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Jenny Langkjaer

Arbetsrörelsens minne. Digitalisering av års- och verksamhetsberättelser från fackliga organisationer, 1880-2018

RIKSBANKENS JUBILEUMSFOND

Infrastruktur för forskning

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| Fil. dr Jenny Langkjaer Arbetsrörelsens arkiv och bibliotek Elektronvägen 2 SE-14149 Huddinge ORCID: | Arbetsrörelsens minne. Digitalisering av års- och verksamhetsberättelser från fackliga organisationer, 1880-2018 Labour's memory. Digitization of annual and financial reports of blue-collar worker union organisations, 1880-2018 |
| Anslagsförvaltare / Grant administrator Arbetsrörelsens arkiv och bibliotek | |

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|---|--|
| Startdatum / Start date: 2020-01-01 Slutdatum / Final date: 2022-12-31 | Ämneskod / subject code 1: Historia Ämneskod / subject code 2: Ekonomisk historia Ämneskod / subject code 3: Statsvetenskap (exklusive studier av offentlig förvaltning och globaliseringsstudier) |
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Sökta medel / Applied funding

| Budgetår / Budget year 2020 | Lokaler (ej del av sökt belopp) | Indirekta kostnader (ej del av sökt belopp) Indirect costs (not part of applied funding) | Lönekostnader / Salaries 1.185.946 | Drift / Operating costs 1.318.600 | Totalt år / Total (year) 2020 2.504.546 |
|--|------------------------------------|---|--|---|--|
| Personal / Staff (icke forskande personal / Non-research staff: 280% årsarbetstid) | | Disp.år / Year of PhD exam | Årsarbetstid / Annual working time | LKP / Employer's social-insurance contribution top- up | Månadslön (heltid) Monthly salary (full time) |
| Hast, Anders (Universitetslektor), 660428-7513 | | 2004 | 20% | 51% | 56.400 |
| Langkjaer, Jenny (Fil. dr), 780703-0262 | | 2011 | 100% | 43% | 40.000 |
| Neunsinger, Silke (Docent), 701016-0922 | | 2001 | 20% | 0% | 0 |
| Simonson, Örjan (Fil. dr), 640321-1912 | | 1999 | 40% | 43% | 43.000 |
| Budgetår / Budget year 2021 | Lokaler (ej del av sökt belopp) | Indirekta kostnader (ej del av sökt belopp) Indirect costs (not part of applied funding) | Lönekostnader / Salaries 1.215.043 | Drift / Operating costs 1.193.200 | Totalt år / Total (year) 2021 2.408.243 |
| Personal / Staff (icke forskande personal / Non-research staff: 280% årsarbetstid) | | Disp.år / Year of PhD exam | Årsarbetstid / Annual working time | LKP / Employer's social-insurance contribution top- up | Månadslön (heltid) Monthly salary (full time) |
| Hast, Anders (Universitetslektor), 660428-7513 | | 2004 | 20% | 51% | 57.800 |
| Langkjaer, Jenny (Fil. dr), 780703-0262 | | 2011 | 100% | 43% | 41.000 |
| Neunsinger, Silke (Docent), 701016-0922 | | 2001 | 20% | 0% | 0 |
| Simonson, Örjan (Fil. dr), 640321-1912 | | 1999 | 40% | 43% | 44.000 |
| Budgetår / Budget year 2022 | Lokaler (ej del av sökt belopp) | Indirekta kostnader (ej del av sökt belopp) Indirect costs (not part of applied funding) | Lönekostnader / Salaries 1.244.141 | Drift / Operating costs 1.221.200 | Totalt år / Total (year) 2022 2.465.341 |
| Personal / Staff (icke forskande personal / Non-research staff: 280% årsarbetstid) | | Disp.år / Year of PhD exam | Årsarbetstid / Annual working time | LKP / Employer's social-insurance contribution top- up | Månadslön (heltid) Monthly salary (full time) |
| Hast, Anders (Universitetslektor), 660428-7513 | | 2004 | 20% | 51% | 59.200 |
| Langkjaer, Jenny (Fil. dr), 780703-0262 | | 2011 | 100% | 43% | 42.000 |
| Neunsinger, Silke (Docent), 701016-0922 | | 2001 | 20% | 0% | 0 |
| Simonson, Örjan (Fil. dr), 640321-1912 | | 1999 | 40% | 43% | 45.000 |

Total projektkostnad / Total project cost: **7.378.130**

Projektledarens (Sökandens) underskrift / Project manager's (applicant's) signature

Datum / Date:

Underskrift och namnförtydligande / Signature and name:

Anslagsförvaltarens (Prefekt/motsvarande) underskrift / Grant administrator's (head of department or equivalent) signature

Datum:

Underskrift och namnförtydligande:

Budgetkommentar / Comments on the Budget

In addition to salaries mentioned in the budget operating costs per budget year:

2020

Technical equipment 200 000 SEK

Workshop 70 000 SEK

Non-research staff, Uppsala University Library: 30 % - 129 600 SEK

Non-research staff, Department of Information Technology, Uppsala University:
50 % - 216 000 SEK

Non-research staff, Popular Movements' Archive in Uppsala FAC, 100 % - 336
000 SEK

Non-research staff, Swedish Labour Movement Archives and Library, 100 % -
336 000

2021

Technical equipment 50 000 SEK

Workshop 70 000 SEK

Non-research staff, Uppsala University Library: 30 % - 132 000 SEK

Non-research staff, Department of Information Technology, Uppsala University:
50 % - 220 800 SEK

Non-research staff, Popular Movements' Archive in Uppsala (FAC, 100 % - 344
400 SEK

Non-research staff, Swedish Labour Movement Archives and Library, 100 % -
344 400 SEK

2022

Technical equipment 50 000 SEK

Workshop 70 000 SEK

Non-research staff, Uppsala University Library: 30 % - 136 200 SEK

Non-research staff, Department of Information Technology, Uppsala University:
50 % - 226 800 SEK

Non-research staff, Popular Movements' Archive in Uppsala (FAC, 100 % - 352
800 SEK

Non-research staff, Swedish Labour Movement Archives and Library, 100 % -
352 800 SEK

Sammanfattning på svenska / Summary in Swedish

Arbetarrörelsen spelade en avgörande roll för den svenska demokratins utveckling. Inte minst var fackförbunden viktiga vid utformandet av välfärdsstaten och den svenska modellen för arbetsmarknaden. Fackförbunden och Landsorganisationen har också haft ett stort internationellt inflytande. Deras arkiv erbjuder en unik potential, också i en internationell jämförelse, att skapa långa sammanhängande serier av dokumentation över vad som är den mest betydelsefulla civila sammanslutningen i Sverige. För att åstadkomma detta behöver materialet digitaliseras och bli digitalt sökbar.

Projektet avser att digitalisera verksamhetsberättelser och årsredovisningar från lokala, regionala, nationella och internationella fackliga organisationer, från 1880-talet och fram till 2018. Det digitaliserade materialet kommer att göras sökbar genom fri textsökning och ett index, som utvecklas i samarbete med forskare inom fältet. Arbetarrörelsens arkiv och bibliotek (ARAB) och Folkrörelsearkivet för Uppsala län (FAC) ansvarar gemensamt för att databasen utvecklas, bevaras och tillgängliggörs för forskare. Det ger institutionella förutsättningar för en varaktig drift och god tillgänglighet, både i Sverige och internationellt. Tillsammans erbjuder ARAB och FAC ett rikt arkivbestånd från lokal till internationell nivå. Det kommer också finnas goda möjligheter för ytterligare länsarkiv att i ett senare skede komplettera från sina bestånd.

Sammanfattning på engelska / Summary in English

The labour movement has played a crucial role in the development of Swedish democracy. Trade unions were especially important in building the welfare state and in shaping the structure of the labour market. The Swedish trade union federations and their confederation, Landsorganisationen, also play an important role internationally. Their archives offer a unique potential to create comprehensive time series on the mobilization and organization of the largest organization in Sweden's civil society. In order to accomplish this research goal, the material needs to be digitized and made searchable.

This project will create a collection of digitised annual and financial reports from local, regional, national and international trade union organisations for the period 1880 to 2018. The digitised material will be made searchable and indexed in collaboration with labour history experts. The database will be developed, stored and made available for researchers by the Swedish Labour Movement's Archive and Library and the Popular Movements' Archive in Uppsala. With two archival institutions performing the task, this data will become easily and permanently available to the research community in Sweden and abroad. Combining holdings in ARAB and FAC enables us to create a unique infrastructure that connects the local, regional, national and international levels, and creates an infrastructure to which other regional social movement archives in the rest of Sweden can add similar material.

Projektbeskrivning / Project description

Aim

This project aims to take important steps towards making archival sources accessible for a large set of researchers. The project will create a collection of digitised annual and financial reports from Swedish local and regional unions, national trade union federations and the national trade union confederation Landsorganisationen (LO), as well as their international umbrella organizations for the period 1880 to 2018 from different archival institutions. This will be an important contribution to digital humanities in Sweden and abroad because it will create a collection that can be searched systematically. The project will enable new types of research questions, as well as improve traditional trade union research while at the same time saving researchers time and money.

The Swedish labour movement has played a crucial role in shaping the structure of the labour market, the development of democracy, the development of the welfare state and international workers' solidarity (Jansson). Most Swedish workers have been members of a trade union and their unemployment funds (2018 union density was 69 percent after a decline from more than 85 percent during the 1980s), which means that these organizations have included a large share of the Swedish population (Kjellberg 2001 & 2017). The strong position of Swedish workers' unions and their confederation LO, has also enabled them to play a significant role in the international umbrella organization, the International Confederation of Free Trade Unions (ICFTU, now ICTU), and the International Trade Secretariats (ITS, now Global Unions) and encouraged international solidarity with other labour movements such as the Chilean CUT or the Polish Solidarnosc (Misgeld & Molin) and liberation movements such as the anti-apartheid movement in Southern Africa (Thörn; Sjölander).

This important role at home and abroad has generated comprehensive and uniquely rich archival material (Hilson et al.). Sixty percent of the Swedish Labour Movement's Archive and Library's (Arbetarrörelsens Arkiv och Bibliotek, ARAB) archival collection are trade union archives. In the collections of regional Swedish popular movement archives, union archives are on average between 20-30 percent of the entire collections. The planned digital collection will include different types of material such as handwritten, typed, printed and digital material from the 1880s onwards which will be digitized and remediated into one systematically searchable digital format. This collection will therefore allow the creation of long time series for different topics covering the last 140 years and a unique combination of local, regional, national and international material which will be of major importance to advance the field of global labour history. Existing archival catalogues do offer an overview of the material, but as the archival material is comprehensive, it is difficult to search it systematically until it is digitized. To digitize the entire collection of trade unions would be far

too costly; thus, we have therefore chosen their annual reports and annual financial reports in the collections of ARAB and the local Popular Movements' Archive in Uppsala (Folkrörelsearkivet, FAC). There are several advantages with this specific type of documents: first, they include the most important topics handled by the union and its spending per year which gives guidance to other archival material stored in the union archives; second, they are consistent in their format and their content over time, hence making comparisons over time, across organizations and organizational level possible; third, they contain brief summaries of all organizational activities year by year; fourth, we know from our daily work with researchers that these documents are highly valued by our visitors; fifth, because of the demand for these documents they are also the ones at risk of being damaged due to frequent use.

The collection will be made systematically searchable through indexing done in collaboration between professional historians, archivists and IT-experts. The digital collection will be developed, stored and made available for researchers by ARAB and the Popular Movements' Archive in Uppsala (Folkrörelsearkivet, FAC), in cooperation with Uppsala University Library (UB) and the Division of Visual Information and Interaction at the Department of Information Technology (DIT) at Uppsala University and in close collaboration with an advisory board of Swedish and international experts in history, archival and library science and information technology science. Of course, individual research projects could develop similar methods for data collection and analysis, but these are very costly and time-consuming procedures for individual research projects. This infrastructure will therefore be time- and cost-saving for researchers and will improve the quality of research. Having two archives perform the task will make this data readily available to the research community in Sweden and abroad and guarantee its long-term preservation.

The project serves multiple purposes:

1. to build a new collection of archival material by aggregating material spanning a long period of time and on different levels of scale (from local to international), through a unique combination of handwritten, typed, printed and digital material from the workplace level to international union organizing.

1. to index the collection so it will be systematically searchable to enable researchers to find new research questions in several academic disciplines

1. to create an infrastructure which will allow adding material from other regional archives in Sweden and eventually from other archives outside Sweden in the future

1. to develop a generic handwritten text recognition tool for different styles of

handwriting in Sweden between the end of the 19th throughout the 20th century

FAC and ARAB collections: Shared histories of workplace struggles, welfare politics and international action

Union archives comprise a large part of FAC's holdings, containing over 500 archives of local and regional organizations since 1885. ARAB has more than 9000 shelf metres of union archives.

The collections at FAC include the archives of local workplace organizing which tell the story of the everyday lives of workers and their organizing. These archives represent a diversity of sectors, including typical sectors such as the printing industry in a university city; the steel industry; saw mills and agriculture in the countryside of Uppland. ARAB holds in addition the archives of Swedish national union federations which mirror the development of Swedish society during the last 130 years and the reaction of Swedish workers to these changes. Although we may think of union material as being primarily work place related, Swedish union federations have been acting as reviewing bodies for the Swedish government throughout the entire 20th century and as such have contributed to the development of Swedish society and the Swedish welfare state. For example, topics such as day care for the children of working mothers, originally initiated by the owners of textile mills in Norrköping and Borås, were after the Second World War turned into a feminist demand by leading female trade union representatives and the recent demand for free menstruation pads for working women by the Swedish Municipal Workers union has become a global issue.

The printed reports of Swedish national union federations are part of ARAB's library. The library holds printed annual reports from 226 union federations (national), most of them re-joined under the confederation LO's umbrella. This large number of organizations is also the result of many mergers of unions over the last 130 years (Kjellberg 2017). On the Nordic/Scandinavian level, the number is 11 and on the international level, 46 organizations.

Swedish union archives also include comprehensive international material. This is also a unique collection internationally. The reports of ITS, Global Unions and the ICFTU are part of the archives of Swedish unions. International umbrella organizations sent their reports to their national member organizations. In addition to the long history of ARAB being the oldest archive and library of its kind in the world, founded in 1902 by the Swedish labour movement, the comprehensive nature of the material and long series have been aided by the limited prosecution of activists in the labour movement, the protection of archives during wars, and the fact that Sweden has been a country for political refugees. The active collection of international material, and the active role Swedish trade union activist have played internationally, as well as the presence of refugees in Sweden, explain why ARAB's collections include comprehensive international material. (Hilson et al; Grass; Grass et al). This part of ARAB's history also explains its important role among international labour history institutes. The close relationship with the International Institute of Social History (IISH) in Amsterdam, which contains the records of the ICFTU, and the Archiv

der Sozialen Demokratie (AdsD) in Bonn, which contains the records of the ITS and today's Global Unions, will enable researchers to get access to some of the reports that might be lacking in the Swedish archives.

Handwritten reports are typical for local union organising and some of the oldest reports of national trade union federations. The largest share of handwritten material is therefore part of FAC's collections. The largest part of typed and printed material is part of ARAB's collections.

In short, the collections of FAC and ARAB offer together a unique possibility to analyse workers activism on different levels of scale, over different sectors and from a long-term perspective.

Building a digital collection of annual and financial reports of the Swedish trade union movement

Digital humanities are situated at the intersection of computing or digital technologies and the humanities and deal with the building of archives, tools or digital methods and interpreting material. The building of collections includes the free dissemination of information available also to audiences outside academia. However, the building of collections does not take place in an historical vacuum but is informed and structured through the epistemological predispositions of the creators and of the institutions and circumstances in which they are produced and used (Neilson). Building a new collection makes sense if there is enough material to be digitized and if the material is useful to researchers and the general public. To make it systematically searchable, the material needs to be in a consistent format (Levenberg).

Annual and financial reports have the advantage of a consistent format across organizations and time, which makes it possible to obtain similar types of information from the material. This is the result of a long tradition of an annual auditing of activities and economy that was part of the well-established democratic practice during annual meetings of Swedish social movements. The annual and financial reports will also allow systematic studies of the rise, fall and mergers of trade unions in Sweden. In most of these cases, researchers will also need to supplement by using the minutes of these organizations (Jonsson & Neunsinger), but the reports included in the digital collection will provide an opening to the archives of the organizations.

During the last decades, there has been a clear change in the use of annual reports, with new digital tools for design, and extended possibilities of distribution with web-based reports. This heightened focus on annual reports has attracted the attention of researchers, resulting in studies on corporate image and aesthetics as well as the selection of what information to include in reports depending on what the organization wants to convey (Thielsch & Wirth; Dutil & Ryan; O'Neill et al; Wickham & Lehman). Communication research is a field where annual reports are studied frequently. Annually recurring texts have been studied to see how much the texts are influenced by their social context. The results suggest a strong connection between what has been reported in previous years, pointing to an institutionally very slowly changing discourse. Moreover,

scholars of communication have analysed how organizations shape their internal and external communication. Annual reports are used both to fulfil demands of obligatory reporting, but also as a mean of mass-communication to investors, customers, members, the public and the media.

Annual reports of Swedish trade union organizations contain information about the most important topics dealt with during each year, and in many cases the national annual reports include very short reports about local development. The economic reports present an overview of income and spending and of how assets and liabilities were held. They are consistent over time; the few changes that took place are an interesting subject of research in themselves. These changes were often related to changes in legislation and taxation, but also to the restructuring of levels of union organizing and centralization. They offer a quick overview over the most important topics and economic decisions of the organizations, as well as the basic data on the number of members. For instance, economic historians Pernilla Jonsson and Silke Neunsinger have used annual reports in their study of women's organizations in four different countries to analyse access to resources, where the money came from, what it was used for and which strategies were used to make the money last or how the lack of money was compensated and had a direct impact on the work of the organization. (Jonsson & Neunsinger).

Together annual and financial reports allow the creation of time series covering for example the development of wages, negotiations, international cooperation, workers education (number of students, costs and incomes as well as curricula), collective bargaining, rules for hiring and firing in specific sectors, unemployment per month and member fees.

Depending on the time period and level of organization, the reports are written in different formats. Reports from workplaces and local organizing were likely written by the specific trade union organizations' secretary, and on a national and international level by someone with long experience of writing and reporting. Creating a collection covering a period of over more than 130 years makes it necessary to combine the material from several archives and of different types: handwritten, typed, printed and digital. This collection will also combine material written in Swedish by workers who only had access to basic education and who used local dialect expressions which are different from the then standardized form of Swedish. The international material, on the other hand, is printed and generally available in German, French and English and for later periods even in Spanish. The most recent material is mainly available in digital format.

Digitizing and re-mediating to create new collections

In order to make the collection systematically searchable, the annual reports need to be scanned. We have decided to scan them in house at ARAB and FAC. Scanning at a scanning company would have the advantage of increased efficiency when it comes to the scanning itself. However, sending off such large numbers of reports would be very time consuming when it comes to packing and logistics. There are also many risks associated with transporting archival material, such as material getting lost or being damaged. This is especially

problematic when it comes to reports that are only available in one single copy. Moreover, the transcription of handwritten archival material into a digital copy demands knowledge of the specific historical context and requires the involvement of experts that scanning companies cannot offer. We have also learned from the experiences of other institutions (such as the Norwegian labour movement's archives and library, when digitizing LO and Labour party annual reports and minutes) and made our decision based on this experience.

Digitizing handwritten, typed or printed materials as well as remediating born-digital material involves turning them into searchable encoded text (Unicode). Printed texts can be converted using Optical Character Recognition (OCR). Handwritten text is much harder to convert due to the large variation in handwriting styles between individuals, but every person will always inevitably write the same letters and words with a small variation in size, slant and tilt etc. Handwritten Text Recognition (HTR) has therefore emerged as an active research field to solve the problem of automatic word recognition and text conversion. HTR can be compared to the development of face recognition technique which has developed quickly over the past years.

Handwritten annual reports from the local level are in general not very long, between two to ten handwritten pages. Still transcription is a tedious time-consuming task and several applications exist that facilitate the process, such as Transkribus, which can help users with line and word segmentation (<https://transkribus.eu/transkribus>). However, it does not help with automatic transcription unless the user manually transcribes about 100 pages and links word images to the transcribed words, developing it into an algorithm, which the HTR engine subsequently can use to make automatic transcription of the rest of the documents. Obviously, not all document collections have more than the 100 pages required for automatic transcription.

DIT is currently developing a framework for the fast-semi-automatic collection of words, which even allows for a group of users to transcribe a text in arbitrary word order, which means that we do not need as many handwritten transcribed pages as Transkribus would need for HTR. This will help in finding linked words much faster for subsequent learning, and it also makes it possible to search in yet untranscribed document collections. By letting the user make a fast evaluation of the quality of the search, excluding false hits via an informative visualization of the search result, linked words can be saved, and a transcription is done word by word.

DIT has been in contact with the people behind Transkribus and are following the development of the platform. DIT is also in contact with the people behind MONK, which is a search engine for handwritten text. Nevertheless, DIT is developing a tool that can do both things in a user-friendly manner. The focus is not only an HTR research tool, but also a platform for both transcription and key word searches, which is aimed to be used by researchers in the field of Humanities, such as historians, cultural anthropologists and palaeographers, as well as research in social sciences etc.

Experiences from a recent FAC project helps to estimate the expenditure of time

for digitization. For four months two archival assistants at FAC have digitized and transcribed around 1500 pages of minutes from local political clubs from the 1910s and 1920s as well as from a suffrage association from the 1890s. Using HTR for the automatic transcription of documents often showed that the transcribed pages needed much more work, simply because the writers are not always the same and therefore vary too much in style. However, where they are similar or identical, the intent is to train the HTR engine using the already transcribed material to improve the automatic transcription together with the material that will be transcribed manually. This procedure includes therefore learning the skills and developing the routines. Transcription is the most time-consuming part, although after some training, a thorough and orthographically correct transcription can be done in ca. 20 minutes per page. Digitization, including repro photography and the following management of the digital copy (editing, converting, designating, arranging and exporting to a server) can be estimated to require ca. 10 minutes per copy. A full-time employee can produce approximately 3,300 digitized and transcribed pages per year, or approximately 10,000 pages during a 3 years period which is regarded as sufficient to develop generic image recognition of nouns for a specific historical period.

Annual and financial reports since 2000 are published in digitized form and will first need to be converted into portable document format (PDF) and Tagged Image File Format (TIFF) for long-time preservation and will, as such, be searchable. The digital collection will be registered and archived within the ordinarily used archival descriptions and using metadata standards ISAD(G) for archival structure and ISAAR (CFP) for authority posts (International council on Archives, <https://www.ica.org/en/isadg-general-international-standard-archival-description-second-edition> and <https://www.ica.org/en/isaar-cpf-international-standard-archival-authority-record-corporate-bodies-persons-and-families-2nd>). Technically the common use of internationally recognized standards provides for the interoperability between the repositories and compatibility for export to other repositories. Preservation formats will be TIFF for digitized and HTR searchable documents. PDF/A (Portable Document Format/Archive) will be a supplement used both for archiving and dissemination purpose. Printed digitized material subject to OCR techniques may be enough to digitize and preserve as PDF/A documents. Born-digital documents may be produced in different formats, and decisions must be made during the project regarding whether they need to be converted or not.

To make the entire collection searchable we need to link digitized material, metadata and other sources. The first two must be attached to *persistent identifiers* and *permanent URIs* (Uniform Resource Identifier). This will insure that a web reader automatically redirects the visitor who clicks on a certain link to an up-to-date copy of the object.

The metadata will also include links to ARAB's and FAC's archive and library catalogues, clarifying the possibility of further research on trade union archives at our institutions.

Indexing

Processing indexes and taxonomies are important to make the collection systematically searchable. In most cases the collection will contribute to finding relevant research questions to initiate new research. In general terms, the digital collection can function as a mature search engine to analyse the importance of specific topics by searching for how often they are mentioned. The structured and repetitive analysis of text which is often done in a non-digital way can be replaced by digitalized processes through text-mining tools that will allow the researcher to find important actors, dates and documents quickly compared to reading each annual or financial report. This is e.g. important for content analysis in digital humanities, as developed by Klaus Krippendorf: that is analysing word frequency counts and detecting specific syntactic patterns within the syntax of a text can be used by different disciplines to achieve quantitative results, which can be used for further qualitative investigations of the content. E.g. media studies scholars have increasingly started to use sentiment analysis to discover patterns in public announcements. Franco Meretti's concept of "distant reading" to capture a corpus of text to find cultural trends through thousands of books is becoming an increasingly popular methodology which demands proper indexing. (Rheams)

Indexing requires concerted efforts from all the institutions involved in the project in the mission of negotiating a taxonomy from the index findings in the documents to a general classification scheme. A starting point will be the official Swedish taxonomies (Svenska Ämnesord) developed by the Swedish National Library, developed further locally by ARAB for its own collections and thereafter reintegrated into the national taxonomy. These taxonomies will be connected to the taxonomies of the World Wide Web Consortium (W3C) developed in the semantic web which will enable us to translate indexed words. This will enable researchers to search the collection on the web. In addition to names, places, dates and topics, it is important to create an index that allows the researcher to find higher frequency occurrences of words or phrases, proper nouns and syntactic patterns. The archives provide knowledge of the used nouns and their contexts in the digitized sources, and the departments of political science and economic history and ARAB's research department provide a theoretical and methodological understanding of important search requirements for different research interests. ARAB's library staff provides knowledge of established taxonomical systems and the Department of Information technology bridges the linguistic and programming aspects of the use of an index. Indexing is closely aligned with an analysis of the content and topics. A close reading and analysis of the annual reports is important to decide this. Persons, places and topics will be the most important part of the index. The fact that the project stretches over 140 years poses challenges to the indexing of the collection such as semantic drifts, the oblivion of old words and the emergence of new ones. There will also be variations of spellings, common misspellings and the use of abbreviations.

Agreements with involved partner

It is necessary to sign agreements with all active trade unions, their federations and the LO about the digitization of their materials. The unions are in general

members of the archives and, as such, interested in collaboration about their history. These agreements will also be necessary to get access to the more recent digital material which is now often available to members of the unions only. The collections of ARAB and FAC also include several orphaned archives, which means that their organization does not exist anymore. In some cases, this is the result of mergers and other forms of re-organizations. In many cases these archives have become the property of the archives and therefore do not require any permission; in other cases, the new merger-organization needs to be contacted. As for the digitization of material of the former ITS and current global unions, we will co-operate with our colleagues at the Archiv der sozialen Demokratie in Bonn, and for the ICFTU we will co-operate with our colleagues at the IISH in Amsterdam to get permission for digitization.

Future management and relation to other archives

One of the huge advantages of the collaboration between ARAB and FAC is their long-term experience of preserving archival collections. It is an intentional choice to regard the digitized collection, not as a closed database, but as part of ARAB's and FAC's holdings, integrating it into their general archival catalogues and employing common international standards for object and archival descriptions. This will improve its lifetime, interoperability and future additions to the collection. ARAB and FAC will remain responsible for the long-term digital preservation after the completion of the project. The project will develop text recognition and a search index for generic use. The collection is open ended, making it possible in the future to use for accruals of digitized and born-digital material.

The entire digital collections will be registered and archived in our e-archive systems, but also transferred to Alvin, a platform for digital collections and digitized cultural heritage (www.alvin-portal.org). Alvin is a collaborative project between various institutions in the Swedish archive, library and museum sector, and has been developed by Uppsala University Library, in cooperation with Gothenburg University Library and Lund University Library.

Our infrastructure project is unique: To our knowledge, there is currently no existing collaboration to create a similar collection. Only a few attempts have been made to create time series for qualitative material. The IISH in Amsterdam is well-known for its quantitative databases on the labour movement. Our colleagues from the Norwegian Labour Movement Archives and Library have digitized annual reports, minutes and principal agreements of the Norwegian labour movement including both *Arbejderpartiet* and *LO*, but this material presents the national level and includes only printed materials. The focus on making annual reports accessible has previously been on companies. Other types of organizations are scarcely represented digitally, especially when it comes to older materials from before 1990.

Ethical considerations

Annual reports from later years may contain sensitive data on persons still alive. Observing the General Data Protection Regulation, GDPR, certain precautions

need to be taken when it comes to publishing the digitised material on Alvin. Sensitive personal data regarding for example racial or ethnic origin, political opinions, religious or philosophical beliefs and trade union membership need to be protected. (EU 2016/679; SFS 2018/218) In order to do so, the DIT and Uppsala University Library will develop a method of blurring personal names in annual reports 90 years or less. By doing this, all annual reports 90 years or less can be published online on Alvin without the risk of compromising sensitive personal data. Younger reports will be published with one year's intervals (to make sure to keep the 90 year limit) The digital reports for material younger than 90 years will be made available at ARAB and FAC only, but first after the examination by the Swedish Ethical Review Authority to make sure it follows the ethical rules for research which will also be important for the future use of the collections by researchers.

Moreover, researchers whose projects have been accepted by ethics committees will be able to access the full online reports at ARAB and FAC. Also, researchers visiting ARAB or FAC will be able to access reports with disclosed personal names, after signing an agreement to handle such information according to certain rules, which is standard procedure for all visitors accessing archival material at our institutions.

Practical outline of the project

The collaboration between FAC and ARAB includes practical elements, but also steps that require interaction with experts of different types. This interaction will take place through meetings and international workshops. Finally, the digital collection needs to be made accessible in steps and introduced to researchers, trade union organisations and an interested public. The following steps are planned to carry out this project.

1. Signing of agreements with all active union organisations, Jan. 2020.
2. Spring 2020 submission of the project for examination by the Swedish Ethics Review Authority
3. Purchasing of relevant equipment for scanning and transcriptions, Jan. 2020
4. Scanning the annual reports, Jan. 2020 – Oct. 2022
5. Development of algorithms for HTR and indexing, Jan. 2020 – Oct. 2022

Early HTR algorithms will be developed parallel to the transcription. Topographic and personal names will be registered and recognized as they appear in the reports. During 2020 one sample of handwritten material from every decade will be processed, and by the end of this first year both a linguistic and a graphic corpus will have been created, which will give a good overview of the whole time period.

Gradually, systematized taxonomies will be developed, which in turn will help to identify useful words for indexing. This in turns will point out words for HTR algorithms to focus on, and so forth. As HTR algorithms and indexes develop, the process of digitizing the handwritten material will eventually, during 2022, be able to proceed without transcription and mark-ups, making the Handwritten Text Recognition finally able to read the handwritten annual reports on its own, and

transferring the remaining reports into machine encoded text.

The born-digital files of annual reports will be remediated to the same digital format as the handwritten and printed reports, creating a coherent unit, which will then be able to be divided into separate building blocks, according to the needs of the researcher.

6. Delivery of scanned and indexed material to Alvin, development of search engines, 2021-2022.

Digitized documents as part of an archival inventory will be able to be exported to Alvin before 2022. However, mature search engines and indexes need to be tested during 2021. E-archives at FAC and ARAB will be used for storage from the beginning.

7. Workshops with relevant researchers will take place on an annual base at ARAB, start 2020-2022.

We will arrange annually reoccurring workshops with our groups of experts and additional interested participants from other archival institutions, both to review our own work and to develop the field through discussions on an international level. The first workshop to be held during fall 2020 will deal with the challenges of HTR in collaboration between our institutes and the Institute of Social History in Ghent (AMSAB) Belgium and researchers from the DIT at Ghent university who are currently co-operating on an HTR project together. A second workshop will take place during fall 2021 on the indexing of union material. We will bring together experts from different disciplines to discuss indexing as a method and the content of the index we will develop. A third workshop will take place in fall 2022 to discuss the created infrastructure and in which ways other archival institutions can contribute with similar material in the future.

Three times per year the participants will meet with our Swedish experts to discuss the progress of the project.

Moreover, we will contribute with articles discussing different aspects of this project in journals of our specific disciplines, as well as participate in Swedish and international conferences specific to our disciplines to discuss the challenges and progress of the project with our colleagues outside our institutes. This will provide us with necessary feedback from colleagues and will ensure that we examine our work critically throughout the entire process.

This project is based on co-operation with the involved union organizations, and for this reason it is also important to give something back to them. In the beginning of 2023, we will launch the collection with an open seminar at the Swedish LO. At the seminar we will both present the collection and the ways in which it can be used. We will invite representatives of trade union organisations and other organizations in the Swedish labour movement to discuss possible ways to use the collection as a tool in the everyday work of the labour movement. The seminar will also be open to a general public.

Importance for Swedish society

Trade union organisations are still the backbone of civil society in Sweden. Due to the high union density, unions are the societal organizations with the most members. Moreover, research has demonstrated that union organisations have played and still play a crucial role for democracy. This makes them particularly interesting not only for academics but for society at large. Digitizing and indexing this material makes it easier for anyone who is interested to search for information. Moreover, the project will create digital copies of unions' most important documents, thus facilitating preservation of this important part of Swedish cultural heritage in more than one place.

The collection will also be relevant in the everyday work of trade union organisations. Union activists and officials regularly visit our archives to access these documents. The collections will enable active trade unionists to quickly search for specific topics to understand in which ways current topics are related to the unions' past and can help to reflect on how to move further with strategic decisions, a task that is currently carried out through organized seminars and workshops on specific topics. The digital collection serves as a complement to seminars. Trade union organisations are also involved in writing their own history, and the collection will allow them to get access to the main topics. The fact that the collection is digitized will enable them to access part of this from home after their working hours when archives are closed. The collection will also become available to a general public interested in the history of workers which can be used by schools as the labour movement and its history are not a major topic of the current curriculum in Swedish schools. The group of experts as well as the international advisory board, and the inclusion of the two archival institutions will ensure the creation of a relevant collection useful in the networks of the Swedish labour movement, including institutions of workers education which will benefit from this material for educational purposes.

Importance for research: Systematic multi-layered and long-term studies

The collection will serve researchers in several disciplines in the humanities, social sciences and computer science. The collection will provide access to big data and can therefore show the relevance of a topic and the possibilities to generalize and theorize from it because it enables the researcher to quantify and to find patterns in a large multi-layered collection. In addition, this digital methodology saves time and money and can even enable the researcher to carry out research remotely.

The collection and its particular composition is of specific relevance to labour history which has not been in the forefront of digital humanities; however databases on strikes, such as the Global Hub Labour Conflicts managed by Sjaak van der Velden at the IISH, and new collections of wage data in Sweden, as found in the recently started project by economic historian Erik Bengtsson at Lund University (Bengtsson 2019), are important contributions. Swedish labour history has shown a tendency towards in-depth studies at the expense of long-term and multi-layered or larger spatial studies (see, however Evans & Rydén). During the last 15 years the emerging interest in global labour history has shifted

focus from the national to the international and transnational levels. However, these studies have been criticized for a perspective mainly focused on the interaction among nations or between international organizations and nations. As part of a debate on global history and the epistemologies of global history, the local as space – e.g., in migration history – or the local as a site for micro-historical analysis has come into focus and the concept translocality has been used to include individuals in studies of larger global and universal processes (De Vito & Gerritsen; Neunsinger 2019). Our project can make important contributions to the work of researchers in this expanding research field. Offering a multi-layered collection will therefore be an important contribution to global labour history.

Histories of Swedish trade union organisations have often focused on either the national or the local level with little interest in the changing interaction between them (see, however, Salmonsson; Bengtsson). A few examples, such as Andrew Scott's study on Australian union federations and the influence of transnational contacts with Sweden, or studies such as Knotter (2018), Carew et al. (2000), van der Linden (2010), Rodriguez Garcia (2010) and Neunsinger (2018) show the importance of Swedish union organisations for activism elsewhere in the world. Some studies have also focused on the connection between the national Swedish level and the international (Misgeld; Misgeld & Molin; Sjölander; Thörnqvist), and on the Nordic collaboration between trade unions (Blidberg; Österberg). There have been comparisons between trade union activism in Sweden and in other countries (Hilson 2001 & 2006; Neunsinger 2001). There is a lack of studies of the relationship between the local and the international levels (with or without the involvement of regional and national levels). For example, Swedish trade union organisations collected huge amounts of money for workers in Spain during the Spanish Civil War and international and transnational support was rendered during the Swedish general strike in 1909 (Schiller). This collection of material will enable researchers to study how the discussion between the different levels of the scale changed and how local unions reacted to advice and decisions from the national level concerning bargaining, wage levels and membership. In which ways did the local issues affect the national and international levels? Can we find periods of agreement between the levels, and can we find specific points in times of discontent? Did the language change over time and between levels?

Studies of Swedish trade union organisations have often focused on single trade union federations or the LO, but the development of trade unions and their federations is affected by the different developments of sectors. Other important questions for labour historians might be the discussion between the local, regional and national level about investments in new technology that changed wages, tasks and responsibilities as well as layoffs. The companies' efforts from the beginning of the 20th century to rationalize production can be examined deeper from a worker's and trade union's perspective. (Johansson 1990; Isacson 1987; Ericsson 1991 mfl). Other questions concern the gender division of labour and the actions of the union representatives (Wikander; Sommestad 1991 mfl). Other important research questions concern the trade union organisations and migrant workers, the trade unions and local political activities, the working environment and the external environment due to changes production over a longer period. Moreover, the proposed digital collection also offers unique

possibility to study changes in labour laws (Åmark). This new infrastructure will also allow researchers to make systematic comparisons between the different union federations in Sweden.

Many Swedish trade unionist such as LO and ICFTU president Arne Geijer, or LO women's secretary Sigrid Ekendahl, who spearheaded the women's committee of the ICFTU, have played an important role abroad and on the international level, but this has been largely neglected in labour movement research. The digital collection will also enable researchers to do network analysis of activists moving between the different levels of scale (Rheams) or the dispersion of information across different levels (Hedström, Sandell, and Stern 2000). Moreover, the collection can also contribute with a spatial turn as places will be indexed, and national reports include information about local and regional developments all over Sweden, just as international reports include different places all over the world which will be indexed by the team.

The digital collection can also be used for longitudinal studies of conceptual history. Conceptual history in Swedish labour history, such as Karin Jonsson's study on the concept of revolution in Sweden between 1917 and 1924, has been concerned with extremely short time spans (see also Salmonsson 1998). Through an analysis of the changing frequencies of usage, the collection will allow the identification of the most relevant concepts which, in combination with other types of materials, can be analysed to study the changes in the Swedish labour movement in relation to a changing society.

Economics and economic historical research will benefit greatly from the planned digital collection. The economic development of trade union organisations in general can be studied, as annual accounts are obligatory in the annual reports, and statements on the organizations' interaction with the current economic situation in the society in general are common.

Media and communication researchers have mostly used quantitative content analysis to detect discourses and how they change over time and space through counting words or combinations of words. Digitalization and the development of big data techniques as well as software for statistical methods has turned computer-aided content analysis (CATA) into a commonly used method for studying any type of written material that is digitized (Neuendorf 2017, Drisko and Maschi 2015). CATA has quickly become an important method for analysing large sets of texts, allowing the researcher to easily code the text and run any type of statistical analyses. Such research methods can also be applied to the database created in this proposed project, for instance, by examining how the use of specific predefined concepts or combination of concepts have developed over time. An inductive quantitative approach is word cloud analysis (Chandrasegaran et al. 2017), in which case the software calculates what concepts are the most used ones.

Digitizing annual reports will also offer a valuable empirical foundation for a novel, socio-historical research agenda. Social scientists have increasingly come to borrow techniques from the field of corpus linguistics to employ quantitative text-analysis (Baker, 2006; Spitzmüller & Warnke, 2011), a method to examine

e.g. social movements ideological changes over time (see e.g. Lundström).

Changing language can illustrate the changes in society. During the 19th century, people in Sweden increasingly learned to read and write, and consequently were also able to gain access to the official language. A 1906 spelling reform, which aimed at making the spelling of Swedish words closer to the actual pronunciation of the words, was part of the general democratization of society. In a study of Swedish newspapers between 1906 and 1926, Markella Callin shows that the Social Democratic newspaper *Social-Demokraten* implemented the new spelling straight away in 1906. It took the liberal *Aftonbladet* ten years after the reform to change their spelling usage, and the conservative *Nya Dagligt Allehanda* did not use the new spelling rules until 1926 (Callin). As the labour movement gradually became a pivotal actor in most sectors of society, its influence on language is likely to have been great. (Arbetarrörelsen och språket, HSFR 1991–1994; Josephson & Hedström; Mral).

Participants

The project will be led by Jenny Langkjaer, (100% monthly salary), archivist at ARAB since 2017. Jenny has a PhD in history (2011) and her field of research is government surveillance of the labour movement, as well as labour movement strategies against military and police repression. Between 2011 and 2015 she worked as a university lecturer at the Department of History at Stockholm University and held a post-doc position at ARAB in 2013. Jenny spent 10 months as an archivist at Stockholm City Archive, making confidentiality assessments of public documents. She has extensive experience in archive pedagogy issues. She will be responsible for the project timeline being followed, handling the project's internal and external contacts, directing the work of collecting and selecting material and overseeing the scanning process at ARAB.

Örjan Simonson (30 % monthly), head of Uppsala county's People's Movements Archive (since 2014), is a PhD (1999) and senior lecturer in history (2012). Simonson's field of research is in early modern history, with a focus on the geographic aspects of local communities and societies, media and self-government. His main academic works have dealt with a hundred's court in Uppsala county (Torstuna härad), Uppsala Cathedral and the Swedish postal office. As a lecturer in history, Simonson specialized in global and environmental history, cultural heritage studies and was 2010–2014 director of studies and main lecturer in archival science at Södertörn University. He has been employed in archives, museums and at different universities. Simonson will manage the work of collecting and selecting material at FAC, overseeing the digitizing and transcribing processing at FAC and vouch for competence in metadata, indexing and repository issues in the project.

Anders Hast is a senior lecturer in Computized Image Processing at the DIT, Division of Visual Information and Interaction, Uppsala University. Hast received his PhD in Computerized Image processing at Uppsala university in 2004, where computer graphics, mathematics, parallel programming and visualization were important parts of the PhD studies. Since 2004 Hast has been working half time at UPPMAX (Uppsala Multidisciplinary Center for Advanced

Computational Science) as an application expert in scientific visualization. After a year as an ERCIM fellow at IIT, CNR, Pisa in Italy 2011, Hast received a full-time position as associate professor at Uppsala University. Recent research has focused on computer vision and image processing, especially for applications in microscopy, aerial photography and hand written text recognition. The latter focus on such things as scribe identification and semi-automatic transcription of medieval documents using a combination of word spotting and visualization techniques. In the project, Hast will be responsible for developing methods of handwritten text recognition and contributes with his academic competence in information technologies.

Silke Neunsinger has a PhD in history (2001) and is associate professor in economic history (2009) and head of ARAB's research department (since 2006). She will ensure the scientific quality of the work by taking responsibility to organize the workshops and meetings as part of her usual tasks at ARAB (20%). Neunsinger has published extensively on feminist labour history, methodology for global history and has been involved in large collaborative global history projects such as the global history of domestic workers and the global history of consumer co-operatives. She has recently finished a research project on the multi-layered global history of equal remuneration. Neunsinger is the editor of the Swedish labour history journal *Arbetarhistoria*. She is member of the advisory board of labour history journals such as *International labor and working-class history* (US), *Labour /Le Travail* (Canada), *Labour History* (Australia) and *Workers of the World* (Global). Neunsinger is a board member of the Global Labour History Network. She is one of the coordinators of the Feminist Labour History Working Group of the European Labour History Network. She has been a visiting scholar at York University (Canada), University of Toronto, The International Institute of Social History in Amsterdam and the Centre for Women's Development studies in New Delhi.

The project also has access to the expertise of the following Swedish researchers: Professor Emeritus Maths Isacson, Department of Economic History, Uppsala University; Dr Jenny Jansson, Department of Political Science, Uppsala University; and Associate Professor Fredrik Sandgren, Department of Economic History, Uppsala University. This group will function as an advisory board for indexing. In addition, the group will arrange annual workshops and conferences to bring together the international advisory board, as well as academics and archivists to discuss the projects and how the repository can be used for academic research and by union organisations themselves.

The project also needs technical assistants for the task of scanning and transcribing, one at each of the archives. In addition, the DIT and Uppsala University Library will need to make adaptations to and develop new applications for Alvin. For this purpose, we will need external consultant services to design an interface for the search engine and the digital collection. In order to adapt and ensure compatibility between the repositories, there will be a cost of 300,000 SEK.

The project group has access to an international advisory board which consist of

archivists, librarians and researchers who have accepted to discuss the development of the project with us during workshops: Professor Stefan Berger (Manager, Institut für soziale Bewegungen, Bochum); Professor Dorothy Sue Cobble (Rutgers university); Professor Geert van Goethem, (manager, AMSAB, Ghent); Shivangi Jaiswal (Jawaharlal Nehru University, Delhi, former content manager of the digital archive of the AILH); Jesper Jørgensen (Head of the archival department of the Danish Workers Museum and Archive); Professor Knut Kjeldstadli (Oslo university), Dr Anja Kruke (manager, Archiv der sozialen Demokratie, Bonn, president of IALHI); Professor Marcel van der Linden (IISH); Gabriele Mohale (manager Historical papers, Wits University, Johannesburg); Dr Larissa Rosa Correa (Pontifical Catholic University of Rio de Janeiro); Dr Ole Martin Rønning and Frank Meyer (managers, ARBARK, Oslo); Professor Andrew Scott (Deakin University, Melbourne), Henrik Summanen (Digisam), Petri Taskanen (manager, Finish social democratic labour movement archives, Helsinki) and Dr Henk Wals (manager, IISH).

International co-operation

ARAB works closely with the Nordic labour movement archives and libraries and is a member of the International Association of Labour History Institutes (IALHI). This will allow us to create the infrastructure in dialogue with our colleagues from labour history institutes worldwide. The close co-operation with the AdsD in Bonn and the IISH enables us, whenever necessary, to fill the gaps in the holdings of the international material at ARAB. This project is of interest to the member organizations of the IALHI with similar holdings. The project will therefore be presented at the upcoming annual IALHI conference in Madrid in September 2019. ARAB and FAC are well-connected to the regional popular movement archives in Sweden as members of the Association of Swedish Archives.

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