participated in the 2020 **Government Office for Science** group "Rebuilding a resilient Britain: Supporting post-Covid recovery" fronted by Sir Patrick Vallance, UK Chief Scientific Advisor. Fussey's research on uneven impacts of surveillance practices across social locations [R1,R3,R5,R6] and implications for intrusive public health monitoring is reflected in the final reporting of the subgroup on trust in public institutions [S9a] and articulated in the testimonial from the Deputy Director (Science, Systems and Capability portfolio) of the Government Office for Science [S9b]. Research on digital policing and security [R1, R2, R3, R4] has also been integrated into central Government policy formulation via the Cabinet Office Open Innovation Team and disseminated to across several Government departments [S9c].

Influence on civil society and protecting human rights

At the centre of the national debate, Fussey's research [R2] presented a model for human rights compliant LFR deployment, which stimulated and reinforced existing civil society calls for a deployment moratorium [S10] until regulatory compliance could be ensured. The MPS stated that this research would inform policy decisions, a statement repeated by the Minister for Policing (documented in Hansard) [S6] in response to parliamentary questions explicitly referencing the work [R2]. The **Metropolitan Police Service's** own legal mandate covering their 2020 deployments of facial recognition technology also references and responds to many of the points highlighted in the research [R2]. Key findings detailing limited LFR operational efficacy [R2] were used as the basis for questioning in the **Greater London Assembly** throughout July 2018 and used extensively by Sian Berry, co-leader of **The Green Party** in her questions to the Mayor of London. In July 2019 the report was directly referenced by the Select Committee scrutinising the work of the Metropolitan Police [S6].

Fussey's research [R2, R3] played a key role in framing the debate informing public scrutiny of this technology and was featured on *BBC Newsnight* and US equivalent *PBS NewsHour,* and generated over 300 stories across the world, including BBC Radio 4 (PM and File on 4), BBC News, the front page of the *Financial Times*, *The New York Times, The Guardian, The Washington Post*, *The Times*, *Le Monde, La Repubblica* and *Last Week Tonight* among others [S10].

5. Sources to corroborate the impact

[S1a] Testimonial from Surveillance Camera Commissioner

[S1b] The blogpost on gov.uk outlining the leadership of the human rights strand of the national surveillance camera strategy and Surveillance Camera Commissioner Annual Report 2018/2019 (pages 11, 36).

[S2] Testimonial from Head of Policy and Campaigns at Liberty

[S3a] Testimonial Special Rapporteur UN Human Rights Council

[S3b] UN Human Rights Council 41st Session. Report of the Special Rapporteur on the rights to freedom of peaceful assembly and of association, "The exercise of the rights to freedom of peaceful assembly and of association in the digital age", 17 May 2019 (page 15)

[S4a] EU Fundamental Rights Agency report (2019) "Facial recognition technology: fundamental rights considerations in the context of law enforcement" (pages 8, 12, 13, 20, 21, 24, 30)

[S4b] Testimonial from EU Fundamental Rights Agency

[S5] Testimonial from Lord Justice Fulford recognising and detailing the impact of work undertaken with IPCO on the regulation of intelligence agencies.

[S6] Live Facial Recognition Impact on Political Debate Collated Documents.

[S7] DCMS/CDEI Report (pages 3, 23, 26, 29)

[S8] Home Office Biometrics & Forensics Ethics Group report

[S9a] Government Office for Science, Summary of the work of the Areas of Research Interest Working Groups (pages 12, 88, 92) and Rebuilding a Resilient Britain: Trust in Public Institutions, report on post-pandemic planning (pages 14, 24, 28)

[S9b] Letter from the Deputy Director for Government Office for Science for participation in the Rebuilding a Resilient Britain initiative.

[S9c] Letter from HM Government Open Innovation Team confirming research influence on cross-government policy

[S10] Live Facial Recognition Public Opinion Impact Document detailing media coverage