

Past and Future Conservation of Paintings at Knole

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Damp, which is the most insidious of all enemies... steals in while we sleep; damp is silent, imperceptible, ubiquitous. Damp swells the wood, furs the kettle, rusts the iron, rots the stone. So gradual is the process that it is not until... the whole thing drops to pieces in our hands, that we suspect even that the disease is at work.

Virginia Woolf, "Orlando", first published in 1928.

Introduction

Over the last 40 years, since National Trust condition records began high humidities at Knole have caused problems for the paintings leading to mould growth, whitened opaque varnish layers and flaking paint. An overview of the conservation records over the last 200 years provides some insight in to changing conservation priorities for the paintings, and approaches to conservation for the future.

The majority of paintings in Knole have had some conservation treatment over the last 400 years although not all of it has been recorded. We can see evidence of previous restorers in discoloured over paint, traces of older darker varnishes, linings and tear mends. It would be extremely unusual for paintings of this age not to have received attention.

Historical Restoration

The earliest recorded restoration at Knole was from the very late 18th and early 19 centuries by Painter/Restorers, who carried out Restoration alongside Painting. Restoring according to Edward Edwards writing in 1808 was "a good resource for the invalids in painting".¹ But on the other hand there was a Status attached to Artists who were capable of understanding and working on Old Masters, perhaps begun by Joshua Reynolds who restored his own paintings and others as a way of studying old master techniques

According to Bridgmans Guide to Knole the Raphael copies and some of the Reynolds paintings, were "cleaned and restored to their original spirit and beauty by that "excellent artist", Mr John Rising".² We don't know the actual date but the Guide dates from 1817. John Rising was in fact one of Reynold's painting assistants.³ The presence of Rising working at Knole is certainly interesting, and the possibility exists that Reynolds himself may have been involved in supervising or restoring his own paintings at Knole before his death in 1792.

Another early Painter/Restorer and Dealer was Francis Parsons who between 1793 and 1797 cleaned the large set of historical portraits in the Brown Gallery and ornamented their frames at a cost of 4 guineas for the 3rd Duke of Dorset. He was also working at Knole again in 1796 on other unidentified paintings. All we know of his working methods now are from his advert, May 1784 in the Daily Advertiser that stated that he would "clean and repair Pictures by a Method that

restores the Beauty of the Colouring without injuring the most delicate Taints'.⁴

William Segquier, noteworthy as First Keeper at the National Gallery, Superintendent of the British Institution and Surveyor of the Kings Pictures, also worked on at least six of the paintings at Knole around 1826. He is remembered chiefly for his minimal cleaning at the National Gallery, and the particular type of varnish he used – ironically a mixture of oil and mastic that unfortunately over time becomes very insoluble.⁵

From the mid 19th century to the mid twentieth century no conservation records have yet been found, although this does not mean that work was not carried out.

By the 1950's and 1960's the National Trust were involved with Knole, and the day to day correspondence between Mason the Knole House Steward, and Bobby Gore the National Trust's Historic Building Secretary, refer to a "local man" who was called in when a picture needed attention.⁶ He is named variously as Waters, Walters and Walker. In Gore's opinion Walters was described as having a hand "that is far from light, but he was cheap and he worked on the premises". We know nothing of what he did apart from one painting, The Unknown Portrait of Edward Cranfield, which was given a shellac varnish. The use of shellac might imply that Walters was more used to working with furniture than paintings.

Obviously we cannot say exactly what Walters did at Knole. But we can see evidence of a type of typical country house repair work, often carried out by local craftsmen on paintings in situ. Partial cleaning in the paler areas of the sitter's faces; some more large scale uneven cleaning carried out while the paintings are framed; and possibly even on the wall. Drip marks from, we imagine, large wet swabs that have cut in to the surfaces of varnish and paint, lumps of cottonwool left on the surface of paintings during careless cleaning. Areas of flaking paint and loss that have been reattached and filled in with large clumsy oil retouchings which would have served both purposes, sticking the paint on and filling in colour loss. Nails tacked through the front of paintings to reattach them to stretchers. There are examples of all this at Knole. We can speculate that the whitened areas of varnish that we see on the Knole paintings may be exacerbated by water based cleaning methods– easier to use than solvents on site, but in the case of Knole not ideal as it might encourage mould growth. We can see evidence of this type of crude approach at Knole

By the 1970's there are records of London based freelance Restorer/Dealers (rather than artists) working on the Knole collection. Keenan, Ellison and Freeman who are all recorded in the National Portrait Gallery's List of Restorers.

In 1976 Hermione Sandwith carried out the first proper condition Survey of Paintings and since then independent and museum conservators have been bought in regularly to work at Knole carrying out preventative and remedial conservation, and a number of paintings have had full conservation treatment.

Condition of paintings

These initial condition reports from the 1970's do not mention mould growth, but a great deal of flaking paint which was the main priority for conservation work carried out during this decade

Although the house was always known as cold and damp, the first actual outbreak of mould on the paintings was recorded in 1981 in all the rooms apart from the Brown Gallery and the Ballroom. National Trust memos in 1981 describe the moulds' occurrence as exceptional and blamed the very bad winter and the restriction on ventilation due to building work. Gary Thomson the National Gallery's Scientific Officer was called in to advise and he confirmed that the "unusual condensation sometimes followed by mould, has been pretty common after last winter." There followed a major campaign of restoration, much of it carried out under Alec Cobbe and the Hamilton Kerr Institute throughout the 1980's. Most paintings were treated in situ to remove the mould. It was brushed off, but in some cases led to costly varnish removal, paint consolidation, re-varnishing and lining. Since then mould problems have been noted in 1988, 1991, 1993, 2001 and then continuously really, whenever conservation staff have condition checked the paintings.

Why did mould occur at Knole at this time?

Most of the showrooms at Knole are unheated, and the low temperatures inside the house have exacerbated high humidities providing ideal mould conditions. Very unusually mould is often present on the front of the paintings, not only the reverse. This is probably because the front of the paintings become so cold sometimes that condensation, water droplets, actually form on their surfaces at a microscopic level, which together with household dust that the mould can feed on, provide the right conditions.

Other factors may play a part and more research is needed to establish why the mould first appeared then, if indeed it did. For instance did the showrooms in fact have some heating such as open fires before the National Trust took over Knole in 1946, or after? Are there new moulds that grow at lower relative humidities? Does the humidity from increased visitor numbers play a part, or even Climate Change? What is clear is that mould spores have now penetrated throughout Knole and when environmental conditions deteriorate the spores sprout.

The low light levels essential for the fragile, rare textiles at Knole exacerbate this. Mould growth is restricted by UV light that is found in daylight. At the moment these low light levels have one advantage - hiding the condition of some of the paintings. The building work at Knole will include better lighting. This will mean that the surface problems on the paintings will also be more visible

In a condition survey in 2012 least 80 of the approximately 310 paintings were noted to be affected by mould; and at least 90 paintings were noted to have de-saturated whitened varnish layers.

High relative humidities have other consequences for paintings. Panel paintings have warped or split in the fluctuating humidity, canvas paintings can be slack and deformed with areas of raised and flaking paint. Varnish layers are also affected by cold temperatures making them brittle and de-saturated. Damp conditions enable moisture to get into the structure of the varnish giving an opaque, white appearance, sometimes in patches or associated with crack patterns, sometimes as a more overall problem.

The mould itself may be pushing paint off. Glue size layers and glue paste linings provide another food source for mould. The mould appears to be growing under the paint, pushes up through cracks, dislodging paint, causing flaking and loss. Mould spores within the painting structure cannot really be removed and so the only treatment option is preventative – to keep relative humidity below 70%.

Recent conservation work

The fluctuating humidity and temperatures levels generally accelerate the ageing process of paintings and of restoration work. Paintings that have been sympathetically restored as recently as 1998 have redeveloped surface issues. The Diana and Acteon, after Titian in the Billiard Room was restored in 1998 and in certain lights we can see that mould growth and varnish issues are reasserting themselves. Tina Sitwell noted in 1993 “mould and de-saturated uneven varnish layers would be expected to come back within 10 years”. (In general the Trust hopes in situ work will prolong full conservation treatment by 25-75 years.)

There has been an over reliance on making do with in-situ work in the light of the futility of carrying out expensive full conservation treatments that don't last. Lady Martha by Mytens that hangs in the Leicester Gallery has had repeated in situ work (1972, 1973, 1988) but it's appearance is still unsatisfactory. Delaminating canvas, raised canvas seam with flaking paint, thick discoloured overpaint covering original paint. The surface is patchy with mould or opaque varnish, and it can only now be improved by full conservation treatment. This in turn will only be worth doing once the environmental conditions are stabilised.

What has worked at Knole

Not surprisingly the choice of conservation materials affects the longevity of the restoration. The Titian already mentioned, was relined using traditional paste glue on to linen. On the other hand Lionel Cranfield by Mytens in the Leicester Gallery was lined and restored in 1996 using synthetic non moisture responsive materials (Beva 371 adhesive and polyester sailcloth). The mould growth and cracked opaque varnish noted and treated in 1992, 1993 and then again in 1996 have not yet reappeared, although the varnish is now slightly de-saturated.

Future work

In the future the programme of building work should make Knole leak and draught proof. Work in the Reynolds Room is now complete, conservation heating has been installed using a heated mat placed under the carpet to form a large low level warm area. By increasing the temperature in the room by only a

couple of degrees, the relative humidity stays below the mould growth set point of around 70%.

Once this was established the Reynolds Self Portrait came to the studio to trial the type of in-situ conservation that will be possible in the Knoles studios in the future. The Reynolds is an extreme example of the typical problems in this room with mould and perished patchy varnish layers. After proper examination of the painting, cleaning tests and analysis to understand the complicated layers of paint and varnish, it was relatively straightforward to remove surface dirt, mould and just one thin top layer of varnish probably applied in situ during the last 50 years. Much of the patchy white surface deterioration was in fact in this top layer. After this, consolidation of raised paint, minor adjustments to the retouching, and re-varnishing, the surface has improved. We are now monitoring this painting to see if the varnish remains saturated and that no mould reappears. This type of treatment is particularly relevant to the Reynolds paintings as they are often very soluble and so full cleaning may not be possible, even if it was desirable.

As the work at Knoles progresses and the environmental conditions improve in each room, conservation and restoration programmes can be re-established. On site at Knoles conservators will carry out remedial work in a well-equipped studio, including proper technical examination, analysis when necessary, and with equipment to carry out some removal of more recent varnish layers to improve the paintings' appearance. It is an exciting opportunity for research - even just examining the painting backs and the stretchers labels will provide new information on their history and condition. Full conservation treatment priorities will have to be decided and a difficult balance must be found between the absolute necessity of work on this important collection, with an awareness of the house's history and a sensitive approach to how the paintings have been displayed historically.

References

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- 2 John Bridgman, *An Historical and Topographical Sketch of Knoles*, 1817, p.56, J Simon, *Website of British picture restorers, 1630-1950*, www.npg.org.uk**
- 3 J Simon, *Website of British picture restorers, 1630-1950*, www.npg.org.uk**
- 4⁴ J Simon, *A Guide to picture frames at Knoles*, *Centre for Kentish Studies: Sackville Manuscripts*, U269/E426).**
- 5 A Laing, article William Segulier and Advide to Picture Collectors, from *Studies in the History of Painting Restoration 1998*, Archtype publications, Ed. [Christine Leback Sitwell](#), [Sarah Staniforth](#)**
- 6 National Trust correspondence 1950's**