

**Joint UNECE/OECD Work Session on Statistical Dissemination and Communication**  
(14-15 February 2005, Henley-on-Thames, United Kingdom)

Topic (iii): How to train and educate statisticians to tell the story behind the numbers

**GETTING THE MESSAGE ACROSS**

**Invited Paper**

Submitted by the Office for National Statistics, United Kingdom<sup>1</sup>

**I. INTRODUCTION**

1. It is human nature to try to make sense of the world around us by rationalising the information into a series of understandable 'stories'.
2. In today's information-rich society, there is so much to absorb. Everyone has to search for some shape and meaning from the torrent of events and information in their everyday lives. In its simplest form, that shape and meaning is a series of pictorial stories. Further than that, each picture is sharpened – the unclear is shaved away and the interesting polished up.
3. This is one of the keys to successful journalism. The journalist shortcuts through the dross of everyday material and focuses on the simple, single picture or story that he or she knows will fit the shape of the public mind. The sharpening process is very important to this.
4. The problem is that this focusing, sharpening and simplifying process can cut away many of the nuances and contexts that make up the bigger picture. The original source of the story may sometimes struggle to recognise the final representation as 'true'.
5. Nevertheless, communicators of statistics face a stark choice. Either help the media to produce a story that is 'sharpened' but accurate; or, allow their work to rest among the sawdust of obscurity.
6. We need to give the public who read, hear and use our statistics the right pictures to help them understand. The only way we can do that is create a corps of statisticians ready, willing and able to paint these pictures.
  - ?? What types of training are available to help statisticians and others develop these skills?
  - ?? What can statisticians learn from journalists in how they approach communication?
  - ?? How can writing skills be improved – has university education created a vast group of people who have not been taught how to communicate for the world of work?
  - ?? Can we do anything to improve the way journalists report statistics?

---

<sup>1</sup> Prepared by David Marder, Senior Press Officer (david.marder@ons.gov.uk). Views expressed in this paper are personal and for discussion. They do not necessarily represent the views of the Office for National Statistics.

## II. ISSUES

7. The first ‘fundamental principle of official statistics’ (published by the UNECE) states:

*“Official statistics provide an indispensable element in the information system of a democratic society, serving the government, the economy, and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens’ entitlements to public information.”*

8. It’s a bit pompous, but I take it to mean that quality-assured information should be available impartially to everyone. That also implies that everyone should be able to understand the information and make it relevant to their everyday life.

9. Fundamental principle three, however, could be seen to muddy the water:

*“To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of statistics.”*

This seems to say that all statistical information should be presented in a strait-jacket to avoid any chance of misinterpretation. Methodology and procedures are, of course, anathema to most members of the public and the media in particular. The public and the media are fundamentally interested in what the statistical data say, not how they were arrived at.

10. If statistics are presented purely in the strait-jacket of sources, methods and procedures, then they would be working only for one part of the audience – other statisticians and academics. This is a kind of intellectual arrogance – publishing only for the benefit of a tiny minority perceived to be ‘important’.

11. It may be an unfair statement, but it could be true too that many publishers of data hide behind this barricade of procedures and methodology for fear their work might be misinterpreted. They produce data but are frightened of the potential consequences – are they scared of their own shadow and determined to live as far from the limelight as possible?

12. No one argues against statistics being produced and published to the highest professional standards of methodology, sources and procedures but, at the point of publication, it is findings and their implications for society that are important.

13. Statistical agencies must make those findings and their implications as clear as possible to the widest audience. The big issue then is how do you clarify or simplify the findings of a piece of work without damaging its integrity. Every bit of sharpening that is done means a few more shavings off the totality of the findings are lost. The big landscape is being reduced to a portrait.

14. This is one of the many trade-offs that are necessary in everyday life. Compromise and trade-off are nothing new to statisticians; every day they have to make the trade-off between timeliness and accuracy or completeness. No one says it’s easy – but it is necessary.

15. So there needs to be a trade-off between UNECE fundamental principle one and fundamental principle three. It is a shame that nowhere in its ten fundamental principles does the UNECE mention the word ‘communication’. It refers to *‘made available . . . to honour citizens’ entitlements’* but this is grudging in the extreme and comes nowhere near the requirements in a modern open society.

16. I don’t believe this attitude forms the thinking in today’s modern statistical agencies. The need for clear communication is great now and will only grow greater. Information from a huge variety of

sources, both good and bad, has never been so readily available to everyone. Information from NSIs should be the best and we should be telling the world in the clearest possible language.

17. In the UK, we operate to the ten fundamental principles, of course, but we also have our own published National Statistics Code of Practice. However, it is another sad fact that nowhere within our Code of Practice will you find the word ‘communicate’. Instead there is a principle on ‘Accessibility’.

*“Access to National Statistics will be fair and open”*

In addition to a promise to promote ‘equality of access’, the principle states:

*“Data will be presented to a standard that clearly and accurately expresses the contents to the widest possible audience, with choice and flexibility in the format wherever possible.”*

18. The default state for the presentation of statistics is to cloak them in the armour of semi-scientific respectability with thick almost impenetrable walls of methodology and a castle keep of procedures. This would almost certainly score on the count of accuracy – but clarity, choice, flexibility and reaching the widest possible audience are right out of the window.

### III. ACTION PLAN

19. There are many who think the ‘scientific standard’ is the one-and-only fair and accurate way to present statistics; it is tried and tested; they learnt how to do it in university – so it must be right. It rolls on with the inertia of a supertanker.

20. But this does not deal with reality. In much of the second half of the 20<sup>th</sup> Century – at least up until the 80s – interest in official statistics was mainly an academic or governmental thing. Public and media interest was always there but at a relatively low level.

21. The creation of the world wide web and the explosion of 24 hour news has changed all that. Every organisation has to be media-savvy, it is no longer something you can opt out of. At the same time the public thirst for information has expanded exponentially. It is no longer an option to sit back and say these statistics are meant for use by academics or civil servants only.

22. The herd has come to the watering hole and needs to drink. Nearly all NSIs have recognised this and are driving to improve their communications and accessibility through improved websites and better targeted releases to the media.

23. In the UK, the Office for National Statistics has a number of programmes aimed at helping to train statisticians and other civil servants to communicate better.

?? Clear-communication – designed to improve the standard of writing by civil servants across the board.

?? Better presentation – aimed at helping presenters of statistics make more impression when they talk about their findings before the media, the public and colleagues at seminars.

?? Media-awareness – presented at two or three levels of ability to help staff get the most out of the media and avoid embarrassing pitfalls.

To this you could add more specialised areas such as media crisis training.

24. But to underline the need for all these programmes there is one unavoidable fact. When it comes to the nitty-gritty, statistics are dead things; they have no blood in them. They are just facts. To mean anything statistics must be related to the people they affect. And they must be communicated in a language ordinary people can understand.

#### IV. CLEAR COMMUNICATION

25. I put this first in the order. If we are ever to educate statisticians and researchers to tell the story behind their statistics, they need to understand the principles of clear writing. We are talking about the basics of language including grammar and sentence construction.
26. We are not suggesting that all our highly-educated statisticians, researchers and officials are illiterate! What happens though is that over years people learn vocabularies and styles of writing that are not appropriate or understandable to the audience they are supposed to be addressing.
27. Few of us are perfect in this respect. I'm sure many people could gleefully tear shreds out of the grammar and language in this paper. Use of language is one of the last bastions of people's sensibilities. The point is not to criticise other people's writing but to recognise that clarity and simplicity should lie at the heart of all our communication practices.
28. We are currently drawing up a strategy that is both comprehensive and ambitious to sharpen up the general writing skills in the organisation. We believe that the fundamental principles of clear communication can be taught and learned, provided there is the political will from the whole staff.
29. This goes beyond teaching people media-awareness and how to draft a good press release. We want to see clear writing in all communication, internal and external and at every level. We are proposing that clear-writing is made a key part of induction when people first join the organisation.
30. We have broken the training needs into four broad areas.
- ?? Writing that sells.
  - ?? Writing that informs.
  - ?? Writing that adds value.
  - ?? Business writing.

*Writing that sells* addresses a broad range of literature including: press releases, web copy, magazines, internal newsletters, annual reports, marketing copy, publicity materials, survey communications and presentation.

*Writing that informs* includes: guides, training manuals and leaflets, policy documents parliamentary questions, yearbook and technical handbooks.

*Writing that adds value* covers: some web-copy, journals, and various reports.

Finally, *business writing* incorporates all communication between staff and the public such as e-mails, memos, letters and business reports.

#### V. PRESENTATION

31. Clear writing feeds into better presentation as day follows night. Writing with simplicity and clarity is the best starting point for any presentation. It is writing the way we speak. But to present to the media or the public calls for an additional suite of skills.
32. Too many presentations suffer from too much information and no clear focus or main point. Too many presentations suffer 'a death by PowerPoint', where the presenter uses the slides as a crutch rather than a tool to help enlightenment. This a tough battle and rule that doesn't come easily to many statisticians. Again this is because of an inbred dislike of drawing any one firm conclusion from a set of data.

33. The aim of the presentation training is to set a high standard for all who need to present. We also need to make sure they are aware of the need to properly use the corporate brand and understand they are representing the organisation as a whole. As well as making sure there is a good general level of presentation; we aim to talent-spot the best presenters and use them for high profile launches where they can make the most impact.

## **VI. MEDIA AWARENESS**

34. Talent-spotting is a strong element too in the media-awareness training we offer. We are looking out for people who have a special ability for expressing the statistical story with the most impact via the media – both electronic and written. We offer various levels of media-awareness training. We always use organisations that take advantage of people who are, or who have recently been, working journalists.

35. Unusually in the British Civil Service, the Office for National Statistics allows its officials to speak directly to the media. It is a practice that has worked well over the years with a handful of exceptions where the statistician or researcher has fallen into the ‘elephant trap’. It is now the policy of ONS that anyone speaking to the media must have undergone media-awareness training at least to basic level and be ‘accredited’ to speak to the media. At this time ‘accreditation’ generally amounts to having been on the one-day course within the past two years. However, attending the course does not always mean the person has grasped the principles. We are thinking hard about some sort of straightforward accreditation certificate that could be created that shows a sufficient grasp of the purposes, opportunities and dangers of dealing with the media.

36. For those who show aptitude or who have particular need we provide an intermediate level of media training which is much more based on performances in interviews both by written media journalists (face-to-face, down the ‘phone and via e-mail enquiry), and also by the electronic media (radio and television). Beyond that, there are tailored one-to-one courses to help statisticians who are facing specific media interviews.

37. The important part though is the follow-up. It is too easy for people just to tick the box and say ‘been there, done that’. Dealing with the media is a skill that needs constant refreshing. So we are setting up a forum or support group that all our ‘students’ can attend on a regular monthly basis with opportunities to hear about and pick up new skills in workshops or hear a seminar from a major journalist.

## **VII. DEBATING POINTS**

38. But . . .

- ?? Is the whole effort too piecemeal?
- ?? Will it really achieve any long-term improvement in public understanding of statistics?
- ?? Are we wasting time and money?

Or . . .

- ?? Do we need to be striving for a far deeper culture change in the way that national statistical institutes communicate?
- ?? If so, is it achievable?

39. To answer some of these points, I don’t believe we are wasting money if we help even just a handful of people to communicate better. Whether it will create a long-term improvement in public understanding of statistics is harder to call.

40. I think the vast bulk of the public wherever you are has a very weak grasp of statistics and risk. This is equally true of the media. Without mass re-education we are never going to be able to convey all the statistical niceties and nuances of how statisticians work.
41. This is true too of rocket-science (to use the famous expression). You can be interested in space and space-exploration without having anything more than a basic understanding of the incredible amount of work that goes into making it happen.
42. Equally, the findings and implications of most statistical work are at the cornerstone of modern society. People are interested in knowing what the statistical findings mean for them without having to grasp how clever a statistician has been to be able to create that information.
43. It comes down to reputation and trust. If the public know who you are and you have a reputation for being honest and reliable, then they will trust your statistics. If you are a shadowy organisation that hides behind a fog of impenetrable numbers then they will believe only what is said about you by your detractors. That is why clarity, simplicity and openness are so vital to national statistical organisations. If you engage openly with the media and the public and talk a language they understand then you will move out of the shadows and into the light.
44. There is a danger, however, that we carry out education of our own staff in too piecemeal a fashion. It needs to be comprehensive, coordinated, measurable and continuous.
45. Then we come to the crunch questions. Do we need culture change and is it achievable? My view is that we need a major culture change in most NSIs. There must be a step away from the public and media image of desk-bound number-crunchers. We need to change to create organisations where providing information and communicating it to a waiting public are at the very forefront and core of their purpose.
46. Is it achievable? My heart says 'yes' . . . but my head says 'not for quite some time and not without major sign-up from those at the top of the organisations'. I fear that attempts 'to clarify and simplify' will be seen for many years to come as 'dumbing-down', which, of course to some extent they are.
47. The truth is though, that every 'fact' we hear or see is almost certainly 'dumbed down' to some degree. As I pointed out at the beginning people are story-telling animals. They need to rationalise all the information coming in and make sense of it in terms they can understand. There is little that is pure about this process, we all do it.
48. We should all be a little bit less precious about what we do and a bit more sympathetic to the need for people to understand it. Journalists are, in some cases, masters of this process. Unfortunately, what drives journalists is not the purity of their communication but the satisfaction of their publishers. So while there is much for statisticians to learn from journalists such as clarity, simplicity and finding the good story, there is much that journalists could learn from statisticians about getting the facts right!

-----