Background

Meaning of **counting** in English

counting

present participle of **count**

Counting, **the process of calculating the number of 'things' is usually a simple process of summing each individual unit within a defined group to calculate the total number [of 'things'].**

How are crime levels reported in the media?

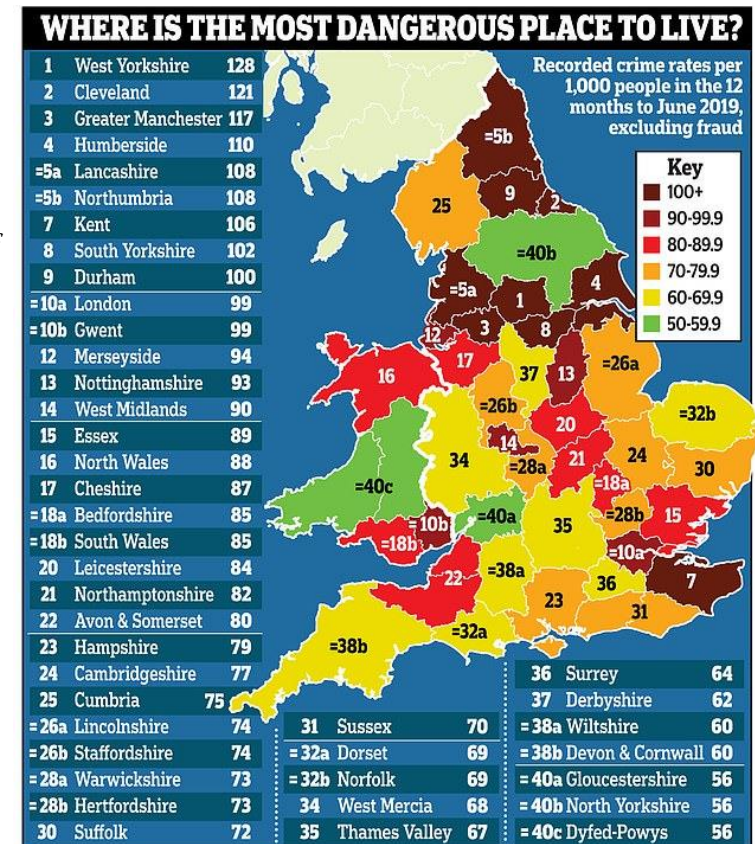## How are crime levels perceived by the public?

Is reporting crime levels in this way misleading?

> West Yorkshire topped the **list of shame**, with 128 crimes per 1,000 people during the 12 months to June
>
> Data from the ONS, revealed that some of the **most crime-ridden** areas of the country are Cleveland, Greater Manchester, Humberside, Lancashire, Northumbria, South Yorkshire and Durham.
>
> The official data showed evidence of **rising lawlessness** in Wild West Britain and a soaring number of crimes being reported.
>
> Gloucestershire, North Yorkshire and Dyfed-Powys in Wales were the **safest** with 56 offences per 1,000 people.

WHERE IS THE MOST DANGEROUS PLACE TO LIVE?

Recorded crime rates per 1,000 people in the 12 months to June 2019, excluding fraud

1	West Yorkshire	128
2	Cleveland	121
3	Greater Manchester	117
4	Humberside	110
=5a	Lancashire	108
=5b	Northumbria	108
7	Kent	106
8	South Yorkshire	102
9	Durham	100
=10a	London	99
=10b	Gwent	99
12	Merseyside	94
13	Nottinghamshire	93
14	West Midlands	90
15	Essex	89
16	North Wales	88
17	Cheshire	87
=18a	Bedfordshire	85
=18b	South Wales	85
20	Leicestershire	84
21	Northamptonshire	82
22	Avon & Somerset	80
23	Hampshire	79
24	Cambridgeshire	77
25	Cumbria	75
=26a	Lincolnshire	74
=26b	Staffordshire	74
=28a	Warwickshire	73
=28b	Hertfordshire	73
30	Suffolk	72
31	Sussex	70
=32a	Dorset	69
=32b	Norfolk	69
34	West Mercia	68
35	Thames Valley	67
36	Surrey	64
37	Derbyshire	62
=38a	Wiltshire	60
=38b	Devon & Cornwall	60
=40a	Gloucestershire	56
=40b	North Yorkshire	56
=40c	Dyfed-Powys	56

Key
- 100+
- 90-99.9
- 80-89.9
- 70-79.9
- 60-69.9
- 50-59.9

Harm Indexes

Concept

Instead of measuring and reporting how much crime is in an area, a more appropriate question is how much *harm* is caused by crime (Ratcliffe, 2015)

Applying a weighting to crime counts to reflect the differentiation of harm/severity is not new, the first examples date back to 1964.

In England and Wales, two methods are 'readily' available:
- **Cambridge Crime Harm Index based on starting sentencing guidelines**
- **ONS Crime Severity Score based on actual sentencing data**

Cambridge Crime Harm Index

Principle

The Cambridge Crime Harm Index (CCHI)

The Cambridge Crime Harm Index (CCHI) is the first system that measures the seriousness of crime harm to victims, and not just the number of officially recorded crimes.

All crimes are not created equal in the harm they cause: homicide is many times more harmful than shoplifting but in crime statistics where offences are counted by number, they appear equivalent. For example, in the UK for the year ending September 2019, there were 3,578,000 incidents of theft and 729 homicides (Office for National Statistics, 2019). An increase of 500 thefts would be a small change in the overall number of thefts and have little impact on police resources. 500 extra homicides would have large consequences both for the harm caused and the impact on police resources. In a number-only count, the additional 500 thefts or homicides would result in the same overall number of crimes, yet clearly the impacts are disparate.

This reality has led to the proposition of a "Harm Index" to measure how harmful different crimes are in proportion to the others. This approach adds a larger weight to more harmful crimes (e.g. homicide, rape and grievous bodily harm with intent), distinguishing them from less harmful types of crime (e.g. minor thefts, criminal damage and common assault). Practically, adoption of a harm index can allow targeting of the highest-harm places, the most harmful offenders, the most harmed victims, and can assist in identifying victim-offenders. Experimentally, use of a harm index can add an additional dimension to the usual measures of success or failure, by considering harm prevented as well as reductions in prevalence or frequency. For the police, creation of harm index could allow them to invest scarce resources in proportion to the harm of each offence type.

Cambridge Crime Harm Index

Illustrated

The Cambridge Crime Harm Index (CCHI)

For each offence type, the Cambridge-CHI applies a weight to the count of crimes recorded by the **recommended number of days in prison** for a **first-time** (no previous convictions) **adult-offender** based on the recommended **starting-point sentence** set out in the sentencing guidelines in England & Wales.
(Sherman 2013; Sherman et al., 2016)

Table 2:
Crimes in UK 2011/2012

Crime type	Subtype	Total number	Starting point sentence days	Total CHI sentence days
Homicide		553	5,475	3,027,675
GBH	Intent	17,777	1,460	25,954,20
ABH		301,223	20	6,024,460
Assault		202,509	1	202,509
Rape		16,038	1,825	29,269,350
Sexual Assault		22,057	365	8,050,805
Robbery		74,688	365	27,261,120
Burglary	Dwelling	245,312	20	4,906,240
	Non-dwelling	255,736	20	5,114,720
Vehicle	Theft of	85,803	20	1,716,060
	Theft from	300,377	2	600,754
Theft	Theft from person	100,588	20	2,011,760
	Shop	308,326	2	616,652
	Other	491,559	2	983,118
Damage	Arson	27,219	33	898,227
	Other	598,798	2	1,197,596
Fraud		181,023	20	3,620,460
Total		3,229,586		117,835,466

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Theories being TESTED

SCIENTIFIC COMMUNICATION

How to Count Crime: the Cambridge Harm Index Consensus

Lawrence W. Sherman[1] ·
and Cambridge University associates

Criminologists
Dr. Peter Neyroud
Dr. Heather Strang
Dr. Barak Ariel
Dr. Matthew Bland
Dr. Justice Tankebe
Dr. Martin Wright
Eleanor Neyroud

Statistician
Professor Sir David Spiegelhalter, OBE FRS FRSS

Former Metropolitan Police Commissioners
Ian, Baron Blair of Boughton, Kt QPM
Bernard, Baron Hogan-Howe of Sheffield, Kt QPM

Former UK Chief Constables
Peter Neyroud, CBE QPM (Thames Valley Police & NPIA)
Sir Denis O'Connor, CBE QPM (Surrey, AC Met Police, Chief HMIC)
Sir Mark Rowley, QPM (Surrey, AC Met Police Counter-Terrorism)
Chris Sims, OBE QPM (West Midlands)
Suzette Davenport, QPM (Gloucestershire)
John Parkinson, OBE (West Yorkshire)
Debbie Simpson, QPM (Dorset)
Crispian Strachan, CBE QPM DL (Northumbria)
Alec Wood, QPM (Cambridgeshire)

Published online: 3 June 2020
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Abstract
Crime statistics require a radical transformation if they are to provide transparent information for the general public, as well as police operational decision-making. This statement provides a blueprint for such a transformation.

- A Crime Harm Index (CHI) for crimes against victims in the current year.
- Crime counts by all crime categories, used to calculate the CHI.
- A Historic Offences Index (HOCHI), a CHI for crime occurring in prior years.
- A Proactive Policing Index (PPI), weighted by crime type as for the CHI.
- A Company-Detected Crime Harm Index (CDCHI), also weighted by CHI.
- A Harm Detection Fraction (HDF), which is the proportion of CHI with police detections.
- Detection rates per 100 by all crime categories, used to calculate the HDF.

Would a proof of concept be beneficial to *test* the idea set out in the blueprint?

Using descriptive and comparative analysis to *test* whether the new framework yields different conclusions about crime and policing

Candidate Number: POL-1932

Name: Gavin Bardsley

Fitzwilliam College

Supervisor: Dr Jacqueline Sebire

Can Crime and Detections be counted differently: Demonstrating the Cambridge Consensus Statement for Counting Crime and Detections in Devon & Cornwall?

Word count: 17,980

Submitted in part fulfilment of the requirements for the Master's Degree in Applied Criminology and Police Management

2021

UNIVERSITY OF CAMBRIDGE
Institute of Criminology

High-Level Findings
Shining a new light on crime statistics

Profile of Crime based on Cambridge CHI Score and by Count by Statistical Series

- Crime Harm Index (Victim and Witness reported)
- Historical Offences Crime Harm Index (Victim and Witness reported)
- Proactive Policing Index
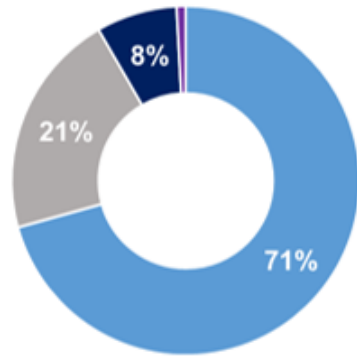- Company Detected Crime Harm Index (0.8%)

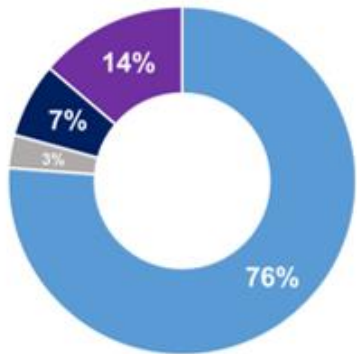Figure 2: Crime in Devon and Cornwall 2019/20 weighted by CHI by statistical series

- Count (Victim and Witness reported)
- Historical Offences Count (Victim and Witness reported)
- Proactive Policing Count
- Company Detected Crime Count

Figure 3: Crime (count) in Devon and Cornwall 2019/20 by statistical series

Perceived level of current public safety based on total crime rates is skewed. Nearly 25% of the crime that the public read into the figures are not applicable in terms of their level of public safety.

Trend: Victim and Witness reported Crime based on Cambridge CHI Score and by Count
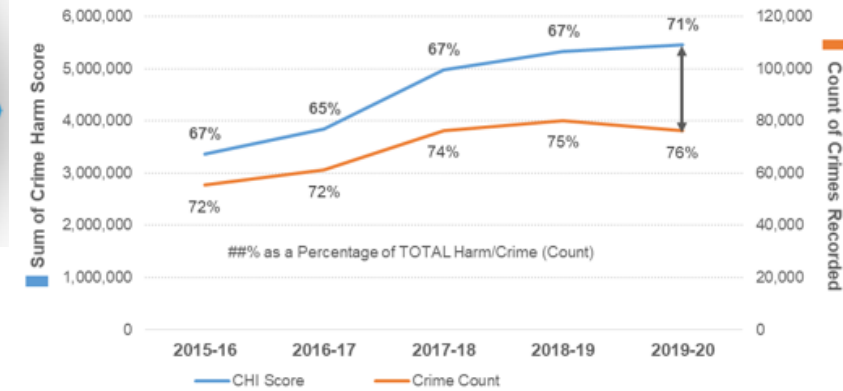

Figure 6: Five-year trend - Victim and witness reported crime committed in-year reported

Increasing Cambridge CHI associated with crimes reported by victims and witnesses. Diverging trend in crimes reported by victims and witnesses when weighted by Cambridge CHI compared to pure counts.

Trend: Detected Victim and Witness reported Crime based on Cambridge CHI Score and by Count
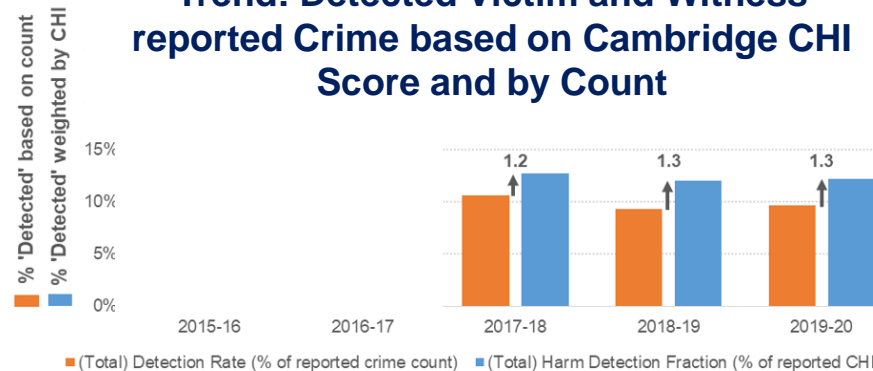

Figure 19: Five-year trend - Detection-rate compared to HDF

Ratio of Harm Detection Fraction to the Detection rate based on count is greater than one

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Lessons Learnt

The results chapter presented how the crime and policing statistical profile for Devon and Cornwall differs when the methodology set out in the Cambridge Consensus Statement is applied. However, the key point to emphasise is that the statistical profile _does_ differ and provides a number of new dimensions and insight.

This research concludes that, supported by this 'proof of concept', the blueprint outlined in the Cambridge Consensus Statement adds value and should be considered and discussed further.

As well as the development of the 'mechanics', this research discussed some of the possible 'cultural' challenges / risks to full implementation.

" *The author has broken new ground in applying the Consensus Statement crime harm recording concept, with revealing findings, in a police force. **It demonstrates very clearly that it can be done** and should be of interest to any policy makers genuinely interested in what the police are actually doing to protect people.*

" *…the research showed straight away that Devon and Cornwall Police have been pursuing harm with vengeance and that it **supports a 'tipping point' for change**, both in England and Wales and globally, in how crime statistics are reported.*

There is great potential, provided by this methodology, to improve:

- **how the public understand their current level of public-safety;**
- **the harm for which the police service should be credited for identifying; and**
- **the focus on 'detecting' high-harm crimes can only positively contribute to public-confidence and legitimacy of policing.**

What has happened since?

Utilisation of the Cambridge Crime Harm Index in our Business Intelligence tools to identify 'Hotspot' Neighbourhoods/Beats/Streets

Top 25 Streets (Beat) - Sep-2021 to Oct-2021 (baseline period - Sep-2020 to Oct-2020)

Month Year - Current	Date - Current	Month Year - Baseline	Date - Baseline	BCU	LPA	Sector
Offence Group	Domestic Abuse	Knife Crime Only	Serious Violence Only	Serious Sexual Offences Only	VAWG Offence Groups Only	

| ⓘ Info | ⌃ Top 25 Neighbourhoods | ⌃ Top 25 Beats | ▦ Top 25 Streets Treemap | All Neighbourhoods | All Beats | All Streets | ⊞ Crime Details |

Rank	Street	Crimes Sep-21 to Oct-21	Crimes Sep-20 to Oct-20	% Change		Rank	Street	Cambridge CHI Score Sep-21 to Oct-21	Cambridge CHI Score Sep-20 to Oct-20	% Change
-		19524	19082	2.3%		-		1609373.5	1651806	-2.6%

Knowledge sharing/exchange

Indexes being used (and research cited) in new research
e.g. Proactive Policing Index

Formal Implementation Proposal written with support from the Deputy Chief Constable

DEC 14

Research and Practice in Conversation: A Policing Lab Virtual Event
by University of Exeter

A space for academics & practitioners to share research & discuss how to facilitate knowledge exchange & evidence-based practice.

Topic: Demonstrating the Cambridge Consensus Statement for Counting Crime and Detections

• *Gavin Bardsley, Head of Performance & Analysis, Devon and Cornwall Police*

Society of Evidence Based Policing
South West Regional Conference

EVIDENCE BASED PRACTICE IN REALITY

DAY 1: TUE 30 NOVEMBER

CAN CRIME AND DETECTIONS BE COUNTED DIFFERENTLY
The presentation is based on the research undertaken as part fulfilment of the MSt. degree. This research developed and applied the blueprint set out by the Cambridge Consensus Statement (June 2020), that recommended how crime and detections should be counted, to Devon and Cornwall police data.

Gavin Bardsley - Devon & Cornwall Police

Live 30-minute talk

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Policing Lab Virtual Event
Research and Practice in Conversation
December 2021

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