Editorial to Section: Memories of Harvey Goldstein (30 October 1939 – 9 April 2020)

"In dark times there will be singing" Brecht

We statisticians may be hardened by continuous examination of death statistics. We may sneer uneasily at the statement questionably attributed to Stalin: "One death is a tragedy; a million deaths is a statistic". But tragedy hits hard and we are impacted as much as others when one who dies is one of us, especially when it is a person so dear as Harvey Goldstein.

Harvey always wore his eminence lightly: soft, quizzical, humourous. This shines out in a gem of an interview (Goldstein 2017). He was with Radical Statistics *before* our first meeting on 30 January 1975. The inaugural issue of *Radical Statistics Journal* (then called 'Newsletter') included his call (Goldstein 1975) to establish a Radstats study-group on educational research. Harvey was also with us at our most recent meeting on 29th February 2020, cogent and stimulating as usual, and with no sign of slowing down. His wisdom is already greatly missed in the statistical discussions around the disease that sadly floored him.

Goldstein, Harvey. 2017. *Interview with Harvey Goldstein*.

https://discover.ukdataservice.ac.uk/QualiBank/Document/?id=q-92053089-af34-4f09-b08c-51c2279ca6b2&q=goldstein#relatedfiles.

Goldstein, Harvey. 1975. "Radical Statistics Study Group on Educational Research." *Radical Statistics Newsletter*, February. https://www.radstats.org.uk/no001/reports.pdf.

Harron, Katie, George Leckie, Bill Browne, James Carpenter, Fiona Steele, and Tim Cole. 2020. "Professor Harvey Goldstein at 80." *Significance. Statistics Making Sense* 17 (1): 41–41.

In this section, several of Harvey's friends share with us some of their memories of a great man, and a great friend.

Harvey Goldstein Memoria

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I. Introduction

I.1 Professional background and Career

Harvey's eminence is recorded elsewhere (e.g. Harron et al. 2020). The Royal Statistical Society summarised his academic contributions as follows: "Harvey was an internationally renowned statistician and social science researcher whose work had huge impact in many different academic disciplines. He was Professor of Statistical Methods at the Institute of Education (IOE), London from 1977 until his (first) retirement in 2005, during which time he was awarded the Royal Statistical Society's Guy Medal in Silver (1998) and made a Fellow of the British Academy (1996)." He then moved, together with the Centre for Longitudinal Studies which he had created to the University of Bristol

Last October, on his very birthday, Bianca De Stavola organised a "Celebration of Statistics" to commemorate Harvey's 80th. Nearly 200 people attended; wine was drunk; speeches were spoken, and the first ever caterpillar plot cake was eaten.

We start with a contribution by recent colleagues who conspired together to arrange the "Celebration of Statistics" mentioned above.

"A generous, kind-spirited and inspiring colleague and collaborator whose loss to statistics and academia more generally is immense"

Harvey was a generous, kind-spirited and inspiring colleague and collaborator whose loss to statistics and academia more generally is immense.

Born in the East End of London in 1939, Harvey's academic career began with his first lecturing position in 1964 at the Institute of Child Health (ICH). Here he first used a computer – the only computer at UCL at the time. Harvey later returned to ICH following his 'retirement' from the Institute of Education in 2005 and was still an active researcher right up until his death. An early sign of his promise was his first journal article that was published in *Nature*, with co-author Sir Richard Doll. Harvey initially worked on child development studies alongside Jim Tanner, producing ground-breaking work on modelling growth trajectories in children, and Neville Butler, who ran the birth cohort studies at the time. He established another long-term working relationship with Michael Healy, which led to a seminal paper on bone maturity.

Harvey's research in social statistics focussed on school effectiveness and educational assessment. This led to his pioneering work in multilevel modelling, perhaps the area in which he was most influential. Harvey realised early on that in order for theory to be adopted by researchers, it should be developed hand-in-hand with user-friendly software. Over the past two decades, Harvey dedicated much of his time to software development and teaching multilevel modelling with colleagues at Bristol University.

As an undergraduate, Harvey was inspired by statistics because he saw it as a way of putting social ideals into practice by providing empirical evidence to support policy. Harvey was never afraid of controversy, believing it was a way of driving forward research. This theme started with his definitive study demonstrating the negative effects of smoking during pregnancy. It continued with his work on the uses and abuses of educational league tables, the need to balance accuracy with confidentiality in administrative data, and the risks of ignoring bias in linked electronic health records.

He advised and challenged government departments in order to maximise the potential of administrative data for public benefit. For many years Harvey also played a key role in the Royal Statistical Society, helping to promote statistics as a way of scientific thinking and opposing government misuse and abuse of statistics. He even turned down a CBE for services to social science in protest against a government that did not take his advice on social science policy.

Harvey's great contribution to statistics stemmed from his extraordinary mathematical skills applied to policy and public services, combined with his drive to make cutting-edge statistical methods widely available. He was a great teacher – he supervised more than forty PhD students and openly gave his time to many others. In a 2017 interview, he said "I want to go while the going's good", and this definitely seems to be the case, given we celebrated his 80th birthday at ICH with an Otto Wolff Seminar, an associated article "Living by the evidence" and a podcast about his life and career. He was a model of how to challenge the status quo with rigorous, evidence-based arguments, perseverance, and a kind spirit. He will be fondly remembered for his quick intellect, approachability, and supportiveness, and hugely missed as a friend and colleague.

Katie Harron, Bill Browne and others

Harvey Goldstein Memoria

John BIBBY: Great memories tinged with sadness

I have known Harvey since 1968-69 when I was at LSE and Harvey was working on Neville Butler's "National Child Development Study". We were introduced by Liz Atkins, another key founder of Radical Statistics, who was working on a JWB Douglas's "National Survey of Health & Development". All three of us were I think at the Multivariate Analysis Conference organised by Kanti Mardia in Hull in April 1973 (Gower and Mardia 1974), when Roy Carr-Hill gave a paper on cluster analysis and the Angry Brigade. This turned out to be crucial in the genesis of Radical Statistics, and was followed by a discussion on the need to set up what was initially called "The British Society for Social Responsibility in Statistics". Discussion followed in RSS "News & Notes", and eventually Radical Statistics was born in January 1975.

Gower, J. C., and K. V. Mardia. 1974. "Multivariate Analysis and Its Applications: A Report on the Hull Conference, 1973." *Applied Statistics* 23 (1): 60.

Harvey was at all times a key person in RadStats' development, always available behind the scenes and occasionally in the front seat also. I think he managed to avoid ever becoming a member of the Troika, thereby evidencing, if any further evidence is needed, his extreme wisdom and sagacity. In the Royal Statistical Society he was continually active and innovative at a time when innovation was direly needed. He played a crucial role in the 1977 elections which became a turning point for the RSS as well as for Radical Statistics. This was perhaps the moment we became "respectable", which is always a questionable virtue.

I was glad to serve with Harvey as a founder member of the RSS Education Committee, which he chaired. I was also glad to be his External Examiner when he was at the Institute of Education, although neither of us were particularly keen on exams. He was very helpful to me when I indicated I would like to visit Cuba, and he arranged a fascinating lengthy stay for me in Havana in 1977 via his contacts with the Cuban Child Development Study. He was less successful in trying to get me a leading role in the RSS Centre for Statistical Education. I was up against an extremely good candidate from New Zealand who appeared virtually because the only travel expenses they could offer him was his second-class return train fare! Despite Harvey's support, I failed to get the job.

More recently, Harvey contributed a thought-provoking article to *Radical Statistics* (vol.124:4-11), on antisemitism in the Labour Party. Although not a Corbyn supporter (indeed, in recent years he had gone "more Green than Red"), Harvey felt that Corbyn had been very unfairly treated by the establishment, and especially by the Jewish and Zionist establishment. In my last conversation with him, he took great pains to emphasise how unrepresentative the Board of Deputies and the Chief Rabbi are of the Jewish community as a whole. The Labour Party, he wrote "made the mistake of caving into pressure from its critics". Then – emphasising as ever the importance of having sound evidence - he regretted that the Party "has signally failed to seek independent advice about antisemitism within its membership". This would have allowed the party to take the moral high ground and, he felt sure, would have shown that while there may be smidgens of evidence of antisemitism within the Labour Party, the amount is small. Antisemitism is predominantly a phenomenon of the right, and of the Christian right. The data Harvey presented in his article evidenced

this. But better data should have been collected. "Throughout this affair", he wrote, "respect for good evidence has been absent all round.". The Labour Party "cannot expect to win arguments by simply rebutting its attackers, unless it utilises clear and independent evidence in its defence. In my view *this is the only secure, and ethically robust, way to proceed".* This is pure Harvey, stressing that good data combined with good analysis is not just pragmatically effective, it is also "ethically robust". I had started a further article, building on this article of Harvey, and had sent it for his comments in March. Unfortunately I will never get a response.

Peter Burnhill: "He held the torch for integrity in statistics"

Harvey Goldstein will be remembered for his insight, both statistical and social, and for his kindness. My first memories date from the mid-1970s when he joined the Statistics Committee of what was then the Social Science Research Council. He already had a high reputation for his work on longitudinal work including the National Child Development Study, and was both critical and kind in assessing the research proposals that were increasingly put his way. Harvey was also personally encouraging in my own career planning. We both made decisions in 1977. I was delighted to renew his company and benefit from his expertise subsequently during the 1980s when I was working at the Centre for Educational Sociology which was embarking upon programmes of multi-level modelling and later on geo-spatial effects. As the former Director of CES recently said to me, "More than anyone else, Harvey held the torch for integrity in educational statistics and their applications to policy – more than anyone else I'm aware of." Harvey will be remembered by many and often, impressive as both a methodologist and a human being.

Roy CARR-HILL

I got to know Harvey personally shortly after joining the Institute of Education in 1993; and almost immediately after that I won a DoH tender (from York) to design a national resource allocation formula for Hospital Services. Because we had access to individual Hospital Episode Statistics and ONS statistics at enumerator level nested within Health Authorities, it was a natural for multi-level modelling about which I knew nothing (except hearsay) at the time. Harvey rapidly taught me and acted as consultant throughout the tender which succeeded in developing a formula which transferred substantial sums from the South East to the North-East – quite an achievement under Thatcher.

We collaborated, not always successfully!, on other tenders but specifically on developing a formula for Children's Social Services in 1996 and of course met as colleagues several times over the next 10 years until he moved to Bristol. But my latest enduring memory is when he and his wife – both of whom loved walking in the South of France – joined me for my 60th birthday celebrations at St Andre de Majencoules in the Cevennes in 2003.

Harvey Goldstein Memoria

David DREW: "Passionately interested in social inequality"

Harvey was at the Institute of Education in 1988 when I was a polytechnic lecturer. I had decided to start a part-time PhD on ethnicity and education using the Youth Cohort Study of England and Wales. I knew of Harvey through the Radical Statistics Group and also knew Ludi Simpson who had been one of his students. Someone suggested I should speak to Harvey about a PhD as he had quite a reputation in the area, and I visited him in the rather austere surroundings of the Institute. He was brisk and to the point. Whenever you asked a question he had a twinkle in his eye and smiled. In the end he suggested I work with John Gray at the University of Sheffield. This worked out very well.

This was an interesting time for studies of ethnicity. The issue was poorly researched and inequality and discrimination was not high on the agenda of Thatcher's Britain. The fact that someone like Harvey, a distinguished mathematician, was passionately interested in social inequality, linking the mathematics with the sociology, was extremely encouraging.

Multi-level models was coming to the fore in the 1990s. The idea that you could analyse data at different levels at the same time, individual students at level one, schools at level two and local authorities at level three, was very exciting. I attended one of Harvey's week-long multi-level modelling courses and was taught by him which was a testing experience because he expected his students to work hard. The mathematics is not easy but he tried hard to explain it. I remember on one occasion hearing him speak and trying to explain that the mathematical process of multi-level models that he had developed sometimes led to an R-squared that was negative. The audience sat up. And they sat up even more when he said, with a smile, that this was not really a problem! His book on the area was absolutely excellent.

I will always be grateful to Harvey for the help he gave me. I did not know him well but the advice he gave me was invaluable.

Russell ECOB: His impact was prodigious. He had concise and effective ways of encapsulating key ideas.

Harvey combined powerful intellect with a lifelong commitment to using his expertise in galvanising fellow statisticians and researchers in a number of fields, motivated by strong ethical views, towards contributing towards a better understanding of societal processes and a challenging of vested interests. He was a kind man who gave generously of his time.

His impact on the Statistical Profession was prodigious. Despite, to my knowledge, being initially rather unenamoured with the Royal Statistical Society, I believe rejecting a request to be President, he found himself increasingly drawn in, elected in mid 1970s as a member of the Council and transforming Series A into 'Statistics in Society' with a wider societal remit. He was editor for two periods, one quite recently. He was recognised with the Guy Medal in Silver and was a Fellow of the British Academy. His paper with David Speigelhalter, on league tables and their limitations read to Royal Statistical Society, is highly cited and influential with over 1000 citations.

At the 2020 Radstats Annual Conference Harvey gave insightful contributions as always, and discussed his recent work on "procedures for maintaining data integrity whilst ensuring privacy in the release and analysis of 'big data' sets". This work, with Ruth Gilbert and others, constitutes a chapter in Data in Society.

Harvey's interview as part of the Pioneers in Social Research series includes some deft 'pen-portraits' of people he has worked with. It allowed me to feel once again the concise and effective ways he had of encapsulating key ideas and motivations for his wide-ranging research challenges to a non-statistical audience. These include, amongst many others, the better understanding of the influence of maternal smoking on perinatal mortality, a successful crusade against an overly reductionistic Rasch model in constructing educational tests (a cause still apparently needing to be fought), the overly simplistic and inappropriate comparisons of schools, later taken on more generally with David Speigelhalter, and criticisms of the PISA international educational comparisons project .

The obituary from the Centre for Multilevel Modelling (CMM) gives a range of links including a 2019 podcast from the Institute of Child Health. London which I found particularly moving.

Harvey's worldwide reputation derives from many things, but particularly from his 'invention' of Multilevel Modelling. He liked to say, 'when you look around you see Multilevel Models everywhere'. He took the ideas from a careful theoretical foundation – they had been around in the economic literature for some time - to their implementation using novel statistical software which had an easily understandable 'front end'.

A major achievement was to get consistent funding streams for CMM. This enabled gifted staff to work with him on a long-term basis, some moving to Bristol with the relocation of the Centre. Managing intermittent funding was perhaps a skill he developed through continuing involvement with the, continually short term funded 1958 birth cohort. This was transformed from a Perinatal Mortality Survey into a lynchpin of the three British Birth Cohorts (1946, 1958, 1970) which remain unique worldwide. More recently, he was instrumental in the founding, with John Bynner and others, of the Journal of Longitudinal and Life Course Studies.

Harvey was instrumental in drawing RadStats into the democratisation of the Royal Statistical Society. This resulted in the election, for the first time in 1977, of the President by the membership (see Radical Statistics Journal ,issue 108). This played a considerable part, I believe, in the current mutually supportive relationship between Radstats and the RSS. Recently, his disenchantment with the ways in which the UK Labour Party was dealing with the antisemitism allegations is documented in Radical Statistics Journal (issue 124).

Harvey's opportune use of statistical methods with immediate effects was also shown in a day meeting c.1978 when several participants reported suspected food poisoning. Harvey instigated a retrospective questionnaire asking about each of the buffet items. The analysis (logit with food poisoning as the binary outcome measure), pointed to the crab paste (I believe) as being the offending item. This was presumably followed up with the catering!

Harvey Goldstein Memoria

Harvey is described by colleagues as 'always extremely generous with his time and approachable', and some of his colleagues published a retrospective of his achievements earlier this year, following his recent Wolff lecture, given on his 80th birthday. This serves as a fitting reminder of his commitment to ethics and values concluded fittingly with the following:

> *'Where does this leave us? I have little doubt that, ultimately, real evidence can win out if the issue is serious enough. For example, as we see with climate change evidence, it will be ignored for as long as possible by vested interests and those policymakers who rely upon such vested interests, until its implications really can no longer be ignored. Hopefully, this will not be too late for useful action. The important thing for researchers is to not give up. The research and the publicising of the implications of that research, along with public critiques of evidence abuse or suppression, need to continue. All of this is difficult, but I think there is an ethical imperative to try to do it'. And I hope to be involved in doing just that'.*

Jeff EVANS: "Competent, Inclusive and Kind"

What stands out for me is Harvey's leadership in the development and dissemination of multi-level modelling. This approach is revolutionary in the way that it allows the inclusion of several levels of *context* in the quantitative modelling of a wide range of social situations. This is recognised on the British Academy website by including 'Sociology' among the disciplines to which Harvey contributed.

Harvey's commitment to, and effectiveness in, disseminating the whole range of statistical methods – and in statistical education and 'outreach' generally - was also notable. I was fortunate to have him as a PhD supervisor at the IoE, and noticed how well he worked with colleagues in mathematics education, including teachers, and in educational psychology. He was exceedingly supportive and kind to me personally.

This supportiveness and kindness extended to organisations in many fields, including Radical Statistics. A very recent example, among many: I was appreciative (and slightly surprised) when he agreed to come back for the second day of our annual conference at the end of February 2020, in order to talk about the problems of data linkage, outlined in his co-authored chapter in *Data in Society*.

Chris LEACH chris.leach1945@gmail.com "A wonderful, kind and influential man"

I have very fond memories of Harvey. I had direct professional contact with him throughout the 1980s and his thinking and pioneering developments in the use of multilevel models influenced me throughout my career. In 1981, when I took over the Editorship of *The British Journal of Mathematical & Statistical Psychology* from Phil Levy, the journal had just published an article by Harvey on dimensionality and measurement assumptions in latent trait models. Phil recommended that I invite Harvey onto the Editorial Board, which I readily did. The article had captured Harvey's concerns about simplistic and unfounded

assumptions in educational test theory, later elaborated by an influential 1989 joint article with Bob Wood in the same journal. Harvey was invaluable as a reviewer and Editorial Board member: always fair but very astute in his continuing desire to develop statistical methods that made realistic contributions to education. He also made strong efforts to influence government policy in the use of assessment methods in schools. Whilst he was on the Editorial Board, the new British Ability Scales were published using Rasch modelling techniques that delivered powerful claims at the expense of overly simplistic unidimensional assumptions about the test items. We tried unsuccessfully to get a review copy for the journal. Harvey was known to be critical of the Rasch model, and this criticism he continued to defend throughout his career.

Harvey also at this time chaired the UK's Social Science Research Council's Statistics Committee, which funded research training scholarships and research projects. I had the privilege of serving on this committee for a couple of years and was delighted to be able to spend some time with Harvey, learning a lot from him about appropriate ways of harnessing complex statistical methods for use in education and health settings.

A wonderful, kind and influential man, he will be sorely missed.

1980s: Rasch models, *Brit. J. Math. Stat. Psych.,* and the SS

Paul MARCHANT "Some people prefer to accept a more complicated falsehood than a simple truth!"

My meetings with Harvey, over more than two decades, although not that frequent, were all very pleasant and worthwhile. He and his group were very helpful to me and my work, through helping me to develop my multilevel modelling skills. As a result, I was able to use the MLwiN package that he and his colleagues developed over the years. I was then able to pass on such knowledge as I had, and recommend courses, to others.

He was a good man. He was always obliging with his time; for example, accepting invitations to come to Leeds to speak at the local group of the Royal Statistical Society. He also accepted, with gusto, the invitation to be a patron of Scientists for Global Responsibility www.sgr.org.uk, of which he was also a member. He attended the SGR conference last autumn and he spoke with its director on how he might best volunteer his services and abilities.

A couple of memories:

- I remember enjoying reading, with a smile, his valedictory remarks on his retirement from the Institute of Education. It contained a good-natured, good-humoured, well-crafted but subtly barbed critique of the rise of managerialism within universities. We talked about this on one of his visits to Leeds.
- On another occasion, on some point with political ramifications - perhaps it was about league tables - I remarked, "I suppose some people prefer to accept a simple falsehood than a more complicated truth" to which he replied with a smile, "Some people prefer to accept a more complicated falsehood than a simple truth!". … Nice one Harvey!

Harvey Goldstein Memoria

Ian PLEIWS "A wonderful critic of colleagues' writing – thorough, timely and trenchant"

I first encountered Harvey in 1973 when he was on the interview panel for a job I had applied for at what subsequently became the Thomas Coram Research Unit. I remember his question to me – searching as always – was about multivariate analysis. Harvey joined the Institute of Education a few years later and immediately encouraged me to apply with him for an SSRC Fellowship to consider statistical problems arising with longitudinal data. He supervised me throughout that Fellowship, always drilling into me the need to write down a statistical model. It was during the period of that fellowship – in 1979 – that his book on the design and analysis of longitudinal studies came out. It was the first major book in the field and Harvey's contribution to the analysis of longitudinal data has perhaps been overshadowed by all his groundbreaking work on multilevel modelling and educational testing. We remained colleagues at IOE and collaborated on many projects, sometimes in the same group, sometimes not.

Harvey was a wonderful critic of colleagues' writing – thorough, timely and trenchant. And he was always forensically aware of the way statistical analyses rested on assumptions and those assumptions could often embody political assumptions too. His heart was most definitely in the right or should I say left place and the world has lost a very fine statistician, a clear and rounded thinker much needed in these troubled times and, not least, an honourable man.

Jonathan ROSENHEAD "A calm voice bringing respect for evidence to the fore"

Harvey was a good friend of Jewish Voice for Labour. Over the recent period of controversy over allegations of antisemitism in the Labour Party, his was a calm voice bringing respect for the evidence to the fore.

As a statistician he was noted for his work on multi-level modelling. It was his critique of Thatcher's school 'league tables' that brought him to the attention of a more general public. These tables were set up on the grounds that information on exam results would enable parents to make informed choices of schools for their children. But you can't measure something without changing it. The effect of league tables was to force schools into competition with one another. The damaging result has been a concentration on 'working to the examination'.

But the tables also ignored the fact that the educational attainments of pupils entering school varies widely. Harvey's criticisms led to their progressive reform, with a system based on the 'value added' by the school in transforming the prospects of its pupils. But he remained a critic of the whole system, which he saw as an abuse of performance data as crude accountability measures.

More recently, Harvey's calm voice has been among the most authoritative in debunking the aggressively hyped narrative alleging Labour antisemitism. In a blog in February 2019 (republished by JVL) he was gently dismissive of the almost evidence-free assertions which were

so prevalent. Gently, because that was his invariable style. But his fierce desire to call out the abuse of data in public debate shone through. He thought statistics should be used to improve society, not to deceive or control it. Harvey took up this issue again in his substantial article *Uses and abuses of statistical evidence: how much antisemitism is there in the British Labour party?* (*Radical Statistics Journal* 124). After carefully reviewing the evidence he came to a very similar conclusion to that of JVL (that is, that the case that antisemitism in Labour is rampant does not stand up) but with the added weight of his statistical reputation.

Harvey Goldstein was Jewish – indeed born in Whitechapel. His father was a button manufacturer and his mother a hat maker. His distinguished career took him to professorial posts at the Institute of Education in London and then, after retirement, at the University of Bristol and London's Institute of Child Health. Tributes from fellow statisticians can be found here.

JVL website at https://www.jewishvoiceforlabour.org.uk/article/harvey-goldstein-an-obituary/

Ludi SIMPSON: "Encouraging to younger researchers, exacting in his expectations"

Harvey deserves recognition for his insistence on the ways in which policy priorities shaped the use of evidence, and the evidence itself.

I remember my early days of knowing Harvey and Radical Statistics involved his account of the use of the Rasch model in educational test evaluation. To be honest, I can't remember the arguments! but I do remember being impressed and inspired by the clarity with which he could explain the assumptions implicit in adopting one model rather than another, and the association of those assumptions with advantage to one way of looking at the world rather than another.

Harvey did this many times in his career, notably for school league tables, where he first insisted that the 'raw' comparison of schools' average test results encourages parents to choose a school for their children that was not the closest, but only those that could afford to do so would act on that information, creating division and inequality in education.

He went on to explain how such a choice based on raw comparison of school results was a very poor evaluation of a school's contribution to a child's development, both because it took no account of what the child entered school with and the pupil's progress that a school should be enhancing, and because it referred to a school's performance several years before the period of importance to the parent making the choice. He devoted a good part of his professional life developing and promoting ways of analysing this kind of data on clusters of observations, in education and dozens of other settings.

His sharp scientific mind led him to a professorship in statistics at the Institute of Education, at a time when his lack of a PhD was not a barrier – he was proud to receive an honorary one from the Open University in 2001.

Harvey was encouraging to younger researchers, exacting in his expectations. I was his first PhD student, starting in 1978, and I think he expected me to have read, understood and

remembered statistical papers on concepts he would drop into supervision conversation. I frequently left supervisions feeling I had experienced something very special but was none the wiser for it. He was generous in his own contributions, always good for coming up with an original paper for Radical Statistics when I edited the newsletter and cast around for contributions.

Harvey has been a regular contributors to the Radical Statistics Journal, most recently on the evidence of antisemitism within the Labour Party (issue 124, 2019; https://www.radstats.org.uk/no124/Goldstein124.pdf) He despaired at the media's poor quality of journalism on this matter, but argued that the Labour Party had not treated the issue through clear presentation of evidence. He ended the article with a characteristically challenging appeal: "Conducting debates principally on the basis of sound evidence ought to be an ambition for the Left generally, and, hopefully, become a defining characteristic of what being 'left wing' is all about."

Twitter logo

Harvey's Latest Tweets

@GoldsteinHarvey was a regular but not a frequent Twitterer.

His last four were on

- Use of big administrative databases (13 March – unfortunately with a link that does not work)
- "What future is there for the British Labour Party?" (27 January)
- The role of evidence in public policy making (15 December 2019)
- "Evidence, its abuses, and antisemitism" (2 July 2019 – a complaint at the outrageous way that Chris Williamson has been treated)

Comments in the TES included the following

https://www.tes.com/news/tributes-pour-critic-pisa-and-league-tables

- Harvey always argued that statistical models need to be complex in order to be accurate – they should model the complexity of reality. If you use a simple model and get it wrong, that is very dangerous."
- "What he did was he mounted a robust challenge to inappropriate use of school league tables. Lots of people have criticised them but he demonstrated accurately and scientifically how they could mislead and what their weaknesses were."
- Harvey had "extraordinary energy and extraordinary kindness to younger colleagues. He was unusually approachable for a senior academic, very generous with his time, with very good intuition on tricky research questions."
- "Where some academics might shy away from that, he enjoyed using statistics to challenge policy, to formulate policy. He spanned the social sciences, medical statistics – he could turn his hand to many things"
- After spending days teaching modelling, he would play flute in an orchestra, and was also teaching himself French.
- Many recalled Harvey's generosity with his time and his willingness to help students, even if they were not his own. "He was very generous. He wouldn't always be looking to be first author. He was generous with authorship and generous with his time. His interest in social justice shone through his work."
- "When I started my PhD and I knew that I would be working with Harvey, he was such a big name that I was quite daunted and expected him to be a stereotypical scary professor, but he was very approachable, friendly and hands-on. He always had time for me and for many other junior colleagues and colleagues across the board, and he was generally very supportive and encouraging. I have very fond memories of my early work with him. He started out as a supervisor and then became a friend, colleague and general inspiration."
- Harvey was "good at a catchy title" and he helped come up with the title for the British Educational Research Association's recent critique of baseline tests, *A baseline without basis".*
- "We will greatly miss Harvey as a colleague and friend. He made an enormous contribution to social science and education"
- On a personal level, Harvey was deeply concerned by social inequity and, more recently, the environment. He had shifted to a vegetarian diet, and his interests included cycling in Norfolk with his wife Barbara, with whom he published a book on the subject.

I was shocked to hear of the sad news of Harvey Goldstein.

I followed him into the National Children's Bureau and the NFER: one aspect I noticed was that statisticians were treated with considerable respect after he'd been around. He was a leader in statistical developments in multilevel modelling and value added in schools. Not only did he have this effect on statistical methodology, but his deep concern with the valid interpretation of data had a major impact on official education policy.

He was patient, kind, generous with his time and ideas. When I first started at the NFER, Harvey was our statistical consultant, always an invaluable and seemingly inexhaustible source of solutions to problems that came up during the course of projects. To any tricky question, it seemed he would come up with

Two good ideas that you'd had already
Two not-so-good ideas that you'd had already
One good idea that you hadn't had already, and
One idea that was so off-the-wall that, if it had come from anyone else, you'd think they hadn't understood the question. As often as not, this turned out to be the answer.

It is difficult to believe that he is no longer with us. He will be very much missed.

Dougal Hutchison