Lies, Damned Lies, Metrics & Semantics: Exploring definitions of the end of Leprosy (Hansen's Disease) & their implications

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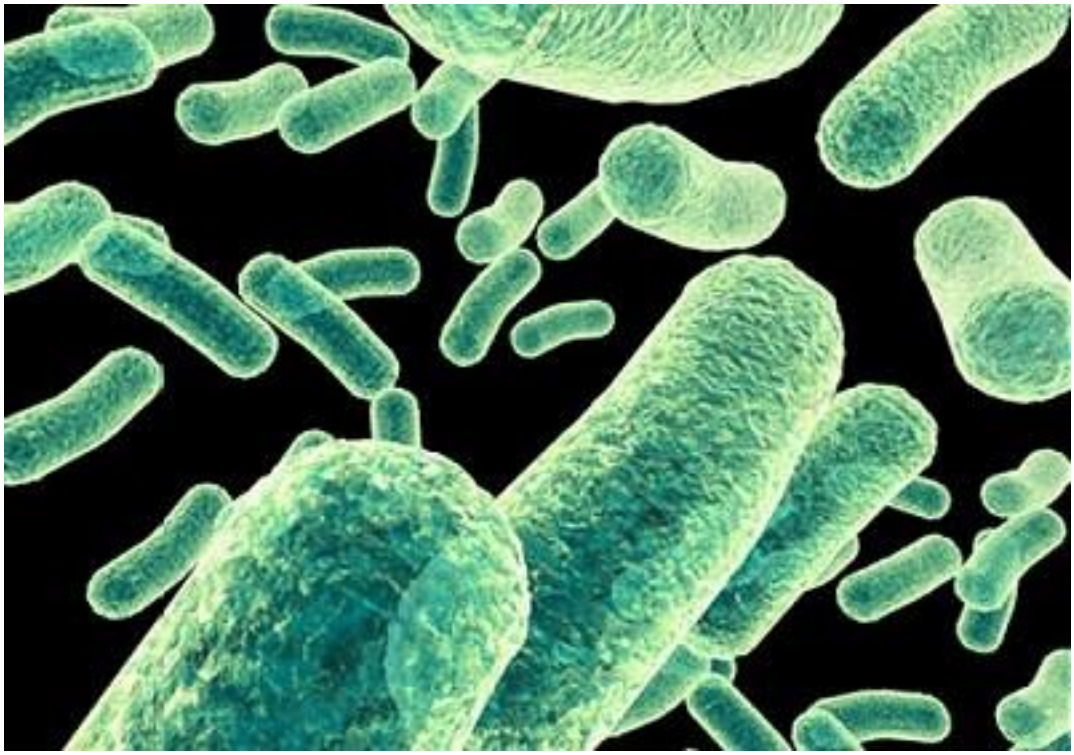
Many a statistic is false on its face. It gets by only because the magic of numbers brings about a suspension of common sense.[1]

Leprosy (also known as Hansen's Disease), is an infectious disease that is both potentially disabling and highly stigmatised.[2] Leprosy can cause blindness, disfigurement and deformity. This disease is named after G. H. Armauer Hansen, a physician who identified the causative agent, *Mycobacterium leprae*, in Norway in 1873.[3] *Mycobacterium leprae* is a strongly acid-fast rod-shaped organism with parallel sides and rounded ends (see Figure One), rather similar to the tubercle bacillus.[4]

Figure One: *Mycobacterium Leprae*



It is interesting to note that *Mycobacterium leprae* was the first bacterium to be identified as causing disease in humans. Given this significant history and impact of this disease on human civilisation,[5-6] and the length of time that has elapsed since its cause was identified, it is alarming that this disease still remains a scourge.

Although for many people the mention of leprosy may evoke biblical associations,[7] or images of remote segregated and excluded communities of a bygone era,[8-9] leprosy is an ongoing and significant problem. As can be seen from Table One, although there has been a gradual decline in the number of new cases reported in official statistics over the last decade globally, approximately 200,000 are still diagnosed annually.[10]

Table One: New Leprosy Cases (thousands) 2006 – 2015 [10]

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015

No. of new cases	244.6	237.4	229.7	224.2	211.1	208.0	217.5	202.9	200.8	200.0

The global incidence of leprosy has declined significantly since Multi-Drug Therapy (MDT) was introduced as the standard treatment in the early 1980s. The specific form of MDT given depends on the type of leprosy diagnosed, but routinely includes two or three of the following drugs: Rifampicin, Clofazimine & Dapsone.[11] The decline in the global impact of leprosy has been significantly aided by the involvement of major international charitable efforts from bodies such as The Nippon Foundation (TNF), formerly known as the Japan Shipbuilding Industry Foundation, the Sasakawa Memorial Health Foundation (SMHF),[12] and the pharmaceutical company Novartis and its philanthropic arm.[13]

However, the very success of MDT has served to undermine the future success of leprosy elimination programs, and this may help explain a recent upsurge in leprosy rates. As Thompson notes "*To prematurely consign leprosy to the history books guarantees unnecessary future morbidity*".[14] In 1991 the 44th World Health Assembly called for the elimination of leprosy as a public health problem globally by 2000.[15] Although this aim is of course laudable, significant issues have emerged over the definition of elimination. The WHO unilaterally defined elimination as an incidence of less than one case per 10,000 people.[16] Based on this criterion and available statistics, the WHO was therefore able to declare leprosy eliminated at a global level in the year 2000.[10]

However, there are a significant number of issues associated with the metric used by the WHO to define the elimination of leprosy.[2]

The first issue is that of a lack of a scientific basis to the rather arbitrary decision to settle on the figure of less than one new case per 10,000 people. The editor of the International Journal of Leprosy addressed this issue stating that:

> *Others are highly sceptical of the scientific basis for current elimination policies, and think that implementation of these policies is being unnecessarily and prematurely rushed to meet arbitrary bureaucratic goals, to the detriment of patient care.*[17]

The second issue is the focus by the WHO on such a short-term target. The decision in 1991 to target elimination by the year 2000 is rather bizarre given the nature of leprosy infection and development. Although MDT treatment is 98% successful, a notable aspect of leprosy is that it can take 5 to 20 years to appear.[10] Though the incubation period is typically 3 to 8 years. Therefore, any such short-term aim was unfeasible from its inception.

The third issue is the WHO combination of the term 'elimination' with a numerical metric, i.e. less than 1 new case per 10,000 population. Dowdle has outlined, with examples, the routine definition of terms such as Control, Elimination, Eradication and Extinction from an epidemiological perspective.[18] Perhaps one of the best examples of WHO efforts around infectious disease can be seen in the Smallpox eradication program.[19-21] However, using Dowdle's widely accepted criteria (see Box 1),[18] this process involved mass population level vaccination programs that slowly achieved the 'elimination' of smallpox in defined geographical areas (usually countries), until the disease could be described as eradicated globally, only now existing in a small number of Government/ Military research labs.[19-21] The important issue here is that countries were defined as having achieved the elimination of smallpox when their incidence declined to zero, not some ratio of 1 per 10,000, or per 100,000 or per 1,000,000. It should be noted that smallpox is very different from leprosy in that it is significantly

more infectious, and has a much shorter incubation period. Smallpox can also result in the death of up to a third of those who contract it, unlike leprosy which results in disability. However, it is the use of terminology that is important, rather than the nature of the disease.

Box 1: Dowdle's Principles of Disease Control, Elimination, Eradication & Extinction [18]

Control: The reduction of disease incidence, prevalence, morbidity or mortality to a locally acceptable level as a result of deliberate efforts; continued intervention measures are required to maintain the reduction. Example: diarrhoeal diseases.

Elimination of disease: Reduction to zero of the incidence of a specified disease in a defined geographical area as a result of deliberate efforts; continued intervention measures are required. Example: neonatal tetanus.

Elimination of infections: Reduction to zero of the incidence of infection caused by a specific agent in a defined geographical area as a result of deliberate efforts; continued measures to prevent re-establishment of transmission are required. Example: measles, poliomyelitis.

Eradication: Permanent reduction to zero of the worldwide incidence of infection caused by a specific agent as a result of deliberate efforts; intervention measures are no longer needed. Example: smallpox.

Extinction: The specific infectious agent no longer exists in nature or in the laboratory. Example: none.

Based on Dowdle's criteria [18] the WHO definition of elimination is blatantly inappropriate. Based on standard epidemiological terminology a target of less than 1 new case per 10,000 would perhaps be more appropriate as a control target, rather than a definition of elimination.

The term elimination in popular discourse does not imply simply reduced. The Oxford English Dictionary defines elimination as "*The complete removal or destruction of something*".[22] Semantics are vitally important in this instance as it impacts the awareness, focus and commitment of individuals, groups and governments to combating HD.[10] Lockwood discusses the unfortunate impact of the use of the term elimination in relation to leprosy:

> *The rhetoric on elimination has discouraged dermatologists from engaging with leprosy programmes, even though they may be diagnosing cases in the private sector, because they believe leprosy is eliminated. Academic work on leprosy has declined; it rarely figures in medical school curriculums even in endemic countries, and research has declined. Young researchers perceive that the disease is eliminated.* [10]

The fourth issue in relation to WHO declaration of leprosy having been eliminated relates to consistent under-reporting of the condition. Concerns over under-reporting of leprosy cases are not confined to any one country. For example, Pedrosa et al. conducted a cross-sectional study of 34,547 schoolchildren aged under 15 years in the Amazon region of Brazil.[19] This was followed by an active case finding exercise among household contacts for children identified with leprosy. The researchers noted a prevalence rate of 11.58 per 10,000. Alarmingly, this rate was 17 times higher than the registered rate.[19] Lockwood et al. observed similar issues in India noting the blatant switch to voluntary rather than mandatory reporting of cases combined with a cessation of active case seeking in order to meet the WHO target:

> *The difference between the reported and observed estimates suggests that up to half of India's leprosy cases are not being reported. India has been reporting about 130,000 new cases a year, which keeps it safely in the eliminated leprosy category. There is therefore no incentive to find new cases.*[10]

In 2010 the Eighth WHO Expert Committee on Leprosy recommended the use of a new international indicator to monitor leprosy.[23] The metric proposed was a Case Detection Rate (CDR) of Grade 2 Disability (G2D) cases per 1 million inhabitants.[24-26] Box 2 details the disability grading system used by the WHO. A target CDR-G2D of 1 per million has been proposed.[6,23,24]

Box 2. WHO Disability Grading System [24]

Hands and Feet

Grade 0 No anaesthesia, no visible deformity or damage

Grade 1 Anaesthesia present, but no visible deformity or damage

Grade 2 Visible deformity or damage present

Eyes

Grade 0 No eye problem due to leprosy; no evidence of visual loss

Grade 1 Eye problems due to leprosy present, but vision not severely affected as a result (vision: 6/60 or better; can count fingers at 6 metres).

Grade 2 Severe visual impairment (vision worse than 6/60; inability to count fingers at 6 metres); also includes lagophthalmos, iridocyclitis and corneal opacities.

However, it has been suggested that this revised metric may be equally problematic:

> *However, the CDR-G2D is less precise than the CDR due to small numbers in the numerator and this difference will make it difficult to use for monitoring small areas, i.e., small countries and local control programmes. Moreover, the CDR-G2D is influenced by early and late diagnoses and by the total incidence of leprosy, as measured by the total CDR.*[6]

Despite current strategies,[27] leprosy remains a significant global threat,[28] particularly in an era of growing microbial resistance.[29] Although MDT has significantly reduced the global incidence of leprosy, official figures still record approximately 200,000 new cases per year. Evidence suggests that this figure may be a gross underestimate of the actual incidence of the disease. The WHO decision to arbitrarily adopt Elimination as a term for control is a misnomer that has served to minimize an important and ongoing issue that will undoubtedly have tragic consequences. The more recent adoption of a new measure based on CDR-G2D by the WHO appears equally problematic.

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Teaching for Citizen Empowerment and Engagement

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High-school and undergraduate curricula in statistics have been criticised inter alia because of: a focus on tractable mathematical models; use of toy data sets; a belief in 'simple to complex' pedagogy; a focus on generalising from small samples to populations; and an over-emphasis on significance testing (e.g. Cobb, 2015; Ridgway, 2015). Questions asked of students rarely relate directly to anyone's lived experiences. This is in sharp contrast to the early days of statistics, when the discipline arose from the need to solve practical problems. In these early days, people with widely differing expertise came together to address problems in agriculture, economics, health, social equality, meteorology and human sciences, often inventing new mathematical models in the process (see Pullinger, 2013). A radical rewrite of the curriculum is overdue: we should teach about socially important topics, use real data, and modern tools and associated ideas.

There is a long tradition of arguing that better information to citizens about social issues will lead to social change, illustrated by Condorcet's (1792) savoir liberateur, and the Neuraths' work on Isotype (e.g. Neurath, 2010); Radical Statistics is an inheritor of this tradition. So what might a curriculum for empowerment and engagement actually look like? There are two key elements: offering

ways to access data; and developing skills in data wrangling and communication.

Reasoning about social issues can be problematic. There is a great deal of information to hand, often gathered carefully by governments and NGOs such as OECD, Eurostat, the World Bank and the UN. Users need to understand something of the processes of data collection and analysis. A fundamental principle is that data are collected by people with some purpose in mind; the choice of issues to address, the creation of measures, data cleaning and data presentation all reflect political and philosophical choices. The use and measurement of GDP, the UN's Sustainable Development Goals, and 'good university' guides provide examples. Measures in the social world have characteristics that make them unsuitable for simple analysis and simple conclusions. Phenomena are multivariate; variables are often correlated; they often interact; there are non-linear relationships; there may be causal relationships. Data are often aggregated, and grouped in diverse ways. Indicator systems are common, and are strongly theory based e.g. should 'poverty' be an absolute or a relative measure? Phenomena change over time, and there are often seasonal variations. Most social phenomena can be illuminated by data from different data sets. Assertions about social phenomena are often embedded in rich text, replete with rhetorical flourishes; novel data visualisations continue to be created, and users need to learn how to read them.

The ProCivicStat project was a three-year project funded by the ERAMUS+ programme and involved a collaboration between six partners in five countries. We created:

- A conceptual framework, mapping out ideas about the components of statistical literacy

- Several hundred hours of teaching materials that can be downloaded - indexed in a variety of ways such as social topic, or key statistical ideas

- A review of dynamic visualisation tools and relevant statistical packages

- Links to data sets
- Sample syllabi
- Workshop materials for teacher professional development
- Tools for analysing tasks, assessment systems and curricula

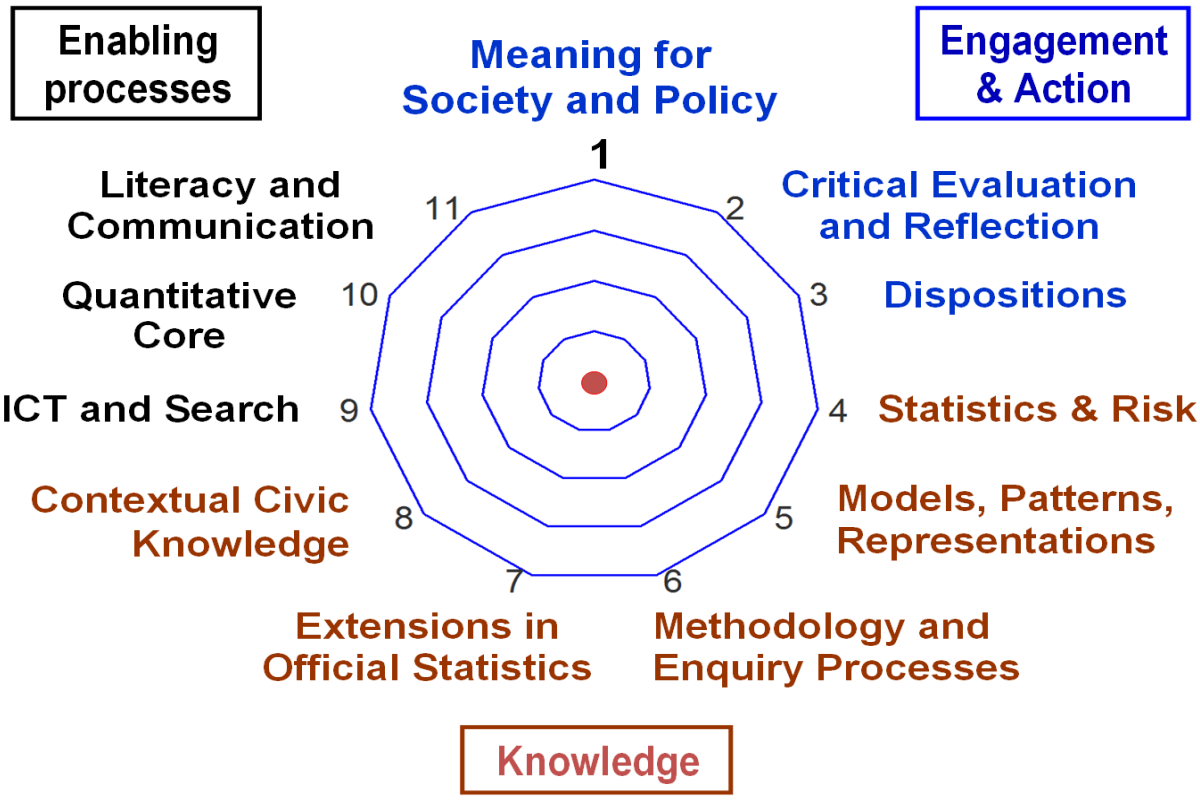
These can all be found at https://iase-web.org/islp/pcs/.

The conceptual framework and the tool for accessing teaching materials are described briefly, below.

Conceptual Framework

Figure 1 shows our conceptual framework for statistical literacy. There are three broad groups of facets, related to: engagement and action; knowledge; and enabling processes.

Figure 1: Conceptual Framework



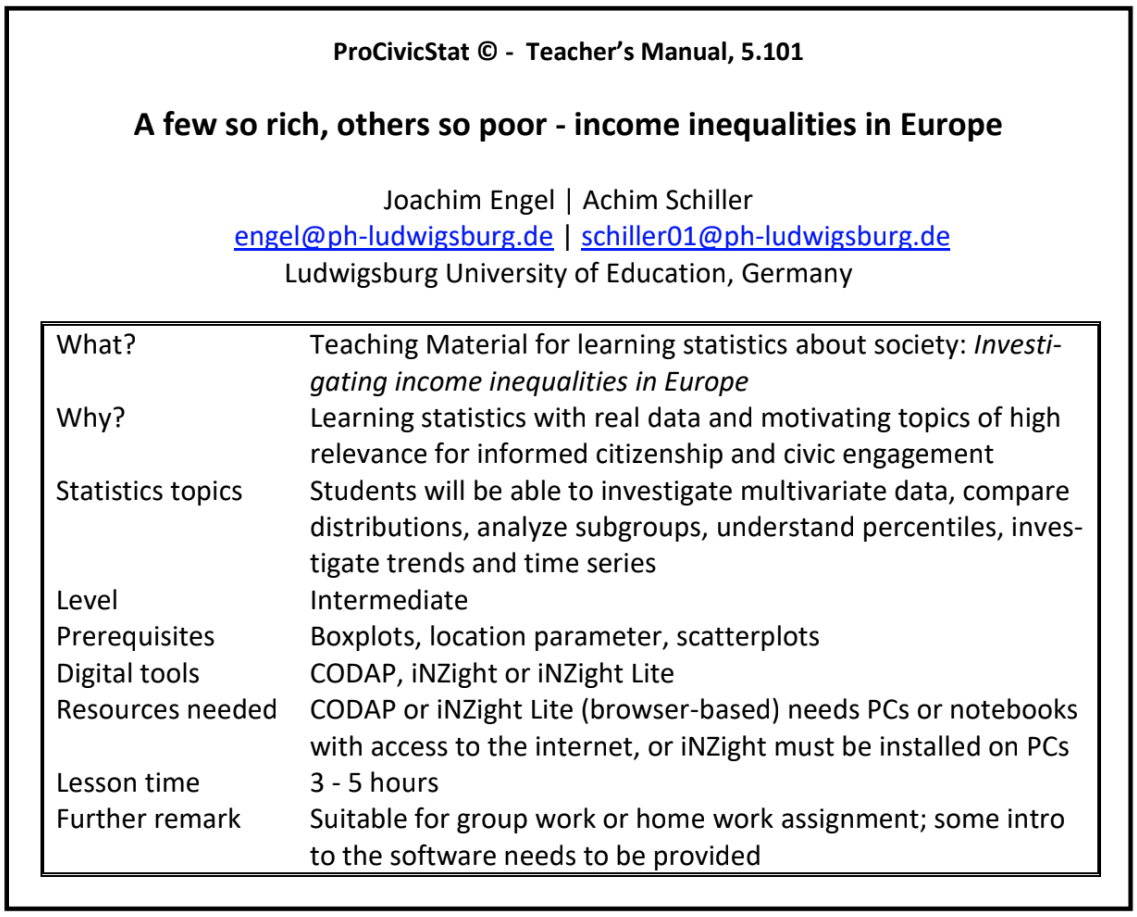
Of these, the most important is Engagement and Action. Willingness to engage with social problems (Dispositions), the ability to evaluate evidence (Critical Evaluation and Reflection) and the

ability to see the implications of evidence for social policy (Meaning for Society and Policy) are key components. Under Knowledge we advocate a broadening of current curricula. The whole process of thinking how a particular issue might be represented and modelled (Models, Patterns and Representations) needs to be problematised; students need to know that (say) using default values in SPSS is actually adopting a specific theory of the phenomenon being modelled. The whole process of exploring social phenomena (Methodology and Enquiry Processes) needs to be explored; critical evaluation depends on an understanding of the strengths and limits of different methodologies. Official statistics is under-represented in many curricula; knowledge about key issues such as inventing measures, sampling, data cleaning and data representation are essential to understanding the uses and limitations of data from National Statistics Offices, OECD and the UN (Extensions in Official Statistics). These authoritative sources provide a good starting point for discussing the politics of data – who decides to collect what information for what purposes? There are also conceptually exciting ideas around the problems of combining carefully curated data with feral 'big data'. Judgements about risk, costs and benefits, expected values, probabilities and subjective probabilities are central to policy decisions (Statistics and Risk), but often receive scant attention in conventional curricula. The last facet in this group is Contextual and Civic Knowledge. In discussions about migration, for example, it is important to know that it is likely to be easier for Germany (population 82 million) to absorb 1 million migrants than for Hungary (population 10 million) to do so, other things being equal. It is essential to know that other things are NOT equal. Enabling Processes comprise Literacy and Communication, Quantitative Core, and ICT ad Search. ICT and Search includes the ability to read and critique novel data visualisations, and to be aware of major sources of information and disinformation (such as deep fake videos).

A fuller description of the conceptual framework can be found here https://iase-web.org/islp/pcs/documents/Conceptual_framework_long.pdf

Teaching Materials

We have created 42 teaching modules that correspond to several hundred hours of teaching time, all presented using a common framework. For each module, there is a teacher version and a student version. A sample of an introductory panel is shown in Figure 2; these have been designed to facilitate browsing by potential users.



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A few so rich, others so poor - income inequalities in Europe

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What?	Teaching Material for learning statistics about society: *Investigating income inequalities in Europe*
Why?	Learning statistics with real data and motivating topics of high relevance for informed citizenship and civic engagement
Statistics topics	Students will be able to investigate multivariate data, compare distributions, analyze subgroups, understand percentiles, investigate trends and time series
Level	Intermediate
Prerequisites	Boxplots, location parameter, scatterplots
Digital tools	CODAP, iNZight or iNZight Lite
Resources needed	CODAP or iNZight Lite (browser-based) needs PCs or notebooks with access to the internet, or iNZight must be installed on PCs
Lesson time	3 - 5 hours
Further remark	Suitable for group work or home work assignment; some intro to the software needs to be provided

Figure 2: Panel from a PCS Teacher's Manual

Fuller details are provided in subsequent sections, such as information about ways to access and drive the (free) software; vices and virtues of the digital tools recommended (here CODAP vs iNZight); information about the context, in the form of links to websites or documents; advice on how to use the worksheets; and some possible solutions (given the nature of the analyses we invite, there is no single correct answer).

The Students' Worksheet begins with brief sections entitled: what is inequality?; why does it matter?; how is it measured? Students are provided with background information, and are then introduced to the data source, and the list of variables (which include income share by deciles of the population D1 – D10), before progressing to specific tasks. The first questions are about values (If you had the choice: would you rather live in…). These progress to specific activities and questions, linked via a guiding question: why in some countries are there large discrepancies between the rich and poor while in other countries the income distribution is more equal? What have countries in common that have a large discrepancy between rich and poor?. Explore and analyse the dataset in search of answers. Try to draw conclusions by means of suitable graphical representations and statistical calculations. How certain are you about your discoveries? The following considerations may guide your investigation.

- Study the distribution of D10 and D1. What characteristics do countries with a high D10 value have in common? Describe the shape of the distribution, location, spread, skewness etc. What do countries with a high D1 value have in common?

- Create a scatterplot of D10 versus D1 and try to fit a line. What is the meaning of the slope? Why is it negative?

- Define a new variable D10/D1 as quotient of D10 and D1 and study its meaning and its distribution.

- Is there a relation between mean income and the new variable D10/D1? Explain why or why not?

- Now investigate the trend of the variable D10/D1 over the years for Portugal, Switzerland and Turkey. Which commonalities do you observe? Which differences?

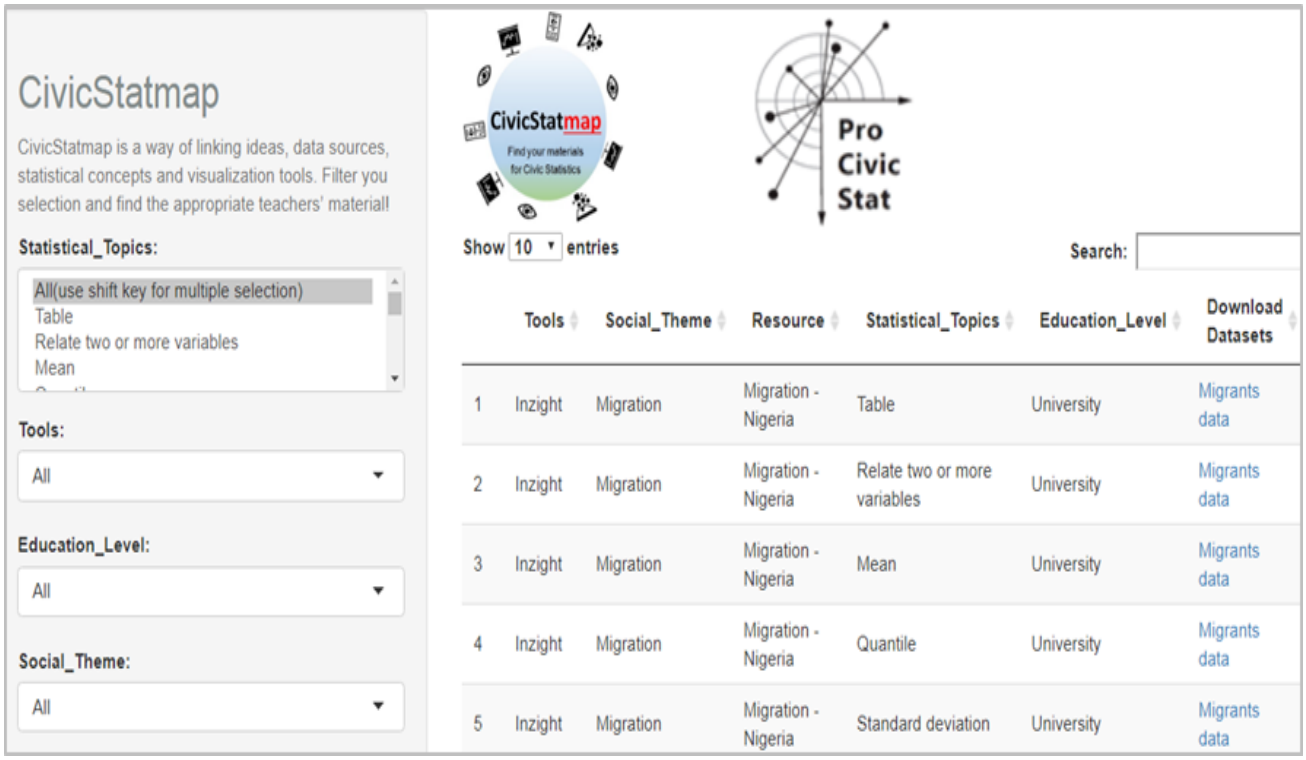
Students are asked to pose two further questions themselves, and to draw conclusions. They are asked how confident they are about their conclusions, and are then asked to produce a counter-argument to their own conclusions.

CivicStatMap

CivicStatmap offers a way to access the teaching resources we have created. A snapshot of the interface is shown in Figure 3. Resources have been created for high school, college and university students. Topics include refugees, alcohol consumption, migration, poverty, racism in football, malnutrition and natural disasters. A wide variety of data sets is used; sources include the World Health Organisation, OECD, the United Nations Children's Fund, Program for international Student Assessment (PISA) and the Center for Disease Control. Commonly used visualisation tools are iNZight, JMP, Tableau, R and CODAP.

Users can search for resources on the basis of one of, some of, or all of: social theme (e.g. climate; happiness); resource or data set (both microdata and microdata); visualisation tool (e.g. RAW, Gapminder); statistical topic (e.g. Gini, Chi-squared); graph type (e.g boxplots, scatterplots); education level (e.g. high school; university); and language (e.g. Portuguese, Hungarian).

Figure 3: CivicStatmap



Associated Resources

Other resources are available on the ISLP/PCS website https://iase-web.org/islp/pcs/. These include sample syllabi, that have been used in partner universities, based on the PCS materials. There are workshops to facilitate professional development, that have been used at conferences for statistics educators in Berlin, Rabat and Kyoto. A review of dynamic visualisation tools and relevant statistical packages is also available, and is described in more detail in Ridgway et al (2017).

Conclusions

Radical Statistics focusses on engagement with important social issues. Many statistics curricula – especially at the introductory level – focus on the mastery of simple statistical techniques, devoid of any substantive content. One consequence of this can be that students are ill-equipped to address issues where there is any level of complexity – such as non-normal distributions, multiple relevant variables that interact, or change over time. Another consequence may be that student perceive statistics as being irrelevant to anything in which they are interested (and difficult, and dull). The ProCivicStat project set out to create and validate resources for teaching that address these problems, and to make these materials easy to access. We hope that this is a useful contribution to support the visions of Condorcet, the Neuraths and many RadStats members.

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REVIEW OF "Desegregation" of English schools: bussing, race and urban space, 1960s-80s, by Olivier Esteves (Manchester University Press, 2018.

Reviewed by Ludi Simpson

While working in Bradford Council in the early 2000s, a young French student asked me about the policy of bussing Asian children from where they lived to schools outside the city centre, a policy that lasted in several English towns from 1964 to 1980. This was before my time so I put Olivier Esteves in contact with friends who had been bussed and I didn't think much more about it.
This astoundingly clear book is the result of Esteves's interviews across England, his searches for primary documentation of a little-discussed policy, and his social analysis of educational and political trends of the time. His commitment to truthful investigation shines throughout his account.

Bussing was a response to the growing number of Asian children in schools in inner cities in the early 1960s. A muddled imitation of the USA, where neither immigration nor language was the issue, coupled with a short-sighted expectation that immigration would be temporary, led to the unjust policy of bussing in a dozen towns in England.

Olivier Esteves summaries that while many young Asians throughout Britain suffered isolation and bullying, "What is different… about bussing is that many thousands of Asian pupils were forcefully transported to far away schools, especially in Ealing and Bradford, that their parents had little or no say in it, or did not know

they could have a say, and that most of these children were of primary age" (15).

The bussing was also unjust because it was only one way (Asian children taken from the neighbourhood rather than white children bussed in), it led the bussed children to isolation and bullying, it denied them access to extracurricular activities (because they were bussed back at the end of the day), and it was based on colour not educational need (English speaking Asian children were bussed). Olivier explores the context deeply, pointing to the lack of resources for inner city schools which bussing relieved, to the racist fear of immigrants exemplified by Enoch Powell's hate-filled speeches, and the quiet administrators' attempts at assimilation and dilution of neighbourhoods with many immigrant families.

Quietness was a feature of the policy. Bussing was not a big issue at the time. It was more in the nature of a short-lived experiment that hardly gets a mention in political histories. In the same period, a pupil-centred revolution in primary education was trail-blazed by the Plowden report of 1967 and the work of the Inner London Education Authority which roundly rejected bussing in favour of neighbourhood schools. Along with the introduction of comprehensive schooling which was planned nationally from 1965, these developments get the bigger treatment in 1960s and 1970s educational history.

The quietness of bussing is also evident in the lack of evidence that surrounds its introduction. It was rarely debated openly. There were few race or ethnicity statistics before the 1991 census first introduced its ethnic group question, despite the Race Relations Acts of 1965 and 1968. UK policy felt it was colour blind. When Dave Drew and I organised a conference in 1983 on ethnic record-keeping, many of the attendees wished to restrict that collection, suspicious of data's use to control rather than to liberate its subjects. Bussing was introduced in response to an evident increase in Asian numbers in a few schools, which offended parents' and administrators' sense of the White normal. According to Olivier Esteves, Education Departments were aware that bussing was on the fringe of illegality,

that it could be challenged because pupils were not chosen on the basis of their English ability, and therefore spoke little about it and did not encourage scrutiny from Community Relations Councils. But bussing certainly mattered to the children (the 'Pakis' on the bus), and sharpened the political consciousness among young people, including those who went on to form Bradford's Asian Youth Movement and the Southall Youth Movement.

Bradford was one of the few areas that kept statistics on immigrant children, perhaps as a result of the small pox outbreak in 1962 that originated with an immigrant from Pakistan. When I worked in Bradford from 1981, the regional health authority's vaccination and immunisation records included a field with categories 'Caucasian', 'Negro', and 'Half-caste', terms that others hesitated to use. In Bradford, dispersal was introduced from the start of 1965 and involved a central medical examination, language centres for the schooling of those with little English language, and dispersal (bussing) for all schools that would otherwise exceed 25% of Asian children on their roll, irrespective of their English ability. It was supported by all parties and praised nationally as pragmatic and efficient.

The general praise for bussing when it was introduced does not stand the scrutiny it deserves but did not get until this book's study.

- Family unity was ignored, unlike for native children's school allocation.
- Bussed children were isolated from their own neighbourhood as well as within the schools they were bussed to, which rarely knew what to do with them or how to respond to bullying from other children.
- The policy emphasised a pupil's family country of origin, rather than educational needs.
- The schools that the children were bussed away from were more capable of dealing with their needs, and sometimes expressed their dissatisfaction with the policy.
- The issue of insufficient school places was not discussed, but transferred to the schools that the children were bussed to; in later

years of the policy some local children were turned away from the bussed-to schools, which fuelled opposition to the bussed children and to the policy.

- As immigration was not temporary, and adults will have children, the number of children to be bussed steadily grew so that bussing became something other than pragmatic and efficient.

Olivier Esteves's book covers the local history not only where bussing was introduced but also in Inner London and Birmingham which rejected bussing. He traces the national discussion, the growing opposition and resistance to bussing, and devotes a chapter to the experience of bussing by the children who were bussed. Not all remember it as a bad experience, though most do focus on the adverse impact of being denied a normal schooling. For some, bullying included thugs from the National Front name-calling and harassing when they left the school gates to get the bus back home. Some became hardened to racism and are grateful for the survival skills learned then and used to succeed later. However, it is in the nature of this research that those interviewed are those now most visible and satisfied with their later lives.

Olivier Esteves's overall assessment is that this solution to tensions of colonial adaptation to the colonies' labour arriving in Britain, was a failure. Its end meant an equality of sorts for Asians who could now be schooled together.

Much of the debate is familiar, as those against bussing argued that it segregates the children by enforcing racialized double standards, while those for it argued that it would prevent segregation by putting children of different origins together. Those slippery words segregation and integration are part of the historical record of debate, but do not contribute to the understanding that this book provides.

Perhaps it helps for an insightful outsider such as Olivier Esteves, to see the bigger picture. Now a professor of British Studies at Lille University, he writes with accuracy and a love of life that clearly motivates his effort to create a greater understanding, and to share it. The book is highly recommended.

MINUTES OF AGM AT 2019

LIVERPOOL CONFERENCE

Radical Statistics Annual General Meeting
23 February, 2019
Liverpool

Present: Peter Bates, John Bibby, Paul Bivand, David Byrne, Roy Carr-Hill, Sean Demack, Russell Ecob, Jeff Evans, Claire Griffiths, Eileen Magnello, David Lamb, Alison Macfarlane, Maurice Marchant, Phil Newton, Wendy Olsen, Martin Rathfelder, Jim Ridgeway, Janet Shapiro, Humphrey Southall, Alistair Cairns (minutes).

Introductions & welcome.

1. Approval of previous year's AGM minutes.

2. Radical Statistics Editors report – Roy Carr-Hill

Roy is thanked for taking lead on the journal for the year. The journal is in need of submissions. More help also would be helpful in specific areas (see AOB).

The book reviews section is being reviewed. An updated system and invitations to review will appear soon to members.

A redesign of the front covers is underway. The current abacus has lasted 15 or so years and several more contemporary and stimulating designs are being discussed by the Editors.

3. Troika report – Roger Cook [appended]

4. Treasurer's report & Finances – David Lamb [both appended] David is thanked.

There has been another year of overspend. This needs to be corrected. Discussion taken on ways of cutting costs, or increasing revenue.

Conferences must be able to cover their expenses. This has not always been the case.

The colour (graphs) in recent journals have added considerable expense to the printing. There is a split of opinion on the value of print journals. There are strong proposals to eliminate it - and to keep it as is. The compromise – to be explored – is to offer RS membership with e-subscription only; and to offer a membership 'plus' at a premium which would include print copies.

Additionally it is suggested RS could: attempt to increase subscriptions; solicit donations; and circulate information about legacies.

5. Membership report – Alistair Cairns [appended] Membership is stable and increased slightly last year, reversing a previous trend.

Alistair & Wendy will arrange to speak about re-designing or re-issuing RS promotional materials. These have been made available for members to bring to events etc but this practice has slipped.

6. Conference organisers report – Stefanie Doebler – All agree this year's conference exceeded expectations. The inclusion of the Pensioners group might have been integrated a bit better but their presence was welcome. Stefi thanked.

7. 2020 Conference – It is agreed to pursue a London-based conference on a theme incorporating the anniversary of Florence Nightingale. Eileen Magnello will start organising additional themes with an emphasis on contemporary and radical political situations (ie the conference will not be primarily historical in nature).

Venue will be looked at as soon as possible.

There is interest in re-trying a Friday conference which would allow more working-age practitioners to attend than a Saturday event. It is hoped – as occurred last time – that this might bring in new, younger attendees. This is approved, pending availability.

2021 is tentatively to take place in Newcastle.

2022 is likely to be in Sheffield.

Some feel promotion of conferences could be improved.

8. Essay competition – Dave Byrne – Dave has spoken with, and plans to meet, the previous organiser in the next few days. Dave reports he is interested in exploring a theme of 'benefits' for the first competition. Traditionally there have been 'student' and 'open' categories.

9. Website/social media report – Robin Rice

The website keeps up to date on the journal and conferences. It could be enhanced with short topical pieces, which would appear as blog posts. Support is on offer. Generally, suggestions and help are welcome.

Radstats has 716 followers on Facebook, and 3748 on Twitter. Both are fairly active.

10. JISC mail report – Alison Macfarlane

There was another 'flare up' last summer, featuring topics of racism and anti-Semitism (neither statistical in nature). Alison intervened and asked for language to be curtailed. The string on these topics was closed and content removed.

11. RS2020 book report – Jeff Evans, Sally Ruan and Humphrey Southall [appended]

The newest Radstats book has a publisher in Policy Press and will go to press this summer.

The Handbook idea is not proceeding at this time.

12. The academic institutional boycott of Israel working group – No updates, and this is presumed defunct. If anyone is interested in resuscitating this effort, contact RS Admin.

13. Any other business

Given the lack of participation on the Troika (currently one member), the need to review impact, stability and entire method of producing the journal, and need for financial review it is agreed to create a temporary working committee. This group will discuss and

propose ideas, circulate as appropriate and come up with recommendations well before the next AGM so that an appropriate amount of time can be given for discussion and decisions.

Motion approved: that we establish a commission to examine all aspects of RS's organisation (including aims and finance, the journal and all volunteer roles) and suggest what changes are necessary to ensure that RS is fit for purpose for the next two decades.

MEETING CLOSES

COMMISSION ON FUTURE OF RADSTATS

BACKGROUND

Minutes of 23rd Feb AGM from Alistair Cairns (Administrator)

Given the lack of participation on the Troika (currently one member), the need to review impact, stability and entire method of producing the journal, and need for financial review it is agreed to create a temporary working committee. This group will discuss and propose ideas, circulate as appropriate and come up with recommendations well before the next AGM so that an appropriate amount of time can be given for discussion and decisions.

Motion approved: that we establish a commission to examine all aspects of RS's organisation (including aims and finance, the journal and all volunteer roles) and suggest what changes are necessary to ensure that RS is fit for purpose for the next two decades.

ISSUES

Aims:

- Problem: What are our Aims now? To what extent do they attract deter new recruits?
- Possible Solution?????

Annual Sub

- Problems: Finance
- Possible solutions?: Donations if not as per NGOs on tele! At least some marketing; Supplement for those who want printed copy

Finance:

- Problem: at current levels of expenditure (vs income), we shall be out of business in 2-3 years; online provides free access to Journal
- Possible solutions: donations/ endowments, badges and marketing, more recruits, raise sub; reduce printing costs; cap on annual conference expenses; fee for Joining Pack for those accessing online only

Journal

- Problem: Financing printed colour
- Issues: Printed or not?; Colour or not?
- Possible Solution? Perhaps B&W printed, colour online

Recruitment

- Problems: stable numbers but growing older and possibly whiter;
- Possible Solutions: Active Marketing at Conferences; 6th Form Colleges, University presence; international marketing?

Troika:

- Problems: What is Management Role – is it clearly defined; current Personnel mostly absent
- Possible Solutions: Clear statement of tasks for Troika members; criteria for membership of Troika (a bit unrealistic?)

Volunteer Roles:

- Problem: many have been 'in office' or several years
- Proposed Solutions:

1. Editor: recruit a stable team?
2. Conference Organiser (rotates annually:)Encourage more local participation – how?
3. Copy Editor: others to provide almost immediate feedback on submissions.
4. List Manager: another recruit to help Alison

Website manager: another recruit to help Robin.

CONTRIBUTIONS

Contribution from Sean Demack

OK, I remember that there was general agreement for the journal to remain in printed form at the moment but the commission would look at how to balance the books – one thing I thought of was to go back to Black & White printing for the paper copy but provide colour online.

Sub rates and expanding membership seem important – there was also mention (David Byrne I think) of seeking funds from members (e.g. via endowments) and to look at RadStats promotional materials (badges were also mentioned … T-shirts / fridge magnets might also follow up). If we do consider changing the subscriptions Alastair noted some logistic headaches around getting members to alter standing orders – and we will need to think how to entice the online-only people to join given that the journal is (appropriately) open access online (e.g. a joining 'pack').

Yes to the need for new younger members – but also to try to increase diversity in terms of gender and ethnicity. I am unsure about the international reach of RadStats (there were a fair few nationalities at the weekend).

I am also pondering about younger people –at A level or even pre-16 – e.g. could have an edition focusing on youth issues and target colleges / 6th forms for membership (sociologists, social scientists, maths and politics types).

Contribution from Alison about Time required for Considering Commission's Report

That's the sort of length of time I think is needed. This year, we were trying to squeeze fire fighting some urgent issues and also having the AGM in the amount of time which was appropriate for a routine AGM. We also need to present the future discussion in such a way as will attract some newcomers. Otherwise, they will think it's just a boring business meeting and stay away. So if we have the conference on the Friday and the 'future meeting' on the Saturday morning. Given the poor attendance on walks in London after recent conferences, we could perhaps leave that out.

The Friday could then have the day's programme followed by drinks for everyone and a meal for those staying over. These would allow time for discussion and perhaps persuading more new people to come back on the Saturday.

Contribution From David Lamb (Treasurer)
Some suggestions to improve the financial position

Events

A few years ago RadStats held a series of annual conferences with relatively large attendances, in excess of 100 people. These events generated a substantial surplus. These conferences were untypical of earlier RadStats conferences, which usually had between 25 and 50 attenders. The three most recent conferences held in Liverpool, London and Edinburgh had an attendance more typical of conferences held in the 1990s and early 2000s. These conferences did not generate the substantial surplus arising from a few conferences held in London and York.

We could organise regional conferences and charge for attendance. I don't expect these, after paying for room hire and catering, would raise sufficient funds to make a difference to the overall financial position. However we should explore the value of holding regional meetings.

A more lucrative source of income could be to offer training in applied statistics and programming. Although we've never profiled the membership of RadStats I have the impression that the employment membership use data in a variety of ways. These people can be grouped loosely in a spectrum in terms of their use of data. At one end are confident users, able to read the technical language of quantitative journals. At the other end of the spectrum are occasional users of data, eg practice managers monitoring primary care activity or administrators monitoring performance in small voluntary organisations. They have probably had some training in statistics, but the lack the knowledge to make an efficient use of data. From experience I have seen eg activity monitoring reports where the writer has not tested for regression to the mean. RadStats members who use data but who haven't had as much training as they would like could benefit from input by more statistically experienced RadStats members.

I believe RadStats could offer support, both in the journal and by offering training, to these individuals so they can make a more efficient use of the data they are required to report. The groups I'm thinking of are research staff in local authorities, researchers in small voluntary groups and activists in community groups. There are likely to be many others who would welcome low cost training.

Would any members of RadStats be willing to offer short courses in data analysis and in the use of Excel and R?

RadStats Journal

When the RSS issued News and Notes, there was a Forsooth column of statistical howlers. The RadStats journal could include a similar page of dubious statements culled from the media. There are plenty every week in newspapers, TV and radio so we wouldn't be short. We could also include some comments on each item to stimulate some debate. I'm thinking of topics like regression to the mean, the ecological and individualistic fallacies, confusing correlation and causation, and Simpson's paradox. Those of us who've worked with data most of our lives are familiar with many of these, but early career RadStats members with a brief training in data analysis may not be so aware of these phenomena.

The journal could include a problems and solutions page, where a data analyst discusses eg a dataset they've had trouble analysing or the experience of being a lone statistician explaining results to non-technical colleagues.

Membership

Ideally we should be more vigorous in promoting RadStats among students of applied statistics and quantitative social science degrees. Is it feasible to write to course leaders in colleges and universities to ask them to distribute marketing material from RadStats?

Name

There's been a suggestion that we should consider another name for the group. We could change to calling ourselves Critical Statistics.

DL, April 2019

Conference 2020

The current state of affairs is that:

Venue

In line with that, I can report that the main room at the St Luke's Centre has now been booked for the full day of February 28 2019. A second space has been provisionally booked for the same day so that if a decision is made to include breakout sessions., we can finally book it for the hours we need. The same space has been provisionally booked for the next morning to discuss the report of the Commission.

Papers

- Eileen Magnello (UCL) “Florence Nightingale: The Radical and Passionate Statistician”

- Lynn McDonald, (Guelph University) “Florence Nightingale and Statistics: What She Did and What She Did Not.”

- Andrew Street, (LSE) “Revisiting Nightingale´s vision to assess the outcomes of hospital treatment”

The remaining speakers will be contemporary statisticians who will talk about their current work that includes the kind of statistics that Nightingale used (including medical, nursing, public health, hospital, maternity and official statistics). Additionally, this includes issues that concerned her, such as poverty, inequality, the lack of sanitation in many parts of the UK and the reduction and elimination of preventable contagious diseases.

Book Reviews for the journal

Radstats wants book reviews!

We are open to suggestions and can discuss any topics or titles.

We will do our best to arrange a complimentary review copy.

Book reviews are expected to be in the 1500 – 3000 word count, but this is flexible.

So, it's about free books, sharing your impressions with other readers, and helping the journal!

Please get in touch with the Book Editor Larry Brownstein at zen143717@zen.co.uk

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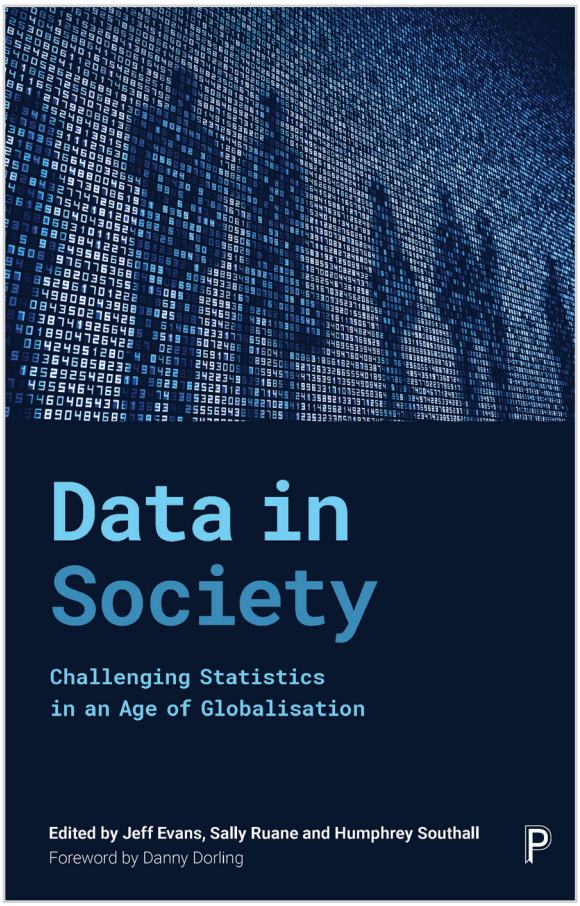

Data in Society

Challenging Statistics in an Age of Globalisation

Edited by
Jeff Evans, Middlesex University
Sally Ruane, De Montfort University
Humphrey Southall, Portsmouth University

Statistical data and evidence-based claims are increasingly central to our everyday lives. Critically examining 'Big Data', this book charts the recent explosion in sources of data, including those precipitated by global developments and technological change. It sets out changes and controversies related to data harvesting and construction, dissemination and data analytics by a range of private and governmental social organisations in multiple settings.

Analysing the power of data to shape political debate, the presentation of ideas to us by the media, and issues surrounding data ownership and access, the authors suggest how data can be used to uncover injustices and to advance social progress..

August 2019

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Part 3: The Changing Role of the State
Part 4: Economic Life
Part 5: Inequalities in Health and Well-being
Part 6: Advancing Social Progress Through Critical Statistical Literacy
Book Epilogue

Chapter authors include: Christina Beatty, David Byrne, Jay Ginn, Harvey Goldstein, Jonathan Gray, Stewart Lansley, Richard Murphy, David Rhind, Prem Sikka and David Walker

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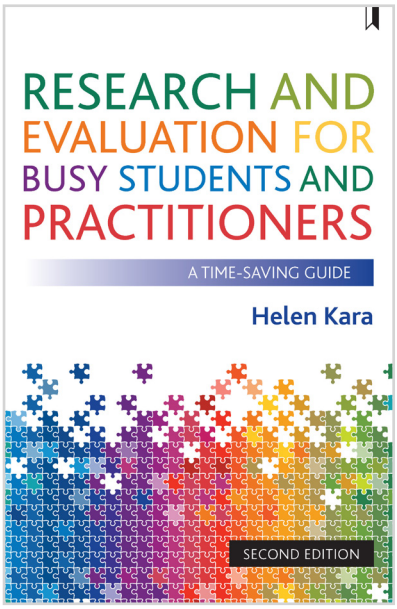

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