CHEMICAL HERITAGE FOUNDATION

NATHALIE DUSOULIER

Transcript of an Interview
Conducted by

W. Boyd Rayward

at

Nice, France

on

19 June 2000

(With Subsequent Corrections and Additions)

CHEMICAL HERITAGE FOUNDATION
Oral History Program
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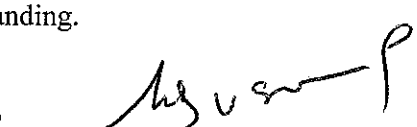
(Signature) 
Nathalie ~~Dusoulier~~

(Date) 27/02/03

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Chemical Heritage Foundation
Oral History Program
315 Chestnut Street
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NATHALIE DUSOULIER

1927 Born in Nice, Alpes Maritimes, France, on 18 October

Education

1954 Ph.D., pharmacologie, Faculté de pharmacie de Paris
1954-1957 Certificats de sériologie, Institut Pasteur, Paris
Certificats de microbiologie, virologie, Institut Pasteur, Paris
1958 Institut de Pharmacie Industrielle, Paris
1960 Institut d'Administration des Entreprises, Faculté de droit, Paris
1964 Courses in Computer Science

Professional Experience

Centre National de la Recherche Scientifique, Paris, France
1961-1963 Abstractor and indexer of scientific literature in medical, agricultural and biological sciences.
Editor and publisher of *Bulletin Signalétique* in medical, agricultural, and biological sciences.
1964 Responsible for all fields (physics, chemistry, et cetera)
1965-1977 Deputy Director and Director of documentation center
United Nations
1978-1981 Director, Inter-organization board for information systems, Geneva, Switzerland
1981-1986 Deputy Director and Director, United Nations Library, New York
1986-1988 Director, United Nations Library and Archives, Geneva, Switzerland

Institut de l'Information Scientifique et Technique, Nancy, France
1988-1994 Director and CEO

Honors

1989 Chevalier de la Legion d'honneur, awarded by the French President
1992 Miles Conrad Memorial Award, National Federation of Abstracting and Indexing Societies
1995 International Council for Scientific and Technical Information Fellowship

ABSTRACT

Nathalie Dusoulier begins her interview by discussing her family background and education. She recounts how she started working in information science from her background in pharmacology. She then speaks about her employment at Centre National de la Recherche Scientifique [CNRS]. She describes the number of different forms her career at CNRS took, from indexing articles to directing the biology and human science sections of CNRS's publication, *Bulletin Signalétique*. She talks about the different methods used to index and her first experiences with automation and computing. Dusoulier then segues into discussing the commercialization of Institut de l'Information Scientifique et Technique [INIST] and its collaborations with various international organizations. She then speaks about a variety of other information science organizations including International Council of Scientific Unions Abstracting Board [ICSU AB], United Nations Educational, Scientific and Cultural Organization Programme Générale d'Information [UNESCO PGI], Federation for Information and Documentation [FID], and the International Federation of Library Associations and Institutions [IFLA].

Dusoulier's interview continues with details of her employment at INIST. She talks about her transition from the United Nations and moving to Nancy, France to set up INIST. She talks about hiring INIST's staff and setting up the center. She continues her earlier discussion about commercialization of information and INIST by talking about INIST Diffusion. She concludes her interview by talking about recent changes in technology and their impact on information science.

INTERVIEWER

W. Boyd Rayward is a research professor in the Graduate School of Library and Information Science at the University of Illinois, Urbana-Champaign. He turned to librarianship after graduating in English literature from the University of Sydney. He received his Ph.D. from the Graduate Library School at the University of Chicago in 1973. He has held positions in the University of Chicago (where he became Dean of the Graduate Library School). He served as Professor and Head of the School of Information Library and Archive Studies and Dean of the University's Faculty of Professional Studies at the University of New South Wales in Sydney where he is now professor emeritus. He has published two books related to Paul Otlet, Belgian documentalist and internationalist, and a great many articles on history of national and international schemes for the organization and dissemination of information.

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INTERVIEWER: W. Boyd Rayward

LOCATION: Nice, France

DATE: 19 June 2000

RAYWARD: Please tell me about your family background and your education.

DUSOULIER: I was born in Nice, France, to Russian parents. I attended school in Nice. I studied pharmacology in Marseilles and earned my Ph.D. in pharmacology in Paris. While in Paris, I also studied other related subjects such as biology, serology, and virology at Institut Pasteur.

I decided to study business administration because of my husband. He has a Ph.D. in political science and a diploma in engineering. I received a diploma in business administration when it began in France—during the first year, but I was not very good because law did not interest me much. I was selected because there were not many scientists studying that. There was only one pharmacologist and one veterinarian.

RAYWARD: Were you the only woman in the program?

DUSOULIER: No, there were other women.

RAYWARD: When was this?

DUSOULIER: Around 1960.

I studied supplementary *diplômes* (diplomas) in the pharmaceutical industry in order to work in industry; I didn't want to work in a pharmacy. At the end of 1960, I was in a car accident, and stayed in bed for about a year. After that, the doctor said that I could not work standing up for at least three or four years, so I had to find a new job. I had been working in pharmacy doing biological analysis. I didn't even know what other jobs I was qualified for that wouldn't require standing.

Just before my accident, I had found a job at the Laboratoire de la Grange, a pharmaceutical laboratory for the control of drugs. Today, I don't think the subject is that

interesting, but, at the time, I was happy there. Then came the accident, which was just terrible. My husband and I were in the car with our three children.

RAYWARD: Were they hurt as well?

DUSOULIER: Not really. My husband was hurt; he was pinned in. I was thrown out of the car.

I decided to put an advertisement in *Le Monde* stating, "Doctor of pharmacy with these *diplômes*, knowing French, English, German, Russian, and Spanish, would like to find a job that doesn't require standing."

At first, I did not receive a thing. Then, after two weeks, I received a letter from CNRS [Centre National de la Recherche Scientifique] stating that they wanted me to analyze, abstract, and index Russian and German journals in pharmacology, biochemistry, and biophysics. I thought, "That's stupid." [laughter] "I could never do that kind of job." But I decided to go and see what it was like anyway.

When I arrived at CNRS headquarters, I was horrified! The main office was a large room with people sitting around at desks, as if they were in a classroom. These were people with Ph.D.s and master's degrees in various disciplines. They told me, "Oh, we want you, absolutely." They asked me to do some corrections to a manuscript—correct the mistakes. I had never done that before, but I must have done well because they were very happy with that stupid work. [laughter] Then they said, "We want you to start next week." I responded that I couldn't because my husband was traveling for his work and I wanted to talk it over with him first. But they said, "If you don't like it, just leave. No obligation. Your contract will be processed, but that takes two or three months—don't worry." So, I gave in and started working there. As it turns out, it was, in fact, quite interesting. The work was slightly difficult. I knew Russian, but they gave me Bulgarian, Polish, and many Czech-related languages. I told them, "I know Russian, not Ukrainian or any of these other ones." They answered, "Yes, but if you cannot do it, who can?" So I tried and I ended up doing that for a little more than a year.

RAYWARD: Were you preparing abstracts?

DUSOULIER: I was preparing abstracts and creating indexes or the *index matière* (subject index). I told myself, "All right, I'll do this for a while, recover, and then try to do something else." At that time, Jean Wyart was director of CDST [Centre de Documentation Scientifique et Technique]. His deputy was a high-level, Spanish researcher.

CDST had several departments. The official director of *Bulletin Signalétique*, the largest department, was a Spanish man named Dr. Garrids. Garrids decided to leave for Spain to

continue his research and a researcher from Institut Pasteur called Dr. [Pierre] Brygoo replaced Garrids. Brygoo's job was to make CDST more fashionable. By more fashionable, I mean to incorporate automation—not the creation of online files or anything like that, but the automation of daily operations. *Bulletin Signalétique*, as you know, was a very large operation. We were doing half a million author indexes. Back then twenty or thirty people sat at very long tables—A, B, C—working in alphabetical order like that.

RAYWARD: On cards?

DUSOULIER: Yes. Even on stamps. We had a piece of paper to do the abstracts. On the top were the authors on small stamps; on the side, the subjects; and on the middle, the abstracts. Then people cut all these small pieces and classified them—first, by the authors, and then by the indexes. Then they put all the indexes on tables. On other tables, they put the authors. Clerical people classified the authors, and scientists classified the subject indexes. They tried to organize it. You know, it was not a machine. The computer would reject the work if one thing were wrong.

The idea was to try to automate these operations. Dr. Brygoo only knew a little about automation. This was during 1962 and 1963. At that time, Compagnie de Saint-Gobain, a very large chemical company, had started the automation of their documentation. That was the first time that had ever happened in France. One of the people in charge of that was Monsieur Pigagniol, a friend of Brygoo. Brygoo, after a few months, decided that I was going to help him with the automation operation. So I was put in charge of one department of *Bulletin Signalétique*.

As we didn't have a lot of space, I sat with Brygoo in a very large office. In France, that arrangement was unusual because people liked their privacy; they liked to have their own offices. However, Brygoo wanted to work in the same space so that we would able to exchange information. That was how we started talking about automation.

Then, Dr. Brygoo was offered a job in [the United States of] America by a large American laboratory—Eli Lilly [and Company]—so he decided to go to America. [laughter] He left us with all of our problems and without a chief of biomedical sciences.

There were three departments at that time; one dealt with everything associated with biology: agriculture, medicine, biology, pharmacology, and biophysics. Another dealt with mathematics, physics, chemistry, et cetera. The chief was a lady named Madame Duval. The other department dealt with *les sciences humaines* (social sciences).

There were three separate *Bulletins Signalétiques*. Brygoo was in charge of the biology department. After he decided to leave, the biology department stayed without a chief for maybe three or four months. During that period, we were under the direction of Jean Wyart.

At the end of that year, Jean Wyart called me in to his office and said, "I hope you are not planning to go on holiday for Christmas." And I told him that I was, but he insisted, "No, you have to stay—you are going to take over biology." To which I responded, "That's impossible. I was the last to arrive here." There were two ladies—one in charge of medicine and the other in charge of agriculture—who had been there much longer than I was. I told Wyart, "I'm going to have a lot of problems with them." But he declared, "No, *you* take over biology and announce it to them yourself." [laughter] That was very convenient for him. I agreed to take over biology and I told the ladies, "Look, I didn't ask for anything because I'm not planning on staying anyway. But this is life." They were all right with it and said, "Look, we know you. We don't know who else could have been named for the position." And so we began working and did quite a good job of starting the automation of authors and indexes.

A year later, Madame Duval retired. The director of human sciences was a geography researcher. He didn't retire, but he didn't want to do his job anymore and decided to leave. One day, Jean Wyart called me, and said, "I would like to tell you that you are also going to take over mathematical, physical, and the human sciences departments." I replied, "Look, I don't know anything about mathematics; I'm not very good at that." He insisted, "Oh, no, you can do it. You have very good people from the field with you. Your two deputies are very good at physics as well as chemistry. You take the human sciences." And I told him, "Human sciences? I cannot; we look at things completely different. I am very precise; I like my work to be very precise." The researchers in human sciences did not come to work. Their work for *Bulletin Signalétique* was two years' late. The researchers thought it didn't matter because "it's human sciences, we have the life."

I came home and told my husband, "You know, some of these people are very poor professionals, but some need the job because they have families, et cetera. What am I going to do?" Finally, I decided, "All right, I will do it *ad interim* until you find someone who can really take over completely." Wyart agreed.

I was lucky, half of the people working during my interim decided to leave because I forced them to come to work. Some had several jobs. Back then, having several jobs was not permitted. So they hired Madame Louise Cadoux, a *maître de requêtes de Conseil d'État* (master of requests of Council of State). She was excellent. She is now working in *Conseil d'État*. She said to me, "I am sorry that you didn't do the interim longer because maybe some more of the bad people would have left." [laughter] Madame Cadoux recruited new people who worked well with her.

We began to study the automation of the *Bulletin Signalétique*. Then Jean Wyart retired and was replaced by Jacques D'Olier. Of course, work became very difficult because Jacques D'Olier came from the Délégation Générale de l'Information Scientifique et Technique [DGRST], part of the prime minister's cabinet.

Wyart had never informed the chiefs of the different departments of D'Olier's nomination. The chiefs wanted Jacques Cordonnier, who was doing all kinds of research on cards. But, one day Jean Wyart called a meeting and said, "I'd like you to meet your new boss."

People drew their breath. There was a terrible silence. Jacques D'Olier was very shy. The silence stretched on for ten minutes. Nobody knew what to say. Jean Wyart broke the silence with, "I hope you will help D'Olier." I thought, "Well, I am the newest employee, but I have to say something." So I said, "All right, we will help you as much as we can" followed by some of the stupid things that people always say in that type of situation. He was always very grateful to me for having broken that silence. [laughter] D'Olier recruited a young guy named Pierre Buffet, whom you may have heard of. He is the international relations director of Questel [Company], a large host computer company distributing *Chemical Abstracts* and databases in France. Pierre Buffet had just come from the army and had studied in the north of France. He was supposed to help us with the computing. At that time, we said, "This is what we would like the computer to do." The computer people told us, "Oh, that's impossible. That's impossible." But we finally got what we requested.

We had the possibility to take computing courses at INRIA—Institut National de Recherché en Informatique et en Automatique, in Versailles. Andre Berthelot, who was the chief of physics, and I decided to go and follow the courses to try to understand why everything was so difficult.

RAYWARD: You were talking before about those little author indexes on pieces of paper the sizes of stamps, and so on. You were beginning to look at automation at that point. Were they actually experimenting with punch cards?

DUSOULIER: I never worked with punch cards. But there was a department in CDST under the responsibility of Cordonnier, whom I never worked with, who was experimenting with punch cards. He was using them in the translation department to try and index the translations that were already done. It's very expensive to do translations. When a researcher asked for a translation, it was good to know if one already existed.

We started working with a computer. I think it was an IBM 360. It was a very modest attempt, and in the beginning, it was more difficult to do it that way than to do it by hand. In America, they had experience with them, but we didn't in France.

This is how we started the automation and why I studied the computing. I didn't study a very high level of mathematics; my training was practical, on software and hardware. I was doing more of the systems analysis than programming, myself. At that time, it was very difficult to do programming. It was much more difficult than now. [laughter]

Then we continued the automation. We produced the *Bulletin Signalétique* with the computer. Then we decided that it was not enough and started thinking about the PASCAL database. Pierre Buffet and I are the parents of the PASCAL database. But at that time, the database was just a by-product of the *Bulletin Signalétique.* We had it all on tapes. We tried to do a database like that, which is the actually the opposite of how it should be done. We understand that now.

We had to make so many corrections to the database. First, we had to take all the marks and codes out of the database. It took a lot of time, because we needed a lot of codes. Nobody wanted to abandon the *Bulletin Signalétique* style with italics, bold, different type of characters, and all the mathematical signs, et cetera. Then, we couldn't print anything on paper because the tape was so dirty with all these codes and marks. It was, in fact, a printed *Bulletin Signalétique* on tape. When we saw how difficult it was to use these tapes, we started thinking of reversing this operation. But it was very difficult to tell that to the editing staff, because they didn't want to abandon anything. They all thought that different subjects could not be treated with the same system. They thought physics and medicine needed a different system and mathematics and human sciences needed a special computing system. We had heard that for years. Even so, we decided we were going to use only one system. If there were a need of some adaptation for mathematics, for example, we'd see to that later. That was how we started the automation.

RAYWARD: What did you do by way of discovering applications of different standards—bibliographical standards, the MARC [machine readable cataloging] formats, and things of that kind?

DUSOULIER: I was involved in ISO TC 46 [International Standards Organization's Technical Committee], for many, many years. I even chaired one of the annual meetings, et cetera.

[END OF TAPE, SIDE 1]

DUSOULIER: We were not using the MARC format because it was considered to be too complicated for scientific information systems. In fact, our colleagues, friends from the information side of things, with whom we were already working—*Chemical Abstracts*, *Physikalische Berichte*, INSPEC [Information Service in Physics, Electrotechnology and Control], and all the organizations, the Russians, et cetera—were all using our own formats.

RAYWARD: What form did your collaborations with those organizations take?

DUSOULIER: In the form of the ICSU AB [International Council of Scientific Unions Abstracting Board]. We had been doing a common list of periodicals, processed, in a sense, by technical information systems. We had a meeting of ICSU AB every year, and we discussed our problems about the journal exchange of publications, et cetera. It was decided to start working for a kind of communication format that could be used by all the systems. It was not very successful because it was difficult. But it helped us to understand where the problems were. Still the decision was not to use MARC.

The world was really divided in two parts: librarians that were using MARC, including our own librarians; and the scientific information centers that were using, more or less, their own much simpler formats.

It was only later—many years after that—that it was decided to work on the reconciliation of MARC and the systems we used. We used the UNISIST [United Nations International Scientific Information System] format when it started. It seems a little bit strange now, but at that time so many things were going on that we were running in all directions.

All these information centers were trying to find a better and cheaper way to produce their publications. In fact, that was the goal of all of us. We were visiting each other to see how we were working. There were no secrets. All the people were showing what they were doing. I remember being in Columbus, where they were doing their coding, and having them try to show it to us. But it was just the beginning.

RAYWARD: So, when you began the PASCAL database, you also included the *sciences humaines*?

DUSOULIER: Yes, later. We started with the biology, and then we did the *sciences humaines*. *Bulletin Signalétique* was only published every three months. It took more time to automate the *sciences humaines*, but Louise Cadoux has done it. This is how the PASCAL database was developed.

RAYWARD: Could you speak about some of the related organizations? You mentioned one, the Délégation Générale de l'Information Scientifique et Technique. Apparently, that was set up in 1959.

DUSOULIER: Maybe. I don't know.

RAYWARD: Then there was a Comité d'Étude de la Documentation and an Association Nationale pour l'Étude de la Documentation Automatisée [L'ANEDA]. Their names came out of this article (1). I wondered what these were, how important they were, and what bearing they had on CNRS and CDST. Well, apparently, in 1963, there was a plan of some sort—the "VI & 186; Plan." They keep referring to that in this article.

DUSOULIER: Association Nationale pour l'Étude de la Documentation Automatisée. *Le sixième plan* (the sixth plan) is a governmental plan. This was not especially for documentation or for information. It was the plan for our government. It had no impact. The only result of

that was the nomination of Jacques Brygoo. And to try to apply this to L'ANEDA. But, in fact, he put his own ideas in very fast.

[BREAK IN RECORDING]

DUSOULIER: Then they decided to set up the Centre de Documentation des Sciences Humaines. It was a separate center from CDST. First, the *Bulletin Signalétique* was divided into three parts. Then everything was reunited.

RAYWARD: That was starting to happen when you were interim director?

DUSOULIER: Yes, let's say that. Then they created two centers. This was when the Centre de Documentation Scientifique et Technique moved to a new place. The Centre de Documentation des Sciences Humaines was moved to the new Maison des Sciences de l'Homme when it was built. Then there were two centers.

RAYWARD: Each center was still producing the *Bulletin Signalétique* related to its area*?*

DUSOULIER: Yes, each center was doing exactly the same.

RAYWARD: Was there a common processing center for the two?

DUSOULIER: Yes, at one time. Then, they both started using the computer of Maison des Sciences de l'Homme. The same computer people were doing both. There were a lot of different periods, with a lot of changes.

RAYWARD: Yes, during one period—I think it was 1964—the *Bulletin Signalétique* seemed to be split into different sections.

DUSOULIER: Yes. This was at the request of researchers. They didn't want to have a big *Bulletin Signalétique* to read. With automation, it was easier to do that. But, in fact, it has created a lot of problems with those automations because of duplication. Physics cannot take over biophysics. But in biology, you need biophysics. So a number of abstracts were put in several places. There was another index added in where *Bulletin Signalétique* was going to go.

RAYWARD: Was there an attempt to counter the influence of the English and American systems?

DUSOULIER: No. I remember this, but it was one of the studies that didn't lead anywhere. [laughter] I'm negative, but, you know, all these things were created—BNIST [Bureau National de l'Information Scientifique at Technique]. Because when you read that, you don't see that. "*À contrer la prolifération envahissante des publications scientifiques d'origine étrangère—c'est-à-dire qu'il dénonce la concurrence les Etats-Unis*."[1] It's stupid. You don't want them; you don't buy them. You cannot stop publishing. It's so stupid even to say that.

This is one of the reasons why PASCAL database was built and didn't stop doing chemistry. Because most of the publications were coming from the States. We could have said, "All right, we'll take *Chemical Abstracts*." We didn't do it because we were afraid. *Chemical Abstracts* was warning that one day it would stop giving the information in chemistry to Europe and Japan. We said, "We have to continue. Imagine, that might or will happen." This is how the Centre de la Bulletin Signalétique was created in 1939. Because we had no more information coming from abroad because of the War. My own opinion.

RAYWARD: Why would *Chem. Abstracts* stop? They were actually selling the information, so why would they stop?

DUSOULIER: I don't know. At one time, you know, there were strange ideas in America, and sometimes they continued. I can tell you, once, I had a conversation with Al [Albert] Gore [Jr.] on that. But that was much later. There was competition over research in chemistry. They were afraid that the Europeans and the Japanese would use the American databases to compete with the research done on chemistry. If you give all the information to the French researchers, they can do as well as you can do. The American Chemical Society said, "No, no, we don't want any more of our information to be distributed." There were rumors like that, particularly when *Chemical Abstracts* started distributing the tapes. Of course, they were always selling; the problem was <u>not</u> to buy because it's much more expensive to do it yourself than to buy.

RAYWARD: So, in developing the PASCAL database in the area of chemistry, did you do all the indexing again, yourselves?

[1] Dusoulier is referring to written document, which the Chemical Heritage Foundation was unable to locate for proper translation.

DUSOULIER: We did everything ourselves. This is why I started negotiating with, for example, the American Physical Society, the *Engineering Index*, et cetera, so that they could provide us the information already indexed. We were prepared to buy.

RAYWARD: Did that work out?

DUSOULIER: That worked with physics. You know, it's only a problem of people. In *Engineering Index*, they were working too slowly. That was in the time of John Regazzi. Now, everything has changed. It was really difficult because we had to translate. The French researchers, at that time, wanted to have information in French.

RAYWARD: Has the audience of the *Bulletin Signalétique* changed over time?

DUSOULIER: No. Our goal was always the same. The researchers from CNRS and the university were our target—about a hundred thousand people, in fact. And we had no problem of money. They asked us to recover some of the money, at least enough to cover the printing of *Bulletin Signalétique*. We recovered enough by selling it—only to pay for the printing, not for the entire operation. Nobody asked us to do better. *Bulletin Signalétique* was bought by libraries all over the world. When I traveled, I found *Bulletin Signalétique* in the most remote libraries, including Taiwan. I suppose that there are not too many people who can read French there. [laughter] But, still, they had *Bulletin Signalétique*.

RAYWARD: Most of the American research libraries take it either as a whole or have the selected parts for the different sciences.

DUSOULIER: Yes! We had a lot of subscribers at one time—thirty-two thousand subscribers. There were a lot of subscribers to *Bulletin Signalétique*. But that was not the goal. The goal was really to serve French readers.

RAYWARD: So this was just an incidental financial benefit.

DUSOULIER: Yes. But, of course, our administrators were very happy to find this money because they were able to spend less. The purpose was never to be a commercial organization. Never. This is why there was no competition, really, with other centers. We wanted to have cooperation to do our work better. That's all. Not to compete.

RAYWARD: I think that's interesting, because my sense is that INIST, Institut de l'Information Scientifique et Technique, has a rather different focus.

DUSOULIER: Now. But that was not the purpose of its creation. The purpose was to become a European center, in fact. We can have a look at it.

The goal was: "*La confirmation de transfer à Nancy. Où la préparation de l'organigramme d futur institut. Afin que celui-ci paisse répondre aux impératifs d'innovation, de productivité, de commercialisation. Tout en évoluant avec les techniques nouvelles.*"[2]

RAYWARD: So this is, in a sense, the new bit, the commercialization?

DUSOULIER: The commercialization goal is new. This is why we thought—*la création d'une filiale de commercialisation*. So that we could better sell what we were doing. You know, the goal was *la création d'un INIST en ordre de constituer un pôle national, de production et de diffusion de l'information scientifique et technique spécialisé à l'intention de la recherche dans les entreprises*.[3]

RAYWARD: That's new, too, isn't it—the *entreprises*? The businesses.

DUSOULIER: It is new. You know, these are physical science, science for engineers. *Informatique documentaire indispensable au fonctionnement de tous les centres de documentation modernes*.

RAYWARD: So, those are the organizations within France that are cooperating with INIST?

DUSOULIER: Yes. This is cooperation with Bibliothèque de France. This is the beginning of research in bibliometry. The first steps to the digitalization. We have organized a close cooperation with a number of centers to try to solve the problems related to the digitalization of documents.

[2] Dusoulier is referring to written document, which the Chemical Heritage Foundation was unable to locate for proper translation.

[3] Translation: "the creation of a commercialized subsidiary. So that we could better sell what we were doing. You know the goal was the formation of an INIST in order to create a national center for the production and diffusion of scientific and technical information to industrial research laboratories."

RAYWARD: These are the international centers?

DUSOULIER: International centers and also Centre Scientifique et technique du Bâtiment in France, Fachinformationszentrum in Karlsruhe [Germany], VINITI [All-Russian Institute for Scientific and Technical Information], Wissenchaft für Mathematik, Informationzentrum Sozialwissenschaften in Bonn, Swedoc in Sweden, EGO, Consiplio Nazionale delle Ricerche in Italy, Konin Klijke Bibliotheck in the Netherlands, and Japinfo in Japan. We had a very close relationship with all of them.

RAYWARD: When you say you have a close relationship with these organizations, what does that actually involve?

DUSOULIER: With the Russians, we had been working together, exchanging information, journals, and abstracts. With the Japanese, they had their own officers in our offices, and we had a center in Japan in JICST [Japan Information Center of Science and Technology]. It was a kind of follow-up of DGRST. But it was in the ministry of—well, the name of this ministry has changed very often—it was Ministère de la Recherche and then Ministère de l'Éducation et la Recherche. Then they were separated. But Bureau National de l'Information Scientifique et Technique [BNIST] was created when Jacques Michel, who was the cultural attaché or scientific attaché—I'm really not sure—in Washington came back for reasons unknown. Their goal was like DGRST, to be a kind of hat for all the information activities in France.

I don't remember many meetings in BNIST. I remember once we were working with BNIST on how to participate into European databases altogether. I remember, there was a database in metallurgy called SDIM [System für Dokumentation und Information der Metallurgie], and we were working with BNIST to see how France could participate in this European database. Then Jacques Michel went to The Hague. He is one of the directors of information in the European Patent Office. He might have retired by now. But he was a quite important person. When BNIST dissolved, it was replaced by MIDIST [Mission Interministérielle de l'Information Scientifique et Technique]. But their goal was always the same. INIST and CDST, et cetera, were always officially separate—really because we were always so big. BNIST and MIDIST only had four or five people.

RAYWARD: Where did you, as an organization, get your money?

DUSOULIER: CNRS from the Ministry of Research. We were 100 percent from the CNRS budget.

RAYWARD: So, these organizations that we're talking about really, as you say, just had a broad coordinating function.

DUSOULIER: Yes. They only had a coordinating function. An important coordinating function.

RAYWARD: They only had a little impact, I gather, on what you folks were doing?

DUSOULIER: I'd say that, but not officially. [laughter] But we were always so big that we could do whatever we wanted, anyway. Also because CNRS said, "Look, we are CNRS, and we do what we want. And you?"

RAYWARD: It seems there was a major reevaluation of what was going on in CDST in 1974 or thereabouts. The comment was, *"Passage d'une publication traditionnelle organisée en fonction des disciplines universitaires à des publications spécialisées adaptées à des clientèles particulières*."[4]

DUSOULIER: Yes. But this was always a part of putting together, splitting, and specializing. In 1974, we produced specialized publications more targeted to professions.

RAYWARD: An article by Caroline Wiegandt-Sakoun made the comment that this was the evolution of the concept of marketing (2).

DUSOULIER: She was my librarian in INIST. She was the lady who moved the collections.

RAYWARD: I'm interested in this notion of moving to a much more commercial, market-oriented service.

DUSOULIER: In the beginning, *Bulletin Signalétique* was not really sold to industry. More and more, the industries in France realized the role of information. Because, in the beginning, they didn't consider information to be very important for them.

[4] Rayward is referring to source, which the Chemical Heritage Foundation was unable to locate for proper translation.

Then, more and more, big companies like Rhone-Poulenc [AG Company] started creating documentation centers and hiring documentalists. That was very funny because most of our people were moving to these places. In the beginning, we thought it was a disaster. But after a while, we were very happy because that was our best advertisement.

Of course, these people wanted to have more specialized information. For example, we had a contract with a big cardiological drug company. We were doing a special bulletin for them on specialized questions about cardiology related to their drugs. We were selling them three or four hundred copies, and they distributed it free of charge to the doctors in the hospitals. That covered this type of operation. But the CDST always tried. Also, it was during the period after 1971 when we resolved to try to target and to help the European industry more. This is a part of Euronet. It, the Conseil de Ministre de la Communauté Européenne, was possible because the PASCAL database was, at that time, stable. It was then very easy to extract from the databases any of the different specialized fields we had. But they were a kind of profile. We had profiles printed and profiles on paper.

RAYWARD: When the online services began, did they affect some of this work? It would have then been possible for these companies to search PASCAL online.

DUSOULIER: No. Well, at the beginning, we only did the searches ourselves. We had a large department producing profiles and researchers for the users. We didn't want to provide online services ourselves. That was clear. Then we gave our databases to host computers to distribute online.

But it did affect us when we didn't want to do *Bulletin Signalétique* any more. We tried to replace *Bulletin Signalétique* because the cost of printing and the cost of paper were rising. That was a period when we tried to tell people, "Look, we are going to provide you with profiles, group profiles." We had some group profiles, and we had some personalized profiles, and we were selling that to our users.

RAYWARD: When did you stop publishing *Bulletin Signalétique* as a periodical?

DUSOULIER: The end of 1994, after I left CDST (3).

RAYWARD: Discussions about Euronet-Diane [Direct Information Access Network for Europe] began in the early 1970s, too, I think.

DUSOULIER: It began after the resolution of the Council of Ministers in 1971 to create the European network. There was a committee, Comité Internationale pour la Documentation

Scientifique et Technique, CIDST. We had a meeting of this committee almost every week. I was one of the French representatives; Jacques Michel was the other one. First, it was Jacques Delors; and then Jacques Michel. We tried to prepare a European information network. Then there were a lot of groups in every field—in medicine, in metallurgy, with Georges Anderla, who was the director at that time. I still see him.

[END OF TAPE, SIDE 2]

DUSOULIER: We were trying to implement this European network at a political level to create relationships between the countries. This was for the countries to organize and to cooperate better in different fields, and see if we could exchange information, set up databases, and control what the commission was doing. In fact, they were working in medicine, agriculture, and metallurgy. They took a lot of time. I think we have set up a kind of common European atmosphere to do that. But it was really political.

We were not doing practical things; we were just discussing at political levels what the commission was trying to do. We were also working with automatic translations. An American system was implemented in the commission and we tried to adapt it. I don't think we have achieved anything important, apart from the creation of this European group.

RAYWARD: You were also involved with the ICSU AB early on. Have you continued to be involved?

DUSOULIER: I am an honorary fellow, but I don't go to the meetings very much anymore. [laughter] I have left the ICSU AB, more or less. I still attended some NFAIS [National Federation of Abstracting and Indexing Societies] meetings, but more to meet old friends like Ed Kennedy and Dale [B. Baker] and so on. This year, in fact, I didn't go because I was ill.

RAYWARD: So, tell me your impressions of ICSU AB and what it's been able to achieve. Is it just essentially a forum for discussion and debate?

DUSOULIER: No. At the beginning, ICSU AB was a family, and in fact, it still is. Don't forget, in the 1960s, there were very few scientific information centers. We were getting together maybe ten or fifteen people. We were the pioneers, people like Dale Baker and Phyllis Parkins. Wiederman from Germany. Sorokin from Russia. We were all trying to have the world recognize that scientific information is something; it's a profession, it's work, it's a job. We did that quite successfully all together because we really were like a family, and we discussed everything. There was no competition. The competition started maybe a little bit later. My Miles-Conrad lecture at NFAIS gives the atmosphere of the thinking at that time (4).

But, in fact, I believe that the ICSU AB created the profession. We created the profession from scientists. That was the goal. Nobody was a librarian. We were all scientists. We wanted to recognize that to process science one needed to be more than a librarian. The users are not the normal users of a library. They'll ask you more. That was the main goal at the beginning. After that, we said, "How can we work together to make things better for our users?"

Then the difficulties started. How could you work with the Russians, with the Japanese? We were each using our own language. The French researchers didn't know enough English. Researchers in physics, in chemistry, can use English, but go to medicine and just forget it. Like the Medline Database—I remember, I brought home research in Medline to my husband. He was a scientist, a politician doing political science. He would say, "What is this garbage? What do you want me to do with it?" I left it on the top of our cupboard, and during six months, he never touched it. Never. He said, "Bring me in some information that I can read." That was what most of the users were doing at that time. Now, it has changed with the Internet, et cetera. You have to translate, also, for political reasons. The French basically didn't want information in another language. But we had been working on periodicals, to give information to each other on periodicals issued in our countries. We had been doing a lot of work on automatic indexing and even manual indexing to try to set up type indexes so that the automatic indexing could be easier. Then the ICSU AB got a little sleepy.

When I came from New York, eleven years after the UN [United Nations], I, of course, came back to the ICSU AB. I shook them up a little bit. I said, "Look, people, what have you done in ten years?" There were no changes. It was the same story and with the same talks, et cetera, for ten years. They recognized that more or less it was the same. But then, with the new people coming, the only problem I saw with ICSU AB—and, then, Marthe [Orfus], the secretary, was going to go, and someone else was going to take over the *secretariat* (office of the secretary)—maybe Barry Mahon. He was one of the candidates on the short list. If the *secretariat* goes to an American, then why have ICSU AB in any place? Let's decide that NFAIS would be international. Anyway, this guy from INSPEC—I can't remember the name—the young guy you saw in the picture, the blond, and myself, we were always invited to NFAIS. I am French; he was British; NFAIS is American.

RAYWARD: When you look at the lists of the organizations at the meetings of NFAIS, most of the European services are present.

DUSOULIER: Yes, but that was not the case before. Then we wondered why to keep both. Of course, ICSU AB was always an opportunity for the Chinese, the Taiwanese, the Japanese, and the Russians to be in an international organization. Also, the ICSU proximity is very important because the ICSU AB was a part of ICSU for a very long time. Now, they want to put it together again.

RAYWARD: When did they come apart? Why was ICSTI [International Council of Scientific and Technical Information] set up?

DUSOULIER: Because they considered that, they wanted not to have this very heavy shape of ICSU, to have commercial organizations as members. The ICSU was not a scientific organization with only scientists as members. For example, Elsevier [Inc.] couldn't be a member of ICSU AB and of ICSU. They were commercial. Also, because at that time, the secretary general of ICSU AB wanted to be more independent. She didn't want to have people telling her what to do. Of course, the members of ICSU AB said, "All right, let's go; let's do it separately."

RAYWARD: Do you think, now, there is a move back to ICSU?

DUSOULIER: This is what I was told. I saw the announcement for the job. They want to keep their relations with ICSU.

RAYWARD: It's interesting, this process of moving away and moving back. You described it in INIST, itself. Now, ICSU AB, and, of course, UNESCO PGI [United Nations Education, Scientific, and Cultural Organization's Programme Générale d'Information] are being re-conceptualized, I understand.

DUSOULIER: Well, now, we're writing a new program completely. We have done information for all programs. Now it's on the executive committee, and then it will go to the general conference. Hopefully, before the end of the year, our new program will be adopted. I am on the chair of that so I have been working very hard. [laughter]

RAYWARD: Can you tell me a little about the nature of the changes that are being suggested?

DUSOULIER: To go a little bit broader, not to focus on small things. To change the focus to new technologies and to try to put the new technology in an international context for developing countries. Let's say, the influence of information highways on the information world—the main goal is to move from the traditional information that exists in the older places to transferring information using new technologies. Of course, there are a lot of details there. But if you want to have a new program, you go to the site, to the World Wide Web of UNESCO, and you can have it. You have the text of the new program.

RAYWARD: The other organization I'm wondering about is FID [Federation for Information and Documentation]. I suppose the parallel organization is IFLA [International Federation of Library Associations] in the library world. Could you speak about your experiences while participating in these organizations?

DUSOULIER: I was a member of FID many years ago, and I don't think it had an important role in the past. Mostly because of the impact of the Russians. They were too static. I can say that in Russian, myself! [laughter] The Russians wanted to have a kind of forum for the outside world. They were doing certification, et cetera. I don't know what they are doing now. Of course, with Martha Stone, the new director, they could move somewhere. But very often, they had very bad directors. You know, there was a Canadian at one time who was just a disaster. I don't remember his name. He was terrible. He didn't do anything. Martha Stone wants to do things. But, apart from the manifesto, they wrote lately, et cetera, I don't see what they are doing. I don't think they have an impact on the real world of information or people really working on information. Particularly because their representation is national. Nobody wanted the countries to go. In France, nobody wanted to go to FID. They said, "We don't have money to spend for stupid things."

IFLA is different because IFLA is focused. IFLA is really focused on libraries. The libraries recognize themselves in IFLA. I don't know who recognizes itself in FID. That is a problem with FID. I don't know if they are going to continue or not. I just don't know.

I am a member of their publications board, but they never ask me anything. I just have my name on the publication. I once reviewed an article and suggested that they throw it away. Maybe that was why they didn't ask me anymore. [laughter] I have worked with FID as the French representative and presented during some years, but we didn't do anything. We were going to the meetings; that's all. No real work. Martha is very good. Maybe she could do something, I don't know. But it's not so easy. You have to move people, and you have to know who to move. I don't know any important people in FID. Nobody important that is visible in the information scene.

RAYWARD: In fact, some of the sorts of things that FID might well have done were probably taken over and done better by ICSU AB, and now ICSTI with its broad representation.

DUSOULIER: I'm not sure they're interested in the types of things that FID is doing. The force and strength of ICSU AB, is that the directors who attend the meetings are the responsible people. Then, at the meeting, they can say, "I will," or "I won't." They are not going to say, "I have to tell it to my government, to my country," et cetera. I remember Dale Baker saying, "Oh, no. We can't!" [laughter] But we knew that if he said he'd do it; he'd do it. We had the responsibility of what we were saying, as well as we were doing. That has made ICSU AB really move. This is still the case. It is very important.

RAYWARD: Many of the major positions in IFLA are held by people who actually have authority to do things, too. That's an interesting point.

DUSOULIER: There are databases available in Germany through the German network. They are available online through Questel, an international host. This was available in 1997. I have been working lately with the European commission on a European project to create coordination between the existing host computers, Questel, DIMDI, a Nordic host computer, a Swedish one, and one other. This is to create the PASCAL bridges so that the user of DIMDI can access PASCAL from the databases they don't have. DIMDI has medicine, but if the databases didn't have it, they could access Questel with one simple password. They want more; they want to put it on the internet just like that, without the host computer. I don't know.

RAYWARD: The other part of making FRANCIS and PASCAL widely available is overcoming the hegemony of the English.

DUSOULIER: How could you overcome the hegemony of the English? That's absolutely stupid. Two-thirds of the publications are in English. Let's say, two-thirds of the publications that count in the scientific world. But what do you want to do—translate them into French? Look, I am for defending French. I don't like when you are at an international meeting when you have translation into English from French in the country. I always use French. I think it's normal. If we are in France, if there are translation services provided, I suppose they have been provided for a reason. You can always express yourself much better in your own language than in another language. I think it's stupid for this snobbish attitude to speak English to continue. But the reality is reality. The English word in information is the most important word. That's it. Why fight what exists? I don't think it's bad.

It's not as if FRANCIS and PASCAL will be on the Internet and then English will not be hegemonic. We would simply have a little bit more information in French, which could be all right. But, anyway, if you go to the INIST site, you can have whatever you want.

RAYWARD: Is the suggestion that it should be freely available?

DUSOULIER: No. Again, I don't know these people. I know only Jacques Le Maguer. I don't know the others. I never heard about them.

RAYWARD: Well, I thought this was a very strange article. It seemed to be pushing a particular point of view, very much against the idea that you spoke of, about the political move to regionalization.

DUSOULIER: The only guy who knows anything about that is Jacques Le Maguer. From what I see, he now is working with L'Institut d'histoire du Temps Present. He has probably initiated that. Which, in fact, is not a bad idea. Why not? But I think they also don't know what they are talking about. They have taken from papers some information—some good, some not. I don't know.

I would be very interested to know if my former deputy Francine Gourd read that—she is probably retired now. But she was still working in 1997. She may have seen that.

[BREAK IN RECORDING]

I said, "All right, after the weekend, I will write you." Then he said, "Oh, you know, you have to do it." I said, "Yes, sure. I'm interested." He said, "Because, you know, don't forget, you are in secondment—" I said, "Is that a way of threatening me? If I won't be good, they won't continue my secondment?" And I told him, "Oh, please, don't *chantage* (blackmail) me because I can stay with the UN as long as I want." And, of course, in CNRS, you have to stay until sixty-five. "I can stay until sixty-two, anyway, and you can stay two years more. You know, considering the money I'm getting here, I will have more money staying three years less in CNRS than two years more." [laughter]

He said, "No, that was not what I was trying to do." I said, "All right." Then he left. I showed him a little bit of what we were doing. After the weekend, I wrote thirty-two pages of comments on this thing. There were a lot of crazy things I could not understand. And I said that. Then I never heard about anything. Because there were problems in Geneva, the Comité Diplomatique said they didn't want to pay any more money for the library because there were big problems there. The librarian said, "Over my dead body. There will be no computers in the library." Finally, they negotiated that I could go to Geneva. I had almost finished my automation in New York, and I moved to Geneva. I was happy to move back to Geneva because my kids were in France. I was a little bit lonely. I went back to Geneva and began working. You cannot believe what Geneva was like. There were rooms full of books. If you opened the door, you just had to run very fast because, otherwise, everything was going to fall on you. [laughter] It was terrible. I started buying computers, doing automation, putting things in order in Geneva.

One day, two years later, I had a call. "I'm the secretary of the director of CRNS. He wants you to come tomorrow to see him." I said, "Look, lady, [laughter] I am not working for you. The UN is paying me, and I just cannot. Again, it is during the General Assembly." [laughter] She said, "Yes. So, when can you come?" I said, "I can come on Saturday." Then I went on Saturday. It was a big room with the director of CNRS, Goéry Delacôte, the director of information, and the chief of personnel of CNRS. They said, "We were very happy about the comments you did," et cetera. It happened in forty-five minutes. I was thinking, "They didn't ask me to come from Geneva to listen to how they were happy about the report that I did."

They said, "Do you know why we have called you?" I said, "No, I have no idea." "Well, because we want you to take over the INIST."

Then, because I was so shocked, I asked a stupid question. I said, "But, I work for the UN and I have no intention of leaving. I have just renewed my contract for the next two years. What happened to Mr. Jakobiac?" He was supposed to take over INIST. I heard, during the two years, that this guy was in charge of INIST.

As soon as I asked the question, I knew that it was stupid because then they said, "No, *ce la n'a pas marché*; it didn't work," et cetera. I was a little bit surprised. They said, "We want you to start immediately." I said, "Are you joking? I just, six months ago, came from New York. I cannot just leave the UN." They said, "We are going to get someone to replace you."

I said, "Look, there was a story in New York. The director of personnel didn't want me to go to Geneva. Then Geneva said, 'We cannot do without you. It's very important,' et cetera. There was a battle for me to go to Geneva. The director of the Geneva office is not going to accept that I'm being replaced just like that." They said, "Then, we will find two people." [laughter] "All right."

Then I went to Geneva and talked to the director of the Geneva office—he was a Belgian man at the time. He said, "They are crazy. There is no way. Look, if you want to go back—" I said, "Look, this is my organization. They can force me to go back." "They wouldn't force you." At the same time, the French said, "All right, we can force you." But it would take two years—going to tribunal.

Finally, I negotiated that I could do some work with the *conseil de projet* (project council) on Saturdays and my vacation days. Which meant, in 1987, I didn't have any vacation days. I used all my vacation days so that I could find someone to replace me in Geneva and that to give them time for the hiring process. In fact, it was Mr. Kofi Annan, the chief of personnel, who is now the director general. I met him in the French embassy and we negotiated my replacement.

Then the INIST story started. I discovered that it was going to be very difficult because all the people said, "It's impossible. It cannot be done." I talked to some of the people. "You're crazy to try to do it," they said. I said, "It could be interesting to start something." But all the people said, "No, it's not feasible. It's impossible." INIST started with a lot of difficulties. I moved to Nancy. I was one person with only a secretary and her husband to help me.

RAYWARD: What were all the difficulties that people were referring to?

DUSOULIER: The difficulties were that the CDST was not prepared to move. We had a library of twenty-seven thousand titles of periodicals on ten floors. We had to move all that, but

we could not stop working. We had four thousand requests for photocopies a day at that time. A day! How do you continue to do that? We had to build a building and figure out where to put the staff. Then the staff didn't want to go. Altogether, thirty people from the whole CNRS went. We had to recruit about three or four hundred people—newcomers—train them, and put them somewhere. When we recruited them, there was nowhere to sit; we had to rent space. We were even in a small castle from the eighteenth century. In this castle alone with a secretary. [laughter] I had to rent in a building the rooms to put the people I was recruiting in. All these people had to be recruited through a National Caucus. It was competitions, because it's administration. It was a post of a *fonctionnaire* (civil servant).

Recruitment was not so easy. I needed ten people as a jury. We had a written exam and then an oral one. We were recruiting twenty-five people at one time. I worked in five places: CDST, rue Boyer, where the remaining staff was; Boulevard Raspail, where CDSH was, the human sciences; and Château du Montet, where I was officially located. But, for political reasons, they wanted me to go there. I was an important person there. I had taken some other things, but we have not time to go through—from the press.

[END OF TAPE, SIDE 3]

DUSOULIER: Phillips Company moved to the suburbs of Nancy, and they left a big place that we started to use for newcomers. Then, I was at Château du Montet; some people were in Vendeuvre, in a building where we just rented some rooms; and others were in two places in Paris. In those days, my train left at 6:15 in the morning. Fortunately, they gave me a driver. The driver brought me to the station at six o'clock; at 6:15, I got the train. I arrived in Paris at 9:00 am. I had a driver taking me, and the driver was carrying me to the two centers, from center to center, mostly to CDST because of where we had the library. And at 6:15 pm, I was taking the train back. I arrived at about 10:30 pm to eleven o'clock three times a week.

RAYWARD: Sounds appalling.

DUSOULIER: The rest of the time, I was in Nancy. I did that for three years. [laughter] I was fortunate to have good health at that time. We started building the new building. I had to follow the building project and, at the same time, continue to recruit, train, and move people. We moved the collections in six weeks, and we never stopped serving the users. We managed this because we had prepared the places of the collections by computer. During the day, we put everything in a truck and during the night we moved. Then the next day, the collections were put in place and we'd start all over again. We used two trucks a day.

There were machines left in CDST, and we bought new machines for INIST. As soon as the orders came, we filled them from INIST or CDST. They said it would be impossible. When I told Caroline Wiegandt-Sakoun, a librarian, she thought I was crazy. Not on a big collection;

we have changed the places of collection in a library from Vienna. All the collection on drugs came to us, and we moved that from Vienna to Geneva. The people worked very hard. Even the people in CDST who were not going to stay did a marvelous job. We hired new people. The first people we hired were the *magasiniers* (shopkeepers) to put things in place. Every night, there was a librarian staying with them to see that there were no particular questions about where to put things.

RAYWARD: Were you still doing the work on developing the database at this time?

DUSOULIER: Yes. The new periodicals were arriving at Nancy, which meant the new people were working on them. The CDST was doing the backlog because some of the people were leaving, and some others didn't want to work anymore because they were leaving—[gun shot]—*midi* (noon).

RAYWARD: There's a gunshot at noon?

DUSOULIER: Yes, every day at 12:00 pm. So that you can check your watch.

RAYWARD: The building site started when?

DUSOULIER: It started in November, 1987.

RAYWARD: When you were recruiting the staff to set the service up—you had over three hundred people.

DUSOULIER: Yes. More. We had three hundred fifty, plus the staff to do abstracts from home. Yes, some of the people were doing abstracts at home. Then we started doing them online from home also.

RAYWARD: What proportion of the abstracts was done outside by this piecework process? It was a piecework process, really, wasn't it?

DUSOULIER: Yes. Maybe half of the abstracts. But much less of the indexing was done that way.

RAYWARD: The indexing was done in-house, essentially.

DUSOULIER: Yes.

RAYWARD: Let's talk a little about the changing philosophy and the approach represented in the INIST as opposed to the earlier CDST. Because so few of the staff actually transferred, it was actually a new organization.

DUSOULIER: Yes. This was what we wanted. The most important change was that commercialization became an important part. We tried—and it is very difficult in an organization that is a public administration—to have a commercial department. We were not supposed to sell things. But we obtained permission from the Ministry of Finance to create a *filiale* (subsidiary company), the commercialization section.

RAYWARD: This is like a company that's set up apart?

DUSOULIER: Yes, a *filiale* is a part of the INIST group. In the INIST group we had INIST and INIST Diffusion. INIST Diffusion was in charge of commercialization. There were thirty or so employees. INIST had several directorates and one department of research. There was a directorate of production, development, external relations, administration and finance, and this *filiale*.

RAYWARD: Was commercialization held at arm's length?

DUSOULIER: Yes. It was a part of the company but was separate. INIST Diffusion was in charge of the commercialization and promotion of the product. It had the exclusivity of promotion and commercialization of all the INIST products. They say it's an interface to adapt the offer to the demand. They were also able to collect the money that we were not able to.

We were only able to spend money. It was a big budget, four hundred million francs a year. We had a big budget, but we had a controller. You can't spend twenty cents without the controller's approval about the way it was spent. The *filiale* was created in October, 1988.

RAYWARD: That was very close to the beginning.

DUSOULIER: On 15 March 1987, the institute was officially created. But the conception of it started earlier. In September, with the director general of CNRS, we decided to start. We started recruiting the personnel of INIST in December. In November 1989, we started the construction of the buildings. It was very fast construction. In November and December, we transferred the collections. In January 1990, INIST Diffusion started to function officially. In fact, in January, 1990, we had started to charge the users through INIST Diffusion. Before, it was charged by us but the money was collected by CNRS.

RAYWARD: But, of course, now, those services are entirely digital. They're online, or on CD-ROMs. Are they no longer printed?

DUSOULIER: Printing was abandoned in 1992, I think it was.

RAYWARD: So, what were the reasons for deciding to no longer print? You mentioned escalating costs before.

DUSOULIER: Yes. Also we wanted to move from a publication center to a new center, and we couldn't do everything. We were selling CD-ROMs, profiles, and bibliographic searches. We sold other formats because not all our users were able to use CD-ROMs at that time. CD-ROM use really started in the 1990s.

RAYWARD: You were ahead of your time in providing this sort of digital service.

DUSOULIER: Yes. We were the first in Europe. It was very difficult to choose the technology. In fact, we didn't choose very good technology because we started with big digital discs. This has not proved to be the best choice.

RAYWARD: I assume, though, that there's a constant transfer of the technology.

DUSOULIER: We change the technology all the time. The goal of Delacôte was to have a new technology center.

RAYWARD: What was the research department doing?

DUSOULIER: They did a lot of bibliometry, automatic indexing, statistics, and *infométrie* (infometry). It was very important for CNRS to know who was doing what. Of course, this analysis was a preliminary study for the assisted indexing system that they were working on.

We were working on a linguistic approach with a company called ALETH—segmentation techniques, optical character recognition—a preliminary study of an assisted indexing system evaluation and prospects. They were really a research department. Sometimes, we were a little bit unhappy that they were too research-oriented and not concentrating enough in applications. Then we remembered that we were CNRS, and we couldn't kill research. [laughter]

RAYWARD: There was a development department.

DUSOULIER: They were cognitive sciences. They were studying a lot of things that could help our staff to work better and do some research in cooperation with research institutes from Nancy that worked in linguistics and computers.

RAYWARD: Was some of what they were doing incorporated into the work of INIST?

DUSOULIER: Yes. Automatic indexing, for example. Pieces of it were incorporated into the computer system. The computer system was quite sophisticated. We had fifty people working on it.

At one time, the department of development was one guy. [laughter] His goal was to steer the center to where the users wanted it. Honestly, he didn't work very well. A few things came from it as far as knowing what the researchers wanted. But, you know, the researchers—they don't even know what they want. You just ask them, "Do you want that?" They say, "Oh, yes, maybe." Then you come and say, "This is what you asked for." "Oh, no, that is not what I asked for." "And what do you want?" Then, "I'm not sure."

But, still, the development guy was not completely responsible. In fact, now, these users follow up, et cetera, is done in the marketing department.

Now, there is only one organization. INIST Diffusion is no longer a *filiale* . There is only one organization that has obtained, step by step, the right to commercialize. The problem was obtaining approval from the Ministry of Finance.

RAYWARD: So, just by way of general assessment as to where INIST has come from, where do you see it going? With this approach to commercialization, clearly there has to be, now, some notion of competitiveness with a whole range of other services. Because you're in effect

competing for the money of clients who have other options being offered by a whole slew of database providers in Europe, in the States, elsewhere. I'm curious as to where INIST fits.

DUSOULIER: I have to say that, now, with the new director, who is a former administrator of one of the regions, they are coming back to CNRS users. For example, the international relations are much less international relations than they were when I was there. They are selling the services—but they are more centered to French researchers. We never had the idea of competing with other services.

RAYWARD: The minute you speak of commercialization, it implies a marketplace in which there is competition.

DUSOULIER: Yes, but the goal was to be able to collect the money we were gaining—to collect and to spend for ourselves. It was not so much to collect more and more money.

RAYWARD: Not profit making.

DUSOULIER: No. Our problem was that we were doing better services; we were selling more. All this money was going in a hole without end, which was called the Ministry of Finance. We never saw the results of our work. What we wanted—and what the CNRS has accepted—is, if we have more money, we can do better. We didn't want to ask for more money, but we did want to do more services. That was the first goal. It was not so much to try to compete with *Chemical Abstracts* or whoever else. That was not the goal.

Don't forget, it's a public administration. There were philosophical problems with the British Library at the time. We sometimes thought that they were doing things that were not very polite or not very good.

RAYWARD: Yes, they were very commercially-oriented.

DUSOULIER: But it was never at a personal level. We always had excellent relations with people like Brian Lang, David Russon, and Maurice Line. We tried even to have an agreement so that we abandoned the periodicals from which we sold very few articles. But, of course, competition was always in the air.

Being a public administration, our goal was not to compete with other public administrations. We wanted to be recognized at the European level as a partner. We succeeded in doing that. CDST was never recognized apart from *Bulletin Signalétique*. INIST was

recognized, not only here, but we had visitors from China, Japan, and all over Europe. Big groups of people were coming to see what we were doing. But we never tried to say we were better than the English, Germans, or whoever.

RAYWARD: The British Library thing interested me because there's no question that when the National Lending Library for Science and Technology was set up, they developed a very commercial outlook. They were interested in making money.

DUSOULIER: Yes, I have visited them.

RAYWARD: And they do make millions of pounds. I was interested that you were saying that during the move to Nancy, there were four thousand copies of articles being copied a day at that time. Which is, again, the sort of thing that the British Library was, you know, seeing as—

DUSOULIER: They were doing maybe ten thousand requests a day.

RAYWARD: —I wondered to what extent the development of their service actually impinged on yours.

DUSOULIER: It didn't. They were too expensive.

RAYWARD: Yours was oriented mostly towards people in France?

DUSOULIER: For people in France and all over the world. Because we had periodicals that some people didn't have. I don't know where the users were coming from. Also, the British Library, at that time, was always very complicated with their coupons, et cetera. But, in fact, we established the same thing. Now, it's easier with credit cards but, at one time, we couldn't accommodate credit cards.

For two years almost, the center never stopped working. That was a burden. That was very difficult. I worked thirteen or fourteen hours a day.

RAYWARD: I can believe it.

DUSOULIER: But we were lucky. We were like pioneers. I had a group of people that didn't count their time. It was really a good group of people. My deputy, in fact, was the latest director of CDSH. She became the chief of INIST human sciences. It worked very well because we had been working together for twenty-five years. She was a good friend of mine, and she played the game.

RAYWARD: The section concerned with the human sciences stayed in Paris?

DUSOULIER: It stayed a little bit longer, and then they moved. Yes.

RAYWARD: So they're all in Nancy now?

DUSOULIER: Yes. Recruiting staff, continuing to work, and installing ourselves in a building of a new conception from Jean Nouvel is not so easy. Jean Nouvel is an architect with ideas—you have seen his futuristic buildings. It is not so easy to work in a futurist building. Have you seen the corridors in the library?

RAYWARD: Oh, yes. It looks fascinating, in terms of design, but I wonder what it would be like to work in it. What was in this area below?

DUSOULIER: That was a computer service.

[END OF TAPE, SIDE 4]

[END OF INTERVIEW]

NOTES

1. Jean Astruc, Jacques Le Maguer, and Jean-François Picard, “Le CNRS et l’information scientifique et technique en France,” *SOLARUS* (January 1997): 1-17.

2. Caroline Wiegandt-Sakoun, “50 Years of Documentation at the CNRS: from CDST to INIST,” *IATUL Quarterly* 4 (1990): 221-226.

3. See Note 1.

4. Nathalie Dusoulier, “The information world: cooperation, competition or confrontation,” *Miles Conrad Memorial Lecture*. NFAIS Annual Conference, Philadelphia, PA, February 24-27, 1992.

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