Statistical Professional Ethics in the United Kingdom

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1 Introduction

There has been continuing concern to create a framework of ethics for the statistical profession. In some cases these have been called Codes of Ethics and in others Codes of Practice but the basic content has been similar in all cases. Key dates in a UK and wider context are:

1979 International Statistical Institute (ISI) sets up a group to draft an ethical code.
1985 ISI adopts a 'Declaration of Professional Ethics' (www.isi.cbs.nl/ethics1.htm and www.isi.cbs.nl/ethics2.htm)
1993 Royal Statistical Society adopts a 'Code of Conduct'. (www.rss.org.uk).
1994 UN adopts Fundamental Principles of Official Statistics (www.un.org/depts/stats).
1995 UK Government Statistical Service: 'Code of Practice for Official Statistics'.
2000 UK adopts new 'Code of Practice for National Statistics' (www.nationalstatistics.gov.uk).
2005 European Statistical Programme Committee adopts European Statistics Code of Practice (www.epp.eurostat.ec.europa.eu)
2006 UK announce intention to place Code of Practice for National Statistics on a statutory basis.

These initiatives are often related, the Declaration of Professional Ethics adopted by the ISI led to the Code of Conduct adopted by the RSS. Similarly the UN Fundamental Principles have been cited in the statistical legislation of many countries since 1994 and also appears in European Regulation and is referred to in subsequent Codes of Practice.

Apart from the actual content of a Code of Practice or Ethical Code there are two other aspects which are essential to consider. The first is whether the Code applies to all statistical activity or to the production of Official Statistics. The second is whether the Code is a voluntary code (i.e. a non-compulsory statement for guidance) or whether it is a mandatory requirement. This paper will briefly discuss the content of Codes and these two additional issues.

2 The nature of Professional Codes and their content

The very nature of statistical design and analysis is such that Codes of Ethics or Practice can rarely be prescriptive in terms of the processes or actions that statisticians must take to comply with the Code. Codes generally state sets of fundamental principles or values that then have to be interpreted in the context of any specific piece of statistical work.

The RSS Code of Conduct is typical and contains guidance on the statistician's duties in regard to a range of different aspects of statistical work:

Duty in Regard to the Public Interest

- Appropriate knowledge of legislation, regulations and standards relevant to the area of statistical work undertaken.
- Regard to basic human rights.
- Studies involving humans based, as far as practicable, on freely given informed consent.
- Identities of subjects kept confidential unless specific consent for disclosure obtained.

Duty to Employers and Clients

- Carry out work with due care and diligence.
- No disclosure or use for personal gain of any information acquired during the course of the work.
- No misleading summary of data.

Duty to the Profession

- Uphold the reputation of the profession and seek to improve professional standards.
- Advance public understanding of statistics.
- Encourage and support professional development.
- Act with integrity.

Duty to Maintain Professional Competence and Integrity

- Upgrade professional knowledge, procedures and standards.
- Recognise good practice and quality standards.
- Only work within areas of professional competence.
- Accept professional responsibility for any work undertaken.
- Avoid conflicts of interest with clients or employers.
- Maintain the right to disengage if conflicts arise.

Note that these duties are couched in general terms and provide a set of principles that are intended to guide the statistician.

The ISI Declaration of Ethics and the RSS Code of Conduct are intended to cover the whole statistical profession. All of the other Codes listed in section 1 are focused specifically on those who produce Official Statistics (i.e. those working in National Statistical Institutes and similar organisations).

In these cases the Code can be rather general and aimed at high level values that should underpin the statistical work. For some Codes the text is more specific and in some cases sets out precise requirements for some aspects of the work. The UN Fundamental Principles of Official Statistics is an example of a rather high level Code which has 10

rather general statements. The adoption of the UN Fundamental Principles was motivated by the break-up of the Soviet Union and the transition of many central and eastern European countries to market economies. More recently the European Code of Practice has been created to strengthen the framework within which Official Statistics are produced throughout the European Statistical System.

Because of the political sensitivity of Official Statistics and the need to ensure that the statisticians can work in a professionally independent environment these 'Official Statistics Codes of Practice' are driven by the need to ensure statistical independence from the political process and hence strengthen public confidence and trust in the statistics produced. The recent versions of these Codes tend to be more precise in terms of the obligations and responsibilities placed on the statistical producers. They also reflect the various aspects of the statistical production and dissemination processes involved.

The European Code of Practice is a good example:

Principle 1: Professional Independence - *The professional independence of statistical authorities from other policy, regulatory or administrative departments and bodies, as well as from private sector operators, ensures the credibility of European Statistics.*
Principle 2: Mandate for Data Collection - *Statistical authorities must have a clear legal mandate to collect information for European statistical purposes. Administrations, enterprises and households, and the public at large may be compelled by law to allow access to or deliver data for European statistical purposes at the request of statistical authorities.*
Principle 3: Adequacy of Resources - *The resources available to statistical authorities must be sufficient to meet European Statistics requirements.*
Principle 4: Quality Commitment - *All ESS members commit themselves to work and co-operate according to the principles fixed in the Quality Declaration of the European Statistical System.*
Principle 5: Statistical Confidentiality - *The privacy of data providers (households, enterprises, administrations and other respondents), the confidentiality of the information they provide and its use only for statistical purposes must be absolutely guaranteed.*
Principle 6: Impartiality and Objectivity - *Statistical authorities must produce and disseminate European Statistics respecting scientific independence and in an objective, professional and transparent manner in which all users are treated equitably.*
Principle 7: Sound Methodology - *Sound methodology must underpin quality statistics. This requires adequate tools, procedures and expertise.*
Principle 8: Appropriate Statistical Procedures –*Appropriate statistical procedures, implemented from data collection to data validation, must underpin quality statistics.*
Principle 9: Non-Excessive Burden on Respondents - *The reporting burden should be proportionate to the needs of the users and should not be excessive for respondents. The statistical authority monitors the response burden and sets targets for its reduction over time.*
Principle 10: Cost Effectiveness - *Resources must be effectively used.*
Principle 11: Relevance - *European Statistics must meet the needs of users.*
Principle 12: Accuracy and Reliability - *European Statistics must accurately and reliably portray reality.*

Principle 13: Timeliness and Punctuality - *European Statistics must be disseminated in a timely and punctual manner.*
Principle 14: Coherence and Comparability - *European Statistics should be consistent internally, over time and comparable between regions and countries; it should be possible to combine and make joint use of related data from different sources.*
Principle 15: Accessibility and Clarity – *European Statistics should be presented in a clear and understandable form, disseminated in a suitable and convenient manner, available and accessible on an impartial basis with supporting metadata and guidance.*

The European Code is still couched in rather general terms but is more precise than the UN Fundamental Principles of Official Statistics for example.

The UK Code of Practice for National Statistics goes even further and underpinning each of the statements of principle there is a more detailed 'Protocol' that sets out the duties of the statistician. In many areas these duties are still rather general in nature but there are areas where the duties are extremely precisely specified.

For example if we consider just one small aspect of the Protocol on Release Practices - the question of pre-announcing when a statistical output will be released - the protocol is very precise:

Timing (of release) will not be influenced by the content of the release or set in such a way as to create a presumed advantage to any particular group or individual.

(a) The release … will be consistent over time.
(b) Any alteration to a pre-announced release date will be made as early as possible and accompanied by an explanation for the change.
(c) For all market sensitive statistics and for frequent statistical releases ….the exact day and time of release will be provided at least six months in advance.
(d) For non-market sensitive statistics, the month of expected release will be provided …six months in advance. Exact release dates … no less than two weeks before release …

3 The Status of any Code, its Enforceability and Implementation

There are two related issues that relate to all Codes: (a) whether the Code is intended to be for guidance or for mandatory application and (b) the extent to which it is enforceable in practice.

The ISI Declaration is clearly intended for guidance rather than for mandatory regulation whereas the RSS Code applies differently to the two classes of Fellow of the Society.

The ISI declaration states: *the aim … is to document shared professional values and experience as a means of providing guidance rather than regulation.*

The RSS Code similarly states: *It is commended of all Fellows of the Society and is mandatory on all Professionally Qualified Fellows as defined in… the Society's Bye-Laws.*

The professionally qualified members of the RSS have designation CStat and GradStat and have been through an accreditation process that assesses their statistical training and experience. In addition Professionally Qualified Fellows are required to maintain a programme of continuous professional development (CPD) in order to maintain their status.

The UK National Statistics Code of Practice is commended as required practice for all who produce Official Statistics but has no legal or mandatory status. However the UK government recently announced its intention to introduce new statistical legislation and one aspect of this will be to give the Code of Practice a statutory basis. It is expected that this will not mean that the actual content is enscribed in law but the existence of the Code will be established in law together with a requirement that it be followed. Hence in future the actual content of the Code will be subject to development and amendment without requiring new primary legislation but adherence to whatever the content of the Code is at any time will be legally required.

Whether or not a Code is mandatory raises the question of the extent to which it is enforceable. By the nature of statistical work it is rare that the content of a Code will be so precise as to be subject to a clear and easy audit as to whether it has been followed. The excerpt of the UK Protocol on release practices quoted in the previous section is very precise and could be subject to simple audit. However most of the text of any Code is imprecise, containing guidance and a statement of underlying values rather than precise instructions as to behaviour in any circumstance. Hence the audit of whether or not a Code has been adhered to requires a process audit rather than a simple outcome audit and is not easy. It almost certainly requires the auditor to understand the process within which professional decisions have been made and to make judgements about the extent to which the spirit of the Code has been breached, if it has. This almost certainly means that the auditors will need to be practising statisticians who are familiar with the context of the statistical work and can assess whether or not the spirit of the Code has been adhered to.

This raises major issues about how a Code of Practice should be implemented and promoted. The Code is not a check list of actions which can be simply adhered to. It is a set of guidance and underpinning values that requires interpretation, in principle every time a professional statistical judgement is made. This means that it cannot be sufficient simply to produce a Code, adopt it and then leave it to sit on a shelf. It has to be a living document that is used to create a common culture and interpretation as successive generations of statisticians join the statistical production team. Obviously when a Code is first adopted it will require a major effort to explain and promote it throughout the Statistics Office but beyond this it needs to feature permanently in the induction and training programmes of staff.

This creation of a common professional culture is vital. It is a difficult thing in a centralised statistical system but is much more difficult, and yet even more important, in a statistical system that has large decentralised components or statistical production devolved to different organisations. The creation of a common professional culture across disparate organisations that have their own organisational cultures is no easy task and should not be underestimated. Even in the most centralised systems there will be groups (for example in a central bank or Ministry of Finance) who will be responsible for some key statistical activities. Building a common culture between the National Statistical Office and such groups is vitally important.

In the UK the Official Statistical system has a strong central core in the ONS as well as decentralised elements in policy departments and devolved administrations in Scotland, Wales and Northern Ireland. The UK Government Statistical Service (GSS) devotes a major effort to

maintaining a common culture across this system through a common Code of Practice as well as other coordinating mechanisms.

The most recent example of a Code of Practice is that adopted by the European Statistical System (ESS). This seeks to bind all of the statistical systems in the EU into a common framework and is a laudable initiative. However, just as implementing a Code of Practice in a complex decentralised or devolved system is particularly difficult, so the attempt to implement a European Code of Practice throughout national statistical systems that are diverse in terms of organisation and culture is truly ambitious. True implementation will be a slow and difficult task.

On the whole, statisticians are good at creating a common culture of professional standards. One feature is the whole network of international standards and classifications and shared methodologies for creating comparable statistics – such as for National Accounts or Balance of Payments statistics. Statisticians are good at talking with each other and finding common purpose. Most of the effort to implement a Code of Practice will involve statisticians talking to each other and is feasible.

However, part of the purpose of Codes of Practice for Official Statistics is to create some space between civil servants who are statistical producers and the rest of the civil service and Ministers. To create the right environment in which the statistical producers can work in accordance with the Code of Practice requires some process of communication and explanation with those who are not statistical producers. This environment places restrictions on civil servants who are not part of the statistical production team which need to be understood. Explaining to those in policy units or in press offices of policy departments the importance of the professional independence of the statistical producers and the fact that some of the statistics produced will, from time to time, be uncomfortable for policy colleagues is not easy. And yet, unless we can communicate the essential elements of a Code of Practice across this divide the proper environment for statistical production will not be created.

This too is an unending process, and one which we, as statisticians, often give too little attention.

4 Summary and Conclusion

By the very nature of statistical work, Codes of Practice or Codes of Ethics cannot be prescriptive as to what is required in any particular situation. Instead they create a framework of values and guidance which professional statisticians must interpret as they undertake their tasks. This is so, whether the Code is designed for the general statistical profession or for a particular group such as those who produce Official Statistics.

This has clear implications for the enforceability of any Code, the way that any audit of adherence to the Code may be carried out and the knowledge required of the auditor.

The fact that the Code is requires interpretation also has important implications for the way in which it is communicated to those it is designed to cover and the training and development programmes that are needed to implement and then sustain the Code through succeeding generations.

The essential features of the Code need to be communicated not just to the statistical community but also to others who need to understand the implications of the Code for the way that they interact with the statistical producers.