

BELGIAN STATISTICIANS

with Pierre Dagnelie



You graduated as an engineer in agronomy. Could you explain the relationship between agronomy and statistics and what brought you to statistics?

Statistics has always played a major role in agronomy because of the inherent variability of all vegetal and animal material. It is not by chance that a great deal of modern statistics started with the work of Fisher at the [Rothamsted Experimental Station](#) in the 1920's. But long before Fisher, statistics was present in agronomy, e.g. in problems of estimating tree volumes and forest productions. Indeed I studied agronomy, more specifically forestry, at the *Faculté Universitaire des Sciences Agronomiques* of Gembloux (FUSAGx) and had many statistical courses. For my master thesis on beech forests production in the Ardennes I largely used statistical methods. After that I served 18 months in the army. During my military service, Professor Teghem (who taught mathematics and statistics in Gembloux and also some courses at ULB), offered me an assistant position under the condition, which did not displease me, to complement my training at ULB with one year in mathematics (together with mathematics students) and one year in statistics (at that time, the ULB Certificate of the Institute of Statistics).

How did you come to the creation of a department of statistics at the FUSAGx?

As assistant to Jean Teghem, I was in charge of practical sessions and exercises in mathematics for first year students and in statistics for second year students in agronomy. Then, the circumstances were such that Professor Teghem gave up the teaching of statistics in Gembloux to increase his presence at ULB. So, I was asked to give the courses in statistics in his place but I continued to work with him in mathematics until he could have another assistant. From that time on, I stood on my own two feet and decided to create a department, first in statistics and later also in computing.

What was the role of computing in the department of statistics?

For my PhD thesis, before 1960, I already made extensive use of computers but not in Gembloux because we had no computer at that time. Actually, I did that in Great Britain, during a stay at Rothamsted Experimental Station, and later at ULB. Upon my return, I convinced the faculty authorities to buy a computer and that's how my department became also in charge of computer science. Progressively, we also taught computer programming to the students and the number of computer users started to grow rapidly.

What was the subject of your PhD thesis?

My PhD thesis was essentially devoted to the study of plant communities by means of multivariate methods, in particular factor analysis, principal component analysis and that kind of methods.

Who were the statisticians who influenced you during your career?

Jean Teghem, my mentor in mathematics and statistics in Gembloux, was my local supervisor but I also worked with David Finney. I was visiting professor Finney in his department at the University of Aberdeen and later in Edinburgh. I am still in contact with both of them because Jean Teghem and David Finney, both born in 1915, are still very well!

What was your major research subject during all these years?

I pursued my research in the study of plant communities by multivariate statistical techniques. I continued to be interested in the estimation of trees and forest productions. Unfortunately, I became quickly overwhelmed with the management of my department and the administration of the faculty, so that my personal research suffered and became more occasional.

Is this a regret?

No, this is not really a regret. I think everyone should face the situations occurring in the course of life. If it is possible to employ and to encourage young researchers, this is as important as doing research by yourself at a certain time.

Thus, you were busy with the department of statistics but you continued to teach and write many books on statistics. Could you give us an overview of your career as a teacher?

I begin with the books and I will speak about my teacher's career afterwards. The books were at the beginning simply syllabi. They progressively expanded and included many bibliographic references. These lecture notes were no longer simple syllabi for the students but statistical companions that might be useful later in their career. My first two books, published respectively in 1969 and 1970, were widely distributed. This was in part, I think, because they were written in French and there were only few

French textbooks in applied statistics at that time. Remember that most French statisticians were very theoretical. Thus, these books were widely distributed in Belgium, in France and also in the French speaking part of Africa. I also wrote other books, one on multivariate analysis, one on the design of experiments, and another book of exercises.

About my career as a teacher, let me say that I rapidly became full-time professor here at the Faculty of Gembloux for basic courses in theoretical and applied statistics and in planning of experiments. I also taught some courses with econometric orientation for the section of economy and rural sociology. I also spent much time teaching abroad because I could benefit from funds of the *Administration Générale de la Coopération au Développement* (AGCD). These funds enabled the development of a statistical department at the *Institut Agronomique et Vétérinaire Hassan II* in Rabat (Morocco), where I acted as chair of the Department of applied mathematics during 15 years. I went there generally once a year. One period of purely Belgian cooperation lasted for 9 years, I think, then a mixed Belgo-Moroccan team took place to finally end up with only Moroccan statisticians.

I forgot one thing about my teachings. In 1967, here in Gembloux we started a post-graduate program in applied statistics. This was the first such program in Belgium, attracting many students from all around the world, mainly from developing countries. In particular, the students of the Hassan II Institute in Rabat came for the 2-year specialization in statistics and then returned home to work and teach statistics in their country. So, I had at the same time the responsibility of the Department at the Hassan II Institute and of the final training of their students here in Gembloux. Later they became my co-workers at the Hassan II Institute. I also worked during several years at the *Institut National Agronomique* in Algiers but that was less exciting. There, I occasionally taught essentially various courses.

Holidays are coming soon! Could you let us dream about countries to which you traveled as visiting professor and share an experience that impressed you?

Overall, I visited about 30 different countries. I already mentioned Morocco, which I visited most. I never went abroad for more than, I think, 10 continuous weeks but I spent about 3 or 4 years in total with shorter stays. Outside Morocco, I would like to name Rwanda. Rwanda, before the genocide, was a privileged country for Belgian cooperation. At that time, in the 1970's, the Rwanda agronomic research was widely funded by Belgium with permanent Belgian human resources. The scientific leadership was assured by the Faculty of Gembloux but the principle was that each year a Belgo-Rwandese mixed commission evaluated the results obtained, set the

programs and the budgets for the following year. The Belgian delegation was traditionally composed of the Belgian ambassador in Kigali, three professors from Gembloux and one representative of AGCD. This gave me the opportunity to visit the same research stations during several consecutive years. It seemed very important to me that the young researchers working there were supervised. I had the chance to learn more about the reality of this developing country. We learned a lot about the particular experimental conditions for different types of crops: mixed crops, very small plots of land, very sloping hills, terraces, etc... All these types of cropping conditions were very different from those encountered in the plains of Western Europe. I also had other missions for the Belgian cooperation or the FAO, for which the siege is in Rome. In particular I remember missions in Senegal and Niger.

Do you have a special anecdote for us about your trips?

There are many but here is one I tell quite often. Independently of my stays in Africa, as I said before, I was visiting professor David Finney's in his department in Aberdeen and taught a 10-week course on multivariate analysis. I remember that I stayed in a hotel downtown and I went to the university by bus every morning and often met the same students on the bus. One of them, a girl who took my course used to correct what I had said in English the day before. For example: "You should not say that but you should say this". Thus, I had free English lessons on my way to the university each morning, a thing I could never imagine here. I don't think that one should dare to correct a visiting professor here. This was fun and nice at the same time... and very useful!

You were much involved in the Belgian statistical life. Could you say a few words on that?

I was indeed part of the 1991-group who revived the Belgian Statistical Society (BSS) since it was created in 1937. The BSS had indeed fallen in lethargy and it was decided to revive the society with the help of a few people, including Marc Hallin and Jef Teugels. I was also much involved in the Belgian branch of the International Biometric Society (IBS), called the "Adolphe Quetelet Society". I was member of the administration board for a long time, vice-president, president and editor of its journal, which no longer exists, namely "Biométrie-Praximétrie". I was also member of the board of the IBS, Belgian representative and later became president of the IBS for 2 years.

You are also honorary life member of the International Biometric Society.

Yes, I was greatly honored by this distinction which was granted to me, I think, widely for my international vision of the development of biometry, in particular with respect to the Third World countries.

You were also editor of the B-Stat News. Do you still read it?

Yes, I read it regularly but I wait for the paper version. I just have a quick look at the electronic version on the SBS-BVS website but I don't like to read long texts on the screen, so I read the paper version.

What do you think about the current state of the SBS-BVS?

I think that the SBS-BVS is doing very well, not only by the number of its members, but also by its multiple scientific activities and its financial stability. It is very well handled. The SBS BVS has really helped in giving Belgian statistics a solid worldwide representation.

You do many things. Is it not too difficult to have a family life with all the occupations you had?

You should ask my wife... She indeed recognizes that I was frequently away. I have the advantage that I need little sleep, at least much less than most people. Still now, although I retired, 6 hours per night is a maximum. I feel however that the years 60's and 70's and maybe the 80's were easier for the teachers than those of today. Easier because the administration was less heavy and it was possible to find some free time. In particular, there used to be 3 weeks of free time between the end of the courses and the exams, which no longer exists. Moreover, if we finished the theoretical courses earlier and had assistants for the practical sessions, we had practically 5 or 6 weeks of freedom between the end of the theoretical courses and the exams each year. This allowed to do many things during that period.

Do you have an advice for young statisticians and how do you see the future of the French statistics?

My first advice to the younger generation, even non-statistician, is to choose what they really like to do. My second advice would definitively be "work". Concerning "French statistics", I think it has improved over the past decades. It has always been more theoretical but there are currently parallel developments in the applied statistical field, in particular in the medical sector, where an increasing number of statisticians work.

Something else?

Yes, there is family life for which we also have time to spend. I devote much of my time to my grandchildren. But I also like to keep a balance with other activities. In particular I like hiking, mountaineering, trekking and

things like that which I still do. I think it has nothing to do with statistics but it is also important. Moreover I had a private pilot license during 10 years and I did tourism flying. This is a good way to enjoy oneself and to take your mind off things.

Thank you for sharing a few moments with me!

Sophie Vanbelle