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## Becoming Professor. With Almost no Publications

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# Becoming Professor

## With almost no publications

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**Abstract.** I consider my career as rather exceptional. I think I am the only living person in Sweden who achieved a professor chair with only one international journal publication; a publication I use as an example of a totally incomprehensible text! The following is the story of how I achieved this. I first describe two important issues that have governed my decisions in the career: Being interpretivist in a dominating positivist research paradigm and my decision not to publish. This is important for understanding my interpretation of what was happening. Then I describe the four universities where I have worked, first by providing the story, then describing how the discipline developed at that place and finally some reflections on the research we conducted. I summarize by giving an historic overview of informatics as I perceive it after 44 years of teaching and finally I reflect upon my career according to my goals.

*Key words:* IS history, career description, information systems development.

In that moment, I decided not to waste my life writing reports that would never be read, but instead I defined my research results as the impacts of my actions would have on society. To provide good teaching, thought-provoking questions and to guide my students towards new realizations became my goal.

I have taught about 5000 students during my 44 years as teacher. If I made an impact on half of them, it is a considerably higher impact than if I had published 50 papers in journals.

Accepting editors: Arto Lanamäki, Rudy Hirschheim and Jaana Porra

# 1 Introduction

This article is not a traditional scientific article. You will not find a problem, methods or theories. Instead, it is a narrative, describing my career as well as some reflections about it. It tells *my* history, seen from *my* perspective.

I started my academic career at Lund University in 1966 studying mathematics, mathematical statistics and numerical analysis. During one semester, I also studied astronomy, just for fun. Hereafter, it was time to look for a job. I was told by a classmate that if I additionally studied Administrative Data Processing (ADB in Swedish), the chances for a job increased by 500%. Therefore, I decided to study also ADB. During the academic year 70/71, I studied both ADB and business administration full time and met my first wife. In September 1971, I started my last semester in ADB, which also included the bachelor thesis. It was concerned with selective dissemination of information and it proved to play a great role in my academic career.

I worked at the following universities and university colleges:

- Lund University (1972-1986)
- Copenhagen Business school (1986-1996)
- Växjö University (1996-2006)
- University West (2006- ) retired 2013, currently 20%
- 1986 PhD in Lund
- 2002 Professor chair at Växjö University
- 2005 Visiting Professor in Nuremberg
- 2006 Professor at University West

This paper contains a mosaic of episodes and ideas taking place during these 44 years. I start by describing two important issues I think the reader should take into consideration in order to fully understand the paper.

## 2 Important issues

### 2.1 Positivism and interpretivism

In the late 70's and early 80's a war of paradigms raged at Lund University (I think it raged all over Sweden, parts of the rest of the world, but I only experienced the one at Lund University). The main battlefield was the Institute of Sociology and it was between positivists and interpretivists. I became interpretivist, phenomenologist specifically. I believed strongly in a subjective world view, constructed and re-constructed in a social interaction. The language played a great role. I used to say: "Our language shapes our reality and our reality shapes our language". An

example is the Swedish Sami, who have no word for snow. Instead they have several different words denoting different types of snow. A Same and myself will see a snowfield in very different ways. I thought this idea could be applied between the users and developers of a computer based information system. They had different worldviews and communicated about the same subjects but in very different ways. I discuss this in my thesis (Flensburg 1986) and recently I found a wonderful article by Dick Boland and Kalle Lyytinen discussing the same issue, but in a much more elaborated way (Boland and Lyytinen 2017). At my department in Lund, all researchers except one were interpretivists and strongly opposed the dominating positivist research paradigm in Sweden and at Lund University. Consequently, we were constantly fighting for our existence and the right to do *our* research. This has become a fundamental issue for me, probably so fundamental I'm not aware of my tendency to see this paradigmatic contradiction everywhere.

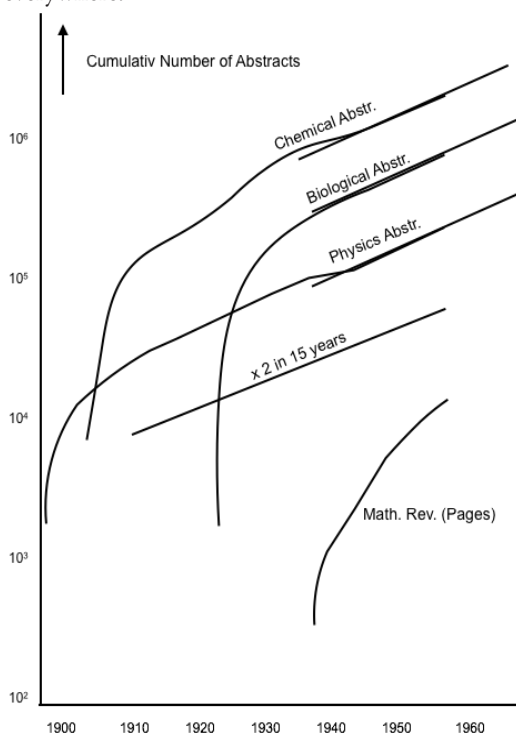


Figure 1. Cumulative abstracts in various scientific fields, up to 1960 (Price 1963, p 9)

### **3 Why I don't publish**

My bachelor thesis was about selective dissemination of information as a mean to follow publications within a specific area. The number of scientific journals was increasing exponentially as well as the number of abstracts and I presented a picture like the one in figure 1 (Price 1963).

It was impossible to follow all journals covering a certain discipline, so a dissemination based upon keywords in the title was suggested. I learned that about 80% of all scientific articles were not being cited, which means they were not read by anyone, except for the author(s) and reviewers. I was very surprised and wondered why people continue writing, especially since they were not financially compensated and the cost of the journal was very high.

In the end of the 70s I oversaw a course in systems development in the third semester for the students. The literature was among others a book of Rolf Høyer, called "... over to EDB" (Høyer 1974). There was a chapter where Kristen Nygaard described the NJMF project (The NJMF project was the first cooperation between trade unions and enterprises within the IT area.) He said that they started as a conventional project, where the researchers wrote reports, which were then put on a shelf and not read. Hence, they redefined the research result to be the actions undertaken by their research partners in the company. This made a great impression on me, especially since I remembered from my bachelor thesis that 80% of all reports were not referred to, probably not read. In that moment, I decided not to waste my life writing reports that would never be read, but instead I defined my research results as the impacts of my actions would have on society. To provide good teaching, thought-provoking questions and to guide my students towards new realizations became my goal. Over the years many students have expressed their gratitude for my teaching, so I think I have made some impact at least. In the above-mentioned article of Boland and Lyytinen they discuss practice oriented research which is something similar: the impact is on enterprises and society, not new theories.

I tried to keep track of the number of unquoted reports over the years and the situation does seem to be improving. In November 2016, I conducted my latest investigation in this area. I searched the Web of Science, since this is supposed to have the highest impact. I searched the categories 'computer science information systems' and 'information science library science' from the year 1986 to 2016—that is 30 years. The result was 5124 hits of which 2053 papers (40%) had no citations. This is better than the 80% I remember from the early 70's, but it does not mean that the other 60 % had any great impact. Only 1220 papers (23 %) had more than 5 citations. When I conducted a similar investigation in April 2016 there were other results: 9908 hits of which 4654 papers (47%) had no citations. Publications with more than 5 citation amounts to 1,3%. Obviously, something has happened in the Web of Science, many papers with zero citations seem to have vanished. On the other hand, the goal of the reports available is to present the most cited articles, not those who are not cited.

My first journal publication Elkjær et al. (1991) is cited 37 times according to Google Scholar. In the Web of Science, it is not to be found. This made me even more suspicious about the bibliometric measures guiding our resources. Another problematic issue is the decline of coverage provided by Science Citation Index and Social Science citation index (Larsen and Von Ins

2010). The author demonstrates that in Science Citation Index the growth rate, measured in years for doubling the total number of citations, is at most half the growth of other databases. Conclusion that follows is that the number of citations might not be as bad as I assumed and hence one of my reasons for not publishing is no longer valid.

Another reason for my decision not to publish is the ethical aspects of the cost. First, I do a lot of research. Then I spend at least a month writing an article. Then I send the article to a journal (or conference). Some highly qualified persons read my paper, evaluate it and provide some feedback. They are not paid for the work and they often get no recognition at all. After some iterations, my paper is eventually accepted and then published in the journal. I am paid nothing, instead I am asked to pay for the printing fees. If a person wants to read my paper, (s) he must pay about 30\$. If a library needs access to the journal, they must pay a huge amount of money for the rights of access to the database where it is stored. Hence, my question is simply: Do I want to contribute to this removal of money from research? I am aware of that Thompson Reuter does a lot of good things and probably they spend their money in an ethically satisfactory way, but still: Am I prepared to support such a process without having any influence on the benefit that my work creates? I was not and according to Larsen and Von Ins (2010) an increasing number of researchers are not either. Open access journals are gaining increasing interest, but very often I must pay a considerable amount of money to get my accepted article published. I haven't investigated the issue, but I consider that the cost for electronic publications and time for the editors should be covered. If I would have started my academic career today, I certainly would have chosen to publish! Since more of the publishing takes place in open access journals, it is more accessible and the possibility for having more readers and more citations is larger.

My choice not to publish is impossible today. Publications are simply needed! When I started my career, publishing was not of major importance and only one person in the department was interested in it. We wrote papers for our own purposes, not for the world! We created a tight group, but after some years it was dissolved. More on that later. However, since I do publish at IRIS conferences people are familiar with me and they have an idea of my capabilities. In that sense, I published. Strictly spoken, I had two publications (one in the journal *Accounting, Management and Information Technologies* (Elkjaer et al. 1991) and one in the *Research Methods in Information Systems, Proceedings of the IFIP WG*, the colloquium in Manchester 1984 (Flensburg 1985) when I achieved my professor chair in 2002.

Since I have decided not to publish, why do I try to publish this paper in SJIS? At first, I was simply carried away, since I thought for a long time about writing something on the history of informatics. I submitted the first version of this paper and received heavy critique, in my interpretation mostly based on the decision not to publish. I thought that point was unfair and not relevant for *the* paper. I decided to withdraw since I asked the question: "Who will be interested in what a completely unknown schmuck has done?" The answer was obvious: Nobody! But a lot of persons approached me and said I simply had to publish because it was an unusual case which is important to make known to the public. I decided to try once more. Besides, it's rather intriguing to write a journal paper about why I don't write journal papers!

### **3.1 Conferences: to attend or not?**

I also decided not to attend conferences, except for the IRIS conferences. There were two main reasons for that: I was often rejected, in my mind because I was an interpretivist. At that time (1980-1990) the main paradigm was positivist and the reasons for reject was often based upon a positivist paradigm.

Concerning reviewing, it is problematic if the reviewer uses a different paradigm than the author. If this is the case, the reviewer does not understand neither the problem, nor the methods and simply rejects the paper. Such comments will by no means be constructive. Because of this when I was associated editor for the journal *Online Information Review*, I was careful not to choose papers that belonged to a different paradigm or tradition than my own.

When I was accepted, which happened once, ICIS 1990 in Copenhagen, I found the conference extremely boring! The time was wasted on listening to people who read their papers, word for word and listening to questions that in fact were a smaller version of presentations of the interrogator's research. Therefore, I decided not to attend conferences either. Maybe I would have found it more attractive if I had visited the conferences many times and if I would have become an active partner in the network. However, I was much more comfortable talking with young PhD-students 5 o'clock in the morning at IRIS conferences, than with highly esteemed professors after their lectures!

In 1979, I visited something called Crest Course in Pisa, Italy. There I met Enid Mumford for the first time and invited her to Lund. She came and introduced the socio-technical approach in information systems to us. I also met Frank Land who was well known at that time and two young PhD-students: Claudio Ciborra and Rudy Hirschheim, who both were to have great impact on research within information systems. These meetings made me more adherent to the socio-technical paradigm.

In 1981, I visited my first IRIS conference and found an interesting, engaging, enthusiastic and non-positivist community, where the participants actually read each other's papers and provided constructive feedback. I met many fascinating persons: Markku Nurminen, who was my roommate; Pertti Järvinen, Pentti Kerola, Kalle Lyytinen and Juhani Iivari among many others. After that I visited about 25 other IRIS conferences over the years and I am one of the ten most active participants in these conferences (Molka-Danielsen et al. 2007).

I appreciated IRIS and its format, even though most of the focus was on writing papers for publication in journals and other international conferences. Over the years, I wrote many IRIS papers in a variety of topics. I even arranged IRIS 27 in collaboration with Halmstad University College. When SCIS was introduced, I was sceptic and feared that the good IRIS spirit will disappear. I even suggested IRIS should close, but it was not accepted. The spirit prevailed and I was forced to officially apologize saying I was mistaken in my fears two years later. I happily did that!

Between 1983 and 1985 I visited some IFIP WG 8.2 conferences and I contributed to the book from the Manchester colloquium in 1984 (Flensburg 1985). There I argued for obtaining an efficient work situation, according to Mumford (1983). My main point was tacit knowledge of the users must be considered. I also used Habermas' three knowledge interests (Habermas 1972).

Thinking about it afterwards, I realize that my decision not to attend conferences was only partially related to my decision not to publish. The proceedings of a conference *are* a publication, probably read by fewer readers than an article in a journal. But the conference provides possibilities for social actions, to meet and make personal relations to the important actors within a specific area. Since my first large scale conference, ICIS90, was such a disappointment as explained above, I only sporadically visited other conferences (except for Uddevalla Conference, which I visited three times). I never created a personal network in these conferences. If I had done that, maybe my career would have been different. Today, I encourage my PhD-students to select one or two conferences to visit and then stick to them! Doing so, they create a personal network and become a part of a community. My being part of IRIS community has for sure played a great role in the success of my career.

## 4 Lund University: The formation of a discipline

### 4.1 The story about what happened

The prediction of my classmate about getting job if I also studied ADB, turned out to be true. I was employed Jan 1st, 1972 at the department of Information Processing—ADB! The discipline was new, it started in 1967 in Stockholm, but already in 1966 there were courses offered in ADB at the Business economics department in Lund. My teachers and colleagues were the first students completing the education. ADB and Numerical analysis were taught in the same department, called Information Processing. Each discipline had its own section in the department. The reason was simple: representatives from both disciplines used computers and the management considered it to be a good idea to share location. It was not a happy marriage. The numerical analysts did not see any need for using computers to produce invoices and the ADB-people did not see the importance of computing  $\pi$  with 20 000 more decimals than before. We belonged to the faculty of Social Science, while Numerical Analysis belonged to the faculty of Natural Science. The basic apprehension of reality and knowledge was different—we did not understand each other; to tell the truth, the interest for bridging the differences was not very high on either side. The section of ADB thus faced animosity from outside, which resulted in strong internal unity.

In 1976, I started my research education. Börje Langefors became examiner and supervisor for me and my colleagues. He gave some lectures, and we attended diverse courses in scientific methods, which were taught by other departments. These courses opened our eyes (especially mine), whereby I discovered the existence of different paradigms. There was a course at the Business Administration department about method approaches that had a particularly strong impact (Arbnor and Bjerke 1994) and I found myself becoming a phenomenologist. I decided to embark on a PhD and write a monograph in my native language, Swedish. The reason was that having a PhD degree would increase my salary, make my position safer and allow for more freedom of action. And it was fun!



After a year Börje was replaced by Janis Bubenko acting as 25% professor in Lund, 25% in Gothenburg and 50% in Stockholm. Janis was a positivist and commenced with teaching data modeling. The PhD-students were interested in user aspects of information systems and we were all, except one, interactionists. Conflicts between him and the PhD-students were inevitable. However, Janis was a nice person as he continued helping us the way he could and after a year we also obtained 25% of Rolf Høyer, a Norwegian professor in organization theory as a balance. We had a lot of fun together and both Jan and Rolf participated and even arranged our parties! After some years, we got a professor of our own: the very ambitious Hans-Erik Nissen, who in a fruitful way guided us through all philosophical mazes we went into. I used to refer to our department as philosophical information processing since we wrote a lot on the topic of philosophy. Hans-Erik introduced Schütz and Apel (Schütz 1967; Apel 1972) and wanted us to read their works in the original language, which was something that none of us were able to do. He said we should form a deep understanding for the text and the best way to do that was to read it in original language. Personally, I agreed and it was a valid argument for writing my PhD-thesis in Swedish. We dived into the depths of philosophy and had it not been for our empirical research, we would be lost. But fortunately, we received financial means to conduct empirical research and Enid Mumford also visited us to teach us about practical research within socio-technique. Thus, we acquired a unique competence, both in philosophy and in empirical research.

We were interested in user aspects of information systems. This included both user influence in the development process and consequences for work of the information systems. I myself took, as I often did, an extreme standpoint, saying the users should develop the systems themselves and my thesis was about that (Flensburg 1986). We all had a genuine interest for user influence and that required other paradigms than the traditional positivist. Hence, we made a lot of efforts to put forward philosophical and methodological arguments supporting our viewpoints. We were a tight group, working with similar problems from similar starting point. We could in fact have created something that might be called a Lund University Information Systems school, but the group dissolved as described later.

## **4.2 Changes in the discipline**

ADB as a discipline had its origins in Business Economy, from the part that dealt with administrative rationalization. Operation analysis and linear programming were topics that we were concerned with. In these days, the discipline had four divisions:

- Administrative rationalization
- Computer technique
- Programming
- Systems development

The kernel of the discipline was systems development (of computer based information systems) where Börje Langefors' PhD-thesis (Langefors 1966) was used as the main text-book.

When the research began, new topics in the discipline were introduced. Janis introduced database modelling, which is another specific topic in ADB. It replaced the computer technique.

Rolf emphasized organization theory, which replaced the administrative rationalization part. In the undergraduate education, this topic was taught by Business Economics and it was removed from our teaching, but not from the research. Systems development was divided into several subtopics such as description techniques, systems development models and project management, in order to make the courses smaller and easier to pass.

### 4.3 Teaching in Lund

My teaching in Lund was much appreciated. One of the best feedback I have ever received came from some students from other Swedish universities who had visited the student unions for system science program in Lund. They had a dinner and the next day, at 10 o'clock they were supposed to visit my lecture on the third semester systems development course. A group of tired students entered, sat down at the far end of the room, which was almost full, as there were about 50 other students. I started lecturing, noticed that none of them fell asleep and some days later I read an article in the student union journal written by one of the visiting students. He wrote something like this: "The next day we had to visit a lecture with Per Flensburg. We were quite tired when we entered and I don't know what Per did, but 2 hours later we left the lecture, refreshed, enthusiastic and happy!" One month after I had sent my resignation letter to Lund University I received a call, saying I have been appointed to the best teacher in Lund that year. Unfortunately, I already left and I was not interested in coming back. In Växjö the students said that if it were not for me, they would not have entered the master's degree program

### 4.4 Research in Lund

My first research area was systems development models. It was an evident choice, since it was my main teaching area. We began visiting companies, talking to users and realizing that they did not consider the systems as such great successes as they were described by the system developers. I realized we need a new type of systems development model, allowing for much more influence of the users. I took a radical standpoint: what if the users could do the development themselves? In my thesis (Flensburg 1986), I described action research in 9 companies and qualitative studies in 13 other companies and concluded it was possible for the users to develop their own systems in some cases. I was the first one in Scandinavia who wrote a thesis on the topic of End User Computing.

There were several methodological problems related to this research. Traditional positivistic and quantitative research was the norm and I had to explain in depth why action research can provide scientific knowledge. The first 75 pages (of 211) in my thesis deals with these issues. The central issue was knowledge, what kind of knowledge we have and how it can be transferred. I introduced Aristotle's Nichomenian Ethics (350 BC) as the best knowledge classification there is so far. After the Crest course in 1979, I oriented towards socio-technique and focused on the tacit knowledge of the users, also relating to IFIP TC 9.

I had some projects with librarians, helping them to select a library system. They forced the current vendor to make many expensive changes before they decided to buy their system and I

was banned by the vendor because of that. I heard from a friend working there, that I was considered as one of their worst enemies.

Even after I left Lund I continued having relations to them. I also think I have over the years got a reputation of being some sort of problem solver. In Lund, they once had a very problematic thesis in computer science (Persson 2003), a person who had written an excellent thesis, except for some pages where he claimed all scientists had sold their souls to the devil, and what they did were absolutely not ethically accepted. We had a priest evaluating this part of the thesis, and he was very enthusiastic about it. I thought the remaining parts were enough (there were 727 pages! A4 format! Printed in Times 10!) so I simply oversaw that chapter. Another time, also in Lund, there was a problematic thesis they wanted evaluated in a finishing seminar. I did that, I claimed the thesis not being within the discipline of informatics and the respondent got another chance. The seminar was held in a civilized manner, which usually wasn't the case if I understood it correctly. Another time I was asked to be opponent of a PhD-thesis (Persson Slumpi 2011) at Midsweden University with an explicit gender perspective, which some gender researchers thought should not pass. It might perhaps not have passed in gender science, but in information system it was quite OK. I entered the role of a grumpy old man, not seeing the need for a gender perspective at all and there was a lot of fun and laughter! The respondent passed.

## **4.5 The decline of a research group**

When we in Lund got financial means for conducting the research we wanted to do and had no common adversary, the decline of the research group started. The different research groups closed and were concerned that some of the other groups might come first with the same results. We did not publish on conferences, but on gatherings, courses and working papers in the name of the department. We usually wrote one author papers and most of us (not me!) carefully guarded their territory, not allowing anybody else even to see their papers! The atmosphere became almost paranoid and I quit as soon as I had my PhD.

Why does a group of closely related researchers suddenly become enemies? One reason might be the spirit of Lund University. It was by no means encouraging, on the contrary, it was extremely critical. Every attempt to put oneself in the spotlight was considered as a violation of the spirit of the university. You were supposed to be humble and talk about small, insignificant contributions, when in fact the work was on the level of Nobel laureates. We were not in that class and everybody covered up the reports as much as possible, to avoid massive critique. Another reason might be that we were applying for financial means from the same organization. In a suspicious and critical atmosphere, the result can only be one: The research groups became hostile.

## 5 Copenhagen Business School: Discover genuine support

In 1986, I got a position at the Copenhagen Business School (CBS) as soon as I finished my PhD. I got to know new colleagues who encouraged me and provided me with positive critique. As an example: when I presented a course plan in Lund, I always received comments such as: “You can’t have that book as the main text!”, “That textbook is too simple/advanced/old/stupid!”, “... and besides you can’t write a course plan like that!” In Copenhagen, they said: “This looks really exciting! Why don’t you try to use it there and there? But maybe you could consider the book being slightly old/simple/advanced etc.”. This happened in Denmark that was supposed to be the homeland of the Jante Law. The Jante Law is a fictive law, formulated by the Danish/Norwegian author Aksel Sandemose (1938). In short it says: “You should not think that you are something.” That attitude was, maybe still is, very common in Lund University!! It turned out that this law was not applicable to CBS and I was happy for that!

In Copenhagen, I met a very different environment. It was a business school and the departments were not confined to single disciplines as I was used to in Lund. Also, the teaching was organized in another way, as the students studied a couple of subjects in parallel and had examinations in all the subjects in specific periods of the year. Instead of being told which course I should teach, I had to announce courses on a free market and if enough students chose my courses I could teach them. We all had some courses in ‘studier’ (programs), which were mandatory. It was our own responsibility to find enough work load covering the number of hours we had to complete. If we did too little work, the hours accumulated; if we did too much, we could to do less work next year.

The working conditions in Denmark were different from those in Sweden. As a member of the scientific staff, I was expected to behave in a rather authoritative way. I did not, I was not raised that way and did not consider myself being better than anyone else. I didn’t understand the social codes and was often surpassed by my colleagues. Other Swedish colleagues also working in Denmark told me about similar problems, they did not understand why things couldn’t be done the way it is done in Sweden. Such cultural differences don’t manifest themselves if you are a resident for only a short period, but over the years, the problems accumulated. Hence, after ten years and a conflict with the dean resulted in me leaving Copenhagen and starting a job at Växjö University College in 1996, which after 1999 became Växjö University.

### 5.1 The development of the discipline

In Copenhagen, my area was experimental systems development. Another part of our department was management accounting. I found it very stimulating to work in a multi-scientific environment and I had many interesting discussions. A new area introduced was strategic information systems, which meant that the information stored in the business systems of the companies should be used for finding new business opportunities and not only for rationalization of administration. This was a new way of looking at information systems and it changed my view

of the discipline. Information systems could be used for business opportunities and not only for managing the old way of working. The cornerstones of informatics (so it was called at CBS) was:

- Strategic information systems
- Experimental systems development
- Use of information systems
- Systems development

A drawback was a very small amount of research, because I couldn't find any financing from Denmark, since I was living in Sweden and from Sweden I could not get any support, since I worked in Denmark. A nice catch 22! Instead I devoted my time and efforts to introducing Macintosh at CBS, which succeeded after several years of struggle! That was my main contribution!

However, in the autumn and winter in 1992 I participated in an action research at a foundry in Sweden (Flensburg 1994), where blue collar workers developed their own production planning system, consisting of three linked Excel sheets. I wrote some pretty complex functions used for calculation of date. After that I was so tired of user involvement that I decided in the future not to have anything to do with users! One might wonder why I decided that, after a successful project. Seen in retrospect, I think I discovered that I was not such a great expert on user involvement as I thought. I was too dominant and was most satisfied when a tricky part of my Excel sheet worked. But since the users have followed me all the time, seen all mistakes they didn't rely on my part of the spreadsheet and never used it. I realized my shortcomings and decided to try something completely new.

## **6 Växjö University: Conflicts with computer science**

In Växjö there was already one professor in informatics, more specifically information science. He was a former colleague from Lund, but we were not friends! He became PhD several years before the rest of us and he soon became professor at a university college in the northern part of Sweden. He made himself unpopular and had to leave the college. He went to Växjö and created a small group of PhD-students. Since we were enemies, the discipline of informatics was divided into two disciplines: Business oriented informatics, which was my area and information science, which was the other. There were a lot of intrigues and finally he more or less withdrew from Växjö. In 2002 he suddenly died, which resulted in his discipline ceasing to exist in Växjö, while his three PhD-students managed to get their PhD degrees after considerable efforts.

The department in Växjö consisted of several disciplines: Mathematics, Computer Science, Physics, Electrical Engineering, Statistics and Informatics. Each discipline formed a section and a director of studies managed each section. The director of Informatics had a principle: "Do as little as possible". I realized that if a change was to take place, I had to do it myself and so I volunteered for being director of study in Informatics. I was also elected as member of the university board and found myself suddenly being involved in a lot of administration.

Looking back, my time in Växjö can be described as a series of crises and some achievements. Crises:

- Dispute between the two informatics disciplines. This dispute was won by my group.
- Dispute about resources between informatics section and computer science. This dispute was one of the main reasons why I left Växjö University. It was no open dispute, only a systematic interpretation of resource allocation to our disadvantage.
- Dramatic overhead cost for our research. This was a crisis that effected the entire university and was the other main reason for me leaving Växjö. See discussion below.

#### Achievements:

- A research project called *Forest resource* funded by the Knowledge foundation. The Knowledge foundation supports research that is conducted at Sweden's new universities and university colleges, provided that industry provides a matching amount and actively participates in the research. For some time, we hosted the biggest website about forest management in Sweden. See below.
- A research project, called *Viggen*, dealing with content management, in collaboration with some companies in Växjö, introducing the concept of ontologies as an important problem in modern IT. Vinnova funded the project (From Vinnovas homepage: Vinnova is Sweden's innovation agency. We promote sustainable growth by improving the conditions for innovation and by funding needs driven research. We promote collaborations between companies, universities, research institutes and the public sector. We do this by stimulating a greater use of research, by making long-term investment in strong research and innovation environments and by developing catalytic meeting places. Our activities also focus on strengthening international cooperation). See below.
- An EU-funded research project, called *Crosswork*, dealing with workflow formation and enactment within the European automotive industry. One result was a PhD. See below.
- In the year 1999, Växjö University College becomes Växjö University. I was at that time member of the university board.
- In the year 2000, we achieved research education rights within a combination of informatics, System Economy and computer science. I wrote the application to the faculty board.
- In the year 2002, I achieved a professor chair in Växjö.
- In 2005 a research network, called *the D-ring*, where D meant either 'Doctor' or 'Docent', was created on my initiative with Kalmar university college, Kristianstad University College, University West, Blekinge Institute of Technology (BTH), MidSweden University (Östersund) and Luleå Technical University. It is described below.

## 6.1 Teaching in Växjö

Arriving in Växjö I was immediately asked to create a one year Master degree education. It contained a set of 'thinking' courses: 'Systems thinking', 'Strategic thinking', 'User thinking', 'Secu-

rity thinking' and 'Object thinking' where the staff could exercise their specialties. A handmade wiki (that concept was not yet invented) called *Classic Problem Web* (<http://www.perflensburg.se/Privatsida/cp-web/index.htm>) was the result of one of the courses. It described central concepts and problems from classic text-books and articles with crossreferences. It was created 1999 and it still works...

The courses were much appreciated by the students. Some of them said that if it were not for me, they would not have entered the program. There I also formulated my teaching guidelines: There are no bad students, only more or less pedagogic challenges!

I have a strange ability to always and without any hesitation pinpoint just those cases that the system has not taken care of. If there is an unforeseen exception, I find it, without effort and without trying to do it. It just happens! There are cases where I'm not even aware of me breaking a lot of rules. In Växjö, the study advisor wrote in a paper, describing his job: "Usually I can find a solution to the students' problems, but in case I can't, I send them to Per Flensburg. I don't know how he manages, but he solves the problems!" However, I was not aware of that! The students came and asked me about something, I answered and then it was settled. I never saw the problem! Maybe I did as Russell Ackoff suggests: I redefined the systems so it was no longer a problem.

## 6.2 Creating the D-ring

With the new universities in Växjö, Örebro and Karlstad, the situation for the remaining university colleges drastically changed. They were all eager to start collaborating with us to obtain some cooperative research education. Also in informatics, we had problems recruiting students, so fusions between departments from different university colleges were discussed. We tried to collaborate between Växjö and Kalmar, but the management was not very interested. So instead I created the D-ring. The idea was cooperating in teaching on an advanced level, to create new education programs in cooperation with the members as well as to form a strong research and research education group consisting of members from all partners. The Swedish government encouraged this type of cooperation, but the local management was not very interested. We had meetings, we made ambitious plans and we established an international master's degree education in information systems in 2007, hosted by BTH. However, almost all courses were taught at University West, supported by persons from Östersund and Karlstad. Around 100-150 international students from Canada, Ghana, Bangladesh, Pakistan etc. started every autumn, but the throughput was very low. BTH ran into financial problems and they terminated the master's degree education in 2011. However, the cooperation worked well and the education achieved a good reputation outside Europe.

Why did the D-ring succeed, but not the research group in Lund? I think a contributing factor was the fact that all of us felt a little left out, we had not managed to place ourselves in the mainstream. The network was also informal, we paid our own travelling costs, hotels etc. There was a great freedom to express ideas, we took initiatives and we all encouraged each other in the group. We had our positions, and there was no need to start disputes about them, instead we could support by being members of evaluation committees, faculty opponents and such things. When people retired, the collaboration disintegrated as well.



### 6.3 Research in Växjö

Coming to Växjö 1996, I was immediately involved in a project, *Forest resource* which focused on creating the largest website for information about forest resources (Flensburg 2000). It was maintained manually and after a year we didn't have the financial means to continue with that any longer. Then I got involved in *Viggen*, a content management project, where ontologies (the meaning of the concepts in a data base or information system) and mapping (moving information with preserved meaning between different systems) become a main interest. Ontologies also became the main issue for me and a PhD-student in an EU-project, *Crosswork*, resulting in his PhD-thesis (Flensburg and Mosnik 2005; Mosnik 2010). In ontologies, I was oriented towards semantic networks and I introduced Sowa's conceptual graphs in my teaching (Sowa 2000).

The *Viggen* content management project made a deep impact in the teaching in Växjö, both in informatics and in computer science. The EU-project *Crosswork*, resulted in a general ontology-based program structure, which the evaluators, assigned by EU, tried to implement afterwards. I don't know if they succeeded.

One mistake I made in Växjö was not taking the role as a professor but instead continued to be just one among the others. However, as a Professor I had obligations that were different. I was supposed to lead the development of the discipline and to lead the research. I was supposed to take a bigger leadership role than I did.

### 6.4 Overhead crisis in Växjö

In Växjö we had a rather low degree of external research funding and we were strongly encouraged to increase it. But it turns out that the overhead costs for external research grants became a problem. In fact, that was one of the main reasons for me leaving Växjö. We have a typical example of conflicting goals, which caused dysfunctional behavior. The administrative costs were calculated by the central administration and every year they send a bill to the institutes, covering the budgeted administration costs for that year. The unit was in Swedish crowns. The institute immediately converted that to percentage of direct salary, resulting in an overhead at 80%. It was also said "Every unit should pay its own administration costs". A unit was here considered as the smallest unit. I oversaw a small research unit, called Celekt, which received about 6 million SEK from the faculty. So, of these I had to pay about 2,5 million as overhead.

This covered the overhead cost for all the research that we conducted. If we got external funding, we had to pay the appropriate overhead costs. These were 80% surcharge on direct wages. But Swedish research funds only allowed for 35% and EU allowed only for 20%. If I got 3 mill SEK for research, about 1,3 mill SEK had to be paid as overhead. The share not covered by the grant provider had to be paid by our faculty money.

I was granted funding for an EU-project worth about 3 million SEK. I could pay 600 000 for administration per EU, but I had to pay 1,3 million SEK per the university. 700 000 SEK was taken from our faculty money. As said above, all research groups were encouraged to search for external funding. My group was very successful and we got another 3 million EU-project. We couldn't compensate for the missing overhead cost, so I suggested we should renounce the money. This was of course not accepted and my little research group had a tremendous deficit af-



ter some years. That had to be covered by the department, which after some years was put under guardianship by the vice chancellor, who had to sign everything that concerned expenditures. But at that time, I had left Växjö University.

However, the system described above, developed by financial director, took care of this. All overhead was in the beginning of the year distributed as an invoice in crowns to the departments, who in their turn distributed it to the sections and groups, using an allocation key everybody agreed upon. My group paid 2,5 million overhead and that covered all overhead for the year. If I got 1 million more, the overhead paid by that grant, should reduce the overhead I already had paid. But the professors and doctors in the research board did not realize that, so they withdrew the full amount! This turned out to have particularly negative consequences!

I was member of the university board and we received reports every month about the calculated deficit. In January, it was close to zero, but in December it was calculated to 10 million. We feared that the university will be put under central guardianship. When the financial statement was given in January we had a *surplus* of 30 million! Next year the surplus was 50 million and our grants from government were reduced, since we obviously were not in need of that much money. Shortly after that the financial director resigned as well as the vice chancellor. I think, but can't prove, that this surplus was one reason. It was obvious that all overhead withdrawn in the year, manifested in the end as a surplus. However, only a few persons in the entire university seemed to understand that! It is, however, to be noted that other circumstances also contributed to the increasing surplus; for instance, our predictions about number of students was too chary.

Eleven years later, I still don't understand how this could happen! The decisions were taken on the institute level by the group dealing with administration of research. All of them had PhD's and some were associate professors and some were even mathematicians! I explained several times, with numbers and figures, but they continued repeating the mantra: Every unit must pay its own administrative costs! I still can't understand, maybe they were jealous and tried to hamper us as much as possible. They succeeded to some extent as I ended up resigning. Lessons learned: Be careful with percentages—they are treacherous!

## 7 University West: Taking the professor role

I visited the IRIS 23 conference, the year 2000, arranged by University West. It was the best organization of the IRIS conference that I have ever witnessed. I saw a group of people working together, having a good spirit and an unbelievable enthusiasm. When I organized IRIS four years later, I went to Uddevalla, their location at that time, and asked for their secrets. It was the good spirit, the lack of intrigues and a genuine democratic mindset that formed an unusually enjoyable, agreeable, genial and cheerful department! When I decided to leave Växjö in 2006 I went to University West without any hesitation and haven't regretted that for even a millisecond! But there were a lot of rules and I used to say that I had never had to follow so many rules and I had never had to ask so many people for permission if I wanted to do something. Despite that, I have never felt so good elsewhere! That was due to the extremely nice people working here.

I entered University West as a professor and I took that role from the beginning, but with humour and distance to myself. In University West there was another spirit, no intrigues and

no major conflicts with other disciplines and it was easy to join the staff. Besides, two of them soon became professors.

A large difference exists between University West and the other places I have worked at. Here informatics has a very strong position insofar as the discipline does not need to fight for its survival, we have large external funding, we do research within the area of Work Integrated Learning (WIL), which is the profile of the whole university. Besides, the overhead cost is dealt with in a fair way. We can fully focus on the development of the discipline and we don't have to struggle for our survival. This creates a positive spiral and contributes to the development of the discipline. Work Integrated Learning is a specialty of University West and in 2012 we managed to achieve research education rights within this scientific area. It is quite new and very few universities in the whole world have such a specialty. Currently we can examine PhD's within two disciplines: Informatics with specialization in Work Integrated Learning and pedagogics with specialization in Work Integrated Learning.

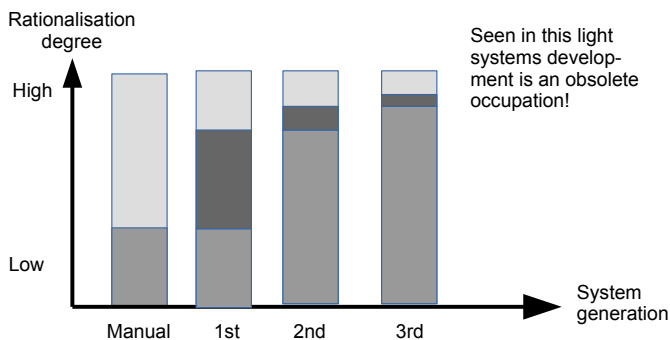


Figure 2. Payoff in systems development. Adopted from (Flensburg and Friis 1999, p. 16)

## 7.1 Introducing a new bachelor program

In 2008 at University West we decided to develop a new bachelor program in information systems and I was allocated to the task. My main idea was based on the model illustrated in figure 2. The black parts in the bars represent the benefit when introducing a new generation of a business system. The benefit becomes smaller and smaller while at the same time the costs increase. An obvious conclusion indicates that systems development is an obsolete occupation! It was consistent with the fact that companies today purchase standard business systems instead of developing in-house systems. However, looking at the advertisements in the specialized press revealed the opposite: There was a great demand for systems development! But their definition of systems development was different than mine: In the press, systems development could be translated as systems maintenance, referring to adaption to the specific business and the transferal of infor-

mation from one system to another. In Växjö, I understood the importance of ontologies for integrating data systems and I designed the program around three main pillars:

- How does the company work?
- How does a standard business system work?
- How do we integrate systems?

There were also courses in programming, databases, scientific method and the thesis. The program was launched in 2009 and the number of applicants increased. A consistent focus on business system and integration was unusual at that time. We became members of the Sante Academy, an organization that provided access to the most common standard business systems, mainly directed towards teaching in business economics. My dream of moving information from one system to another with preserved meaning almost came true in 2015.

The program was successful; it is now one of the most demanded programs at University West. Some courses have been replaced, we have for example added app development as an example of system integration.

I was the only one who was allocated the task of developing the program which is unusual. Because of that, I could design a rather radical program, taking future trends into account. If a group would have developed the design, it would have been more conservative and less successful. It would maybe not be based on the needs of the industry, which is important for getting employment.

Concerning teaching, in 2011 the students nominated me as one of the best teachers. But in 2014 when I retired I had to give two courses at the first semester and these were complete disasters in terms of student evaluations! It did not depend on me only, but I lost all interest in teaching for two years after that.

## **7.2 Research in University West**

At the University West I was involved in some projects concerning e-governance and social informatics (Flensburg and Kurti 2006). I managed a large project, Innoveta, concerning contact centers in municipalities (Flensburg et al. 2009), which continued my action research work. We developed an open source system for contact centers in the project and a massive amount of qualitative research about consequences of introducing contact centers. After finishing that, I was supervising and helping the PhD-students and took part in their publications. We worked a lot on a conceptual level and I realized that the concept 'user' was problematic indeed (Flensburg 2015). A user is somebody using an information system, but the people for which we design the systems are workers. They perform work and their work is not to use an information system. Today I'm getting involved in design science and phenomenology (Haj-Bolouri et al. 2014) and the design community.

### 7.3 Establishing a research education

I have participated in introducing research education in three of the universities: in 1976 in Lund, in 2000 in Växjö and in 2011 in University West. In Lund, the section of information processing—ADB became a department of its own accord and the prefect decided to start research education. The procedure was very easy. She asked Börje Langefors if he could supervise and examine all of us. We were about seven persons. He agreed, and then it was settled. We decided ourselves on the proportion of courses, projects and thesis. Börje gave some lectures, but did not interfere very much. He merely signed the papers we asked him to sign. We attended courses in methodology at the institute of Philosophy, Business Administration and Sociology. None of us had a PhD but we were very persistent and insistent, which was needed to finance the research.

The number of persons in the research disciplines was a major issue in Växjö. It was supposed to be 10-15 persons with at least two professors or associated professors in each discipline. We had to merge three disciplines (information systems, computer science and industrial economics) to obtain a joint research discipline. We were also encouraged to apply external research funding, but when we succeeded, some counterproductive overhead processes took place as was described earlier.

Work Integrated Learning is a specialty in University West and is a prioritized research area. My colleagues have distinguished abilities in attaining external funding and they are also very skilful in publishing. A research group called LINA (Learning in and for work life) was created. It was a research environment, since it consisted of about 50 researchers from a variety of disciplines. In 2009, LINA was appointed as vital research environment and got 2 million SEK from the university's research budget. The Swedish rules for obtaining research education were changed, I think in 2011, and University West applied for obtaining research education within the area of work integrated learning. We succeeded and thought naively that we could start research education immediately. However, it took almost two years due to the incredible internal administration!

It turned out that the decision of providing research education was to be taken by the Central Board for Research Education. It was an extremely complicated process, where the board demanded increasingly detailed information. For example, they demanded full course plans for every possible course within the education, both mandatory and voluntary. The courses were treated in the same way as courses in the undergraduate education. It took almost a year to complete this procedure. The same happened when we were to accept PhD-students. The central faculty board insisted on them doing the evaluation. After a while, they understood that knowledge of the discipline was necessary. It was extremely frustrating to be obstructed by silly administrative procedures, seemingly having no other purpose than demonstrating power! Well, they pretended it was to secure quality...

It is interesting to compare the strategies in Växjö and in University West. Växjö recruited many external professors, in fact many of them from Lund University. These professors were used to compete for resources and they brought this attitude to Växjö University. I guess that many fled from Lund and were not genuinely interested in working in Växjö. At University West, we recruited leading professors and new personnel mainly internally and they were accustomed to our procedures so there were no big differences in value.

In old universities, the problem of starting a new research education is almost non-existent. A new discipline is eligible for research education, so it is all about finding a professor who can act as supervisor. In university colleges, it is different. The ability to examine PhD-students adds two new dimensions: firstly, about increased quality and secondly the risk of doing something wrong. The reactions from the controlling bodies; i.e.; the faculty board, are the same in both cases: it is necessary to establish very hard quality criteria. These criteria might have a negative effect insofar as the faculty board usually have no domain knowledge and the proposed criteria might be counterproductive. In Växjö it was manifested in an unease about potential lack of external evaluators, even in the smallest decisions. In University West it was manifested in a long learning process of the faculty board, almost making us losing an external funded PhD position. For young researchers, it is to be noted: You can go through many workplaces that are not so good, but don't hesitate to change workplace. You might end up in a really nice place.

Topics	70-75	76-80	81-85	95-00	01-05	06-10	11-15
<i>Systems development</i>	25	30	25	15	10		
<i>Systems development techniques</i>	25	25	25	10	5		
<i>Business analysis</i>						20	20
<i>Business systems</i>						20	20
<i>Ontologies</i>				5	10		
<i>E-business</i>				10	10		
<i>Strategic IS</i>				5	5		
<i>Project management</i>				5	5	5	5
<i>General system theory</i>			5	5	5		
<i>System integration</i>				5	10	25	25
<i>Information retrieval</i>	5						
<i>Administrative rationalization</i>	5						
<i>Operations analysis</i>	5						
<i>IT in society</i>		5	10				
<i>Data bases</i>		5	10	15	15	5	5
<i>Computer technique</i>	10	5					
<i>Programming</i>	25	30	25	20	20	25	25
<i>Internet-technique</i>				5	5		

Table 1. Evolution of the discipline

## 8 Conclusion

First some words about the development of the teaching. Many authors have written papers about how research has changed in the area (Iivari and Lyytinen 1998; Nissen et al. 1991; Banker and Kauffman 2004). However, I have not seen any papers about the changes of the teaching. Therefore, I created table 1 describing percentages of areas I have taught over the years. It is created from my memory, since almost all papers before 1990 either have disappeared or are unavailable in old computers. I use a five-year interval and identify the percentage of each topic within these five-years. I have omitted the years in Copenhagen, since the system was different there. Programming has varied between 20-30% and being consistent over time. Systems development (including systems development techniques such as flow chart, decision table, Jackson Structured Programming, etc.) occupies about 50% of the program during the first 20 years. In the following ten years, in Växjö, courses of e-business, systems integration and ontologies were introduced as a part of systems development and in the next ten years, in University West, systems development unmitigated to business analysis, business systems and part of systems integration. Except for programming and databases, all topics have been replaced. Truly an amazing development!

### 8.1 Reflections

I said in the beginning that my career was exceptional. The obvious reason was my decision not to focus on publishing but instead making impact in society by influencing people I met. Obvious target was the students. As described earlier my teaching has been very successful. But there are many talented teachers and I'm by no means the most talented, maybe among the upper 10%. I think it was the unique combination we had in Lund, with both theoretical/philosophical approach as well as practice and action oriented research, in combination with the open and welcoming attitude by the IRIS community, that made a handful of professors thinking I was capable of being one of their kind. I do publish, but not in high-impact journals. I did not spend a lot of time rewriting my papers; instead I wrote new ones, in different areas, from philosophical discussions of world views, via ontology generation, user development and research methods to quantitative analysis of teaching interests in Europe and evaluation of search engines (but that was rejected!). Submitting these rough diamonds to the assessors in the applications probably resulted in them thinking: He has potential! It is OK! And there it stopped! I don't think I realized the potentials they saw, but maybe instead other potentials.

Concerning traditional impact of my research on the global research community, it is of course very sparse. A Finnish PhD-student, Torsti Rantapuska, picked my ideas from 1986 and developed them further in his PhD-thesis (Rantapuska 2002). Concerning citations, there are 53 to a book about knowledge spillover (Karlsson et al. 2004), where I was one of the three editors and 37 to a journal article (Elkjaer et al. 1991). There are 25 citations to an article about an enhanced communication model (Flensburg 2009) which is the most of any of my own publications. All according to Google Scholar. For a 44-year career, it is not much. Today

publication matters much more than when I was PhD-student and my most important advice to new scholars is: Don't try to replicate my career! Publish!

It might seem strange that I give an advice I didn't follow. But as I said before, I do publish—in IRIS seminars. By doing this I created a network, people get to know me and my capacity and my interests. That's one reason why I became professor. Today IRIS still is a good introduction in the research community, but it is far from enough to achieve a PhD degree. Another reason is, as I also indicated before, we were rather few in the discipline and we all knew each other. This is not the case today, you know your network within your specialized area but you need a few good publications to get your PhD and many more to be a professor.

An issue that has affected me more than I realized was the paradigm issue. When we in Lund attended our first course in philosophy of science all except one realized: We are not positivists! We were interested in relations between humans, computers and organizations; what it actually means for the clerks when they were forced to work with computers. We had great battles with grant providers and reviewers (because we, even I, submitted articles to conferences) and felt misunderstood all the time! Instead of realizing: “we don't express ourselves clear enough” we thought the others were stupid positivists and according to Kuhn's theory about incommensurable concepts (Kuhn 1962) it was impossible to understand each other. This heavy anti-positivist attitude was imbued in my thinking, almost in my genes, and to tell the truth: Not until writing this article, I realized its huge impact on my scientific thinking. As soon as a paper was quantitative, dealing with hypothesis, doing surveys and other positivist issues I immediately had my opinion about it: Bullshit! (Sorry for the rude word, but this is true!). When rejecting the method, I also rejected the question, which *might* be an interesting one.

Today all has changed. There are many articles discussing different approaches from different paradigms (Orlikowski and Baroudi 1991; Mingers 2002; Mingers et al. 2013; Porra et al. 2014; Aakhus et al. 2014; Hirschheim and Klein 1989). There are even special issues of information systems journals dealing exclusively with philosophy; e.g.; the forthcoming *European Journal of Information Systems* special issue on Philosophy and the Future of the IS field. Researchers and editors are much more open to different approaches, different paradigms and qualitative research. This makes the field much more interesting. However, does this change my decision not to publish? To some extent yes, since this is a journal publication and it will probably be read by some people. The main question is, however: will this paper have any impact? Probably not, I would be highly surprised if any cite this paper but I would be highly satisfied if anybody decides to include impact on society and not only impact on researchers in their goals. Devoting a lot of effort to teaching, treat the students in a respectful way and be engaged in the teaching creates in my mind much more impact on society than other researchers reading my papers. A rough calculation indicates I have taught about 5 000 students during my 44 years as teacher. If I made an impact on half of them, it is a considerable higher impact than if I had published about 50 papers in journals.

When I presented my paper after the first review in IRIS 39 and decided to withdraw it, many people approached me saying: You can't do this! Your story is important! We need different people, we need exceptional people and we need be told about them! So now, I have told my story! Hope you enjoyed it!



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