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Citation for the published paper:

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**Swedish Archives and a Fatal Heredity Disease**

**SCRIPTUM, 2002, 50: sid. 56-69**

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**Forskningsarkivet vid Umeå universitet, Umeå**
Swedish Archives and a Fatal Hereditary Disease

Background and introduction
A number of severe hereditary diseases occur throughout the world but generally few people are affected by each one, as they are primarily linked to certain families in specific areas. Some such diseases, however, are spread worldwide and affect many. Symptoms can be present at birth or become manifest later in life, and they may also vary considerably among people with the same diagnoses.

What concerns us here are the social, relational, and structural aspects related to such diseases and their social and cultural meanings in a nineteenth century Swedish context. It may be ethically problematic to study to its full extent an area so infused with anger and guilt as hereditary diseases using current data. However, certain socially problematic aspects of life can reasonably be illustrated with the help of historical distance. The Swedish historical archives permit us to systematically study aspects of the social life of families who lived more than a hundred years ago.

Analytical and empirical considerations
The empirical foundation consists of data about seventeen extended families with members who what is presumed to be suffered from Huntington’s Disease (henceforth abbreviated to HD) and who lived more than a hundred years ago with lives that covered most of the nineteenth century. These families lived in certain geographical regions situated in the northern part of Sweden.

This simplified model will help to clarify the main purpose of this investigation:

Model
HD → behavior disorders → ‘Intervening factors’ ← Social context
(social reactions, interpretations & understandings of HD)

1 The research project entitled Hereditary Causes and Social Consequences which resulted in the present article has been supported by funding from Humanistisk Samhällsvetenskapliga Forskningsrådet.
The focus here is on the social reaction dimension of the model above. What is highlighted is primarily that social reactions should not only be regarded as merely automatic responses to specific deviant behaviors caused by HD. Various social and contextual factors certainly contribute to the considerable variety of the observed reactions. In themselves, the extended families studied probably also represent different customs and traditions related to work and occupational standards, as well as to external social settings. Various defense strategies were developed to cope with problems present in their lives at the time.3

Those affected by HD, who leap out of the documents were for the most part ordinary people. They were often typical of normal, Northern Swedish, rural nineteenth century people and they often lived under conditions characteristic of the average population. However, sometime during their adulthood they were struck by a mortal, hereditary disease. This was certainly a personal disaster that, due to the familial nature of the disease, many of them lived in fear of for years before its onset.

It became evident through the documents utilized that the reactions expressed by specific actors were caused by negative family conditions, which in turn might have been to a greater or lesser extent associated with symptoms linked to HD. A few of the deviant behaviors causing these reactions also involved moral and legal issues related, for instance, to sexual crimes such as incest, or serious violent crimes such as murder. These certainly gave rise to continuous discussions among the local population.

Historical documents rarely speak for themselves; they need to be interpreted and carefully analyzed. If we are to improve our understanding of the various social aspects that emerge from them, the importance of utilizing analytical tools based on social theories seems obvious. There is at least one main thread that runs through the forthcoming analyses. In order to point to certain aspects significant for the interplay between HD-sufferers and their close relatives on the one hand, and all those potential actors who were in positions to react to behavior disorders caused by HD on the other, certain analytical tools initially introduced by the American sociologist Erwin Goffman will be shortly described here. His theories briefly concerning interaction rituals in everyday life have proven to be fruitful in numerous examples of social studies dealing, for example, with various forms of chronic illnesses.4 Goffman’s work on social identity maintenance processes is particularly interesting for understanding social reactions towards certain kinds of deviance. Particularly useful is Goffman’s concept of stigma5 which refers to “any condition, attribute, trait, or behavior that systematically marks the bearer of as culturally unacceptable or inferior, and has as its subjective referent the notion of shame or disgrace.”6 In a social sense a visible stigma means a spoiling of the normal identity, but the level of visibility is context-dependent and is therefore an aspect of vital importance.

3 See Goffman, 1968, p. 57.
4 See, for example, articles about living and coping with different sorts of diseases in Scott and Douglas, 1972, Fitzpatrick et al., 1984, and Anderson and Bury, 1988.
5 Goffman, op.cit.
6 Williams, 1987, pp. 135-6, after Goffman.
Huntington’s Disease

The inherited form of HD as we know it today was not recognized among physicians to any great extent until George Huntington, an American physician, described it in 1872.\(^7\) However, popular notions of HD were certainly known long before this.\(^8\) Since then it has been discovered in different parts of the world but in varying degrees.\(^9\)

HD has been described as an autosomal dominant hereditary disease. This means, genetically, that one single affected parent is enough to transfer the HD-gene to on average 50 percent of the children in the next generation. New research findings have somewhat modified this description. For example, an anticipation hypothesis has been presented, suggesting that, comparing later generations to those born earlier, it is possible that the HD gene might lead to more severe symptoms. Furthermore, HD is fatal and death occurs on average 16 years after onset.\(^10\) The symptoms of HD have been summarized in the following way by Davison and Neale:

Symptoms usually begin when the individual is in the thirties, and, thereafter, deterioration is progressive. The earlier behavioral signs are slovenliness, disregard for social convention, violent outbursts depression, irritability, poor memory, euphoria, poor judgment, delusions, suicidal ideas and attempts, and hallucinations. The term chorea was applied to the disorder because of the patient’s choreiform movements - involuntary, spasmodic twitching and jerking of the limbs, trunk, and head. These signs of neurological disturbance do not appear until well after behavior has already started to deteriorate. Facial grimaces, a smacking of the lips and tongue, and explosive, often obscene speech are other symptoms. The afflicted individual is likely to have severe problems in speaking, walking, and swallowing.\(^11\)

One of the crucial problems related to HD concerns the normally late onset ages between 30 and 50 years of age for most of those affected. Accordingly, most of those affected show symptoms in the middle or at the end of their fertility. For a few years now it has been possible to avoid giving birth to children with the HD gene. Modern DNA testing makes it possible to detect signs of the disease in the fetus. Potential carriers’ knowledge and use of these tests create new possibilities, but also ethical problems.\(^12\)

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\(^7\) Huntington, 1872. Whether Huntington was really the first man to make a proper description of the disease has later been questioned. See Örbeck, 1957, and Stevens, 1972, for comments on this issue. For instance, it was described in Norway as early as 1860 by the district physician Johan Christian Lund as Rykka (i.e. jerks or twitches) or Arvesygen (the inherited disease), and there are almost identical descriptions of the disease made by Huntington and Lund. Lund’s scientific term for the disease was Chorea St. Vitus. See Lund, 1863, and Örbeck, \textit{op.cit.}


\(^10\) Folstein, \textit{op.cit.}, p. 125.


\(^12\) For a discussion on this topic, see Huggins et al., 1990.
The number of people suffering from HD is relatively high in certain North Swedish areas. This fact combined with the possibility to utilize highly informative, historical Swedish archive materials forms the empirical basis for systematic, historical and sociological analyses of social reaction aspects related to HD.

**Research ethics considerations**

As a certain hereditary disease with considerable stigmatizing effects can be linked to certain families, it is necessary to take certain ethical considerations into account in the research. As family names are often related to specific areas and villages, steps have been taken to maintain all conceivable ethical principles to avoid any possible identification of links to families alive today. The inclusion of both family names and names of certain key villages central to the presentation of the HD cases could lead to identification.

Another step must also be regarded as an absolute necessity if identification is to be avoided. A frequently stated criterion for scientific research is that analyses should be replicable by someone else. This of course requires that detailed information about sources is provided. In the case of this study, however, this would mean that the subjects discussed and analyzed would be exposed to the risk of identification. This kind of fulfillment of the principle of scientific openness has therefore been sacrificed in this instance in favor of the ethical goal of confidentiality.

**Sources utilized - a short review**

Swedish historical sources contain systematically collected data records of every registered Swedish citizen from the end of the seventeenth century up to the present. The extent of the Swedish parish records is unique and could serve as empirical grounds for extensive and systematic studies of people suffering from different kinds of disabilities.

The primary source within the system of historical records is the parish examination records, which came about mainly as an effect of the missionary ambitions of the Swedish Evangelical Lutheran Church in the seventeenth century. The aim of these ambitions was to prepare the population for study of the Bible directly, without mediation. They were supported by far-reaching examination activities carried out by the church. According to an act of church law of 1686, the official duty of the parish priests was to keep records, and the instructions for carrying out this duty became successively more detailed. Records thus became increasingly standardized. Pre-

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13 See Sjögren, 1935, who found two heavily HD-tainted, extended families in one North Swedish region in the 1930s, and Mattsson, 1974, who made the first systematic inventory of all Swedish HD families up to the beginning of the 1970s. However, HD was described the first time in Sweden in 1916 by Ottosson.
14 An English description of these records can be found in Nilsdotter Jeub, 1993.
15 Before the year 1686 some attempts had already been initiated to record parishioners on a large scale in the diocese of Västerås. Furthermore, minor attempts were also made in this direction in certain parishes in northern Sweden, not however in parishes in the studies presented in this book.
printed forms were distributed to parish clergy from around 1770 onwards. In these forms individual data about each parishioner’s birth, marriages, and death were recorded. In addition, proficiency and knowledge as well as examination results in church related matters were noted in the records. This makes it possible to compare various aspects of individual records, for instance with regard to an individuals’ abilities to meet the claims stipulated in the church law. In an indirect sense it is even possible to interpret the lack of certain abilities in terms of disease, especially when these were commented en clair through notes in the records.

People’s reading and reading comprehension abilities regarding key Christian texts collected in the Hymn Book and in the Lutheran Small Catechism were carefully checked in annual examinations or catechetical meetings (husförhör). The minister of the parish systematically visited every known household within his parish in order to collect census information and information about the above mentioned proficiencies for every adult. Thus, an increasing amount of individual data were then collected in a system of records in which one record completed, and sometimes also overlapped other records, making double checks possible.

As these records were kept both on the individual and household, they also covered civil status and aspects of the local structure regarding formal social position. Parallel records of birth and baptism, marriage, death and burial, and in- and out-migration were kept. Therefore, a number of aspects concerning the conditions of social life could later be systematically studied. Thus, if one of these records has been lost, or if some records lack data due to fire or other damage, efforts of reconstruction are possible, allowing us to rectify absences of such data, at least to a certain extent.

It is possible to link parish record data to other data found in old sources such as protocols from district court proceedings, inspection records by district medical officers, maps of villages, etc. Thus an extensive reconstruction can be developed of the population structures that existed centuries ago. Furthermore, tax records, which are related both to land and cattle ownership, provide systematic knowledge about living conditions in different households and open the way for more standardized comparisons of households and families in different regions. Protocols from estate inventory proceedings, though far from completely preserved, may supplement these data by giving a more detailed idea of the household standard.

As local administration was fairly well developed in the seventeenth century, and with clear routines established in the eighteenth century, protocols dealing with both district matters and those that concerned household, family, and individual problems are still

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17 From 1749 on these data were collected centrally by a bureau of statistics, Tabellverket, in order to compile population statistics on both the parish level as well as for larger area units. These efforts were made in the spirit of mercantilist ideas and covered all parishes in the country, which at that time also included what is now Finland.
18 Such efforts have also been successively realized for one of the parishes involved in the present study. By utilizing computers the Demographic Data Base at the University of Umeå has reconstructed damaged parish records from one of the regions in Northern Sweden. This effort is an excellent example of how to make use of modern computers to restore the content of old damaged archives.
largely preserved. Lists and protocols dealing with poor relief, damage to real estate, domestic family problems, and certificates of address changes were just a few matters that parishioners dealt with. Thus, sources, originally aimed at serving administrative purposes, were developed in accordance with various professional standards. It is therefore possible to study the same events from different perspectives. Public, legal, medical, and religious records are accessible and available for making comparisons.

Missing data are always a problem in research based on historical documents. Some archives studied are complete, while others are more problematic due to incomplete data. Fortunately, there are no examination records representing parishes of interest in the present study that are completely missing, although one parish has been partly reconstructed due to damaged records. Furthermore, almost all court records of importance are still intact. There are, however, records missing from parish meetings, church councils, and certain diaries. Even though these sources are not the most central, a complete collection of them would have contributed considerably to enriching certain case stories.

Family comparisons, discussion, and concluding remarks

A rough categorization of all seventeen extended HD families studied results in three separate family groups as follows:

Group I includes three extended HD families designated as the no-sign HD families with no signs of anything resembling HD in any of the nineteenth century records checked.

Group II represents a centre-category, characterized by either slight signs indicating HD for more than one family member, or with striking signs related to just one member. This group is represented by seven extended families, here designated as typical HD families.

Group III involves seven of the seventeen extended HD families. Each of these so-called multi-problem families includes a number of members from more than one generation with pronounced signs of mental disorder and social problems that have afterwards been interpreted as symptoms of HD.

Thus, after roughly grouping all seventeen extended families studied with regard to possible signs of HD, three categories emerge. Though the line between the centre-category and the multi-problem families may seem somewhat fluid, the important thing here has been to emphasize the various overall differences between the HD families. In fact, both age at death and patterns indicated by the nature of social reactions noted in records indicate distinct and significant differences between the two groups. Could this result be explained by differing recording routines? Did the overall social conditions in the various Northern Swedish areas differ enough to give rise to systematic variations with respect to what was noted in records? Firstly, the majority of families were descended from two main areas situated in Central Norrland not far from each other.
The character of these villages as genuinely rural, situated in the same diocese, and with identical administrative routines means that neither significant social context nor systematic administrative differences existed. Furthermore, differences with respect to indicators discussed above also exist between extended families from the same parish.

All of these factors mean that it is meaningful to make comparisons between extended HD families with regard to aspects that occurred in different decades and in various parishes. Thus, at least two possible conclusions can be drawn: Firstly, despite the stigmatizing character of the disease a number of presumed HD cases studied appear with few or no indications in the records of any signs related to HD. Secondly, striking and systematic differences in social expressivity appear when one compares the seventeen families studied. Apart from some systematic medical genetic factors which might have given rise to various symptom patterns, there are also reasons to assume that social relational and economic factors influenced this outcome.

The present study should not be regarded as a complete review of all HD cases in Northern Sweden throughout the nineteenth century. Severed ancestral lines due either to the early deaths of some possibly HD sufferers, or to childlessness, may in certain cases have prevented the HD gene from being carried from earlier to present-day generations.

The research strategy chosen may also give rise to another analytical problem concerned with the generality of the findings. In fact, the selection of cases and events in the present study is not based merely on representational considerations but springs from medical genetic and genealogical factors. That is, information about present-day HD families has been utilized in order to find potentially HD-affected individuals further back in time. Most of the social, familiar, and communal challenges that emanated as a result of the way people with HD behaved were also extraordinary in various respects. On the other hand, these kinds of arguments could be applied to a majority of historical circumstances and events that roused public attentions and led to written documents.

But if the intention of the present study goes beyond a mere documentation of the number of people affected by HD, are there also vital elements in this study that give rise to apparent analytical advantages? Social norms, not formalized through the law and normally hidden in ordinary commonplace situations in the community, may be difficult to identify. By studying extraordinary events, however, normally hidden forces and norms may be revealed by evoking the expression of old-fashioned standards that were publicly taken for granted.

To proceed, there are at least a couple of possible explanations behind the findings presented here worth discussing in more general terms. Some have genetic significance while others are of a social, economic, and/or mental character. We will now turn to a discussion about mainly non-genetic factors.
The concept of family trauma seems significant here as it indicates people’s involvement in fatal, problematic, socially curious, and sometimes also terrible events which must have caused serious domestic family problems for all involved. Furthermore, social and psychological processes related to individuals afflicted with a serious hereditary disease surely give rise to feelings of shame, guilt, blame, and responsibility in the villager. They evoke social relational processes that involved both social identity maintenance processes of the HD sufferer, and interaction adaptive strategies among actors confronting the sufferer, in line with what Goffman suggested. Thus, one could expect a serious hereditary disease like HD to often cause overt negative, destructive reactions from such authorities as the courts, public assistance committees, or the church actors. Conceptions regarding the influence of heredity and environment, as seen in social reactions, did not always follow the expected pattern.

Members of the extended families studied represented a range of different living conditions. While some were well-situated, landowning peasants, and a few also had public offices, less than a handful could be characterized as socially marginal, multi-problem families. Few of the HD families were associated with crime. One simple but fairly reasonable explanation is the social exposure experienced by the HD families compared with other families. This is further strengthened by the socially dense character of the communities in which they lived. Another factor has certainly linked with the way these families coped with the social pressure from society around them. Generations of domestic family problems led these families to develop strategies to manage information and tension in the way that Goffman indicated, that is, to manage stigmas and to avoid public attention.

Most of those affected by HD described here were in fact individuals who happened to fall ill in middle-age, and who broke unwritten but living social norms. These norms often made their appearance by testimony in court or other assemblies. It has been possible from such testimony to later derive those virtues with which ordinary rural people seemed anxious to live in accordance. Thus, virtues that were apparently praised among the masses in nineteenth century rural Swedish society could be sorted into three clusters in the light of all the life stories, conflicts, and social reactions presented:19

- One should behave in a peaceful, silent way, act piously and have a charitable disposition.
- One should be honest and frank, unblemished and irreproachable.
- One should conform to church regulations and both feel and convey godliness.

Examples of benefits resulting from living in accordance with these virtues are easily found in the Bible. Furthermore, striking examples of the way Christian patterns of thinking permeated the attitudes of the rural Swedish population regarding their existence can be seen in protocols from district court proceedings, for instance. However, we also need to consider that these virtues were mediated by individuals, in whose self-interest it was to let these religiously based patterns direct the way they

19 This has also been discussed in Drugge, 1997, pp. 151-154.
acted and thought. The virtues represented may give rise to reflections about how and to what extent they then actually permeated the existence of the entire population. One may state that attitudes and values noted were truly in accordance with what was expressed in church council minutes, as their contents were almost always confirmed afterwards by the parties involved. On the other hand, the innermost thoughts of these people may have been of a somewhat different nature, but here we can only speculate about that.

In this context, one aspect concerning the perceived role of the parent in the rural community is worth comment. The understanding and practical implications of this social role were apparently sufficiently complicated to cause tragedy and severe domestic problems. To instill godliness into children’s minds, to facilitate their learning of the abilities prescribed, and to chastise all their children, whom they were expected to love to the same extent, were apparently responsibilities that weighed heavily on those who wanted to follow the decrees of the church concerning discipline. It was quite simply expected of all true believers, that they would be strict parents. Lapses from these prescriptions led to deep feelings of guilt and/or to strong disapproval.

The professional standards of knowledge about the basis of mental, nervous, or physical health conditions were relatively limited even at the end of the nineteenth century. The scientific, cultural, and social readiness to cope with mental disorders was obviously also lacking. The kind of features listed in categories of mental disorder were in reality those that caused serious practical problems in day-to-day family routines. Signs of hereditary links between generations were regularly noted in Swedish mental hospital journals during the second half of the nineteenth century. However, HD was apparently too much of a diagnostic challenge for the Swedish medical practitioners of the day. Furthermore, the way practitioners made diagnoses at the time in question was based on crude, symptomatic expressions of mental disorders. Thus, symptom patterns related to what may be understood as HD, or dance disease in the term used in Sweden at the end of the nineteenth century, were not explicitly understood in hereditary terms. Instead, such symptoms were often interpreted as the inheritance of some common personality characteristics from an earlier generation.

It should not therefore be considered strange that the majority of all presumed HD cases during the nineteenth century were never admitted to a mental hospital. The admission of mentally deranged individuals to Swedish mental hospitals one hundred years ago was far from automatic. But as in fact only five out of more than one hundred presumed HD cases in Northern Sweden were ever admitted during the whole nineteenth century, social selection mechanisms certainly operated which were directed by other considerations than those associated with mere medical and mental health. Thus, in order to gain a more general idea of how HD cases were “treated” in Sweden during the nineteenth century, we must refer to sources other than hospital journals and official declarations. The mental care situation in Northern Sweden during most of that century should in practice be characterized as pre-hospital, in which most mentally disordered individuals were treated in their homes, and those HD
sufferers who were admitted to a Swedish mental hospital during this period were the exceptions.

In other respects the Swedish nineteenth century society was in a formal sense relatively well organized with a fairly well-developed legislation regulating work conditions and poverty problems. Even though authorities served somewhat separate interests and also represented somewhat varying ethical grounds, their *manifest functions* seem fairly evident. Efforts maintained by the Church through church councils, for example, were principally aimed at controlling the way people met religious demands and, specifically, preparing people mentally and morally for the Holy Sacrament. State interests, effectuated by local authorities such as district courts and parish meetings, tried and punished individuals who broke the law; they also served as the last resort for those in acute need of financial aid and medical attention when no other means were available. This situation became evident when the need for help arose as a result of problems related to aggravated, ordinary daily, domestic routines.

Various social restrictions introduced in Sweden throughout the first half of the nineteenth century must have been viewed as increasingly burdensome for those without property, and who from time to time experienced severe problems in supporting themselves and their families. Despite this, surprisingly few were actually subjected to harsh actions from local authorities. Instead, a kind of flexibility often characterized decisions made by local authorities. As striking as this is, however, there was also reluctance on the part of local authorities to intervene in cases where individuals were mistreated by HD sufferers. Nevertheless, the overall principle directing actions by authorities in the local community then seems to have been to keep the social order intact with the individual’s well-being only a secondary issue. Thus, maintaining social order could be regarded as the overall *latent function* of all the locally based authorities.

The various social and economic preconditions that characterized the separate HD families may have influenced the readiness of the state and the church authorities to give attention to these families. However, the abilities of actors representing these two main forces in society to handle problems related to HD affliction may also have differed. Not least to the church with its local bonds, must these problems have been demanding. How was it possible to explain and to make people understand why certain families were afflicted with something so annihilating as a serious and fatal familial disease, and for no obvious reasons? The link between sin and punishment was repeatedly sermonized by the church, and a number of key passages in the Small Lutheran Catechism, one of the most widely distributed publications among Swedish households at that time, emphasized these links. 20 It is a short step then to also presuming, as was the popular notion, that these families were afflicted with sin.

20 See Luther’s commentary on the tenth commandment (in Luther, 1983/1529, pp. 49-50) and his words in the Table of Duties (*Haustafel*) to these subjects (*ibid.*, p. 107).
Although Swedish clergymen were ordered to make notes about presumed hereditary diseases as early as 1824 according to a royal decree, they seem not to have done so consistently. The systematic differences that appear in documents, regarding the varying reactions to the HD families, may thus mean that the authorities turned a blind eye to certain events as long as they did not cause trouble in the sense that they became public affairs. The strategies the families developed for coping with traumatic situations and handling their relations with local authorities may also have caused these differences. These strategies varied to a great extent as the families initially possessed a variety of economic and social resources for managing these circumstances. These differences were also a matter of how various social distances affected relationships. Better living conditions are certainly related both to comparatively late ages of death and to the social ability to make it easier to conceal any stigmatizing symptoms of HD. Furthermore, genetic and socioeconomic factors may coincide. Slight or no symptoms, for instance, did not lead to stigmatizing effects, which also meant that no formal or informal social reactions could then be expected to occur. This means that it is not really possible to separate analytically genetic from socioeconomic causes, and to make estimations from historical documents exclusively about the importance of presumed genetic factors relative other factors, due to the complicated interdependencies presumed.

Finally, the results presented here lead us to pose some other questions of more current significance. One is connected with the way we comprehend the lives of those suffering from hereditary diseases in general. In fact, a majority of those afflicted with HD seem to have had fairly decent family lives for most of their adulthood. Should their lives be primarily a matter of medical, or genetic considerations? Skepticism towards radical, gene-technological strategies aimed at completely eradicating the HD gene must at least be explicitly stated. Another question has significance for modern geriatric healthcare. What does the high age at death among a number of the presumed HD cases in certain extended families really mean? One provocative assumption could be that certain aspects of the private healthcare arrangements at home more than one hundred years ago were, at least in more well-situated families with relatively decent living conditions, significantly different and qualitatively better than the institutionalized hospital care which has characterized the treatment of HD patients during most of the twentieth century. A majority of those suffering from HD a century ago were cared for in their homes. Socially stable settings surrounding progressively demented and disorientated individuals may have prolonged their lives. However, what their actual living conditions were like and what quality of life they and their relatives had are questions that are probably impossible to answer or even to study empirically from available historical data.

21 Handbok uti Svenska Lagfarenheten (Swedish Statute-Book), 1824, p. 88.
References

Printed sources


**Unprinted Historical Sources (categories of sources)**

*Church archives:*
- Church council minutes
- Parish meeting minutes
- Parish records (Church Books) including:
  - parish examination records
  - migration registers
  - birth and baptisms records
- banns and marriages records
- death and burials records

**Local government archives:**
Social welfare office documents including:
- poor relief records
- child care records

**Hospital archives:**
Admission documents
Mental hospital records
Mental hospital journals
District medical officer’s annual reports

**Juridical archives:**
Judgement Books including:
- district court minutes
- estate inventory records
- court of appeal minutes
Sheriff’s letter diary
Deputy sheriff’s letter diary

The following archives have been consulted during the data collection:
The Swedish National Archives, Stockholm
The Regional Archives of Härnösand
The Regional Archives of Östersund
The Research Archives, University of Umeå, Umeå
The Demographic Data Base, University of Umeå, Umeå