The Big Data and Data Ethics
Current Issues in General Insurance
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Big Data and Data Ethics

• The Big Data Landscape
• The Insurance Context
• The Ethics and Governance landscape
• Big Data Traps
The Big Data Landscape

Regardless of source,

... is about gaining value and insights from extremely large, complex, fast moving or combined data, across a range of sectors in innovative and beneficial ways.
• 90% of the data currently in the world was created in the last two years.
• The total amount of global data is predicted to grow 40% year on year for the next decade.
• Emails still supreme but reducing (204m sent in 2014).
• It is predicted that the "digital universe" will reach 180 zettabytes (180 followed by 21 zeros) in 2025.
• Worldwide Big Data market revenue is projected to increase from $42bn to $103bn 2018-2027.
• 90% of the data currently in the world was created in the last two years
• The total amount of global data is predicted to grow 40% year on year for the next decade
• Emails still supreme but reducing (204m sent in 2014)
• IDC predicts that the Global Datasphere will grow from 33 Zettabytes (ZB) in 2018 to 175 ZB by 2025
• Worldwide Big Data market revenue is projected to increase from $42bn to $103bn 2018-27
The Insurance Context

Insurance Big Data

- Data has been fundamental to the insurance industry for decades
- Slow to respond to new data and technologies?
- Structured vs unstructured
- Use cases
“Big Data promises to use data to make the world transparent, but its collection is invisible, and its tools and techniques are opaque, shrouded by layers of physical, legal, and technical privacy by design”.

Professor Neil M. Richards, Washington University School of Law, 2015
Data Ethics

- Describes the value judgements and approaches made when generating, analysing and disseminating data
- Incorporates reference to data protection and other relevant laws
- Appropriate use of technologies
- Requires a holistic approach including good practice in analytical techniques and information assurance

Actively and demonstratively doing the right thing.

Emerging Governance

- Think tanks
- Data Ethics policies
- Regulators/Governments
- Data ownership
What’s the concern?

An ‘algocracy’ may lead to adverse outcomes:-

- Sophisticated algorithms deployed in ways that influence or manipulate the decisions we make in unprecedented ways
- Automated decision-making can be opaque and may lead to unfair outcomes or overly restrict the level of control over key decisions eg job applications, criminal justice system
- Reduced capacity for new entrants to compete and innovate, while a few large businesses having unprecedented power to influence behaviours and shape our society.
- Geo-political angle
Insurance Big Data Traps

• Data sources
  – Social media (mis)use
  – Genetic testing
  – Facial recognition

• Data Black Box
  – Aggregated data
  – Biased data

• Hyper-personalisation of pricing

Discussion

• Aware/surprised/not surprised/shocked?
• Anything to be done? What?
• By whom?
• What are you doing/what is your organisation doing?
Concluding Thoughts

• Diversity!
• Transparency and fairness
• Individual awareness
• Individual and collective accountability
• Organisation standards and policies

Diversity at the IFoA

For more information on diversity at the IFoA or to get involved, contact diversity@actuaries.org.uk