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International collaboration and Finland in the early years of computer-assisted history research: Combining influences from Nordic and Soviet Baltic historians

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Abstract. This paper studies Finnish historians' contact and collaboration with their colleagues in neighboring countries from the late 1960s until the early 1980s, focusing on exchanges concerning the use of computers for historical research. Computers were used by some historians in the Soviet Union, in particular Soviet Estonia, as well as in Sweden and other Nordic countries. With the former, historians in Finland organized regular symposiums starting in 1971; and with the latter, Finnish historians completed joint Nordic research projects during the 1970s. Both forms of collaboration resulted in a stream of publications. Further exchanges took place at seminars and Nordic conferences. The approach in this study is transnational, and the paper argues that this approach helps us understand better the deep roots of Nordic collaboration in the early digital humanities, and more broadly, the spread and circulation of humanities computing internationally.

Keywords: Nordic collaboration, history research, history of digital humanities, Baltic countries, Estonia, Sweden, Finland.

1 Introduction

Historians in Finland, that is, a few of them at first, became interested in the use of computers during the mid-1960s. First, two Finnish articles on this topic were published in 1967. Those publications mentioned a handful of history researchers who were planning to work with computers in Finland. Their research themes varied from Roman history (Pertti Huttunen) to the Finnish civil war of 1918. Fifty years after that brutal spring in Finland, in 1968, historian Viljo Rasila published a history book, a monograph in which he applied computer-aided statistical methods to explore key themes in recent Finnish social history leading to the 1918 war. His main computational method, developed in the field of psychology, was factor analysis. *The Social Background of the Civil War (Kansalaissodan sosiaalinen tausta)* was the first book-length study published in Finland in which a historian made use of a computer [1].

In Sweden, historians' use of computers had commenced somewhat earlier, and Finnish colleagues made references to the first history article by Carl Göran Andræ that presented the benefits and use of the computer, published in *Historisk Tidskrift* (Historical Journal) in 1966 [2]. Somewhat surprisingly, perhaps, historians in the

Soviet state of Estonia had started utilizing computers even before that, in the early 1960s. What, if any, influence did that research have abroad, for example, in Finland?

This paper studies Finnish historians' contacts with their colleagues in neighboring countries from the late 1960s until the early 1980s, and in particular, attempts to contribute to our knowledge of early international contact and exchanges regarding the historians' use of computers. It is well-known that Finland balanced in-between the cold war blocs. Did Finnish and Estonian researchers establish contact during the cold war, and despite its tensions, learn from each other about applying the latest information technology? Perhaps historians from Finland also acted as links between Baltic colleagues and Nordic ones.

The materials for this study consist of memoirs, various written documents (especially digitized history journals), and published research reports. To focus on the interactions between historians in various countries, the approach applied here is transnational rather than international, although the terms complement each other. This view also reminds us of the limitations of methodological nationalism in writing about historical developments, such as the use of computers by historians, and the need to balance nationally framed studies with transnational elements [3, 4, 5]. Furthermore, this article serves as a small reminder of and correction to the US-centric view of the history of computing-assisted history. This, too, was an international and transnational development [6].

2 Finnish historians and their contacts in the Soviet Union

The international discussion concerning historians' use of computers increased from the late 1960s onward. In that exchange, Finnish historians rarely contributed publications, but Viljo Rasila (mentioned above) wrote two articles for international scholarly journals. He published the articles in 1969 and 1970, and they summarized his research process and results concerning the study of the Finnish civil war [7, 8]. The Finnish ground would soon see a somewhat exceptional international interaction.

A group of historians in Finland, and especially in Turku, revived contact with Soviet Estonia gradually beginning in the mid-1960s. After several rounds of negotiations, the Turku Historical Society was able to organize a joint seminar with colleagues of the kindred nation in the south, called the Finnish–Soviet social science history symposium, in April 1971. This first meeting took place in Turku, or Åbo in Swedish. Attendees consisted of Finnish participants from Turku, Helsinki, and elsewhere, and four Estonian guests. The next seminar took place in Leningrad in 1972, and another followed in Turku after several years. After a couple of meetings, the seminars included representatives from the other two Baltic States of Latvia and Lithuania, and Soviet Russian historians. The tenth symposium was arranged in 1988, and the last one took place in 1992 [9].

At the first meeting in 1971, the Estonian presenters, Juhan Kahk and Enn Tarvel, told the audience that researchers of agrarian history in Estonia had used computers for three or four published articles. The first, the presenters said, was completed in 1962 [10]. In later symposiums, quite a few historians from Soviet Estonia presented

and published several articles, in which the authors usually integrated statistical analysis of historical phenomena using quantifiable sources.

Importantly for the broader influence, each meeting resulted in a proceedings or a book-length publication in the Turku Historical Society series. Many of these publications were printed in Finnish, but at times, English was also used. For the second conference, the Estonian scholar Juhan Kahk wrote an article, "New Possibilities of Using Computerized Historical Analysis in the Study of Peasant Households." This study was included in the volume printed in Turku in 1973 and made Estonian scholars' results concerning computer use better known to historians in Finland [11].

Among the Soviet Estonian scholars, Juhan Kahk was able to travel widely and publish abroad, such as in the French *Annales* [12, 13], but in general, travel to Finland was easier than further abroad. According to information online and unconfirmed by this study, in return, Kahk had to report about his travels to VEKSA (the Society for the Development of Cultural Ties with Estonians Abroad), which was controlled by the KGB. To what extent Soviet and Finnish scholars influenced each other's work is difficult to know and show because they made few (if any) references to each other in their publications. Still, that could have been a practice related to performing ideological purity and for protection from possible accusations: In the Soviet Union, it was unwise to admit or show one was influenced by historians outside one's own camp, so to speak [14].

Nevertheless, at times Soviet historians had wider opportunities for meetings than is generally known. For instance, Soviet historians were able to organize a conference in Tallinn, Soviet Estonia, in 1981, with their American colleagues on the developments of quantitative history [15]. Meanwhile, Finns entertained lively contacts with their Western neighbors, especially Sweden, and thus, talked regularly in both directions, as well as communicated information between the two cold war blocs. Despite the scarcity of references to Soviet colleagues, most if not all of the few Finnish historians who led computer-assisted research projects in the 1970s (see below) participated in the Finnish–Soviet symposiums [1].

For international collaboration, it was significant that during the 1970s and continuing well into the 1980s Finnish scholars had relatively dynamic transnational communications in particular with their Estonian and other colleagues from the Soviet Union who were among those who had pioneered the use of computers in history research. Non-aligned Finland provided an informal international meeting place for such personal contacts and exchanges. This mediating role of the Finnish historians in-between the cold war divisions started during the *détente* in the early 1970s and continued when the tensions heightened again. Although computers were never the centerpiece of these discussions, quantitative methods including using statistics and data processing with the help of mainframe computers were, early on, part and parcel in these talks.

3 Nordic history research projects using computers: migration and demographic studies

Conducting research in organized projects became more common in the sciences during the postwar decades. From the late 1960s onward, in the leading Finnish history journal *Historiallinen Aikakauskirja* (Historical Journal), several researchers wrote about current, fashionable historical research projects in Sweden, and these reports included mentions of “ADP systems.” ADP stands for automatic data processing. Research projects either were testing those systems or had taken an ADP solution in use, to store and handle information (data) [16]. Such news reached historians in Finland at about the same time that historians were able to create more sustained contact with Soviet Estonia.

In Finland, too, the early 1970s saw a new phase in historians’ use of computers when the technology was incorporated in research projects. Contemporaries considered such projects cutting-edge, and the reorganized Academy of Finland allocated funds for up-to-date research projects in the field of history. In 1971, for instance, Professor Vilho Niitemaa presented a newly funded project focused on far-off emigrants (*kaukosiirtolaiset*, from Finland) which included an “ADP department” working on collecting data and compiling statistics. To store data, the department used punch cards [1].

As part of that research project, Reino Kero used computerized methods for his doctoral dissertation which he defended successfully at the University of Turku in 1974 [17]. Similar to other Nordic students of migration to North America, Kero’s research contacts with colleagues and university departments in the United States further supported the use of computers for historical analysis. Soon after and building on several national Nordic projects on migration history, this network started two Nordic collaboration projects on emigration to North America. The first project compiled an atlas of Nordic migrations, and the closely related second project focused on comparing patterns of national migration to the United States and Canada. Participants at a Nordic seminar in Uppsala had first discussed such multinational efforts in 1969, and that probably motivated national projects, such as the one initiated by Niitemaa and based in Turku, Finland [18].

The Nordic collaboration project aimed at comparing migration from the Nordic countries to North America and within Denmark, Finland, Iceland, Norway, and Sweden. The task proved more complex than was anticipated, and the project faced difficulties. In the five Nordic countries, the examined local migration cases were those of Alfta, Toholampi, Torslev, Ullensaker, and Vopnafjordur. Reino Kero emphasized the differences among the Nordic countries in the materials available for study, which allowed similar in-depth scrutiny only in the cases of Sweden and Finland. During the meetings, the researchers must have shared ideas and advice on how to best store and process their national and local data but obviously that could not help if the historical information was too limited [19, 20, 21].

Presenting the results of the collaboration, Sune Åkerman wrote honestly about the practical downsides [18]: “It would be misleading to conceal the extreme difficulties encountered in this Nordic team-work. The large geographic distances between the

research groups has complicated coordination and [sic] problems of staff etc. have sometimes caused the project to waver somewhat.”

In these collaborative projects, Reino Kero acted as the key liaison in Finland. Soon, he further contributed his expertise to planning a national migration study that commenced in 1977. This collaborative research scheme, called the Migration Project (*Muuttoliikeprojekti*), counted and mapped the movements of people inside Finland between 1850 and 1910 with a focus on industrialization. The project plan was in large part encouraged by Viljo Rasila’s expertise in data processing and computers. Pentti Virrankoski, who was a professor of Finnish History, had initiated the collaboration, and he was its supervisor. In addition, Virrankoski headed one sub-project at the University of Turku, while Rasila, now an appointed professor, led another research team at the University of Tampere, and Yrjö Kaukiainen a third team at the University of Helsinki. In this project, the workload of collecting data manually grew much larger than had been anticipated. However, the difficulties with the ADP programs and processing the data proved to be even more significant. Because of these surprises, the larger project ran out of funding in the early 1980s [22, 23]. Most of the laboriously manually gathered and manually inputted data was never computerized.

However, the sub-project led by Rasila at the University of Tampere was able to process the materials with a computer. The Tampere team planned their database differently from the Turku team, and the Tampere team used the data successfully for their computerized statistical calculations, and published their research results [1, 22].

Importantly, the larger Finnish Migration Project had formed ties with the Swedish project that was building a demographic database in the late 1970s, and the two groups discussed their projects and swapped ideas at international seminars [24]. Project participants arranged a seminar in Tvärminne, Finland, in March 1979. The four invited Swedish participants included Sune Åkerman, who was also central in the collaboration on Nordic migration history, two others from a Swedish project on family history led by Professor Sten Carlsson in Uppsala, and Jan Sundin from Demografiska databasen at Umeå University. Afterward, the Finnish project leader, Pentti Virrankoski, indicated that the results of their productive exchanges had been heard, for instance, in a presentation by Jan Sundin at the Congress of Nordic Historians at the University of Jyväskylä two years after the seminar in 1981 [22, 25].

In principle, such historical databases can have a very long lifespan. In Sweden, a demographic database was first developed in the early 1970s [24] while many Finnish projects collecting and processing valuable data in history research have had limited continuity and left a very ephemeral legacy. Meanwhile, since 2017, once again in connection with and drawing from the long-term Swedish experience, there are plans at the University of Tampere for historians to refresh the migration database and use it as part of a larger digital collection aimed at historical demographic research [26].

In addition to the contacts between research efforts and projects abroad, Nordic historians maintained well-established connections and gathered at regular meetings. They started the *Nordiska historikermötet* (Nordic conference for historians) series in 1905, and they arranged the conferences once every 3–4 years after the Second World War. In addition, historians organized a Nordic series of methods seminars from the mid-1960s until the early 1990s [27, 3]. Some of the early meetings included ex-

changes about the use of quantitative methods, as well as computers, all of which, at the time, the historians considered to open up new options and opportunities for their scholarship [28, 29].

Nevertheless, not all contacts led to following the same solutions, such as data processing by computers. Historians discussed these new tools in the case of historical newspaper research, too. In the 1960s, in Sweden and Denmark, the first major projects investigated newspapers historically. These press history researchers drew from the ideas of content analysis developed by Bernard Berelson in the United States in the 1950s [28, 30], as did the large-scale Finnish press history research that began in the mid-1970s. The leaders of that growing project were interested in applying quantitative and mathematical methods, but in the end, they did not choose computers for quantifying and counting, and instead, used other techniques. However, the Finnish scholars deemed the Nordic contacts and influence overall very important. Subsequently, they led to Nordic collaboration in writing and publishing results on press history and media history [31].

4 Conclusion

Ideas and possible influence on the use of computers for historical research came from many directions in and to Finland during the late 1960s and onward. Although a few historians in Finland designed their own computer-assisted studies, many more learned about such new options from their colleagues in Sweden and other countries in the so-called West, as well as, or from, the Soviet Union, especially Soviet Estonia. Such early international contacts and influence concerning historians' use of computers are difficult to prove with detailed evidence. However, for example, the series of Finnish–Soviet social science history symposiums and other conferences left sources that confirm these exchanges and that also dealt with computer use. In the changing political climate of the cold war, moreover, Finland offered a safe and relatively harmless place for history professionals from the two political blocs to meet and discuss their research, and thus, strengthen the links between the Baltic and Nordic communities of historians.

We can use these experiences to understand general traits of early computer usage by humanists, and especially historians. The 1960s and 1970s saw the first generation of historians, who were few in number, using computers and related technologies mainly for storing data and processing data for statistical analysis, often drawing influences from social sciences, all of which formed parts of the historians' larger research agenda. Historians labeled much of this research quantitative history. Today, we should regard it as the early evolution of digital history.

At that time, international collaboration was not without difficulties, especially in practical matters. It was a time of posting letters, and very little digital data on physically much larger computers—approximately two decades before the worldwide internet and email, and all the other digital tools that have gradually expanded transnational scholarly collaboration and made it much less complicated.

These results regarding historians' connections serve to remind us that we can find deep roots for Nordic collaboration in the digital humanities, and these contacts help us better understand the international spread of humanities computing [6, 32]. Similar connections may have been more active in some other fields of research, such as in linguistics and social sciences, and studying them would increase our knowledge of the early international history of digital humanities [33, 34, 35]. Most importantly, the developments of computer-assisted research are well worth studying and remembering from the transnational perspective. Finally, because old databases periodically interest digital humanist researchers after extended lengths of time, history research could offer practical help in locating relevant publications and archives, and in the best case, save long-forgotten data collections from oblivion.

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