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Topic (iv): How to integrate statistics from different sources and subject-matter areas to produce analysis that would be of interest to a wide audience

**WAYS OF PAINTING AN INTEGRATED PICTURE – AND THE
RIGHT CHANNELS FOR THEM**

Contributed Paper

Submitted by Statistics Finland¹

1. How to integrate statistics from different subject matter areas to provide analysis that would be of interest to a wide audience? I will answer to that question at once so that it will not remain unanswered. There is no ready formula. It is no use wanting one either. If we seek the attention of the general public, we are all on the same line and in the same situation – journalists, authors and other providers of information: information has to be combined to create new and well-founded understanding, and it must be presented freshly and efficiently. How it is done – that is dependent on the writer's perception and the nature of the story in question.
2. I cannot say that I would have been involved in many stories that meet those requirements. Most stories, such as those published in Statistics Finland's journals and publications, not to mention press releases, are built on one statistical variable. Industrial output has risen, migration has accelerated, the birth rate is falling...
3. An example of an article where information was combined from various sources and fields was a story in our monthly journal, *Tietoaika* (Information Time or Age) about the increase of natural catastrophes. The basic data in the story derived from a report of a Swiss reinsurance company. The data showed that the number of natural catastrophes had clearly risen since the mid-1980s and further in the 1990s. After that, this basic observation was analysed and scrutinised in more detail. It was found that part of the rise in the number of natural catastrophes was due to improved information flow. The definition of catastrophe was also examined; it is a question of losses of human lives or economic values. The story indicated that humankind has become more vulnerable all the time: population growth and poverty have forced more and more people to live in risk areas, such as volcano slopes, landslide areas and flood plains. Urbanisation and technological-economic development have increased economic damages, against which have increasingly been insured, bringing damages to the scope of statistics.
4. The article thus drew a picture showing that natural catastrophes have increased and human activity has contributed to this, but it is not only a question of the faltering ecosystem and climate change but also of population development, economic inequality, technological-economic development and even

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statistics production. It also revealed how differently natural catastrophes meet rich and poor people. For example, in the natural catastrophe prone Japan an average of 60 people die in a natural catastrophe, while in Peru the figure is 3,000. It was also pointed out that the uneven distribution of natural catastrophes is further strengthened by their tendency to come one after the other; hurricanes are followed by flooding, flooding by drought, drought by epidemics and famine.

Channel according to degree of interpretation

5. That catastrophe story serves as a good example of combining very different sources and information. A slightly similar story of mine concerning the environment dispersed to a much larger audience, actually as big as possible in Finland. It appeared in a journal called *Suomi75* (Finland75), which was distributed to the all-time widest audience in Finland, containing several stories based on statistics and combining different statistics. The journal was made in co-operation with Finland's largest journal publisher at the time of the 75th anniversary of Finland's independence, and over two million copies were printed, one for each Finnish household.

6. The opening story of the journal described how Finland's nature has changed and formed as a result of human activity and how nature in turn has shaped human activity. That story is an example of painting an integrated picture in one story and of a fairly extended analysis made by the journalist for the readers. It also raised quite a heavy response, about which I will talk later.

7. Another way of painting an integrated picture was used when we prepared *Pieni Maailmankirja* (Small World Book). It consisted of thematic maps, related articles, statistical graphs and tables. They were collected between the covers in an organised way and the result was a book that is still sold, although the statistics in it have become outdated. In what way this book differed from the above article is of course its size, but a more significant difference is qualitative.

8. Nature articles offered a complete analysis with interpretations, and all was compressed into a few pages as a pre-digested package (interpreted so much that for months I received mail from the all powerful Finnish forestry industry, and the matter was discussed in letters to the editor published in the largest daily – the reason for the strong response was that I claimed in the story that the major part of our forests were already cultivated fields of trees, no longer natural forests). *Pieni Maailmankirja* is an example of assembling information the journalist thought to have a meaningful relationship with each other, but finding of connections, analysis is left to the receiver. This method is also always based on the journalist's analysis of the world, by which he or she has selected and organised the statistics and stories for the book. The readers have plenty of room for their own interpretations, and the journalist stays as the background operator offering elements for the readers' own perception.

9. This juxtaposing way of making an integrated picture may be more modest compared with great world-embracing articles, but not necessarily any less demanding. It requires a clear analysis to select and juxtapose information for which the reader can then find connections, or not. We have favoured this method because it respects the reader: gives them something to think about, not a fully thought out analysis.

10. Like *Pieni Maailmankirja*, we have produced a few other separate books providing information and stories to readers, and most of all, the opportunity to make own inferences. The economically most successful was the bulky volume *Suomen Vuosisata* (Finland's Century), which described the development of Finland in the 20th century in the light of statistics and articles.

11. The most media attention received a booklet called *Vara-aktuaarin Tilastotälli* (Vice Statistician's Statistical Punch) that was made with a humorous and fairly bold approach. The both evening papers in our country had a double page story on the booklet and the song made in the same connection, *Tango tilastojen valossa* (Tango in the light of statistics; Finland being mad about the tango) was played on the radio. Unfortunately, even our greatest success stories, with regard to media visibility, have been sales disappointments. Lesson: sales and marketing are skills that either the statistical agency must acquire or

join forces with old hands in the publishing industry – otherwise the work will be economically wasted (though an economic result is not necessarily sought).

12. Now back to another way of combining statistical information, in which elements are offered for the reader's own analysis. Journals can also work in this way. One issue comprises articles by different experts, statistics, small stories and so on are inserted, and thus the readers are given the opportunity to think for themselves and combine information. In addition to the Tietoaika journal, Statistics Finland published three journals where this is realised by means of one theme for each issue. The journals are Hyvinvointikatsaus (Welfare Review) focusing on social development and welfare, Economic Trends dealing with international development and the economy and Kuntapuntari (Municipal Facts) concerning municipal issues. These journals typically centre on one theme in each issue, be it information technology, municipal economy or people's time use. Individual articles may combine different statistics to draw a broader picture, but above all, the issue as a whole provides good elements for a very exhaustive analysis on the field or subject.

Indicators are not sufficient

13. The two ways of making an integrated picture thus differ in how complete the analysis or story is made for the reader. Shorter stories usually have a more thought out story; larger packages often provide elements for the readers' own inferences.

14. One example of half-finished serving of materials is the indicator system that now seems to be current among users of statistics. The EU, for example, has a big set of key ratios called structural indicators used for monitoring long-term development in the community. In short, the indicator system means that it is agreed which statistical key ratios are followed in the decision-making process. The problem is that the message of indicators can be understood only by a limited group of the initiated. A responsible journalist is needed for making the right comparisons.

15. I think the purpose of this session is to discuss a bolder way of analysing and telling a story, or combination of statistical information in a shorter story. There is a need for this but this matter is not without problems. The biggest difficulty lies in that there is no objective way to build stories, analytical pictures of what things in the world influence one another and how. It is always subject to interpretation, which statistical agencies have always left to others.

Differences between the ways statisticians and journalists tell about the world

16. Statisticians and journalists have different ways of telling about the world, although there are some common features. The fundamental difference of orientation between statisticians and storytellers is this: both want to tell something about the world but storytellers – if they are any good – try to find telling particulars and perhaps exaggerate them a bit to make the story effective. Statisticians or scientists or researchers, if you will, want to say just what their numbers allow, and are careful not to exaggerate things.

17. Another significant difference between the ways statisticians and journalists tell stories has to do with the use of individuals, real persons. In any interesting storytelling real people, individuals are usually used – therefore magazines tell about general stories through example people. The line and even the lifeline of statistical agencies is to safeguard private person's data protection. This is one reason why use of example persons as "illustrators" of social trends and phenomena is fairly limited in Statistics Finland's journals.

18. Using of example people is not excluded, however. Then it is important to make it clear in the story that information about the person does is not derived from statistical systems but by normal journalistic means. This should be emphasised by using a photograph and direct interview quotes to show the person was involved of his or her own will. If the person is mentioned in passing in the story the

reader may get the impression that he or she was taken direct from the statistical agency's inquiry or register – which would naturally be damaging to general trust in data protection.

19. At the moment I am writing a story about Finns' entrepreneurship. We examine whether, as commonly assumed, it is true that the enterprise stock of our country is declining, Finns rather aim at safe positions and entrepreneurs are getting older. It could be possible to interview for the story an old entrepreneur unable to find anyone to continue his or her work, or a young person to disprove the myth about unwillingness of young people to become self-employed. This storytelling requires close consideration and, above all, lots of work. Another reason for little use of example persons is that it is so laborious; finding persons suitable for the story and talking to them is the most time consuming part of journal editing and requires several journalists. It is much easier to draw numbers from statistical reports and say that they are now greater or smaller than in the corresponding period last year.

20. Despite the problems there is no reason to leave storytelling to the professionals. If we only disassembled numbers, important stories would be left untold, significant knowledge of the statistical agency untransmitted. It is a fact that journalists consider statistics fascinating sources for stories but they often use statistics incorrectly. At any rate, statistical stories are told and seasoned with all kinds of illustrations and interpretations. It might be quite in order that there were also stories on the market told by statisticians themselves – as they are the ones who should know most about statistics.

Voice of the writer and statistical agency

21. But how far do we want to go in the direction of journalism and analyses open to interpretation? I myself am a journalist, not a statistician, for which reason what I say should be understood against that background. In my opinion we should go quite far in that direction but on certain conditions that concern both the channels of communication and the messages itself, that is, stories.

22. First of all, the medium or channel must be made clearly distinct from the official statistics, publications and press releases, which are objective, official information published by the statistical agency. At Statistics Finland we have several such unofficial channels, one of them the Tietoaika journal edited by me. It does not represent Statistics Finland's views, as it is in fact stated in the journal that the stories reflect the views of their writers not Statistics Finland's official opinion. Our other book-like publications (Tilastotalli, Suomen Vuosisata, etc.) also have such more unofficial status that gives more freedom for the storytelling. In these more unofficial publications that can be considered magazines or books, it is also less problematic to use real people as examples than in official statistical publications.

23. It is also possible to depart wholly from the statistical agency's publications. We have long had a "number patrol", which includes, besides me, Statistics Finland's Director of Information Services and Information Specialist of the Library of Statistics. For a long time we had a column called "Relative truths" in Finland's largest daily newspaper. It was not hampered by any commitments to Statistics Finland's official voice, which allowed us to look boldly for connections between various types of information. At one stage our column appeared in connection with a reminiscence piece written by some known author. The author made "an integrated picture" and we questioned different details in the author's text. The method used in the work was association and it worked for a time. The principle was "more questions than answers". Authors offered answers as well.

Interpretations and facts separate inside the story as well

24. The channels are important so that the receivers can distinguish when they receive official data, when interpreted stories. Differentiation of the channels is not enough in my opinion, however. Although the story would be in such a more unofficial medium, it still needs to be made clear inside the story where official statistics and reliable information ends and where the writer's own views, interpretation and journalistic means start.

25. This brings me to what I have been thinking about lately. I have been wondering whether it would be suitable for our journal to have a story type using a sort of piecemeal approach that combines in one story those ways of offering an integrated picture I mentioned above; that is, a short compact story in a style challenging readers for own perceptions and analysis. The core of the story would contain our conventional statistical information, such as a graph or table to which other relevant statistical information would be linked. But then there could be a wholly different part of the story, separated by means of layout: a tale, anecdote, interview piece, journalist's description or even subjective experience about something. This is quite typical for present-day journalism but would it be suitable for us? An advantage would here be that statistical blocks would be clearly separate, it would depend on the goodness or badness of the story whether the reader would realise the connection to the other blocks.

26. For example, I could write a story about Geneva as an investment centre of European enterprises and meeting point of nations. The story could comprise my own observations and experiences, anecdotes, stories and daily news related to the city, interviews with taxi drivers, etc. (what their work is like in an international conference city) and of course, statistical information. All these would be blended into a happy mixture where the parts would support the overall picture of the nature and situation of the city but would also remain clearly separate, by which the reader would know when each type of information is offered.

27. Thinking about this new story type arises from the problems with the stories we publish now, which are mainly written by experts. They tend to be fairly dry writings where argumentation goes inevitably from point A through point B to point C. Who can manage to read them? Could something unexpected and bold be found by this journalistic method in which all kinds of elements are brought alongside statistical information (by the way, it is not possible to prepare any guidelines for it; what it would be and how it is combined; it is dependent on the perception, creative input and professionalism of the journalist)? Are we now drifting to an area where we cannot do as well as the others? Or would it be very rewarding to make such slightly more artistic storytelling based on the knowledge of statistical agencies? I would be interested in going to this direction but I would be happy to hear comments and experiences from others.

I HAVE A DREAM!

28. At the very end, I would like to tell a story and issue a challenge to all the colleagues here who are thinking about these possibilities of statistics and storytelling. Some time ago I worked for a couple of years as an editor at the Reader's Digest and I could not help admiring how well their concept worked. It is based on the fact that "good stories travel" – people want to read them all over the world either as such (translated) or as so called adapted. Thus the Reader's Digest has been able to produce a successful magazine in different countries with a fairly small number of employees by recycling the same stories and ideas in the issues of different countries.

29. We storytellers are alone in our statistical agencies but we think about the same kinds of questions. We could bring together our strengths and ideas. We could, though much less modestly than the Reader's Digest, start the same type of exchange if only for the purposes of learning, development and contacts. It is a fact that if good stories are universal, statistics are universal as well. We can understand numbers from other countries' publications, and enormous amounts of work is done constantly so that concepts, definitions and statistical systems would be as uniform and comparable as possible.

30. How would this exchanging of stories and ideas work? At the Reader's Digest it operates via a common network. When, say, the Finnish magazine writes a story, it makes a summary of it that can be seen by everybody else. Thus when the editors-in-chief in the other countries are planning their future issues, they can use different stories and story models in addition to their own and they can choose the best from the lot. We storytellers inside statistical agencies could form an unofficial network for exchanging stories and ideas. At the Reader's Digest adoption of merely the idea and structure of a story was called adaptation. A good idea – storyline and structure – travels, but statistical information,

examples, expert opinions and so on derive from the country to whose journal the story is adapted, and it is embedded in the story framework.

31. One small example of an idea for a statistical story that someone might want to use in their own country with their data has to do with age pyramids. We have just made for our Tietoaika a cartoon of the population structure of our country. The series of pictures tells the story of Finland's so-called baby-boom generation after the Second World War (chart). In 1948 the maternity hospitals were swelling with children, in 1956 children went to school in two shifts and siblings exchanged school books during recession, in 1969 students were rebelling and changing the world, in 1978 the public sector was growing at a rapid pace, in 1985 the development of work conditions had risen to the social agenda, in 1991 we were hit by mass unemployment, from which we could not recover, in 2003 we talk about the decrease of labour force, pension bomb and reduction of the public sector, and in 2019 old people will conquer the world and change it again.

32. The pyramid story is perhaps an example of stories where we producers of statistics have the upper hand. We see such things that journalists in the street and field cannot see: big phenomena, long waves and evolution where the "heroes" are whole populations or population groups or other statistical entities. We should invest in such stories, without forgetting the viewpoint of an individual, real person.

33. It is evident that how interesting the exchange of stories and ideas is going to be depends on the kinds of products different countries publish. In Finland we have in addition to journals a large Internet service, courses and other such things. Therefore it is natural that we would be much interested in getting good stories from different places to complement all those. But perhaps even statistical agencies not yet engaged in such activities could get incentives and ideas – or at least warning examples. In any event, I believe in statistics, stories and stories rising from statistics. And on top of that, I believe that those statistical stories could even travel!