The odd one out?

John Arbuthnot

Meteorological models

Claude Shannon

provided a formal definition of information based on probability and a receiver – allowing information to become a scientific quantity – and laid the foundations of the information age

Boris

“400,000 fewer children in poverty than in 2010”
400,000 fewer children in poverty than in 2010"  

How many children in the UK are living in poverty  

<table>
<thead>
<tr>
<th>Millions of children</th>
<th>Relative income poverty</th>
<th>Absolute income poverty</th>
<th>Income poverty and deprivation</th>
<th>Severe income poverty and deprivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/11</td>
<td>5.6m</td>
<td>3.7m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
<tr>
<td>2011/12</td>
<td>3.6m</td>
<td>3.0m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
<tr>
<td>2012/13</td>
<td>2.6m</td>
<td>2.3m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
<tr>
<td>2013/14</td>
<td>2.1m</td>
<td>1.8m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
<tr>
<td>2014/15</td>
<td>1.3m</td>
<td>1.4m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
<tr>
<td>2015/16</td>
<td>1.6m</td>
<td>2.0m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
<tr>
<td>2016/17</td>
<td>1.7m</td>
<td>2.2m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
<tr>
<td>2017/18</td>
<td>1.8m</td>
<td>2.2m</td>
<td>6.6m</td>
<td>9.1m</td>
</tr>
</tbody>
</table>

Source: Department for Work and Pensions

But child poverty increases with benefit freezes and the loss of local government services!  
The number of children living in poverty is estimated to have increased by 500,000 between 2010/11 and 2017/18 under the DWP’s relative low income measure!  
The Institute of Fiscal Studies (IFS), the Joseph Rowntree Foundation and the Social Metrics Commission all agree that child poverty has worsened!  
IFS predict an increase in child poverty in future years!  
Regardless, 3.5 Million children living in absolute poverty does not exactly constitute ‘success’

Inequalities

3-4% have developmental disorder (risk factor for poor educational attainment)  
Health barriers to education  
Short-term costs estimated as £1.58 billion per annum  
Annual long-term costs estimated at £2.35 billion

What the data show

In England, Bradford is the city with the highest prevalence of all types of diabetes: 10.26% compared with the 6.6% UK average

The system is broken

It’s complex and dynamic...

But our actions – e.g. government policies - are often not tailored for complex dynamical systems
Visual screening

Letter identification affected by poor eyesight
Score | 2% every line logMAR reduction: CI -2.17 to -1.13

Missing in action

866 children (16%) referred for further investigation
534 referred to optometrist
332 referred to Hospital Eye Service
479 (55.3%) attended the first appointment
371 (42.84%) failed to attend
345 were sent a recall appointment
111 (32.17%) attended the recall appointment
(HES coverage improved by 10.54% (60.84% to 71.39%) and Optometrist coverage improved by 14.23% (51.87% to 66.10%))

Seeing and vocabulary

Letter identification affected by poor eyesight
Score | 2% every line logMAR reduction: CI -2.17 to -1.13

Improving autism care

We used BiB data to show that the educational assessments conducted on all children in their first year of schooling (the Early Years Foundation Stage Profile) can identify children at risk of autism

| examined EYFSP scores for 13,500 children within BiB |
| educational data linked to routine health in 8,854 children |

Creative interventions

Data driven service organisation
World’s largest handwriting RCT
Glasses in classes - world’s largest RCT

Connected Bradford

Approvals:
Health Research Authority (HRA)
Confidentiality Advisory Group (CAG)
REC & IRAS Yorkshire & Humber Bradford Leeds
Research Ethics Committee
White Rose Universities Ethics Committees

https://borninbradford.nhs.uk/research/documents/
School admissions

Not the same place!

January 10th 2020

Place based working

Working with our partners to use data to support place based working across the Region

- 11,130 people live in Holme Wood (28.3% under 16 years of age)
- 84.3% White British plus Gypsy
- Highest % of NEET in Leeds City Region
- 22% long-term illness and on benefits
- Life expectancy <10 years below UK
- Mental health a major problem
- High rates of crime