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Some Sources of the Unity in Plurality of Scandinavian Research on Information Systems Development

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Abstract

Iivari and Lyytinen propose some cultural and demographic reasons for the diverse yet unified pattern of Scandinavian research on information systems development. This short comment recounts my own experience with Scandinavia and Scandinavian researchers and proposes three factors indicative of the social and cognitive environment that might also explain the distinctive unity in plurality.

Keywords: Culture, research environment, information systems development.

Juhani Iivari and Kalle Lyytinen present a compelling overview of ten approaches to research on information systems development that have been taken by Scandinavian scholars over the last four decades. These approaches present a rich tapestry of theory and field work emphasizing a deep concern with the human use of information and its technology that stays close to the ground. Taken as a whole, the Scandinavian tradition of research on information system development is distinctive in its concern with the individual as a worker and a language user struggling for meaning in a social setting. The research is conducted with a special recognition of the human consequences of technology and of the responsibility of both the developer and the researcher for shaping the world that others must live in.

Iivari and Lyytinen attribute this unique tradition of research to the high living standards and education levels in Scandinavia, coupled with an advanced technology infrastructure, an open community and key innovative leaders such

as Börje Langefors and Kirster Nygaard. It strikes me that something more is involved, though, in explaining how such a relatively small population has created such an influential legacy and such a strong, diverse set of ongoing research programs. It would be nice to be able to present some broad cultural study that helped to explain this phenomenon, but that is well beyond my ability. Instead, I will present as possible explanations some observations from my own personal experience with Scandinavian scholars and their research traditions.

My first visit to Scandinavia was in January, 1983, and I have had the pleasure of visiting several dozen times since. Our longest stay was from July, 1988 to August, 1989 when I was a visiting professor at Gothenburg University. Looking back over that time, I have had the good fortune to give presentations to information systems seminars at twelve Universities in Denmark, Finland, Norway and Sweden as well as numerous conferences, doctoral consortiums and workshops. Through the years, I have been privileged to meet and discuss ideas with most of the leading figures that Iivari and Lyytinen identify. My explanation for the unity of plurality of the Scandinavian research tradition in information systems development comes from these experiences. The diversity of approaches and their unity in keeping close to the ground of human work and language use is not a surprising outcome, giving my understanding of the context of Scandinavian information systems research.

There are three factors in my experience of Scandinavian life that seem relevant to this unique pattern of research on information systems development. For purpose of discussion I will label them: nature, equality and irony. I will discuss each of them in turn, keeping in mind that they interact closely to create an environment conducive to the type of research described by Iivari and Lyytinen: research that keeps close to human experience in striving to develop information systems for social betterment.

By nature I refer to the intense interest so many in Scandinavian have in the outdoors. From mountain hiking, skiing and orienteering to mushroom hunting, summer houses and boating, Scandinavians seem to be more closely tied to nature than Americans. In visiting Bergen on a sunny weekend, it seemed that trails in the surrounding mountains were more crowded than city streets had been during the week. In Denmark, a colleague bicycled twenty miles to work each day, and traveled with large groups of other biking commuters. This is unheard of in America. While living in Sweden, we found schools closed for two weeks during winter so that families could go skiing—and each city had a different two weeks so that the slopes wouldn't be overcrowded. I imagine that most Americans would find this hard to believe. In Finland, I wasn't prepared for the importance of the open fire in a woods. And the high percentage of people spending time in summer homes beyond the range of utility lines must have had something to do with its leadership position in cellular communication. One last example of nature and the natural in Scandinavia comes from our first week living in Gothenburg. We were visiting at the summer home of the family whose house we were renting. The father had taken our nine year old daughter out on a rock at the lake's edge. He looked at her and

said "I am now going to show you the difference between Sweden and America." He then pulled down his shorts and stepped out of them. Naked, he took her hand and together they dove into the icy water for a swim.

This is not to day that every Scandinavian researcher is an active participant in nature and the outdoors. But it is an environment in which they all work and it represents a set of values that are important to the openness and variety of information system research that we see in Scandinavia. The values I am thinking of have to do with a sense of connectedness—an awareness of a larger whole that is wild and threatening as well as bountiful and nurturing, and is, in an important way, beyond of our control. I think that this deeply ingrained and widespread sense of nature has something to do with the lack of positivist dominance in the Scandinavian research traditions in information systems. Beyond the awareness of our connectedness and our position in a larger whole, I think the day-to-day reality of nature in Scandinavian culture gives a taste for concreteness that buffers the abstract and disembodied theorizing of North American research traditions. It provides an appreciation for situated complexity and the value to be found in the logic of local practice.

The second factor I identify is that of equality, which is manifest in many dimensions of Scandinavian culture, including social equality, economic equality and sexual equality. This tradition of equality was brought home to my family in a dramatic way when my wife began receiving a monthly stipend from the Swedish Government because she was a homemaker taking care of two small children. During our year in Gothenburg I saw first hand some of the workplace democracy experiments at Volvo, where sensitive financial data on costs and profits, reserved only for top executives in most of the world, was being shared with shop floor workers. Sten Jönsson was leading that action research project, as well as a project on researching the radical decentralization in the municipal government. These are just some of the examples of research that flow from the abiding sense of equality that characterizes Scandinavian research in organizations. It creates an environment of research in which the concern with workers and trade unions by information systems scholars seems almost inevitable.

I believe the expectation of equality in so many aspects of Scandinavian society results in an approach to the human aspects of information systems development that is unique and certainly distinctive from the dominant approach in North American research. Perhaps the best way to put it is that the Scandinavian tradition in research on system development approaches the other as self, whereas the North American tradition approaches the other as other. When other is approached as self, it fosters a certain respect for the situated practices and logics of workers and a heightened awareness of their unique contextual demands on the technology. All of the research streams identified by Iivari and Lyytinen share this respect for the primacy of the human subject. None of the streams of research they discuss take the human as being subject to "laws" of psychology or sociology. They are, instead, endowed with the same capacities for language, cognition, creativity and learning as the researchers themselves. This is a very

distinctive and telling tradition of research that other researchers can benefit from recognizing and emulating.

The final factor I identify as part of the explanation for the diverse yet unified tradition of Scandinavian research on information system development is irony. By this I mean a certain expectation of value in the ironic restatement of a research question—a certain willingness to reopen a seemingly focused line of research and to repose its fundamental questions. In 1988, I had a memorable experience of this ironic approach to the taken for granted when Karin Ekström described the research question of her doctoral thesis to me. Instead of studying the way parents socialize their children, she was studying how children socialize their parents. I have been struck by this irony in Scandinavian research in many ways through the years. One of the first was when Bo Hedberg and Sten Jönsson asked if semi-confusing information could be more valuable than clear, unambiguous information. Another time was when, in the age of growing centralization of data systems, Markku Nurminen asked if smaller, humanly controlled systems weren't more effective. Recently, in the age of globalization and a concern with a global economy, researchers at Gothenburg University have been studying the local economies of work groups. Nils Brunsson has for long been asking if organization reform or organizational hypocrisy are occasional events as we usually think, or are actually permanent conditions. And in that ultimate example of ironic reframing, March and Olsen proposed a garbage can as the superior model for organization decision making.

In the research streams identified by Iivari and Lyytinen we see a similar pattern of ironic reframing at work. While the world was being swept away by cybernetic models of rational data and control, Langefors posed infological models as a more appropriate alternative. When others were building case tools with formal justifications, Lyytinen and colleagues were building meta case tools that punctured the pretensions to a single, formal logic for system representation. When the dream of information system developers was to be appreciated as the creators of Management Information Systems, Nygaard argued for the importance of Trade Unions as our clients. Sociotechnical systems took what had been seen as the misbehavior of workers and marveled at the enabling process of workarounds that they represented. Language action and work practice research moved away from both the data and information questions of the past to study what people actually do in concrete situations. And so it goes.

I am not proposing that these three factors of nature, equality and irony are anything more than convenient categories for clustering certain features of the social and cognitive environment of Scandinavian research which help me to account for the pattern of unity in plurality that Iivari and Lyytinen have so ably summarized. The real point to be made is that the environment of ideas and ideals in Scandinavia is as important as demographics for explaining this unique pattern of non-positivistic, action oriented research on information systems development. A sense of connectedness with a natural order in its concrete immediacy, an approaching of other as self, and a taste for ironic reframing of the fa-

miliar are the key ideals and ideas I have experienced in Scandinavian research. Those are the features of the social and cognitive environment of Scandinavian research that help me to understand the unity in their plurality.

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