

Historical Networks and Identity Formation: Digital Representation of Statistical and Geo-Data: Case Study of Norwegian Migration to the USA (1870-1920)

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Abstract

The article is a result of the collaborative interdisciplinary workshop, which involved expertise from social sciences, history and digital humanities. It showed how computer mediated ways of researching historical networks and identity formation of Norwegian-Americans substantially complemented historical and social sciences methods. By using open API of the National Archives of Norway we used statistical, geo- and text data to produce an interactive temporal visualization of regional origins in Norway at the USA map. Spatial visualization allowed highlighting space and time and the original regional belonging in their home countries as fundamental values for understanding social and cultural dimensions of migrants' lives. We claim that data visualizations of space and time have performative materiality (Drucker 2013). They open a free room for a researcher to come up with his/her own narrative about the studied phenomenon (Perez and Granger 2015). Visualizations make us reflect on the relationship between the phenomenon and its representation (Klein 2014). This digital method supplements the classical sociological and socio-constructivist methods and can therefore enrich our knowledge of social phenomena. In the article, we show, what potentials this visualization has in relation to the particular field of emigration studies, when entering into a dialogue with the existing historical research in the field.

The work of representation in historical and social research

Historical and sociological research has been recently dominated by socio-constructivist approaches and methods for reproducing social reality. Both, the participants within the studied phenomenon and researchers are perceived as actors, who enter into various

discourses and create and recreate identities and social realities, which are perceived as flexible, changing and not possessing a certain once given and stable “core”. Participants of social reality are, according to these methods “always already thrown” into the changing linguistic and social world of human dwelling. The only possible thing is to study, or reproduce are certain verbal or imaginary representations, but not a “true” substance or reality. To social constructivists, there is no stable metaphysical ‘core’ from which people operate and make sense of themselves and others (Dreyfus and Rabinow 1982). Rather, the infinite linguistic and cultural processes of meaning creation or representation, constructs subjects. The discursive theory of representation was developed within cultural studies by Stuart Hall (1997). Hall pointed to the constructed, discursive and arbitrary nature of the representation. According to Hall, meanings and connotations, which we prescribe to the objects of representations, can be written into different discourses and mean ‘anything anytime’ (Hall 1997). Representation is an act of giving meaning to a thing, an event or a group. It is an indirect mediation through which our mental idea about something is expressed by using a so-called signifier – a sign or a word that enters into complex relations with other value-laden signs. In the act of representation, we relate to discourses disseminated through culture and media in stories, images and signs. Culture has, therefore, a decisive force in ordering our subjective world (Hall 1997). This basic socio-constructivist idea has been dominant in historical and sociological research when studying historical social networks, relations and identities of individuals and groups. The main research material has been diaries, letters, historical documents, newspaper publications, research discourses etc.

Performative materiality of digital representation

With the rapid progress of information and communication technologies digitization of science and humanities takes place. As Eric T. Meyer and Ralph Schroeder (2016) point out, sciences and humanities is increasingly being driven by “knowledge machines”, with ever larger domains of research subject to advancement via research technologies. Internet and digital tools transform the way, *how* we produce knowledge and *what* we learn about the world. ICT is able bringing together people, data sets and tools for their investigation, creating a qualitatively new network and methods for knowledge production. In our case we have produced a digital representation of the historical phenomenon of migration and

migrants' identities. We believe that analogue socio-constructivist and computer mediated methods complement each other. This fundamental insight is taken from media archaeology, which scrutinizes the repressed, forgotten and outdated media (if not to say in technological rubbish), showing the continuity and complementarity of various types of mediation of reality (Parikka 2012). In our project, we continue this line of thinking showing that analogue and digital ways of how researchers mediate historical reality complement each other. In both cases we represent the reality of migration in certain ways. However, whereas in the analogue representation active actors of representation are human beings, or researchers, in the digital representation the agency of the machine (computer) co-performs a digital representation. Digital representation has performative materiality, as it involves an agency of the machine (Drucker 2013). We believe that in the future social scientists will use a combination of the analogue and digital methods of representation.

By approaching digital methods of representation in terms of performative materiality, we perceive them, in line with Drucker (2013), as material mediations of arbitrary and context-specific meanings. The meanings, produced by the digital agency are dependent both, on the material and social conditions, which underpin representation, and on the concrete individual act of reading or interpretation. In this way, we write the work of digital representation into the tradition of structuralist, post-structuralist and cultural studies, which all have questioned a stable and essence-like nature of meaning. According to Drucker, by re-engaging with these theoretical traditions, one can bring an analytical framework for approaching the materiality of digital activity into focus. This framework signalizes a shift from a concept of things as entities, to a concept of them as events (Drucker 2013: 12). A meaning in both, an analogic and the digital representation is unique and conditioned by material, cultural and societal circumstances, which were involved in the act of mediation: "...material forms create the mediating expressions that are transactional objects of meaning production" (Drucker 2013: 25). According to Drucker, material artifacts, which are involved into meaning production, do not represent, they perform.

In our case, when creating a visualization of the places of origin of Norwegian migrants on the USA map, one should be aware of several social and material agencies, which altogether made the digital representation possible. To name only few, these are the material

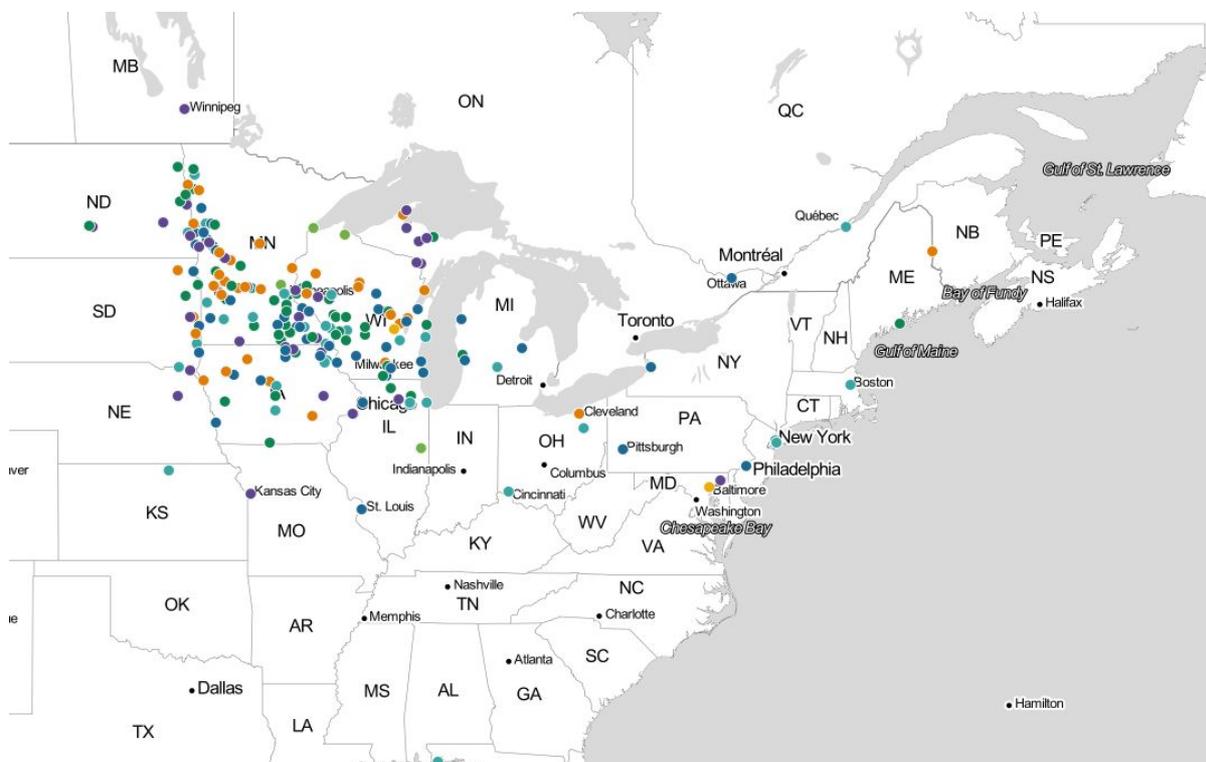
technologies of and the interest in the population census, which has been essential for the functioning of, and control within national states; the persistent attempts to reproduce geographical experience in maps, and a huge number of various maps and geo-visualizations. Increasing scholarly interest to identity, nation-building and ethnicity, and a close attention to the topic of migration, belong to the recent social factors, which stand behind the produced visualization. And last but not least, material infrastructure of the Internet and the ability of digital code to link various types of data, make out the material conditions and specificity of digital representation. Therefore, when creating this type of research, the involved team has been aware of various mediating stages, layers and conventions, which altogether perform the presented visualization. We believe, however, that it is still meaningful to relate to the already existing forms of mediation and discourses. When linking various types of data: maps, statistics, previous qualitative research on migration, it is possible to see well-known phenomena in a new light.

Data materials, methods and digital tools

1) The visualization on map: <https://knreise.carto.com/builder/5fd73b14-d197-11e6-a02e-0e05a8b3e3d7/embed> and statistical graphs use data from the National Archives of Norway. They are based on Emigrant records collected by the Norwegian Police on all emigrants leaving Norwegian ports. The original records include for example: name, sex, age/birth date, embarking/register date, place of residence, occupation and intended destination. These records have been transcribed by the National Archives of Norway and made public through: <http://digitalarkivet.arkivverket.no> In 2016 the National Archives chose these materials as a linked data pilot, and the transcribed data was linked to Wikidata and Geonames using openRefine and made accessible through an API. The API delivers JSON-LD and can be used to compile statistics on migration patterns, for example, the gender percentage of Norwegian emigrants to each state in the United States from each Norwegian county sorted by decade. The API also delivers information about each individual.

Our research became possible due to the possibilities offered by the digital tools shared through Internet, which make it possible to bring together data, process them and make available for various experts. Using Carto allowed us producing visualization of the

immigrant statistics (place of origin in Norway) on the USA map. The main method is that of digital visualization. The method (picture 1) enables the thinking about this history of Norwegian-American migration as a spatio-temporal phenomenon. It offers the interactive temporal visualization of regional origins in Norway at the USA map. Migration from certain regions in Norway is marked with a separate color. That will highlight space and time and the changing regional belonging as fundamental values for understanding social and cultural dimensions of migrants' lives. Statistical graphs and texts, which is possible to produce (by using for example, Plot.ly) complement the visualization on map and demonstrate the contrast between relatively stable, but changing with migration, spatial values and varying thematic data (Meirelles 2013).



Picture 1

Studying Norwegian migration to the USA (1870-1920): socio-constructivist approaches

When using the digital methods for researching identity, we study the example of Norwegian emigration to the USA. Between 1825 and today, nearly 1 million Norwegians left their homes. Especially during the period of mass immigration, from 1865 to 1939, a greater

percentage of Norway's population emigrated than any other country except Ireland. The majority of Norwegian immigrants settled in the Upper Midwestern states of Iowa, Minnesota, Wisconsin and the Dakotas. Other areas of the United States also witnessed Norwegian settlement, mainly in the Pacific Northwestern states of Oregon and Washington, in Brooklyn, New York, Alaska, and Texas. But in 1910 almost 80% of the one million Norwegian Americans living in the United States called the Upper Midwestern states home. Norwegian-American experience was rural in character. Researchers have been asking: What characterized their and their children's experiences in the United States? Recent scholarship in the field has turned toward investigating the interactions Norwegians had with other immigrant and minority groups, including Native Americans and Swedes. Historians have also started paying more attention to the cultural, political, racial and ethnic factors that influenced the immigration experience.

As mentioned before, recently, researchers have used the socio-constructivist and post-structuralist theory of representation as a starting point for theorizing identities and lived lives of migrant subjects. Historical representations of migration and migrants' lives are built proceeding from an analysis of text documents, and discourses around ethnicity, sexuality and gender. Migrants' identity is looked at as a "creative and chaotic space of existence" (Staunæs & Søndergaard 2006), a flexible notion, which is formed within a complex web of societal discourses. There are proponents of the idea that any social characterization is too narrow to describe the richness of individual experience. However, the majority of researchers believe that operating with categories as gender, ethnicity, race, religion, regional belonging and others can be meaningful (Berg et al. 2010; Staunæs and Søndergaard 2006). In line with Hall (1997), scholars studying migration suggest that the researcher should be sensitive to concrete contexts holding that the interplay of signifiers or categories in representation is situation-conditioned. The researcher should be able to show how these categories were negotiated by specific actors (Berg et al. 2010; Lykke 2003; Staunæs and Søndergaard 2006).

Proceeding from these socio-constructivist methods, the process of Norwegian migrants' assimilation has been recently studied in terms of their advantage as white people in the race conscious American society of the 19th century. Alternatively, when raking into

consideration the notion of ethnicity, other researchers show that Norwegian immigrants, who were settling in the urban Chicago area by the turn of the 20th century, developed a romantic sense of ethnicity, which was manifested in e.g. the activities of ski jumping and children's parade on the constitution day on the 17th of May. Although the romantic sense of ethnicity could be therefore opposed to race consciousness, evoking feelings of pride. The dispute within the field has been centered on the question, which categories played the major role in the formation of migrants' identities.

Historians have also shifted their attention to studying Norwegian immigration from a perspective of their local belonging in Norway and its impact on the assimilation process in the USA. In these works emigration and immigration – Norway and the United States – are given equal treatment and understood in relationship to one another (Olson 2013). The transatlantic focus of new scholarship, coupled with an emphasis on cultural, racial and ethnic factors and the knowledge gained from micro analyses of lived lives opens up the possibility for a greater understanding of how the particular regions immigrants left shaped their immigration experience. We believe that it is in this emerging area of scholarly focus that the digital visualization on the USA map stands to make a significant contribution. Visually highlighting the relationship between immigrants' places of origin and the geographic dispersal of their intended settlement in the United States, will further historians questioning of how local Norwegian traditions, customs, and beliefs came to shape immigrants' experiences in the United States.

The work of the computer mediated visualization is especially reliable as it is based on the metadata (place of origin, name, place of destination, gender, age) of the digitized original migrant protocols available at the National Archives of Norway. Digital visualization on the places of migrants' origins in Norway on the USA map opens new questions to work with, for the historians, as to the impact of regional identities on class, gender and even racial and ethnic self-identifications. As it is known from previous research, Norwegians followed a fairly conservative pattern of assimilation, maintaining many cultural beliefs and traditions of their home country decades after immigration. For example, the Norwegian-American experience was distinctly rural in character. In fact, they were the most rural of any major immigrant group that went to the United States in the nineteenth-century a trait Odd Lovoll

refers to as a “rural bond” Norwegian immigrants shared across the generations (Lovoll 1984). Living in rural communities, often surrounded by other Norwegian Americans, the rural nature of their American experience contributed to a slower assimilation rate amongst Norwegian Americans compared to their more urban-oriented Scandinavian counterparts, the Swedes and Danes.

Local and regional identities were important to Norwegian immigrants and their descendants. Though regionalism was common to all immigrants, local identities appear to have held special significance for Norwegians. Perhaps this was due to the physical environment of Norway, with topographical conditions such as water and mountains separating rural communities to the point of isolation. Many Norwegians came from places with distinct local customs and traditions, including peasant dialects that could diverge greatly from one another. It was often only after immigrating that Norwegians came into contact with these unfamiliar variations on the Norwegian language (Lovoll 1984: 66-67). Language formed the basis of regional cultures, but other practices such as dance, music, games, folk art, and folklore developed alongside distinct dress, food, and social norms.

In the United States, Norwegian settlements were defined not only by a national identity, but also by the rural Norwegian communities from which the settlers immigrated, often referred to as *bygd*. Even in rural America, few Norwegian settlements consisted solely of one *bygd* population. Most towns and parishes had people from several parts of Norway, though people from a different district or valley in Norway often settled together in particular neighborhoods or sections of a town (Lovoll 2006: 66).

Historians have used immigration records, farm names, and census materials to identify some of the local identities of Norwegian settlements in the United States. For example, Odd Lovoll found that Benson Township in Minnesota was heavily settled by immigrants from Gudbrandsdal, though there were also settlers from Trøndelag in the township. A neighboring township was predominately settled by Nordjordings. Lovoll was able to further narrow down the locations in Nordfjord where settlers came from by examining family names on grave markers (Lovoll 2006: 68).

One can understand how these research methods will be much enhanced by the digital map that displays place of origin in one easy-to-read and accessible format. The project also promises to help answer Nils Olav Østrem's call for immigration historians to shift their focus from an economic interpretation of Norwegian immigration to a cultural understanding of this phenomenon in his recent micro-history of Norwegian emigration from Skjold and Vats (Østrem 2015: 9). Digital visualizations and tools will be of much use in this respect. The innovative and interactive map, based on statistical materials, can inspire researchers to ask comparative questions regarding how local customs, beliefs, and practices – in other words, local culture - influenced immigrants' experiences in the United States.

The local identities of Norwegian immigrants have long been included in historical research on this topic, but rarely in terms of how local and regional identities affected the immigrant and settlement experience. Some of the first works published on local identities and Norwegian immigration were written by first and second-generation Norwegian immigrants themselves who asserted the presence of local and regional differences in the face of the national identity thrust upon them after immigrating.¹ In the early 20th century, many of these Norwegian Americans came to form *bygdelags*, or Norwegian American social organizations with distinct regional and local identities. Much of the early postwar research on regionalism and Norwegian immigration focused on the development of *bygdelags*. Scholars wanted to understand how attachment to regional identities manifested themselves in the creation of these organizations, and how these attachments changed over generations.²

In addition to this work on how regional and local identities were expressed in the United States through the *bygdelag* movement, scholars also investigated how the general trends in Norwegian immigration looked in particular locales. This research primarily focused on the sending regions in Norway and did not connect immigrants' places of origin to their

¹ Some of these thoughts are outlined in Waldemar Ager's writings. See: *Cultural Pluralism versus Assimilation: The Views of Waldemar Ager*, edited by Odd Lovoll. Vol. 2. (Northfield, MN: The Norwegian-American Historical Association, 1977).

² See, for example: Odd Lovoll, *A Folk Epic: The Bygdelag in America*. Boston: Published for the Norwegian-American Historical Association by Twayne Publishers, 1975).

destinations.³ We know for example, that emigration from Tinn in Telemark county was largely spurred on by social and economic motives. Poor farmer laborers and landowners alike saw emigration as the best way to secure land of their own (Svalestuen 1983: 82-83). Economic conditions in Sogn, the county to lose a larger proportion of its population than any other, were also found to have stimulated mass emigration (Sunde 1983: 121-122).

These examples demonstrate the emphasis most scholars have placed on local economic factors in studying the relationship between places of origin and causes of migration. In his book *Den store utferda (The Great Exodus)*, Østrem answers his own call to shift the focus of study to the role cultural factors had in stimulating immigrants' decisions to emigrate. His study investigated these motivations at the individual level in the communities of Skjold and Vats in Southeastern Norway (Østrem 2015). He found that at the local level three major factors came into play in determining whether someone emigrated: religion, chain or network migration, and to what extent movement was encouraged, accepted, and prevalent in a given place (Østrem 2015: 323-324).

Many previous studies of Norwegian immigration have either focused on the sending country: Norway, or the receiving country: the United States. In 1960 Frank Thistlethwaite called for studies of immigration that were transnational and followed individuals "from their places of birth to their place of death."⁴ While several historians have responded to this call, studies that consider both the country a person emigrated from and the country a person immigrated to are difficult to carry out because of the nature of source materials. In spite of these limitations, there are some histories of Norwegian immigration that look at both the specific regions people emigrated from and the specific regions they immigrated to. An early example of this work is Jon Gjerde's *From Peasants to Farmers*, which traced immigrants from Balestrand, Norway to the Upper Midwestern states of Minnesota and Wisconsin. He found that the key to understanding Norwegian American developments lay in the tension between old cultures and new environments (Gjerde 1985: 6). Terje Joranger's

³ *Norwegian-American Studies*, vol. XXIX, edited by Odd Lovoll (Northfield, MN: The Norwegian-American Historical Association, 1983) has several articles on Norwegian places of origin, including Tinn, Sognfjord, and Helgeland. These pieces highlight regional and local economic, social, and cultural life in Norway prior to emigration.

⁴ "Migration from Europe Overseas in the Nineteenth and Twentieth Centures," in *XIe Congres International des Sciences Historiques Rapport V* (Uppsala), 32-60.

work, *The Migration of Tradition?*, has added to this scholarship by examining to what extent Norwegians legal institutions linked to land transfers and marriage and naming patterns were brought by Norwegian immigrants from the Valdres region to America (Joranger 2008).

While these studies have begun to look at how local and regional cultures influenced the Norwegian immigration and assimilation experiences, there is still much to be done. Most of the previous scholarship has focused on immigration to the Upper Midwest, with little research conducted on how Norwegians transferred and adapted local customs to the particular context of other regions in the United States, such as the Pacific Northwest, Texas, or New York.

There is also very little comparative research done on this topic. A recent dissertation written by Erik Aalvik Evensen at the University of Oslo compared the migration of immigrants from Hommedal parish to two settlements in the Midwest: St. Joseph Missouri and East Norway, Kansas (Evensen 2011). Evensen finds that due to the small size of these settlements these Norwegian immigrants assimilated quite quickly. Their relative isolation from other Norwegians encouraged this as well, and led to more interactions and cooperation between these Norwegian immigrants and other immigrants, including Germans and Danes. His research shows the rich understanding of the immigration experience that can be gained from doing comparative studies.

The digital visualization can help stimulate more research into this area. Its interactive display of immigration trends from Norway, including the variables of chronology, gender, place of origin, and place of destination, provides a fertile starting point for researchers of immigration. This information will hopefully stimulate new discussions about the settlement of the United States over time by immigrants of varying backgrounds. It will potentially add new understandings or at least inspire new discussions of research on Norwegian immigrants to states outside of the Upper Midwest.

Additionally, this interactive map can aid researchers in asking comparative questions about local identities and how they intersected with other kinds of identities, including age and gender, to affect the immigration experience. Evensen's comparative work investigating

immigrants from the same place in Norway in two different American settlements has started this conversation. Hopefully more researchers will push even further and begin comparing immigrants from regions or local environments with distinct cultures to see how local identities affected immigration experiences in various regions of the United States

One final note that is not so much about the research implications of this work, but rather about how this project can aid in the teaching of immigration. Someone who teaches a course on Scandinavian immigration to the United States can often experience that students draw their own maps displaying patterns of settlement of Norwegian immigrants because there are no good maps already in existence. The digital map not only will assist students of Scandinavian immigration in understanding and comparing Norwegian immigration patterns across time and space, but it also promises to enrich the teaching of immigration more broadly. Consider if other immigrant group experiences could also be mapped in this way and a comprehensive, interactive map of American immigration could be created. For example, if similar visualizations of Swedish, Danish and Finish immigration to the USA would be done, we would enrich our knowledge on “Nordic spaces” outside the Nordic countries, to the expression of L. Gradén, H.P. Larsen and S. Österlund-Pötzsch (2014)⁵. That would also help us answering the question, whether various Nordic cultures in the USA remained the same or merged, making it possible to speak about Nordic-American identity. The conducted project can also be a template for a similar spatial analysis of immigration to the USA from other European countries, as well as from the countries outside Europe. If such projects would be made, one could simultaneously compare the immigration patterns of Norwegians, Finns, Italians, Irish, Scots, Somalians, English, Australians, Chinese, Mexicans, and gain a fuller understanding of the similarities and differences in American immigration over time. For example, along with Norwegians and Irishmen, Scots represented a large immigration group to the USA in the 19th century. Although this falls outside the scope of this project, but it is a thought for where this project could go in the future and how it could inspire new directions in teaching and research – both of Norwegian immigration specifically and immigration to the United States more broadly.

⁵ <https://rauli.cbs.dk/index.php/assc/article/viewFile/4639/5067>

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