What Police Wear and Why It Matters: Tasers, Cameras, Uniforms and Experimental Criminology

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UK Police Uniforms Over Time

1850
1891
1980
2018
2019
Standard Police Gear

- Mobile phone
- Body worn camera
- Flashing light and siren for emergencies
- GPS navigation system
- Stop signs, front and back, with the words 'stop', 'police' and 'follow'
- Additional spotlights on the front and side of the blue bar
- Orange / yellow safety vests with the word 'police' on the back
- Orange cones to discard the location of a collision
- Fifty meters of rescue rope
- Belt cutter
- Fire extinguisher, first aid kit and extra box with tools
- Chalk to mark a collision on the street

- Bullet proof vests
- Tire groove gauge
- Computer
- Dog band and possibly a dog stick
- Doctor's gloves
- Paper and plastic bags
- Safety helmet
- Digital camera
- Blankets
- Alcohol control device
- Taser/Weapon
- Teddy bears (?)

https://www.politie.nl/themas/uniform-en-uitrusting.html
Experimental Psychologists are very interested in the effects of police uniforms on various outcomes

• In social psychology experiments, wearing uniforms was found to cause de-individuation (Mauro 1984)

• Higher degrees of anonymity lead to more aggressive acts (“games of fieldball” (Rehm, Steinleitner, Lilli 1987)

• Uniforms:
  • Create “brand awareness” (image)
  • Assert authority and protection
  • Promote royalty and unity
  • Promote employee security

Source: https://www.positivebranding.co.uk
Criminologists and Deterrence Theory

• By their presence, law enforcement uniforms communicate messages about the authority of the state

• The cue of authority Increases the perceived likelihood of apprehension: Deterrence

• Yet, do they ‘work’?

• Does the type of uniform matter?

• Can we even compare different uniforms? Different outfits signify different tasks

• But deterrence – visible tours in hotspots – is “borderline passive”
What Type of Uniforms Deters Offenders?
Constables reducing crimes and calls for service on the London Underground
16% fewer Victim-Generated Crimes

- Victim-generated crimes at Target Locations: 12.02 vs. 12.13
- Victim-generated crimes - all other locations: 24.28 vs. 30.59
- Victim-generated crimes - entire station: 36.33 vs. 40.09
What Type of Uniforms Deters Offenders more?

Cohen’s $d = 0.176$

Cohen’s $d = 0.189$

Cohen’s $d = 0.184$
Body-worn cameras (BWCs)
Context:
Violence and Aggression in Law Enforcement
In order to stop violence, we gave the social control agents powers...
What can reduce use of force / violence?

• Rigorous training, **proactive supervision**, strict disciplinary procedures, knowledge sharing between officers, role-playing (Bayley and Garofalo 1989, Bennett 1997; Europe, Stenning et al. 2009)

• **Systematic recording practices** (Brandl and Stroshine 2013; Terrill et al. 2003; Walker and Alpert 2000)

• Dealing with **work-related stress**, job satisfaction, burnout, and situational factors
Another Possible Solution: Cameras
Why are cameras supposed to work?

• Humans (and animals) alter their behaviour if they are aware they are being observed…as this leads to…

• Greater **self-awareness** → self-inspection/self-scrutiny → being more likely to follow rules of conduct

• Deterrence theory

• Just as criminals differ in their sensitivity to external surveillance / deterrents (Wikstrom and Treiber, 2007), we should not expect all officers to react the same either (Noppe, 2016)

Loads of Recording Devices

• CCTV – don’t work
  • 44 studies show 16% reduction in crime
  • Welsh and Farrington (2002; 2009)

• Road Cameras – Work
  • 35 studies show 44% reduction in serious and fatal accidents
  • Wilson, et al. (2010)

• Mobile Phones – don’t seem to work (Garner & Scott incidents)
When cameras fail...
When cameras succeed...
What about BWCs?
Can body worn cameras provide a solution?
UNTIL VERY RECENTLY, THE ONLY ONES NOT RECORDING THE POLICE, WERE THE POLICE THEMSELVES
Aims and Goals of BWCs

• Reduce police use of force
• Reduce complaints against officers
• Enhance police legitimacy
• Increase transparency and accountability
• Increase prosecution rates
• Improve evidence captured by the police
• Assure Evidence track is not jeopardized
• Interagency data-sharing
• Early guilty pleas
• Save time
• Reduce arrests
• Increase self-confidence of officers
• Better data-sharing

The First Experiment on BWCs
Rialto (California)

- Rialto Police Department
- 28.5 square miles
- Population of 100,000 residents
- Mid-sized police department in California
- 54 front-line, uniformed officers
- Total of 115 sworn police officers and 42 non-sworn personnel
The Cameras
Why BWCs Matter –
Use of Force
Officer Use-of-Force

February 13, 2011 to February 12, 2012 = 61
February 13, 2012 to February 12, 2013 = 25 \((-59.01\%)\)

2009 = 70 \((64.28\%)
2010 = 65 \((61.53\%)
2011 = 60 \((58.33\%)

Control = 17
Experiment = 8
Use of Force (UOF) by Patrol Officers at the Rialto Police Department

(January 1, 2011 - February 12, 2013)

Start of Experiment
Use of Force Incidents - Rate per 1,000 Police-Public Contacts
(mean baseline=1.46; mean treatment=.33; mean control=.78)

Baseline | Control | Treatment
Is Rialto, CA Unique?

- Over time
- Between Jurisdictions?
Average Number of Use of Force Incidents per 1,000 Arrests

F=12.496; p<.001

The Cambridge University Replication Studies (CURS)

Barak Ariel, with
Alex Sutherland, Darren Henstock, Josh Young, Paul Drover, Jayne Sykes, Simon Megicks, Ryan Andersen, Justice Tankebe and Gabriela Sosinski
The Cambridge University Replication Studies (CURS)


Overall Multi-Site Study Design: 2 Million Residents Worldwide

- Planned 12 month experiments
- 11 independent tests in 6 English speaking PDs
- Police shift as the unit of analysis (5,692 shifts randomly assigned 50%-50%)
- 2,000,000 patrol hours
- A wide range of outcomes

Treatment Plan
- use BWCs
- notification
- no discretion
- record everything,
- but store evidence only

Control Plan
- no BWCs + no notification
Average number of use of force incidents per department (N=11)

Use of Force Rates per Shift, Broken Down into Compliance Regimes

Why BWCs Matter – Assaults of Officers
Assaults on Officers: Before (1,418) - After (547) in Ten Experiments (61% drop)

Why BWCs Matter – Complaints
Each complaint against the police has a social and financial cost

Taken together, the research evidence suggests that more can be done to improve the quality of police-public interactions...

...body worn cameras might be one tool for achieving this.
Complaints Filed Against Police Officers (7 Experimental Sites): Before-After Percent Changes

Average Number of Complaints per Department (7 forces): Before and After

what *kinds* of complaints

Denver PD: Odds of a complaint in the Treatment District compared to the Odd of a complaint in the Comparison Districts

Why BWCs Matter – Victim Satisfaction
Victim Satisfaction Survey: % Improvement when BWCs are in use

- How would you rate the whole experience with the police?

- Are you satisfied with the police action?

- How do you rate the ease of contact with the police?

- Are you satisfied with the police's follow-Up?

- Are you satisfied with the way the police have treated you?
Experiment I
Site features

• 200,000 residents, 83% Whites
• One of UK’s top 50 cities in terms of size
• Crime rate higher than average for the force area
• Calls for service received between May 2014 – May 2015
• 38,406 incidents
• 12-months follow-up period
• 120 frontline officers
• 728 shifts
Percent Change
(Treatment versus Control Conditions)

- Convictions: 6%
- Acquittals: 23%
- Dismissed: 53%
<table>
<thead>
<tr>
<th>Crime Category</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal damage</td>
<td>-58%</td>
</tr>
<tr>
<td>Nuisance</td>
<td>-50%</td>
</tr>
<tr>
<td>Domestic incidents</td>
<td>-27%</td>
</tr>
<tr>
<td>Police generated activity</td>
<td>0%</td>
</tr>
<tr>
<td>Burglary</td>
<td>0%</td>
</tr>
<tr>
<td>Violence against the person</td>
<td>13%</td>
</tr>
<tr>
<td>Sexual offenses</td>
<td>43%</td>
</tr>
<tr>
<td>Robbery</td>
<td>75%</td>
</tr>
<tr>
<td>Theft</td>
<td>200%</td>
</tr>
</tbody>
</table>

(* p≤.10; ** p≤.05; ***p≤.01; positive change indicates more convictions in treatment conditions)
DOMESTIC VIOLENCE COURT OUTCOMES – RATES PER 10,000 INCIDENTS

<table>
<thead>
<tr>
<th>Cameras On</th>
<th>No Cameras</th>
<th>Acquitted</th>
<th>Convicted</th>
<th>Dimissed</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>6</td>
<td>9</td>
<td>62</td>
<td>16</td>
</tr>
<tr>
<td>85</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ .10; ** p ≤ .05; *** p ≤ .01; based on binary logistic regression models with robust estimators
Experiment II
Site features

- 100,000 residents, 76% Whites
- Crime rate lower than average for the county area (approx. 3 crimes for 1,000 residents)
- Calls for service received between June 2014 – June 2015
- 2,586 arrests
- 12-month follow-up period

- 105 frontline officers
- 734 shifts
Overall Court Outcomes: Treatment vs. Control Conditions (percent per arrest)

- **Convictions***: 33.3% (Cameras) vs. 30.0% (No-Cameras)
- **Dismissed**: 2.2% (Cameras) vs. 2.1% (No-Cameras)
- **Case still open**: 11.4% (Cameras) vs. 12.5% (No-Cameras)
- **Warrants**: 3.4% (Cameras) vs. 4.3% (No-Cameras)

* *p*≤.10; ** *p*≤.05; *** *p*≤.01; based on independent samples t-tests for proportions with bootstrapping
Effect of BWCs on Convictions: Percent Change (Treatment vs. Control)

- Domestic Violence: **68%***
- DUI*: **32%**
- Violent Crime: **32%**
- Assaults Against Officers: **18%**
- Property Crime*: **15%**
- Narcotics: **11%**

*p ≤.10; **p ≤.05; ***p ≤.01; based on independent samples t-tests for proportions with bootstrapping
Effect of BWCs on Cases Still Open after 12 months: Percent difference (Treatment vs. Control)

- Domestic Violence***: -477%
- DUI*: -114%
- Violent Crime: -5%
- Assaults Against Officers**: -65%
- Property Crime: -3%
- Narcotics**: -61%

* $p \leq 0.10$; ** $p \leq 0.05$; *** $p \leq 0.01$; based on independent samples t-tests for proportions with bootstrapping
## A tale of two experiments—all about compliance and implementation

### UK Experiment
- Weak treatment fidelity
- Trigger: happy prosecution
- Single patrol formation $\rightarrow$ weak camera footage

### US Experiment
- ‘Moderate’ treatment fidelity
- Cherry-picking cases for prosecution
- Double patrols $\rightarrow$ “the filmmaker cop”

<table>
<thead>
<tr>
<th>Rate of breaches</th>
<th>No camera shifts</th>
<th>Camera shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK test</td>
<td>130/1264 = 10.3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>733/1322 = 45%</td>
</tr>
</tbody>
</table>

*DUI Test of a Drunk Driver*
Unstable single-shot vs. multiple viewpoints
Prevalence and Rationale

• Currently, more than 20,000 law enforcement agencies utilise the Taser X-26 model as a strategic part of their mission to promote public safety, as well as officer safety

• The appeal of less-than-lethal technologies is that they are deployed with the intent not to kill, but to incapacitate temporarily

• These devices give law enforcement a momentary window to gain control over uncooperative and uncontrollable subjects
Should all frontline officers wear TASERs?

• Loads of opinions

• Good arguments for it, good arguments against it

• Will frontline officers use it too much?

• No evidence in British forces

• No controlled evaluations ANYWHERE
The City of London Police TASER Experiment
The city of London Police
TASER Experiment

- The first of its kind, ANYWHERE!

- Produced evidence for the benefit of all forces

- A wide range of questions:
  - How often do frontline officers use Tasers?
  - Do Tasers lead to higher rates of assaults of officers?
  - Do Tasers lead to higher rates of suspects and officers’ injuries?
  - Will use of force (other than Taser) go down?
Complaints against officers will increase because of TASERs

People will be less likely to approach the police if they have TASERs

The widespread deployment of TASERs will be a positive change

"I trust the police officers in my area to use TASERs responsibly"

“Less-lethal” weapons such as TASERs should be made available to all police officers in…

Generally speaking, do you support or oppose the introduction of TASERs into all…

Public Sentiment
(2,000 respondents nationwide)

People will be less likely to approach the police if they have TASERs: 57%

The widespread deployment of TASERs will be a positive change: 60%

"I trust the police officers in my area to use TASERs responsibly": 69%

“Less-lethal” weapons such as TASERs should be made available to all police officers in…: 70%

Generally speaking, do you support or oppose the introduction of TASERs into all…: 70%

Complaints against officers will increase because of TASERs: 88%
EVALUATION OF THE EFFECT OF DEPLOYING TASERS ON OFFICER OPINIONS AND CONDUCT

The City of London Police will be the first force in England and Wales to train and deploy TASER weapons to all its eligible frontline officers. This decision was made in response to recent threats to police officers. The purpose of this survey is to understand what police officers think about this new policy.

All responses will be kept private and confidential. We will not try to track where the responses originate. Please do not mention your name or any other identifying information on this questionnaire. In order to protect your privacy, we will not provide the City of London Police with your participation status or any of your individual answers. We will only share an aggregate report. In addition, we will not report any information that will make it possible to identify which officers participated. We appreciate your honest and complete answers to the questions contained in this survey.

It is expected that this activity will take you approximately 10 minutes to complete.

If you have any questions or concerns, please contact Dr Barak Ariel, Cambridge University, Institute of Criminology, at ba285@cam.ac.uk.

We greatly appreciate your help with this study!
Experimental Procedure

• Training to 84 frontline response officers; 58 officers (69%) certified
• Standard operating procedures were put in place
• Random allocation of 678 temporal clusters
• All outcome variables were recorded independent of the experiment
• 6 months RCT
Random Allocation of 678 police shifts

• Weekly random assignment

• Limited spill-over of treatment to control conditions:
  • ‘Treatment clusters’ → 58 Taser-equipped officers (approximately 40% of all officers during the shift)
  • ‘Control clusters’ → 0 Taser-equipped officers patrolled the City of London

• ‘Treatment officers’ were assigned to ‘treatment clusters’, not to ‘control clusters’; however occasionally they were, but 0 deployment with Taser equipment during ‘control clusters’
Results
City of London Police Offices rarely used Tasers

• During the experimental period, police officers “used” TASERs in police operations nine times

• BUT applied electric shocks to suspects “only” twice (a rate of 1 per 3,000 incidents)

• The remaining “uses” included encounters in which officers either de-holstered or pointed the TASER at suspects
However, a different story emerged in terms of the rate of use of force per 1,000 incidents (per temporal cluster)

• TASER-carrying officers → force increased by 48% compared to control conditions (p<.001)
Assaults of Officers and Suspect Injuries

- 0 recorded Injuries to suspects
- Significant doubling of assaults on police officers in the line of duty compared to control conditions
  \[ \rightarrow 0.4 \text{ physical assaults versus 0.2 per 1,000 incidents in treatment and control conditions} \]
What Explains these results?
What Explains these Results?
The General Aggression Model

• The outcomes can be contextualised within the General Aggression Model (GAM) (Anderson & Bushman 2002) → hostile appraisals facilitate aggression

• The “Weapon Effect” → Mere presence of weapons is an aggressive cue; increases “aggressive thoughts, hostile appraisals, and aggression, suggesting a cognitive route from weapons to aggression” (Benjamin et al. 2017)

• The appropriate response is consequently a ‘fight or flight’ dilemma and, under certain circumstances, the behavioural manifestation is assault, violence and aggression

• Taser is no different → the “less-than-lethal weapon effect”
Policy Implications

• (“Use” of Taser should be deconstructed → the data are there; there is no need to collapse all applications of Taser into a binary registry of ‘use’)

• Training (!)
Policy Implications

• (“Use” of Taser should be deconstructed ➔ the data are there; there is no need to collapse all applications of Taser into a binary registry of ‘use’)

• Training (!)

• Concealing Tasers
What Police Wear and Why It Matters: Tasers, Cameras, Uniforms and Experimental Criminology

Thank you for your cooperation