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Comment

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1. Introduction

Shortly before reading Don Dillman's article, I had read the latest issue of the Harvard Business Review. I could not help wondering whether the Dillman article should be put up as a case study. Government statistical organisations do not have to function in the way Dillman describes and do not in all statistical organisations. I am confident that experts in organisational design and culture change could be of immense value. If their expertise has not already been sought by the survey organisations, then it should be.

Dillman should be congratulated for bringing forward an article on this topic. It is an important article that should be taken seriously. It is critical but the criticisms have been handled very sensitively. It may prove to be an important stimulus for improving the adaption of innovation in U.S. government surveys.

I agree with most of his analysis and his recommended solutions certainly go some way towards improving the situation. However, I am critical of the implication that there is a lack of innovation in all government survey organisations. Dillman is referring to a current U.S.A. problem, and it would be wrong to generalise to other countries, or past periods in the U.S.A. Certainly in the two organisations in which I have worked, the Australian Bureau of Statistics and Statistics New Zealand, innovation is highly prevalent in survey programs. I expect that Statistics Canada, for one, would make similar arguments. I will discuss some of the reasons below when giving my view of "Towards a Solution."

To give one example of innovation in Statistics New Zealand, the 1996 Population Census had a research program that made extensive use of cognitive methods in developing the census questionnaires, particularly on the new topics (or topics that had not been asked for some time) of language, disability, smoking and fertility, provided for the first use of a bilingual questionnaire, and resulted in the adoption of imaging technology for processing. All changes have been subject to proper testing and development programs.

Innovation is possible in government surveys. I would suggest that it is the current culture that prevails in U.S. statistical offices that limits the adoption of innovation.

The United States used to be the international leader in methods for government surveys. I personally benefited greatly from discussions and visits with those responsible for the various surveys. They provided much inspiration for what might be done when

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returning home. People such as Morris Hansen had a huge and lasting influence on the methods used in government surveys. Waksberg (1992) highlights some of his most important contributions. However, the United States is no longer the number one place to visit to discuss innovation in government surveys. There should be some analysis of why this is the case. Dillman's article is an important step in the right direction.

This reduction in effectiveness is not due to a lack of good quality innovative thinkers in the United States statistical system. Some of the world's most capable statisticians work there. The capacity of U.S. government statistical offices is the envy of many other statistical offices. However, that capacity is not being fully exploited. The "system" puts too many barriers to enable research staff to use their skills to full effectiveness. Consequently, many of their research objectives are focused externally (e.g., conferences and scientific publications) rather than the internal statistical program. I may be wrong but that is the impression that I have gained.

This is not just a personal view. Others, including statisticians from the U.S.A., have expressed similar views. All organisations go through cyclical patterns of relative strength and weakness. If they do not address the issues of the time and "reinvent" themselves, their future is not good. That is the current challenge for U.S. government survey organisations–how do they reinvent themselves to maximise the benefits from the comparative advantages (e.g., legislative authority for surveys, high response rates, a positive image on confidentiality practices, substantial survey experience and research capacity) that they hold over other survey organisations.

My comments are set out as follows: In Section 2, I have commented on Dillman's analysis of the current situation. Comments on his specific proposals towards a solution are set out in Section 3. I have also offered some further suggestions "towards a solution" based on my experience in both the Australian Bureau of Statistics and Statistics New Zealand.

2. Analysis of the Current Situation

Dillman's analysis is generally very insightful. Many of the comments are probably relevant to all large organisations at some stage during their lives. The real test is being able to respond effectively to the symptoms of an organisation experiencing some lack of cohesion.

It was especially pleasing to see that the time-honoured excuse of "lack of funding" was not used in his analysis. Although additional funding is undoubtedly useful, and it appears that the research funding available to U.S. statistical agencies has definitely declined in real terms, in the smaller countries we still see the United States as relatively resource rich.

In addition to Dillman's analysis, the points that I would like to comment on are:

a. the importance of organisational culture,
b. leadership,
c. communications
d. understanding your market, and
e. the importance of competition.

2.1. Organisational culture

Organisational cultures could be described as belonging to one of the squares in the following grid.

A Relationships	B Entrepreneurial
D Control	C Continuous Improvement

In a culture dominated by *A*, relationships are extremely important and are what dominates work activities and decision making. Advertising agencies are one example. The training area of a statistical office might be another example.

The entrepreneurial culture is largely self-explanatory. These organisations are continually seeking the next big "winner." High technology companies (especially the small companies) will be of this type. The marketing area of a statistical office may have this characteristic.

The continuous improvement culture is what many organisations may be seeking, but not always successfully. It has been an emphasis of the quality improvement movement. The research departments of statistical offices will often have this organisational culture. It is roughly equivalent to what Dillman refers to as the "research culture."

In the control culture, reliability and predictability are important. Standard procedures and policies have an important role. It used to be the dominant culture on the factory floor. It remains the dominant culture in the production areas of many statistical offices. It is equivalent to what Dillman refers to as the "operations culture." With such a culture, it is often difficult to respond to environmental change (participants are threatened by it) so the emphasis is on efficiency rather than effectiveness.

There is no right or wrong culture. We would not want an entrepreneurial culture in the National Accounts Division. On the other hand, we do not want a control culture in a product development area.

There are tensions between the different cultures, but each needs to co-exist within a large organisation. The real challenge for the organisation's leaders is to manage these tensions, and gather strength from the tensions. A prerequisite is understanding the different cultures and what drives the people who are managing or operating in these different cultural environments. An organisation must understand itself and its key people. The difficulty is not with having a research and an operations culture because both are essential – it is whether the tensions between these two cultures is successfully managed.

2.2. Leadership

Much of the analysis provided by Dillman suggests a lack of effective leadership. The divergent objectives of the operations and research cultures are just one sign. Without

effective leadership, decisions are often made on a "lowest common denominator" basis, or the need for change is ignored.

I cannot be critical of individual leaders – I am not in a position to offer praise or criticism. However, from an external perspective it seems that the political appointment of the Director of the Bureau of Census for a relatively short term is not helpful. These appointments are generally external and, in the time available, it must be extremely difficult for them to understand the business, understand the key people, understand the culture and understand how the organisation actually works, prerequisites for providing effective leadership. Also, it cannot provide much incentive for the top quality staff, who really understand the survey business, if they are never going to have a chance to lead their own organisations. The *Economist* magazine provides a peer assessment of the leading statistical organisations. It is interesting to note that most of the highly rated statistical offices are led by those with a background of government statistics, often with a strong methodology influence.

A special effort is needed to develop good leaders. Potential leaders have to be provided with the range of opportunities to broaden their knowledge and experience, and to establish internal and external networks. In both Australia and New Zealand, potential leaders are rotated through different work areas in the organisation as a deliberate strategy. This would include rotation between the "research culture" and the "operations culture." My impression is that this happens to a more limited extent in U.S. statistical organisations.

2.3. *Communications*

Because of the rapidly changing external environment, and the need to react to that environment, there is a need to be responsive to change. Management texts will argue that hierarchical organisations are not efficient in this environment – they are designed for more stable operational situations. The modern organisation relies on flatter hierarchical structures so that decisions can be made more quickly, and networking across hierarchical units, through multi-disciplinary project teams or more informal means, to get things done. For this type of matrix organisation to work, trust and confidence in each other and good communication are paramount. Dillman's analysis does not convince that either is a strength in the statistical organisations he describes.

Communication in terms that can be understood is even more important between units whose underlying culture is different. One group (with a research culture) is about proposing change and the other group (with an operations culture) is threatened by change. Their basic objectives will be completely different so communication requires a special effort. Specifically, communication must be in language that can be understood by both parties and it will often have to be facilitated by the managerial staff.

2.4. *Understanding your market*

Those statistical agencies that are regarded as the best in the world have embraced the marketing of their products or services on a commercial (or semi-commercial basis). A real benefit has been the value of "user pays" to get a real understanding of the needs of the market.

It is not the only way of getting that understanding. In addition to its marketing activities, Statistics New Zealand has deliberately courted a close relationship with the media, providing media conferences for all key releases to assist the media with their reporting of major statistical releases. We have also created a small Public Policy unit whose major task is to remain abreast of key public policy issues as they affect statistics, as well as informing public policy agencies of statistics that may be of relevance to the latest public policy concerns. Consequently, Statistics New Zealand is frequently represented on interdepartmental policy and working groups.

Dillman's analysis suggests that market influences are not having a major effect. Without this external focus and direct contact with users, internal objectives will continue to dominate work practices.

2.5. The need for competition

Many modern management thinkers (e.g., Michael Porter) stress the importance of competition for efficiency. There is much evidence of the benefits of competition, to both customers and the business itself.

Is there enough competition within the U.S. statistical system? The potential for competition is much greater in the United States than any other country. There already exists world class survey organisations in the private sector, high quality statistical consultancy groups, statistical research organisations outside the government sector, etc. Therefore, I dispute Dillman's claim that "much of the specific knowledge for designing and implementing them (government surveys) must come from research which only the host agency can design and implement." Rather, I think the injection of some competition may help to accelerate the research and development process. Duncan and Gross (1993) suggest that a lead time of 10 years may be needed for major innovations in government statistics. In most businesses this would be unacceptably long. I am sure competition would have the effect of reducing the lag between concept and implementation. Certainly in the two statistical offices in which I have worked, we would not contemplate such a long lead time.

3. Towards a Solution

Dillman provides a number of useful suggestions. In this section I comment on his suggestions.

His first suggestion is that government agencies should recruit significant numbers of professionals with training in the theories relevant to defining, identifying and resolving measurement and non-response error issues. This is a necessary but not sufficient condition. The culture still has to be right for their skills to be used effectively. Unless this happens, separate research and operations cultures will prevail without much meshing of these two cultures and not much will change.

His second suggestion is that efforts must be made to ensure that the operations culture develops an understanding of the measurement and non-response issues. This is most important and has my full support. Statistic Canada's Operations Division may provide a good model. They have an operations research unit located

within the Division to assist both with the understanding and to ensure the relevant professional expertise is closely located to the operations staff.

I also agree with his third suggestion to address the organisational structure to improve the efficiency of decision making. Again, this is a necessary but not sufficient condition. Organisational redesign will not help unless the right leadership is in place, management have common goals, market needs have a significant influence and good communication is present.

The fourth suggestion is to increase people's understanding of the multi-dimensional nature of survey error. It is also important that they understand the relative importance of the different sources of error. There is no point in putting vast amounts of sophisticated effort into reducing sampling error if some form of measurement error is a more significant concern. Linacre and Trewin (1993) emphasise the importance of Total Survey Design. As Dillman highlights, the current situation puts too much effort into reducing the sampling error.

However, these proposals will be of limited benefit unless the crucial management issues of culture, leadership and communication are addressed. These are important issues which all organisations face from time to time. It is often useful to employ some external expertise to address these issues. It is too important an issue to leave solely in the hands of statisticians.

4. References

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