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Danish church interiors and their change in colour appearance due to repeated repainting of the furniture

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Abstract

This paper describes aspects of an ongoing PhD research project [1]. The research aims to investigate and gain new knowledge about the chronology and context of the colour history of Danish church furniture. Throughout time church furniture has been repeatedly repainted and new colour expressions were added. Repainting changed the coloured appearance of both the furniture itself and the entire church interiors.

The ongoing PhD is presented as an empirical and cultural historical research project. In addition to its methodological and theoretical approach, the paper demonstrates how paint archaeological records are used as a gathering source. As the PhD is in process, the paper, instead of focusing on the research result, presents how the chronology of the colour history is investigated by quantitative database methodology and told in a narrative form, and furthermore visualized by using NCS colour atlases [2]. Regarding repainting as a motivated human act, the contextual analysis is done by qualitative cause-effect related analytical designs set up in selected themes.

Keywords

Church furniture, church interior, colour history, colour expression, repainting, paint archaeology

Introduction

Repainting of furniture has always been an essential undertaking that brought new colour expressions to the traditionally whitewashed Danish church interior. From a historical perspective the furniture has always been repainted; it is said to have a still living and changeable colour history. Apart from possible uncovered wall paintings the interiors nowadays in general are looked upon as being whitewashed. Knowledge and appreciation of changes in coloured appearance due to repeated repainting of the furniture, is in obviously more or less lacking to the general public. Contributing to this basic understanding, the PhD project investigates and describes how Danish church interiors have changed their colour appearance due to repeated repainting of the furniture [3]. The PhD project is ongoing and instead of presenting research results, the paper is focusing on the pre-understanding and theoretical approach of the project. In addition, it describes the paint archaeological sources and research methodology and hereby it is telling about the doctoral as a traditional empirical research project within the multidisciplinary frames of cultural historical studies and conservation science.



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Background and pre-understanding

Repeated repainting of furniture in Danish church interiors has been happening since the middle of the 16th century. The Danish church interior is filled with painted historic furniture [4]. Carved and carpentry made altarpieces, pulpits, chairs, pews, panels, sculptures and other pieces of furniture from the middle age, renaissance, baroque and later periods have by various reasons been repainted throughout time. Polychrome ornamentations have been replaced by monochrome colour schemes, just to be vividly repainted again in a later period. Bright interiors have changed to dark ones, and vice versa. Bluish, white, brownish, reddish-brown and other main colour expressions have been used as favourite colours throughout times. Since the 16th century the choice of colours was never dictated by the church clerics. The choice has been free, reflecting the surrounding community's favourite colour throughout time.

The demands of undertaking repainting, and thereby adding new colour expressions, was stated by cultural historical determinations. The fundamental premise of changing colour expression is to effectuate a motivated human action - the repainting. The action of repainting was caused, perhaps reasoned by the usage and wear of the furniture, or other types of interior damage. Repainting could also be effectuated simply because other works of construction took place in the interior. But also style and trends influenced and brought repainting to furniture without any preservation demands. Wishes of modernization, change of style or supplying the furniture with new decorative elements are just a few examples of the many different reasons why a church owner would decide to repaint the furniture.

Successive church owners have had disposal on the economy of the Danish church, and therefore have had the managing part in effectuating repainting and restoration - or lack thereof. Since the beginning of the 18th century the church ownership had been state-held, but assigned to local church councils. But since the middle of the 16th century the churches were traded as property, and the earnings (church tithes) and finances of the church were conceded to successive owners, such as the crown and administration, nobility and manor houses, almshouses, bourgeoisie, private persons and parishioners of the local community. Being a church owner could be a profitable business. Still, any ownership was governed by church supervisory authorities and owners were obligated to maintain a good state of repair. State of preservation has influenced the effectuating of improvement, including repainting.

Modernization incorporating trends or physical style alterations into the furniture and interior might have depended on the prestige and symbolic power dedicated the specific church or group of churches by their owner. Particularly if the church was the main or burial church of nobility or of a local manor family, the church equipment and interior appearance had great importance. In some areas wealthy owners wished to emphasize the ownership of many local churches by introducing a strategy of uniform interior refurbishing and repainting. In contrast, in poor areas with a continuous struggle to defray the cost of church maintenance, owners such as ordinary parishioners have had a lesser need for changing colour expression as a means of modernization, and the occurrence of repainting is probably occurred less frequently. The occurrence of repainting is contextually devised by the possibilities and interest of the owners, and furthermore by a number of reasons and events in the surrounded historical cultural landscape. A decline in repainting was most likely in periods when wars and diseases ravaged the country, and the lack of money caused the king to impose special taxes, or the owners to confiscate the church tithes.

Interiors and furniture have a living colour history. Even today historic furniture is repainted. Owners nowadays seem to prefer light grey or white in harmony with the modest whitewashed interior. But even modern times invite to greater changes, both in term of human needs and colour trends. Trends will change, and more and more often there seems to be a need of repainting, but the interior and the furniture cannot always withstand such repeated change. From an antiquarian and preservation point of view it is not always appropriate to repaint the cultural heritage. According to legislation historical colour expressions must be preserved, either as invisible paint layers in archaeological structures underneath new paint layers, or as still visible and image creating colour expressions. Even though contemporary modernizations and renovations demand a need for holistic knowledge about colour history, to date no research or publications exist detailing the chronology of the Danish church furniture colour history.

Empiricism, paint archaeological records as source

Since 1880 conservators in Denmark have carried out archaeological colour surveys on church furniture. A set of rules has existed since 1892, which dictated both archaeological methodology and the archaeological records to be delivered to a national central archive [Mollerup, 1908]. This is the Antiquarian-Topography Archive at the National Museum, which today has an inventory of at least 5-6000 colour archaeological records, containing written stratigraphical statements of the colour history of individual furniture pieces [5]. The surveys are documented by photographs, drawings with colour codes or by watercolours, (Figure 1) and since 1970, by scientific records regarding identification of paint material, technology and cross sections.

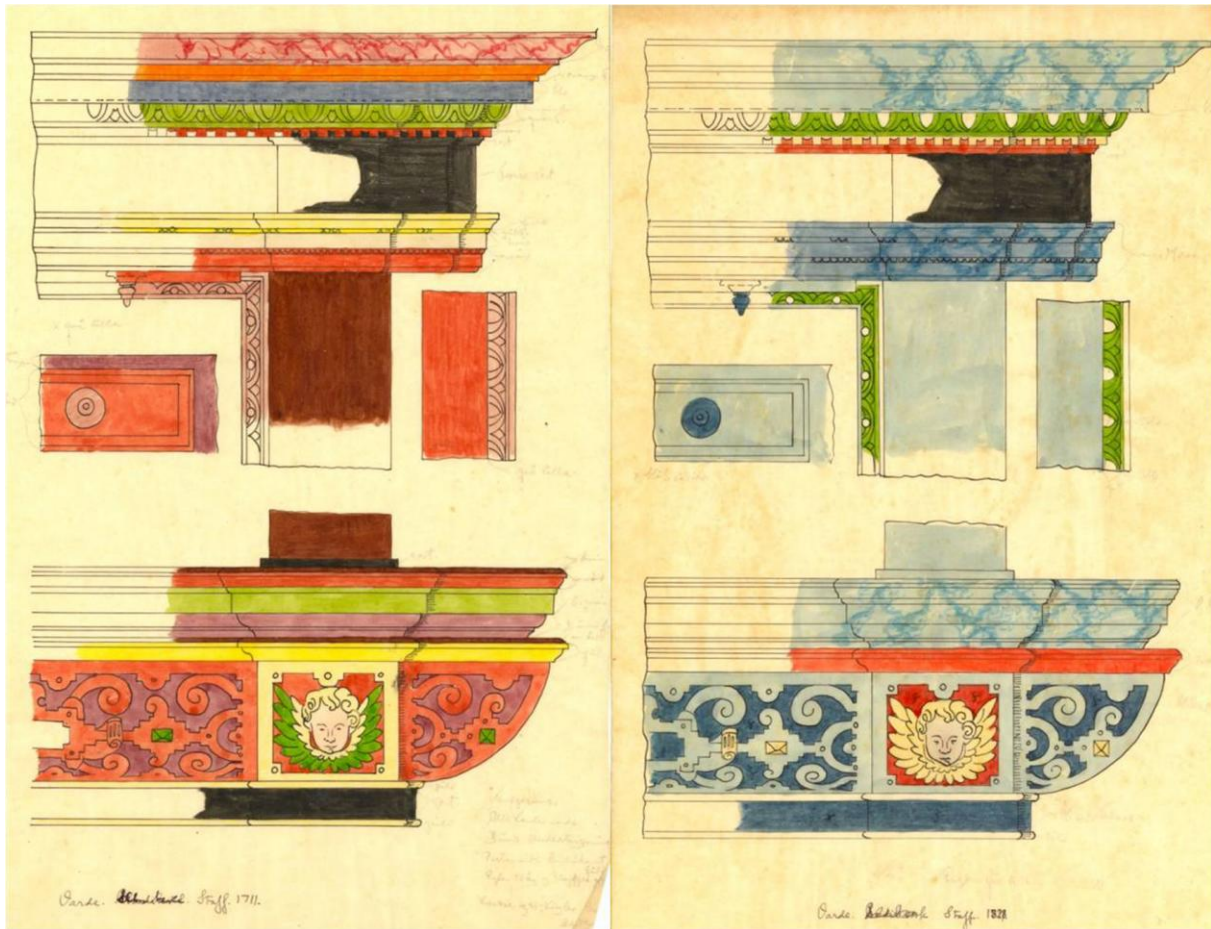


Figure 1: Watercolours done as paint archaeological documentation of two different layers of repainting on the 17th century altarpiece in Varde Church, Denmark, executed in 1711 and 1828. The Antiquarian – Topography Archive at the National Museum of Denmark. (Photo: K. Vestergaard Kristiansen).

A preliminary study [Kristiansen, 2007] demonstrates how these paint archaeological colour surveys in general are executed by the same methodology as in contemporary discipline [Hughes, 2002], including description of how main and secondary colours are composed at the furniture architecture. And furthermore, it is shown that their stratigraphy can be combined with phases set up with contextual historic information. In a critical view the records do have specific uncertainties and losses of source validities, but these are assigned to the specific intension, and hereby the method, the conservator were meet with when undertaking the colour survey. Although it is possible to eliminate or estimate the value of each paint archaeological source, sometimes by combining it with later records done on the same furniture. These paint archaeological records are very extensive and nationwide, and represent a hitherto untapped source of knowledge about Danish colour history [6]. It is a basic premise of the PhD project to use the archive's archaeological records as the main gathering source. Thereby, this project will use or exploit the knowledge, which over time has been obtained by conservators, and by analytical combination with cultural historical data the knowledge will be used in a holistic and multidisciplinary way.

Purpose of the investigation

The project will investigate and describe the chronology and context of the colour history of Danish furniture, and furthermore explore how and why church interiors have changed their appearance over time due to repeated repainting of the furniture. The analysis will be both nationwide and have some focused areas.

Theoretical approach

Thus, it is an empirical and cultural historical research project, based on that human scientific field, which occupies and investigates primary sources or domains bearing witness of human activity. The domain is the colour history and paint archaeological records, and the human activity is the repainting. Furthermore, the project performs cultural historical studies by investigating the context that contributes to our understanding of the reasons and relations by which the furniture was repainted. Based on empirical knowledge the project has the following theoretical approach: the furniture has a colour history; the furniture has gone through a colour related change that even changed the colour appearance of the interior; repainting and colour restoration were carried out as caused human activity influenced by factors in the surrounding cultural historical landscape. The basis of this approach is to regard both restoration and repainting as a human act which can be seen as sustained or changed layers in a paint and phase archaeological stratigraphy.

Methodology, collection of data sources and database

The primary method is to undertake a systematic source collection and interpretation of colour historical information from the paint archaeological records in the archive, which are categorized in a database [7]. The database is searchable by posted transverse counting options on three main themes: church history, furniture history and classified stratigraphy. This last theme operates with sub-categories describing the main and second colour, pattern, type of ornamentation or repainting, technique and materials of each paint layer. This classification sets up the restoration as a layer either sustaining (preserving) an existing colour or changing it through uncovering or reconstruction of an older paint layer. The database is used to consider the colour data of each element of furniture in a holistic manner, as well as one part of a unifying whole. Combined together in a quantitative analysis the database will produce an image of the overall colour history [8].

The main questions in the research

Besides answering the main question: *What is the chronology of the colour history?*, the investigation and the holistic view will also include answers to contextual questions, which will enlighten the cultural historical influence on the colour history. Based on the historical knowledge of ownership and affinities, national and local cultural history and furniture history in each church, the analysis will answer questions such as *“When and how often was the furniture repainted?”* and *“Was the furniture more frequently repainted in certain geographical areas or in some periods than in others?”* Further questions like *“Why was the furniture repainted and what caused or influenced the repainting?”* are posed. Answering these questions analytical models are set up in three superior theme: chronology, occurrence and context.

Analysis of chronology

The chronological analysis is done on the basis on quantitative database calculations about preferred colour expressions through periods, as they can be read in relative occurrence and distribution. For example, analysing the database will make it possible to read the occurrence and distribution of silver coloured glazes as part of the preferred colour expression in the 16th century. Or the brown grained colour creation, which as a fashion phenomenon changed the 19th century colour expression all over Denmark. The chronological analytic models are divided in two methodological sections: The first one is a statistical explanation analysis whose results are interpreted and described in a qualitative and narrative form with reflections to the empirical pre-understanding.

The second method will visualize and communicate the colour history and chronological results by colour atlases set up to show the preferred colour of each period. For this purpose the colour communication system, NCS [9], has been chosen for its ability to visualize not measured, but historically used colours [10]. The archaeological records seldom present information based on pigment identification. Instead the project will use scientific knowledge of historically used pigments. When historical pigments do not have NCS-

notifications, reference NCS-measurements will be done [11]. The method of visualising by the NCS colour atlas will need to be supplemented with photographs of characteristic patterns and techniques.

Analysis of occurrence

The database can be used to carry out further analysis on the occurrence of repainting and preferred colour expressions [12]. *Occurrence* is a concept explained in the investigation by the frequency and distribution of repainting and colour expression in different periods and locations. Analysis of occurrence is primarily done as quantitative statistics and related in a narrative form and by graphical representation.

Contextual analysis

The contextual analytical design is organized thematically in five parts focusing on the reasons and relations that caused or influenced the action of repainting (Table 1). Each design will use the former quantitative occurrence analytical results in a causal analysis to gain knowledge on how preservation, alteration or modernization, ownership and matters in the historical cultural landscape influenced the colour history. The contextual analysis will be done in some focused areas.

	Causes that influenced the occurrence of repainting
Theme 1. Needs of Preservation	Damage of furniture or interior Usage and wear Neglect of repair
Theme 2 Alteration of interior	Renovation or other construction interior works Modernizing and change in room Strategy interior refurbishing decided by many-church-ownership
Theme 3 Alteration of furniture	Application of new decorative or art elements Physical change or move of furniture Change of colour by reason of trend and adding new materials and techniques
Theme 4 Ownership	Occurrence of repainting in different types of ownership Occurrence of repainting in burial or main manor church Change of ownership
Theme 5 Culture historical landscape	History of church and landscape culture history: Social and economic history Wars and diseases

Table 1: Five themes in the causal-analysis which contribute to the contextual understanding of why church furniture was repainted or restored and hereby were changed, re-changed (reconstructed) or sustained (preserved) in its colour expression. In the concept of occurrence abstaining of repainting might as well be influenced by contextual reasons.

Conclusion and perspective

Contributing new knowledge about the colour history of Danish church furniture and interiors the PhD project will improve the basic knowledge required in decision-making in contemporary or future renovation and restoration works in Danish churches. The results will promote an understanding of the still living colour history of the furniture, and by this, the colour history in which contemporary repainting must be considered. Furthermore, the research findings will promote awareness of colour as part of the church cultural values and heritage in the whitewashed interior. By presenting the ongoing PhD at the ICOM-CC Joint Interim meeting in Rome, it is my hope to achieve a mutual dialogue on the subject with conservators, curators and scientists working with the colours that surrounded people in the past.

Endnotes

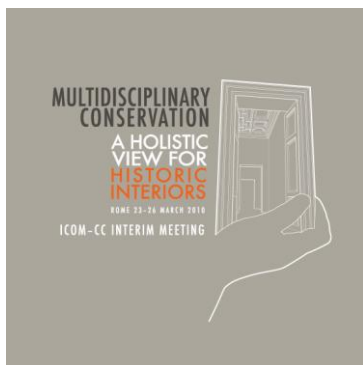
- [1] The PhD is titled: “The Colour History of Church Interiors and Furniture – a Chronological and Contextual Investigation with the National Museum Antiquarian-Topography Archive as a Gathering Source”. The PhD is carried out at The National Museum of Denmark, and financially supported by the museum, State Government research foundations and private foundations. Besides being a PhD-fellow, the author is church consultant in advising church authority, architects and church councils in preservation and restoration of church cultural heritage.
- [2] (NCS) Natural Colour System is a colour communication system with digital atlases of 1950 standardised colour samples with individual notification codes. (see Scandinavian Colour Institute AB at www.ncscolour.com)
- [3] The PhD project has limitations. Middle Age wall paintings were in many churches not covered until the middle of the 17th century, and in later periods the walls of the churches were sometimes coloured and painted decoratively. From the end of the 19th century Middle Age wall paintings were uncovered in one third of Danish churches and hereby the overall colour expression in those churches were changed. Those kinds of coloured expressions are not included in the PhD project, but will be referred to in its description and reflection on the chronological colour history.
- [4] There are no publications about Danish the furniture colour, but numerous publications about attribution and the history and iconography of Danish church interior, but mostly in Danish language. To mention a few: Ulla Kjær, Poul Grønder Hansen: *Kirkerne i Danmark II, Den protestantiske tid efter 1536*, Copenhagen 1989. Marie-Louise Jørgensen: *Kirkerummets forvandling, Sjællandske landsbykirkernes indretning fra reformationen til slutningen af 1800-tallet*. Copenhagen 2009. The *Danmarks Kirker*, a set of books in ongoing publication. Copenhagen 1930-2010.
- [5] The archive existed since 1846 and contains documentation about all kinds of knowledge about historic churches. It is by law the Danish national archive: See Marianne Poulsen, Mads Mordhorst og Jes Fabricius, *Antikvarisk-Topografisk Arkiv, Afdeling for Oldtid og Middelalder*, Nationalmuseets Vejledninger, Copenhagen 1996.
- [6] Today the archive is widely used by art historian, restorers, architects, and historians.
- [7] The investigation does not intend to use records from all over Denmark. A statistical amount, covering certain areas of the country, has been chosen by a set of criteria
- [8] The database is set up by the database-specialist Klaus Støttrup Jensen at the National Museum of Denmark in cooperation with the author.
- [9] see endnote 2.
- [10] The criteria of using NCS will be detailed in the PhDs doctoral thesis by themes: number of notified colours, compatible to CIE-lab values, suitable colours-atlas, possibilities in narrative language and visualizing in grey-tones nuance, values and colour-intensity. Besides it is preferable to use a system developed on the basis of human-eye-experience. The NCS-system is widely used in northern Europe, especially by the target group of the investigation.
- [11] Measurements will be done as reference on semi-mat oil paint samples on known historical pigment from samples in the collections of The School of Conservation in Copenhagen and FAR, The Research Department at The National Museum of Denmark. The measurement will be done on pigment without a published NCS-notation, and hereafter transferred into the NCS Digital Atlas.
- [12] In the contextual analysis, the term repainting in categorized form will enclose complete repainting, partial repainting, restoration, uncovering, surface cleaning or treatment, as human activity that either preserved, changed or re-changed (by reconstruction) the colour expression.

References

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Biography

Karin Vestergaard Kristiansen (PhD Fellow) was educated as painting- and polychromy conservator (Cand.scient.cons) at the School of Conservation in Copenhagen, after studying art history at the university in Copenhagen. Since 1982 she has been employed at The National Museum of Denmark, doing painting-conservation and research of paint technology. For the last ten years she has worked as government church consultant for the responsible authorities aiding the decision making of restoration and preservation of church furniture as a part of Danish cultural heritage. She has since 2009 studying part time as a PhD Fellow at the FAR-research department at the National Museum of Denmark. Karin has published in Danish journals and twice before in the *ICOM Committee for Conservation Preprints* 1987 and 1996. (Frederiksholms Kanal 12, Dk-1220 København, karin.vestergaard.kristiansen@natmus.dk)



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