
Ten Commandments for Fiscal and Statistical Literacy: Number, Equivalence, Power ¹

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Abstract: Taxation meets Radical Statistics

Tax is numbers !! How can we leverage this to enhance fiscal and statistical literacies?

Tax is equivalences (trade-offs) !! Can we compare tax policies using a common *numéraire* like ‘micromorts’?

Tax is power !! How has Radstats succeeded in highlighting statistics as an agent of political hegemony?

Introduction: The 2022 Radstats conference organisers are to be congratulated on bringing together two key themes – TAX and STATS (on average, a four-letter word). These two complex organising systems have developed side-by-side over the centuries. Both were founded for reasons of statecraft and of war – intrinsically oppressive instruments. Both enhance military organisation and state control and may therefore be justly accused of continually enabling and enhancing inequality, poverty, oppression, and other iniquities of the capitalist system.

The Covid crisis of 2020 has underlined and strengthened their role as instruments of state control.

Taxation and statistics are both intrinsically complex systems. They are both also intrinsically ideological – but in different ways. Taxation presents an ideology of financial extractive capitalism using annual budgets as the all-important constraint; Statistics is an ideology of

¹ This paper is based upon a paper with similar title (Bibby 2022), presented on 26 February 2022 at the Radical Statistics virtual conference 'Taxing wealth, reducing inequalities'. Thanks are due to David Lamb, Wikipedia, T. H. Huxley, George Bernard Shaw, Moses, Marx and others, as well as many members of Radical Statistics for their help and support with this paper and with my statistical underdevelopment over the years.

calculation and comparison, with uncertainty as its key theme. Tax is the ideology and science of getting money from the poor; statistics is the ideology and science of evidence – of working out “What’s going on?”.

Numbers, Equivalences, Power:
Ten Commandments for Fiscal and Statistical Literacy

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MATHS IN THE NEWS
0.98% for the first time since 1997
0.03% for the first time since 1997

QUESTIONS
Tax is numbers? How can we leverage this to enhance fiscal and statistical literacy?
Tax is equivalences (trade-offs)? Can we compare tax policies using a common numerator like 'income tax'?
Tax is power? How has Radcliffe succeeded in highlighting statistics as an agent of political hegemony?

12 Oct 21
13 Oct 21

Age Demographics

Simpson's paradox

Images of vital literacy/literacy – some sound, others not

1

Taxation and statistics both play key roles in discourses of state power and in its physical implementation. Their complexity and mystification are often unnecessary. Both lead to injustice and both are essential to the capitalist project. To subvert this project we must control the discourse. One way of doing this is to develop and disseminate strongly critical statistical and fiscal literacies which can subvert and minimise the mystificational potential of these two strong complex ideological systems.

A tiny thread in this campaign of ideological subversion may involve new canons of statistical and fiscal literacy that allow society’s power imbalance to be coherently discoursed, analysed, understood, and contested. What are the canons that enable this to be done? I hope that this paper and the discussions to which it may lead may point to some feasible and achievable answers.

The paper presents canons of fiscal and statistical literacy using the Mosaical notion of “Commandments”. These should be interpreted ironically, but not exclusively ironically. All religions and faiths require ethical watchwords – banners under which we can march - and the faith which asserts the need for statistics literacy is no exception. “Simplicity and Justice” may be such a watchword for such a banner.

Our systems of taxation and of statistics are unjust precisely because they are so complicated. None but the rich can afford the time, energy, and bought-in expertise which are required to negotiate the complexity. The complexity may even *a deliberate conspiracy* - deliberately designed to deceive, delay and dominate. Certainly the failure to remove the complexity is deliberate.

Simplicity and Justice are interrelated twin ideals. Each supports the other – each is necessary but not sufficient for the other. In the words of the old song, “You can’t have one without the other”. It is the *complexity* of statistics and of taxation which leads to their mystifying effect and the consequential power imbalance.

Other themes to be developed below include the following:

- Statistics is at risk of becoming a religion
- This process has been accelerated by the Covid pandemic which has distributed costs and benefits in class-laden directions.
- *Everybody* now fancies themselves as a statistician – which is as it should be. That is one reason why statistical and fiscal literacy (reading/writing/speaking) are so important and so contemporary.
- Statistical and fiscal literacy may be enhanced by presenting data using *comfortable* units which tie in with people’s lived experiences (“everyday familiarity”). *Numéraires* such as the MicroMort (MM), MegaPenny (Mp), and even the “Great North Road” (GNR) can help. These will be discussed, along with proposals for a Land Value Tax (LVT) and for Universal Basic Income (UBI).

The author is not an expert – but nor was Moses! This paper is ‘advocacy from ignorance’ and is designed to present ideas for chewing over, for discussion and debate.

Fiscal and statistical literacies:

John Berger used “Ways of Seeing” as a metaphor for analysing social and cultural power. But he was focusing on gender, art, and ‘softer’ forms of analysis. For fiscal and statistical issues, “Ways of Knowing” seems a better starting-point, especially for the ideologically blind and sight-impaired.

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There are commonly said to be three “types of knowing”: knowing THAT, knowing HOW, and knowing WHY.

1. **‘Knowing THAT’** includes indisputable facts such as “Berlin is the capital of Germany” or “Three times five is fifteen”, and other types of knowledge often disparaged as ‘Gradgrindian’. This can be extremely useful in pub quizzes and more importantly as gateway knowledge into other types of knowing and learning, which cannot be fully appreciated without a certain amount of Gradgrindian information. A second type of “Knowing That” includes strict indisputable moral imperatives such as “Eating people is wrong”, although even that is subject to the Cannibal’s comment that if eating people is wrong, why did God make us of meat?

2. **‘Knowing HOW’** requires skill as well as knowledge in linking factoids from Level 1. This may be technical, e.g. how to wire a plug or how to conduct a t-test in statistics.

3. **‘Knowing WHY’** lies deeper than the other two levels. It requires knowledge and understanding of theories of causation that link individual factoids and groups of facts from Level 1.

Each level of knowing parallels an equivalent level of understanding, which is not necessarily the same thing. Statistical and fiscal literacy draw upon all these levels of knowledge and understanding. Examples from fiscal literacy might include the following:

1. ‘The basic rate of income tax is 20%’ might be one example of Level 1 fiscal literacy.

2. Level 2 of fiscal literacy could include an understanding of how the 20% rate of income tax relates to other features such as higher income tax rates, nil tax bands, and tax favours that exempt certain types of income from income tax altogether. It includes knowing a maze of factoids from Level 1, along with skill at knowing how to negotiate a way through the maze in a particular situation.

3. Level 3 fiscal literacy would include an understanding of the strategic and ethical principles which underlie a particular theory of taxation, for example the notion that “all budgets must balance” or the need to distinguish between wealth and income taxation.

The ‘three levels of knowing’ in statistical literacy might be illustrated with the following (all taken, for topicality reasons only, from statistics applied to the current Covid outbreak).

1. ‘The R value is 1.1’ or ‘There were 1000 Covid deaths today’ would be two examples of Level 1 statistical knowledge.

2. ‘The R value goes down when people socially distance or wear masks’ would be one example of Type 2 knowledge.

3. ‘The SIR model of statistical epidemiology is the following (then follow the list of equations)’ could be an example of Level 3 statistical knowledge.

In some situations, what is regarded as Level 3 in the above examples could be regarded as Level 1 knowledge for a more advanced context. For example, a Masters Course in Epidemiology may take the full understanding of the standard SIR model as ‘Level 1’, upon which further theories and skills may be developed.

“Ten Commandments”

Commandment 1: All Commandments may be broken
BUT NOT THIS ONE !!



Commandment 2: Use confidence bands (All figures here are “broad-brush”, say $\pm 20\%$)

Commandment 3: Use percentile or decile points, not *intervals*

Commandment 4: Above all, “Justice and simplicity” shall be thy watchwords

Simple and Just !!



2

‘Commandments’: The author of this paper does not have the infallible Authority which Moses could claim for *his* commandments; *this* author claims *no* expertise and possesses *no* unchanging tablet of stone. So the commandments spelled out here should not be interpreted too rigorously, seriously or unquestioningly - except for the first and most important commandment which is:

Commandment 1: All Commandments are made to be broken BUT NOT THIS ONE !!

This libertarian edict may not appeal to serious religionists accustomed to power and control – but a coven of logicians might wonder whether it exemplifies Russell’s paradox of self-contradiction.

Commandment 2 applies to statistical literacy and is unlikely to appeal to anybody outside the statistics fraternity. It stresses the importance of *uncertainty*: “Begin with certainties and you will end in doubt; begin

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with doubt and you shall end in certainties”, as Francis Bacon put it. Or, more concisely:

Commandment 2: State confidence bands.

However, confidence bands must be *understood* as well as stated. The niceties of differing statistical philosophies (Bayesian, frequentist etc.) are not of major significance and are vastly over-rated in statistical teaching. (They are good for exam questions but not important in everyday life.) The most important nicety relating to statistical confidence is the calibration criterion that 50% of statements made at the 50% confidence level should turn out to be correct (and 50% should be wrong). In this paper, all figures are “broad-brush”, say $\pm 20\%$. That is, 50% of statements are correct to within $\pm 20\%$.

As a side-commandment beside Commandment 2 we give

Commandment 3: Use quartile, decile or percentile *points*, not *intervals*.

Even the technical literature contains confusion about the meaning of quartile, decile and percentile. These are often used (erroneously) to refer to a *group* e.g. the top decile means those above the 90th percentile. Under Commandment 3, this is wicked, evil and pernicious. It leads to confusion and above all it introduces practical difficulties, as extreme points are always the most difficult to evaluate. For this reason it is much better to compare quartile, decile or percentile *points* as in common terms such as interquartile range and inter-decile range. Where the data does not allow this, clarity in statistical literacy (i.e. clarity in writing and speaking as well as clarity in reading) requires clear statements if decile or percentile *groups* are intended. (Newspaper reporting is poor on this: “top decile” is needlessly ambiguous – often unclear whether it denotes a point or a group. NB: Focus on medians, quartiles and deciles led Open University Course MDST242 to emphasise the “7-figure boxplot”, a technique that goes back to Arthur Bowley – see *Radical Statistics* 120.)

Our fourth commandment has already been referred to. It is far easier to state than to apply and links two conflicting, unmeasurable criteria:

Commandment 4: “Justice and Simplicity” shall be thy watchwords.

Fortunately, Justice and Simplicity tend to complement each other and are not usually in conflict. They are admittedly rather trite, self-evident concepts, like Love, Motherhood and Apple Pie, and this commandment

does not specify how to deal with trade-offs e.g. How much Motherhood may be sacrificed for a given quantity of Apple Pie.

**Sex, Statistics, Religion:
Dangers of Size and Certainty**

Stats + Data Science: "The sexiest professions of the new millennium"
(Google Chief Economist)

£252
Average amount of the most common
complaints in a partnership
considered in the relationship

£15bn
Estimated value of the most
valuable start-up in the world, according to estimates

£12m
Average amount of the most common
complaints in a partnership
considered in the relationship

£156
Average amount of the most common
complaints in a partnership
considered in the relationship

£62.40
Average amount of the most common
complaints in a partnership
considered in the relationship

75%
Average amount of the most common
complaints in a partnership
considered in the relationship

Commandment 5: Thou shalt not fetishize *BIG* numbers

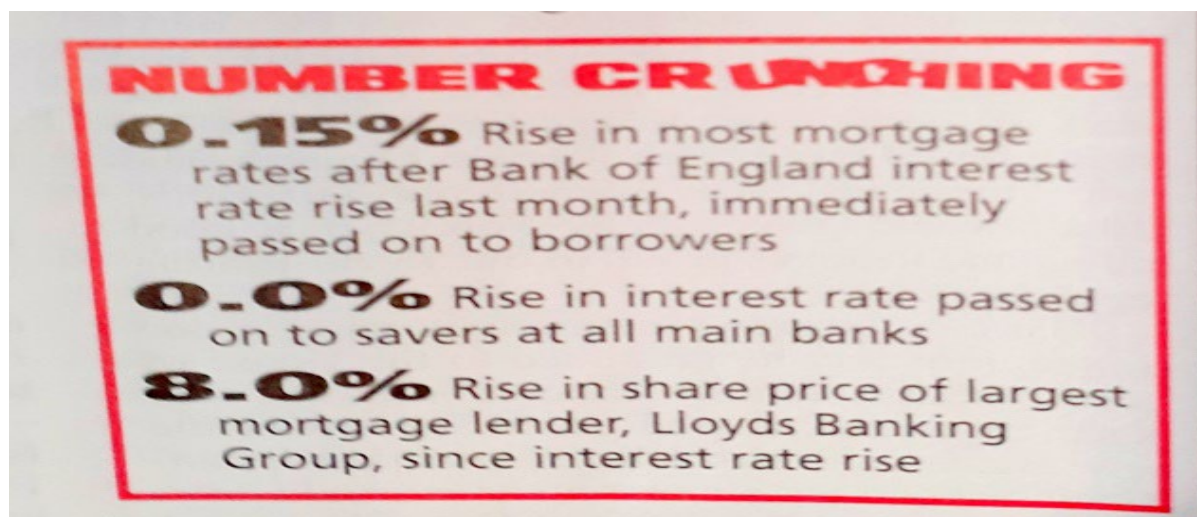
- Personally lucrative
- Socially/economically valuable
- Exciting
- Continually developing

(BIG data, AI)

3

At the beginning of the century. **"Statistics is Sexy"** was a popular rallying cry. It led to a massive increase in mathematics students in a generation that has now taken over the City. Data science, statistics' younger sib, was also predicted to become "the sexiest profession of the new millennium". In 2013 Google's chief economist, Hal Varian, stated that statistician would be **the** sexy job of the 2020s. He was thinking particularly of how the up-coming "datarati" would leverage technological and data developments using routine split plot experimental designs with other statistical ideas to assess and improve outcomes *in the routine course of normal activities*, whether these are educational, health/ medical, social/remedial or just the normal boring capitalist production of widgets. Sexy or not, this seems like a sound idea: costs would be small while informational gains could be cumulative and huge.

However statistics, like sex, has its dangers. Both are easy to do, but also *easy to do wrong*. Also, it's not so easy to *advise others how to do it*. That requires real skill. As shown in Slide 3, some newspapers fetishize numbers in ultra-large print almost as an art-form. In this *The Guardian* is a key offender. Their large-font figures often have no meaning and little value except if they improve the typography in a cost-effective manner, looking good on the page in a superficially crass oversimplifying way. *Private Eye* as usual is ahead of the game: their "Number Crunching" feature is not solely ironic; it often brings together numbers which together make a sound political point.



point.

Why is statistics sexy? One reason for the ‘sexiness’ of statistics is that statistics is increasingly *visible*, and increasingly becoming *technological*. Another is that SIZE MATTERS, and statistics increasingly involves BIG NUMBERS. Here, by ‘Big’ I mean large numerically, not typographically. So ‘big’ numbers are millions, billions, trillions and zillions. Journalists seem to be excessively and irrationally committed to using such large numbers (which is the dictionary definition of ‘fetish’).

Commandment 5 : Thou shalt not fetishize BIG numbers.²

How many people know what these BIG numbers mean? They are often used simply to impress using shock and awe, and to incite the literally mind-numbing response “*Gee Whiz, that’s a lot!*”

How many people know the differences between a million, a billion and a trillion?

² I was glad to see the BBC’s editorial guidelines on “Big and Small Numbers”. These emphasise the importance of ‘everyday familiarity’ in the numbers and units that journalists use: “Just because a number is very big or small does not make it substantial”, the guidelines read: “Big and small numbers are difficult to understand without any context. Millions or billions are not part of our everyday experience so it is not easy to judge if they are actually big or not. ... To make sense of big numbers we should put them in context and divide by the number of items to which they relate or people they affect. For example, an annual figure measuring public spending is better expressed in human terms by dividing by the population. This will give you a more meaningful measure of what the figure represents per person per year. Or an increase of government spending on nurseries should be divided by the number of 3-4 year olds in the population.” <https://www.bbc.com/editorialguidelines/guidance/reporting-statistics/#bigandsmallnumbers>

A quick question: If I had £3 trillion, how much would that be if it were distributed equally between every person in the United Kingdom? What would be the length of a trail of £3 trillion in pound coins laid side-by-side in a line? What if the £3 trillion was in *penny* coins instead?

Commandment 6: Give rough estimates where possible (with confidence bands)

Sex, Statistics, Religion: opportunities and threats

"It is the fate of new truths to begin life as heresy and to end life as superstition"
(T H Huxley)

Dangerous features of religion – and of statistics:

- *ritualistic, repetitive* ('RSS' = Repetitive Statistics Syndrome)
- *produces hierarchies of committed professionals working in silos as missionaries, infecting non-believers with belief*
- *intolerant/dismissive of 'ignorant' non-believers*
- *fails to notice hidden faces and voices unheard.*



*That voice unheard,
those eyes unseen,
That touch unfelt,
was, a bit keen
to turn into reality
someday—
And drag me out
Of my dream.*

Medha Dalal



Commandment 7: Beware the dangers of fashion and conformity

Commandment 8: Think outside the box

4

Statistics in danger of becoming a new religion

The Covid Crisis of 2020 led to two worldwide pandemics – the pandemic of disease, and the pandemic of statistics. We became powerless against these two all-powerful and all-pervasive Gods.

The role of statistics in enhancing state control has already been mentioned. It also led to changing power within society. The following have had their power enhanced:

- purveyors and interpreters of statistics
- those whose daily catechism involves telling the flock to “follow the data” or “follow the statistics”.

As in all religions there were also of course the statistical nonbelievers - nay-sayers who deny that statistics has the answers, or at least *not all* the answers.

Statistics played a key role in Boris's daily 5pm Downing Street catechism or press conference which was often more like a Papal Enclave than a genuine conference. The attendees no doubt included many from today's audience who also played the role of vicars (representatives) and ideological disseminators of the statistical god. There was considerable repetitiousness and conformity pursued. For example, the furlough system broke one box of conformity (the idea of a balanced budget), but it retained the dominant belief that "business" is all-important rather than "people". It did not learn the lessons of the 2008 financial crisis which should have used quantitative easing to support people, not banks and bankers. *People-support is more important than business-support*. It is egalitarian and direct, rather than indirect, relying on trickle-down from business-owners and capitalists. In short, the following two Commandments were overlooked:

Commandment 7: Beware the dangers of fashion and conformity

Commandment 8: Think outside the box.

In considering statistics as a religion we must also keep in mind the question: Is statistics in danger of becoming a superstition? We recall Huxley's dictum that new truths begin life as heresy and end life as superstition. In the 1800s, statistics was often a subversive ally of the new sciences which were threatening the place of religion in society. But statistics has now become so procedural and ritualised that its radicalising impact is reduced.

There are many other features common to statistics and religion which should make us pause for thought:

- *statistics and religion both easily become comfortable, ritualistic and repetitive*
- *statistics and religion both produce hierarchies of committed professionals who work as missionaries in a silo – their aim being to infect non-believers with belief*
- *statistics and religion can both be intolerant/dismissive of 'ignorant' non-believers*
- *statistics and religion can both fail to notice hidden faces and voices unheard.*

These will now be considered one-by-one.

Dangers of the statistical religion (1): Ritualism and repetitiveness

The Bible according to Boris provides many examples of this dangerous aspect of the statistical religion:

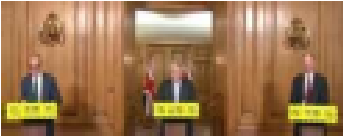
1. Rituals and religion: Boris’s 5 o’clock Downing Street show

Boris’s daily 5pm Covid mass delivered a televised eucharist of life and (sadly) death. The unforgiving Almighty announced repeatedly (at different times), the number of deaths, the number of infections and the number of jabs. First it was “R, R, R”; then it was “deaths, deaths, deaths” and “infections, infections, infections” until finally it became “jabs, jabs, jabs”. It’s like the numerical plagues of Egypt!

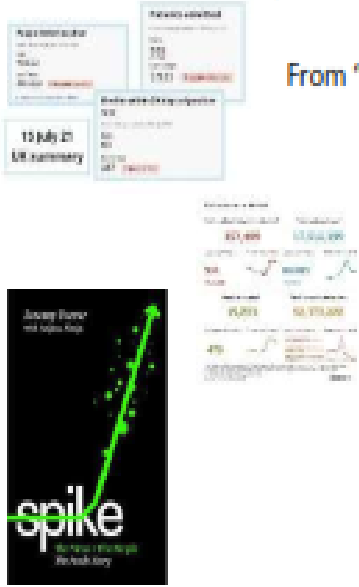
in the way that the pandemic was portrayed, and a failure to think “outside the box”, in particular to consider the unintended consequences of remedies being

Ritualism: the 5 o'clock show

('RSS' = Repetitive Statistics Syndrome)



From "R, R, R" to "deaths, deaths, deaths" to "jabs, jabs, jabs"



Missing comparators – compared with WHAT?

Covid fractions:

- Covid deaths / Total deaths
- Covid positive tests / total number of tests
- Covid hospitalisations & ICU beds/ totals
(confusion of stock and flow)

Simple and Just!!

5

All these data are extremely fallible. But we were not given the fallibility, we were just given the certainty of large, apparently precise numbers. The many gaps were generally jumped over. We were not told that data is like Edam cheese – full of holes. (Some data is more akin to Edam holes, randomly distributed in a universe of bland nothingness.)

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Data on infections are extremely fallible. Unreported infections could double or treble the reported figure.

Data on deaths had unfortunate reporting delays which varied by day of the week, and there was a tricky distinction which varied over time between “Deaths with” and “Deaths from” Covid. More importantly however, the data on deaths omitted a meaningful comparator (except much later, when the concept of “excess deaths” entered public consciousness).

The obvious comparator for Covid deaths is the total number of deaths for the same population or sub-population. On a typical day, some 1500 people die in the UK, and 1800 are born³ – that’s approximately 500,000 deaths and 700,000 births in a typical year. So at the peak of the pandemic, when up to 2000 Covid deaths were reported in one day, this more-than-doubled the usual death rate: the average death-chance was twice what it usually is (which for most people is infinitesimally small – less than a one in a million per day). More typically over the course of the pandemic, the number of Covid deaths has been less than 100 per day i.e. well under 10% of total deaths.

By providing a comparator such as the total number of deaths, Boris could have contextualized and de-emotionalised the dangers from Covid and put them in perspective. This would have reduced mental distress and could have changed public perceptions and public policy.

Similarly, when the emphasis was upon the number of positive tests we could have been given the number of negative tests too. And when hospitalisations or staff absences were given we could have been told the total number of beds and the total number of staff. In short, the 5 o’clock show went for emotion and drama, and failed on contextualization and on the following commandment:

Commandment 8a: Use comparators, especially where emotions are involved. (“Compared with *what?*”)

2. The Great God “R”: a further example of deification.

³ “*Every moment dies a man, Every moment one is born*” wrote Tennyson. But we all know that models break down in crises (Simon Levine). As the pedant Charles Babbage responded to Tennyson, “If this were true, ... the population of the world would be at a standstill. In truth, the rate of birth is slightly in excess of that of death. I would suggest [that the next edition of your poem should read]: “*Every moment dies a man, Every moment 1 1/16 is born*”. “Strictly speaking,” he added, “the actual figure is so long I cannot get it into a line, but I believe the figure 1 1/16 will be sufficiently accurate for poetry.”

Jeremy Farrar's excellent scientific thriller, "*Spike*"⁴, ends with a critique of SAGE which, he says "could have more clearly communicated the simple mathematics underlying pandemics and warned more trenchantly against optimism bias and confirmation bias". In the "simple mathematics" to which he refers, the variable "R" plays a key role, and R was given a leading part in the early 5pm news conferences. However, it soon became reified as though R were an impersonal, external GIVEN, a uniform constant. Bayes was never mentioned!

However, this decontextualising is an over-simplification which has the effect of minimising potential for social and personal agency. An alternative would present 'R' not as God-given and external, but as a personal parameter which can be kept under control by personal and social actions. That is, *everybody has their own personal R*. It changes over time, and varies according to personal, social and environmental characteristics. R represents the expected number of people that one person (**YOU !!**) will infect if you are infectious. So, by limiting social contacts you have some control over your personal R.⁵ A clearer understanding of this would have provided context and could have encouraged better understanding and commitment, and led to better social practices and more effective and possibly less restrictive legal restrictions.

Commandment 8b: Make very clear what is fixed and unchangeable, and what can be changed.

3. "Voices unheard, eyes unseen"

Apart from the effects mentioned above, Ritualism and Repetition also have the effect that focus is always upon one thing while other things get ignored. The world becomes a nation of binaries – the counted and the uncounted. As a general rule, "the uncounted do not count". This is relevant to uncounted *individuals* and *groups*, but it also refers to unmentioned *categories* and *causes*. This leads to "Voices unheard, eyes unseen", which has two particular aspects. One is that *most* people are

⁴ Farrar, J. and Ahuja, A. (2021, p.229) *Spike: The Virus vs. The People - the Inside Story*. This book also provides an excellent account of the main *dramatis personae* in the world's anti-Covid drama: it is trenchantly critical of Whitty's delay in taking the virus seriously, scathing about Boris and Hancock, highly complimentary about Ghebreyesus, WHO, and Kate Bingham, and apologetically complimentary about Dominic Cummings. Ian Diamond (p.137) is a "brilliant chief statistician".

⁵ So in SIR models and models which use R, R is a stochastic, multi-level, time-varying parameter. It is not fixed.

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far from average: 50% of people live outside the inter-quartile range, and subgroups vary immensely. There is *always* geographic variation. This seems to continually surprise journalists who love to call it a “postcode lottery”. In fact it is often a function of local democracy as well as local demographics and epidemiology.

“Voice unheard, eyes unseen” (1)

That voice unheard,
those eyes unseen,
That touch unfelt,

Unheard comparisons:

- Postponed operations
- Damaged children
- Stressed families
- Africa + Third World



Commandment 9: Beware statistical nationalisms,
classisms and class denialism

6

Normality is abnormal. But a second aspect of “Voices unheard” is that numbers that are *not* collected represent questions or ‘causes’ that are overlooked and ignored. Both these can be illustrated with reference to Covid.

Boris’s continual stress on totals and averages overlooked the fact that different people and different groups play the Covid game with different dice. The dice are not ‘fair’; they are biased. Eventually work was done on this – on the impact of ethnicity, gender and occupation. Initially the only variables mentioned were age, region and ‘special vulnerabilities’. The fact that men were more vulnerable than women was (of course!) underplayed: it was conveniently masked by the fact that women live longer; there are *many* more old women than old men. (In the UK Life Table, for every 1000 men at age 90, there are 1560 women; but at age 90, a woman’s life expectancy exceeds that of men by 15%; moreover, women are generally healthier.)

Housing and social class have been especially un-mentioned throughout the Covid epidemic.

Also, the 5pm focus upon deaths and NHS beds ignored the other damages due to Covid and, more importantly, ignored the damaging impact of the health restrictions imposed. It is understandable that schools were closed in the panic-ridden days of March 2020 – but panic

would have been unnecessary if Tory cuts had not left Britain in such an ill-prepared state. Too much policy is driven by headlines: I would be interested to know how many lives would have been saved if the billions spent on terrorism (which statistically speaking is a minute threat) had instead been spent on pandemic preparedness.

However, after the initial two weeks of crisis, a better policy might have been to open the schools, with social distancing measures to protect the elderly especially in multi-generational households living in restricted accommodation. This would have reduced a lot of the ‘collateral damage’ which resulted from lockdown. Youngsters aged 1-5, 9-12 and 15-19 have been particularly vulnerable to government policy.


Further categories of Covid ‘collateral damage’ which merited more attention included the following:

- Postponed operations
- Damaged children
- Stressed and damaged families.

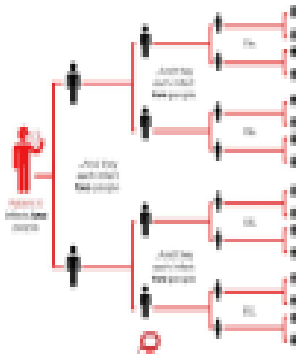
“Voice unheard, eyes unseen” (2)

- **Commandment 10: Use comparators, especially where emotions are involved.**
(“Compared with WHAT?”)
- **Commandment 11: Make clear what is fixed and unchangeable, and what can be changed.**

That voice unheard,
those eyes unseen,
That touch unfelt,



“People forget what you say and forget what you did, but they never forget how you made them feel.”
Maya Angelou



“W”: Not God-given and external, but a personal parameter which can be kept under control by personal and social actions

7

Also, very importantly, Africa and the Third World were rarely mentioned. It still seems a miracle to me that the impact of Covid in Africa was not far, far worse. And it is shameful that we are talking now

about fourth injections in Europe when many in Africa have not received their first.

Commandment 9: Beware statistical nationalisms and classisms

Commandment 10: Use comparators, especially where emotions are involved

Commandment 11: Make clear what is fixed and unchangeable, and what can be changed

Dangers of the statistical religion (2): hierarchies of committed professionals

As statisticians we are proud of our role as ‘professionals’ i.e. members of a “profession” – we speak an arcane language; we are exclusive in the sense that entry to our profession requires a training of sorts; and we like to retain that exclusivity.

George Bernard Shaw’s *Doctor’s Dilemma* defined professions as ‘conspiracies against the laity’. Of course statisticians are nothing like the doctor, vicar and lawyer shown here in a 19th century cartoon. But in some ways we are similar. (What, one wonders, would feature in the speech-bubble of today’s cartoon showing a statistical consultant’s client?!)

We know that doctors are said to define themselves as gods. Are statisticians at risk of being deified too? One of the functions of statistical literacy is to ensure that this does not happen. Demystification involves de-deification.

However, just as goldfish do not sense the bowl in which they live, we often fail to recognise the silos within which we live and work, the environments which constrain our contacts, and the ideas and opinions outside those which we usually come into contact with.

Silos can be social as well as ‘disciplinary’ (university ‘disciplines’): How many people do we know who are farmers, live in tower blocks, or are members of the ‘precariat’? Few, in my limited experience.

Also, professions are intrinsically conservative: we teach in false academic silos and we generally teach what we learned, often using the same teaching techniques that we learned by: it was good enough for us, so why should we change? Are modern techniques reflected in what we teach? (I find it worrying that my book on Multivariate Analysis, published over forty years ago, is still selling as well as ever.)



We

A 19th century etching of a farmer consulting with his doctor, vicar and lawyer



Commandment 12: Burn textbooks over 10 years old – and professors at 70 (Editor’s addition: *but then you wouldn’t have an editor*).

Dangers of the statistical religion (3):

How do we learn NOT to hear the voices which remain unheard? Unhearing is a skill that we easily learn. One method is to avoid the discomfort of thinking “outside the box”. We may fail to engage with out-of-the-ordinary ideas. We love our own comfortable cocoon with comfortable, oft-repeated ideas. Conversing with and *listening to* people who disagree with us can be a disagreeable experience.

"Voice unheard, eyes unseen" (3):

'Gee Whiz' numbers; 1.6°

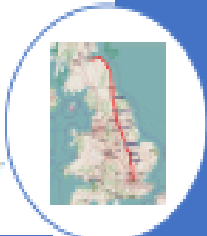
"500,000 houses must be retrofitted to avoid overheating" (Gee Whiz numbers)

Consider both sides:
Global warming: Does it have advantages as well as disadvantages?

1.6° = 1 GNR = difference between London and Edinburgh
(Daily and seasonal differences are much, MUCH bigger); GNR = "Great North Road"

Hear	Avoid	Convert	State	Count
Commandment 12: Hear "voice unheard"	Commandment 13: Avoid lone data. Use comparisons (% or per person)	Commandment 14: Convert "Gee Whiz" numbers into rates and bite-size chunks	Commandment 15: State your universe	Commandment 16: Count pluses and minuses, not just one side

That voice unheard,
those eyes unseen,
That touch unfelt,



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For example – we hear incessantly about the dangers of global warming. But have you ever looked at the question of the *advantages* of global warming? That question is near-taboo. I have been called a “climate change denier” just for raising the question. That is completely false.

I agree that climate change is happening and that most of it – the worrying bit - is anthropogenic (man-induced). However, climate change is a bigger concept than global warming, and the main dangers of climate change lie *not* in the average change of temperature, but in the extremes and in unpredictability. Great heat and great cold can kill. And unexpected droughts and floods. These are the extremes that kill. The averages are less important.

Also, small increases in average temperature have advantages as well as disadvantages. The main problem is that the advantages will further advantage the already-advantaged, while the disadvantages will disadvantage the already-disadvantaged.

Two examples will suffice – one important, the other relatively trivial.

The trivial advantage accrues to vineyards and avocados in Yorkshire. If global warming increases we may get better wine soon from the North of England.

More importantly, consider deaths from hypothermia. There are about 25,000 such deaths in the UK each year. That is barely 5% of the total number of deaths, but the figure represents lots of individual tragedies which will reduce under global warming.

Of course there is another side to the coin – people die from over-heating also. However, the hypothermia argument involves thinking outside the conventional, comfortable, fashionable box.

One passing-point relates to the “holy mantra” of 1.6° which is so often cited as a red-line that must not be crossed. It is very rare for political decisions to involve a cliff-drop threshold. It is not like the Gradgrindian mantra “*Annual income twenty pounds, annual expenditure nineteen nineteen and six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds nought and six, result misery*”.

Equivalences and voices unheard in the Climate Change debate

Climate Change is an area where statistics has become almost a religion with dominant mantras like “ 1.5° good; 1.6° disastrous”.

Like $\pi=3.14$, in this debate 1.6° is so important that it deserves a name of its own so it can become a useful, readily recognizable benchmark. So I shall call 1.6° a “GNR”. So 1 GNR = 1.6°C .

Why “GNR”? Because of the Great North Road (GNR) which used to run from London to Edinburgh; and if we compare differences in temperature between the two capitals, we find the average is almost exactly 1.6° or 1 GNR. So 1 GNR measures the difference in average temperature between London and Edinburgh.

In passing, note that temperature averages are averaged over millions of locations in space-time. It can be revealing to see how small or large 1 GNR is compared with other temperature differences (again for London and Edinburgh): average difference between January and July = 8 GNR (12°); difference for one month between its hottest average and its coldest average = 4 GNR; or average difference between daytime and night-time temperature = 10 GNR.

A further current example of “voice unheard” is the fashion for packing vegetables etc. in compostable wrappings. It is acknowledged that these require more energy in production than conventional plastics. “But that is no problem”, it is said, “because you can put them straight on your compost heap”. Such glib statements stem from the mind-set of a compost-owning elite who cannot think outside the box and who fail to realise that many people buy vegetables precisely because they have no garden, let alone a compost heap.

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Commandment 13: Avoid lone data. Use comparisons (% or per person)

Commandment 14: Convert “Gee Whiz!” big numbers into bite-size chunks

Commandment 15: State your universe

Commandment 16: Count pluses and minuses, not just one side.

Examples:

“500,000 houses will have to be retrofitted to avoid overheating” (Gee Whiz on global warming).

Unclear what universe: presumably UK over 10 years.

UK has 25 million houses. So universe is 250 million house-years.

“1 in 50 houses in the UK will have to be retrofitted within the next ten years, or 1 in 500 per year””

The Micromort (MM)

A numéraire used to compare different risks of death:
1 MM = a death risk of one in a million.

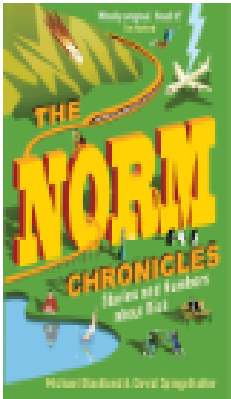
1MM = daily risk of dying from 'external causes' in England and Wales.
(“External causes” means “Not from illness or old age”.)

1MM = risk of dying per half-hour for UK service personnel in 2009
in Afghanistan

1MM = risk of dying per second for UK bomber crews
between 1939 and 1945.

1MM also represents the risk of dying during 4 miles of a marathon,
25-28 miles of walking, cycling or motor-cycling, 333 miles
of driving, 2 days of skiing, a week on ecstasy, or one-tenth of a
sky-dive or an operation with general anaesthetic.

(Source: Norm Chronicals).



For comparison, daily risks of death in UK from all causes are approximately:
20MM per day population average
1-2 MMpd for ages 1-40
50 MMpd for 65-74
150 MMpd for 75-84
400 MMpd for 85+

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Numéraires and the “MicroMort” (MM).

The “GNR” unit was proposed above in order to suggest different ways of looking at global warming data, which is one of the points of fiscal and statistical literacy. Another such unit is the ‘MicroMort’ which has

been proposed by David Spiegelhalter to compare *different risks of death*: one MicroMort or 1 MM represents a death risk of *one in a million* or 0.000001 or 0.0001%. The context of its magnitude can be gained from the following examples given by Spiegelhalter in his book *The Norm Chronicles* (all figures are approximate averages):

1MM = daily risk of dying from ‘external causes’ in England and Wales (i.e. “Not from illness or old age”)

1MM = risk of dying *per half-hour* for UK service personnel in Afghanistan in 2009

1MM = risk of dying *per second* for UK bomber crews between 1939 and 1945.

1 MM also represents the risk of dying during 4 miles of a marathon, 25-28 miles of walking, cycling or motor-cycling, 333 miles of driving, 2 days of skiing, a week on ecstasy, or one-tenth of a sky-dive or an operation with general anaesthetic. (Famously, David Nutt lost his job for effectively using Micromorts and daring to compare risks of a trip on ecstasy to risks of a trip on horseback: horses are safer, but not by much!)



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For comparison, daily risks of death *from all causes* in the UK are approximately:

20MM per day population average (risks for females are about 15% less than risks for males)

50MMpd for 70+

100MMpd for 75+

300MMpd for 80+.

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A key advantage of units such as MicroMorts and GNR is that once you are familiar with them, their use provides a greater sense of statistical familiarity, language and ‘feel’. For further details and examples see *The Norm Chronicles* or *Wikipedia*.

Another way of generating statistical “feel” is to express data in “per person” units rather than in large aggregate totals. These tie in more with people’s ‘lived experience’ than do unfamiliar large ‘Gee Whiz’ numbers.

Commandment 17: Use “per person” units rather than large aggregate totals.

Statistical literacy intersects with fiscal literacy in what I call fiscal numeracy because it involves numbers as well as letters. Above all, it involves political concepts: if statistics is the science of evidence, then fiscal numeracy is the science of evidence regarding fiscal matters (government finance). It includes aspects of statistical presentation and interpretation. The presentation of uncertainties is especially important.

Unfortunately, political discussions often take place in evidence-free zones, using concepts that have no “feel”. Such discussions often do not consider alternatives or unexpected impacts. Financial cost is often the only metric used. It immediately leads to parallels with personal and household budgeting. These are the closest parallels in everyday ‘lived experience’ and are attractive and seductive. However, emphasis on financial cost too easily reinforces the Gradgrindian fallacy that public budgets must “balance” like household budgets (Thatcher, *passim*). This fallacy contains three fallacious elements.

First, it ignores the fact that public planning is by its nature *long term*. Therefore annual or short-term budgets are not appropriate.

Second, many ‘public goods’ are ignored by financial costs. Otherwise we would give everyone a poison pill for their seventieth birthday. This would save the NHS a fortune! A wider reference-group is required.

However above all, governments unlike private households can *manufacture money*. Indeed, they do this all the time – mainly not in the form of physical cash, but by increasing credit and issuing government bonds.

Thus, public costs require a mind-set that is completely different from that required by household costs. The latter are generally short-term and exist within a particular budget and a specific time-scale. Current expenditure gets conflated with capital expenditure. For governments

however, the focus should be upon long-term total resource costs including environmental costs and benefits. These cannot be represented in a single £ figure.

Moreover, government costings often produce very large numbers which lack “feel”. Multi-year totals provide very VERY large numbers. Better by far to give costs in “£ per person per year”. So instead of “£1 billion over 5 years” (too big to feel) we get “£3 per person per year”, which has more “feel”.

Policies and Trade-offs


Side-comment on Modern Monetary Theory (MMT).

Basic tenet: state budgets do not have to balance.

- However *imbalance has consequences especially where the state does not control its own money supply (as in the Euro). Constraints on imbalance can arise from real resource limits (only so many workers or widgets), risks from inflation, exchange rates and 'confidence', and other external/political factors.*

Rather than insist on tax neutrality, I propose using a common and easily understandable *numéraire* with units from a familiar type of tax. Then we can answer the slam-dunk question “How are you going to pay for it?” with the slam-dunk answer “Out of general taxation”.

Over-simple ?



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Taxation – alternative policies and trade-offs

As stressed above, managing a government budget require a different mind-set from that required for household budgets. However, trade-offs are important in both types of budget. We all want Love, Motherhood and Apple Pie. But more Motherhood means less Apple Pie. Such considerations also apply to taxation and benefits.

Tax/benefit debates often occur in a vacuum, without considering tradeoffs. One option is for discussions to always involve proposals that are *tax neutral*. However, that involves discussing two items at the same time – one on each side of the balance sheet. Hence the inane slam-dunk question “How are you going to pay for it?” (“Out of general taxation” is always a sound answer, but then you must also have a good taxation policy.)

Rather than insist on tax neutrality, I propose that we should instead get used to a common and easily understandable *numéraire* which uses

familiar units. This will enable us to answer the slam-dunk question “How are you going to pay for it?”

Side-comment on *Modern Monetary Theory (MMT)*. Inasmuch as I understand it, I accept the basic tenets of MMT – that state budgets do not have to balance. However, imbalance has consequences, especially where the state does not control its own money supply (as in the Euro). Limits on imbalance can arise from real resource limits (only so many workers or widgets), risks from inflation, exchange rates and ‘confidence’, and other external/political factors.

The Megapenny (Mp)

The Megapenny is the change in revenue produced by a 1p increase or decrease in the basic UK rate of income tax (e.g. today from 20p in the pound to 21p or to 19p).
= about £6 billion.

Total spent on Bankers' Quantitative Easing (QE)
£900bn = 150Mp = £15k per person.
This benefitted Tory constituencies: bankers+home-owners.

Similar effects obtainable via short-term Community QE
in which everybody received the same amount.

Simple and Just!!

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The Megapenny (Mp) – a second numéraire: The MicroMort compares risks. I will now propose a similar *numéraire* which has a different purpose. This is the Megapenny (Mp) which compares fiscal and tax revenues and expenditures.

We define a Megapenny as *the revenue produced by a 1p increase in the basic rate of UK income tax* – from 19p to 20p in the pound for example, or from 20p to 21p. Today, 1Mp is equivalent to about £6 billion. So the total amount spent on quantitative easing as at 21 December 2021, which is £895 billion, is about 150 Mp. Other examples are given below (all figures are approximate and based upon HMRC estimates):

- one penny on the basic rate of income tax produces 1Mp (£6 billion), as does a penny added to all NIC rates (employer and employee)
- 1% change in the basic 20% VAT rate (from 20% to 21% or 19%) produces 1Mp

- one penny on the higher rate of income tax produces 0.2 Mp
- 10% change in the 0% tax income tax threshold produces 1.3 Mp
- the zero-rate band costs £110bn = 18Mp
- capital gains house relief costs 3Mp
- imputed rent (Schedule A) tax relief costs 4Mp
- Poverty costs 13Mp (Joseph Rowntree Foundation)
- Wealth/Windfall/Excess Profits/Inheritance/Gifts tax could produce £174bn or 29Mp.

These Megapenny numbers are easily and immediately comparable, in a way that the monetary figures £6 billion, £1.3 billion, £8.8 billion etc. are not.

Why use Megapennies rather than money, the traditional numeraire? There are two main answers. First, the numbers are smaller ('bite-sized') and more manageable. Second, the Megapenny definition in terms of one penny on income tax, underlines equivalences in terms of fiscal policy. (Just as MicroMorts make small numbers large and more manageable, Megapennies make large numbers smaller and more manageable, thus enabling comparisons.)⁶

In short:

Commandment 17a: Please use the MegaPenny when discussing public finance.

A fiscal "Mini-Manifesto"

This final section discusses a progressive tax mini-manifesto containing just four elements. Its key guiding theme is

Cancel Tax Favouritism.

Tax currently favours Capital rather than Labour.

Many taxes have been proposed for 'levelling up' society. Among these, Wealth Taxes and Windfall Taxes have already entered the common discourse. Each is great in principle but complex in practice. It's important to get the practicalities right.

⁶ The 'joy' of the MicroMort, wrote Spiegelhalter, "is that it makes all kinds of risks comparable on the same simple scale" (*Norm Chronicles*, p.16). Similarly, the 'joy' of the Megapenny is that it makes all kind of expenditures and receipts comparable on the same simple scale.

A core “fiscal manifesto”

Remove tax benefits and capital favours (residential capital gains etc.)

- Wealth tax
- Windfall tax
- LVT = Land Value Tax
- UBI = Universal Basic Income

Simple and Just !!



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I shall now argue the above points in the context of a tax “Mini-Manifesto” which argues for a Land Value Tax (LVT) and a Universal Basic Income (UBI).⁷ For simplicity, we start with “crude” versions of each, in which all units are treated the same. These are simplest, easiest to understand, better for “buy in”, and cheapest to administer.


In the Crude LVT: *Every square metre of land is taxed the same*

In the Crude UBI: *Everybody gets the same amount every week.*

Land Value Tax

- UK land area = 24mn hectares
= 24×10^{10} sq metres.
- So LVT of £1 per sqm produces
= $£24 \times 10^{10} = 40\text{Mp}$.

40Mp is about 80% of the cost of a simple UBI (see below).



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⁷ See e.g. Brown, P. (2021) *Proposing a Resilience Universal Basic Income*: <https://www.ubilabnetwork.org/resilience-ubi>. UBI Lab Network.

Refined LVT/UBI would allow varying rates for different categories of people and land.**Crude Land Value Tax (LVT)**

This could replace the discredited and out of date Council Tax, and could easily enhance local democracy by allowing for local variation in LVT rates.

Advantages for LVT are that land is easy to identify and measure and track ownership. It cannot be moved abroad. LVT would also reduce the attractiveness of holding land and so will bring down land prices. There are also arguments in terms of equity and in terms of imputed rent.

If every hectare of land were taxed the same, what tax rate would be needed to produce 1 Megapenny (£6 billion)? For simplicity and to calculate orders of magnitude, let us imagine initially that every piece of land in the UK is taxed at a rate of say £1 per square metre.

The UK's total land area is about 240,000 sq km. This is 24 million hectares or 24×10^{10} square metres (1 sq km = 100 hectares = 1 million sq m). So £1 per square metre will produce $\pounds 24 \times 10^{10}$, which is 40Mp (1 Mp = $\pounds 6\text{b} = \pounds 6 \times 10^9$). That is, a Land Value Tax that averages £1 per square metre will produce about 40 times as much as is produced by a 1p in the pound increase in income tax.

Note that our crude LVT is based on *land* area. So whatever the floor-area of your house, you are charged only on its *footprint* area, plus the area of any garden etc. If you are in a six-story tower block, then only one-sixth of your floor-area counts towards your personal footprint. My house in York some 200 sq m floor area on two floors, so that counts as 100 sq m of land. Add to that say 400 sq m of garden, and the total is 500 sq m. So at £1 per sq m I would pay £500 per year. This compares with Council Tax paid at present which is about four times as much. Some would gain by a switch from Council Tax to LVT, but many who own a lot of land might lose. (In practice, small tracts of land may be exempted from LVT – but one must beware of the perverse incentives that this might produce, and of landlords who own many small plots.)

However, it would of course be immensely unjust to tax all pieces of land the same. Land in Central London is far more valuable than land in the Outer Hebrides, so it would be unjust to tax both at the same rate. A more refined LVT would take account of this differential in land values. For reference we note that residential land values vary by region from £70/sqm in Bradford to £12,800/sqm in City of London (a


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factor of 180+), so we would expect this variation to be reflected in the LVT levied in the various places.

Refine LVT using value factors

Cost of residential land in Bradford is £70/sqm. It is £12,800 in City of London.

This is a factor of 180+.




Simple and Just!!

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UBI = Universal Basic Income

£100 pw to 60mn people = £6bn pw = 1Mp per week
= 50Mp per year

50p on income tax is not feasible.
But 40p of this can be covered by the simple Land Value Tax outlined above and at least 10p is covered by the benefits which UBI would replace.



Simple and Just!!

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Crude Universal Basic Income (UBI)

The second proposal for our “Tax Mini-Manifesto” is a form of Universal Basic Income (UBI). UBI is generally defined as “a regular and unconditional payment given to everyone regardless of their income, wealth or work”. The “Everyone” is important in order to maximise political and emotional ‘buy-in’ for all citizens. It removes the ‘them’ and ‘us’ mentality which bedevils so much debate around tax and benefits. Refinements may modify who is entitled to UBI by treating e.g. visitors, babies and millionaires differently.

UBI may soon become an idea whose ‘time has come’. Several variants have recently been proposed:

- Stewart Lansley proposed a particular version of UBI at the Radstats 2022 conference
- The LibDems (Paul Noble sep2021) propose a UBI of £71pw for all working-age adults: children and pensioners are excluded. The Zero-rate tax-band would be removed and they suggest modifications for those earning over £100k.
- Welsh UBI for care-leavers has just been announced (feb2022): this is to be at the rate of £400pw, but is not strictly universal as it applies only to care-leavers.

UBI is of course expensive. However, it costs less than it seems because:

1. **UBI is taxable.** This can reduce exchequer cost by 15%.
2. **UBI replaces other benefits.** These may include pensions and the 0% tax-free income tax band which alone cost 17Mp and 65Mp (£100bn and £400bn) respectively. This can reduce costs by a further 15% or more.
3. **The certainty of a guaranteed income provides psychological and community security.** This has financial as well as non-financial spinoffs in terms of reduced use of health, police and prison expenditure.

But how much would UBI cost? For simplicity consider a system where everybody gets £100 per week, or £5000 per year. In practice children and new arrivals would get less, and the initial UBI would more likely be about £50 per week or less, rather than £100. Conveniently, £100 for each of 60 million people is exactly £6 billion, or 1 Mp. So the cost of this UBI is 1Mp per week. Over a year, the total cost equates to 52 Mp i.e. 52p on the basic rate of income tax. However, this has to be reduced by 50% because of factors mentioned above, and can be reduced by a further 50% if the initial UBI is £50 rather than £100 per week. So this UBI cost could be as low as 13bn pa, or just over 2Mp.

There are also other ways of reducing ‘bottom line’ financial UBI costs. (These of course are not the *real* ‘bottom line’). The most obvious of these penny-pinching strategies involves “focussing UBI on the needy”. This is possible, but it introduces complications and complexity i.e. undesirable features of the present benefits system. “Focus” thus reduces the simplicity which is one of the key features of ‘true’ UDI. More importantly however, it changes the associated mentality from one of “universality” to one of “them and us”. A key requirement for innovations to be feasible is that they must have widespread “buy-in” from the community at large.

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Note: I am not suggesting that the total cost of UBI should be covered by Income Tax. **Other taxes are available!** I emphasise Income Tax simply as a vehicle for introducing a common *numéraire* and language and, hopefully, greater understanding.

In some situations, one-off (non-regular) universal payments may be appropriate, for example where the economy needs stimulating. Some people call this “helicopter money”. It has recently been proposed by the ECB and implemented in USA, Japan and Switzerland (see *Wikipedia*).

However, regardless of whether we take the long-term decision to go for full UBI, in the short term a strong UBI infrastructure can be useful in many situations e.g. in paying the same furlough to everybody (and saving on business subsidies and business fraud); on giving everybody £500 to cover unanticipated fuel costs; as a bonus to every young person on reaching the age of 18; as an economy-boosting measure by increasing money supply; why not £1000 for everybody on every birthday?

UBI Infrastructures

Even without full UBI, having a UBI infrastructure will ease other uses:

- Citizens' QE
- Winter fuel payments
- Gas price hike
- Universal Covid furlough support
(Macron & Trump managed it – why can't we?)
-

Simple and Just!!

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Here are several examples where a UBI infrastructure would have proved its worth in recent years.

1. UBI and Quantitative Easing (QE).

George Brown's QE policy should have been called *Bankers QE*, because its main beneficiaries were banks and bankers. So those who caused the crisis benefitted from it. (Home-owners also benefitted via the house price-inflation caused by Bankers QE.) A better alternative would have been *Community QE* in which *everybody* received the same amount.

Brown's scheme cost some £900 billion, or 150 Mp. This equates to a UBI of £15,000 per person.

2. Winter Fuel Payment

The Winter Fuel Payment of £200 p.a. is essentially a UBI for pensioners. You even get it if you live abroad (just as I know of well-paid American citizens living in the UK who received cheques under President Trump's 2020 'CARES' stimulus scheme. This delivered a total of \$500b to American citizens around the world - \$1200 per adult and \$500 per child, tax-free, with exclusions for those earning over \$150k.)

The Winter Fuel Payment costs £2-3b per year i.e. 0.5 Mp. However, at less than £4 per recipient per week, it is an insignificant amount over the year for most recipients. It is however better than the alternative of offering pensioners discounts on their fuel bills, since discounts incentivise greater user of fuel, rather than giving recipients discretion to spend their money how they want.

3. Covid furlough and business support

The Rishi Sunak furlough scheme has been large in scope, but has it been well-targeted? In total it has cost £70bn. Other support for business makes the total c£100bn.

The Tories' main focus has always been on supporting 'businesses', not people. Why should we support 'business'?

The main valid reason is because it supports jobs and therefore supports people. We should not be supporting the infrastructure of speculative businesses – and all businesses are, to a greater or lesser extent, speculative.

And a key reason for supporting jobs is because jobs support income. Without income, demand drops, and the capitalist hurdy-gurdy ceases to go round. The result is poverty.

Better by far than supporting 'business' is to offer direct financial support i.e. *support income*.

If a UBI infrastructure had been in place, there would have been a pre-established, much simpler system, less capable of fraud and devious use, for maintaining family incomes.

It would also have been fairer - everybody would have received the same, whereas the Sunak furlough scheme involved a percentage of normal wage, so the better paid gained more.

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Full UBI requires a good database to enable fine-tuning e.g. by area of residence, age.

4. Green tax incentives; Gas price hikes. Profits are booming for Shell and BP while households throughout the country face fuel poverty. *What can be done?*⁸

Taxing energy companies' windfall profits is at last being considered. It is an obvious candidate rarely mentioned.

Reducing VAT on gas is the Labour Party mantra. How this 5% reduction can relieve a 50% price increase is unclear. But also, reducing tax on fuel runs counter to green policies, which would encourage less fuel use. This requires increased pricing.

By contrast with Labour Party policy, I suggest we should massively *increase* fuel taxes– including taxes on aviation fuel which is currently exempted by incomprehensible magical tax deals.

A policy of doubling fuel prices within ten years will underline the importance of fuel economy and fuel strategy. On its own it would be massively regressive – poor people could not afford it. However, a countervailing UBI system can ensure that it is progressive rather than regressive.

⁸ *Final Footnote for Radical Greenstatters: 'Sliced Bread'* (9 April 2022), the BBC's fact-checking programme 'on ad-hyped products and trending fads' examined the case for electric vehicles. Using 'Never been done before' (the manufacturers admitted) road tests, electric per-mile running costs are about 10p less than on the equivalent petrol vehicle. However, the capitalised carbon footprint from manufacture is twice as large and the financial capital cost ratio is 2.5:1. It takes 300,000 miles to recoup the extra financial cost (£30,000), and 60,000 miles to recoup the extra carbon cost. If electricity prices go up, these figures will increase. Additionally, of electricity used by cars, 45% uses oil in its manufacture, which is often overlooked. "Experts" estimated 50,000 miles as the tip-over point, not 300,000. (This is based upon purchasing new, which is recommended for electric cars because technological progress is so rapid. However, for petrol cars it is often best *not* to buy from new, so real-life figures are likely to be bigger than cited here.)

'White Bread' (9 April 2022) *How green is switching to an electric car?* Available at: <https://www.bbc.co.uk/programmes/m00162yr> (Accessed: 10 April 2022).

Conclusion: Questions for Radstats

"Seek Simplicity - and distrust it"
A. N. Whitehead

Commandment 18: Above all, in statistics and in taxation, "justice and simplicity" shall be thy watchwords


**Numbers, Equivalences, Power:
Commandments for Fiscal and Statistical Literacy**

Tax is numbers !! How can we leverage this to enhance fiscal and statistical literacies?
Tax is equivalences (trade-offs) !! Can we compare tax policies using a common numeraire like micromorts?
Tax is power !! How has Radstats succeeded in highlighting statistics as an agent of political hegemony?

Thanks to David Lamb, William Shakespeare, Wikipedia and others for useful suggestions, and to you, Comrades, for listening!

I look forward to hearing your comments.

JOHN BIBBY johnbibbyjohnbibby@gmail.com



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This whistlestop tour has considered many issues and raised many questions. I hope that some of these will be uncomfortable enough to provoke responses.

In conclusion, I wish just to leave a final commandment and a few further questions:

1. Is taxation an area that Radstats has left untouched for too long?
2. Is there scope for a radical tax textbook?
3. How can the links between statistical and fiscal literacy be enhanced, and how can the oppressions of the current systems be reduced?

Commandment 18: Above all, in statistics and in taxation, "justice and simplicity" shall be thy watchwords.