



Royal
Danish
Academy

Architecture
Design
Conservation

Material and Technique in Portraits by Jens Juel and their Correlation to Degradation Patterns

Tine Louise Slotsgaard, PhD Thesis, 2020

Abstract (English)

Jens Juel (1745-1802) was the most famous portrait painter and the most productive painter of his era in Denmark. His production spans forty years and he left behind more than 600 portraits on canvas. This thesis investigates twenty-two portraits on canvas from throughout Juel's career, focusing on whether Juel's materials and techniques changed with regard to time, location and availability of materials – and how these correlate with degradation patterns, especially craquelure, which display a different morphology in the paintings he produced abroad than paintings produced in Denmark.

The selected paintings are examined focusing on original strainers, canvas characteristics, absence or presence of a sizing layer, colour and composition of the ground layers, use of pigments and build-up of the paint layers as well as the application of varnish. Juel used mainly traditional materials and his paint application shows a very assertive and deliberate approach with few changes and a rapid technique resulting in only one to two paint layers in a non-experimental manner. The results of material analyses in combination with documentary evidence provide some indication of the circumstances of Juel's choices, the available materials and the market for art and artistic practice in the pre-industrial era. Many materials commonly available in Europe at the time were also available in Denmark; however, the absence of some materials, such as ultramarine, as well as the use of different ground layers used in the eight years he spent abroad during the 1770s compared to those used while in Denmark, suggests that the extent of access to some materials varied. Except for the occasional use of white grounds, which emerged in his paintings during this period, the years abroad do not seem to have had significant influences on his technique in the years following his return to Denmark; rather he seems to have returned to a similar approach to his early years. The availability of materials or items must have been contingent on necessity and demand, including the access to pre-primed canvasses, and it is unclear whether this was yet an established line of work outside the studio. Canvasses were usually cut from larger pre-primed canvasses, and two sets of matches between the canvas and preparatory layers of paintings dated art-historically as being several years apart, suggest the dates for some of the paintings should be adjusted.

The identified differences in the ground layers, based on the presence or absence of calcium carbonate versus lead white, appear to be a major factor in the development of one type of craquelure over another. This difference has a significant influence on the mechanical and chemical properties within the structure of the painting, and therefore influences the way and degree to which cracking occurs. The findings of this thesis may provide a point of departure towards expanding the understanding and explanation of the formation of cracks in paintings. This relates not only to Juel's paintings, but also to the preservation of paintings in general, contributing to the understanding of paintings' degradation, and enabling a more targeted approach to both preventive and active conservation.

The thesis is the result of a PhD project by Institute of Conservation, The Royal Danish Academy – Architecture, Design, Conservation, Copenhagen, Denmark

The thesis is available to look through for interested persons at the Library of Architecture, Design and Conservation, Danneskiold-Samsøes Allé 50, 1434 Copenhagen K.



Royal
Danish
Academy

Architecture
Design
Conservation

Materiale og teknik i portrætter af Jens Juel og deres sammenhæng med nedbrydningsfænomener

Tine Louise Slotsgaard, ph.d.-afhandling 2020

Resumé (Dansk)

Jens Juel (1745-1802) var den mest berømte portrætmaler og den mest produktive kunstner i sin tid i Danmark. Hans karriere spænder over fyrrer år, og han efterlod sig mere end 600 portrætter malet på lærred. Denne afhandling undersøger toogtyve portrætter på lærred udført på tværs af Juels karriere med fokus på, om Juels materialer og teknik ændrede sig i forhold til tid, lokalitet og tilgængelighed af materialer – og hvordan disse hænger sammen med nedbrydningsfænomener, særligt revnedannelser, som viser forskellige mønstre i malerier udført i udlandet og i malerier udført i Danmark.

De udvalgte malerier er undersøgt med fokus på originale blændrammer, lærredskarakteristik, tilstedeværelse eller fravær af forlimning, grunderingens farve og sammensætning, brug af pigmenter og lagvis opbygning af farvelagene samt anvendelsen af fernis. Juel anvendte primært traditionelle materialer, og hans maleteknik viser en selvsikker og velovervejet fremgangsmåde med få ændringer, og en hurtigt arbejdende hånd med kun et til to farvelag i opbygningen, og uden væsentlige eksperimenter. Resultaterne af materialeanalyser, sammenholdt med skriftlige kilder, giver en indikation af Juels tekniske valg, tilgængelighed af materialer og markedet for kunst og kunstnerisk praksis i den førindustrielle tid. Mange af de materialer som var tilgængelige i Europa på dette tidspunkt, var også tilgængelige i Danmark; om end fraværet af bestemte materialer, såsom ultramarin, indikerer, såvel som at Juel har anvendt en anden type grundering i malerierne som han udførte i de otte år i 1770'erne han tilbragte i udlandet, end han anvendte i Danmark, at tilgængeligheden af visse materialer varierede. Bortset fra, at Juel begynder at anvende lyse grunderinger, hvilke fremkom i hans teknik imens han var i udlandet, synes udlandsårene ikke at have haft stor indflydelse på hans praksis i de efterfølgende år i Danmark; snarere synes han at have anvendt tilsvarende teknik og materialer som i hans tidligere år. Tilgængeligheden af materialer og varer må have været afhængige af udbud og efterspørgsel, hvilket også indbefatter adgangen til at købe præ-grunderede lærreder fra en leverandør, for så vidt, at det var blevet en etableret praksis som foregik uden for kunstnerens atelier. Lærrederne blev som regel udskåret fra større præ-grunderede lærreder og to sæt malerier, matchende mellem lærred og grundering, som er kunsthistorisk daterede blev fundet i denne undersøgelse. Dette stiller spørgsmål til den nuværende datering og hvorvidt nogle dateringer bør afstemmes.

De identificerede forskelle i grunderingslagene, som baserer sig på fravær eller tilstedeværelse af blyhvidt og kridt, synes, at være en af de primære faktorer for de to forskellige revnedannelsesmønstres opståen. Denne forskel har en væsentlig indflydelse på de mekaniske og kemiske egenskaber i maleriets struktur, og dermed også indflydelse på formen og omfanget af revners opståen. Disse fund kan være med til at bane vejen for en udvidet forståelse og forklaring på udbredelsen af revner i malerier. Ikke kun i Juels malerier, men også mod en generel forståelse for, hvordan nedbrydning foregår i malerier og for at skabe en mere målrettet bevaringsstrategi, både i præventiv og aktiv konservering og restaurering.

The thesis is the result of a PhD project by Institute of Conservation, The Royal Danish Academy – Architecture, Design, Conservation, Copenhagen, Denmark

The thesis is available to look through for interested persons at the Library of Architecture, Design and Conservation, Danneskiold-Samsøes Allé 50, 1434 Copenhagen K.