

Scented resins for scented figures

That ancient Egyptian painters used varnishes in the creation of tomb decorations has been known for a long time. The general assumption is that they were used as fixatives or to improve colour and brilliance. But, as **Alexis Den Doncker** and **Hugues Tavier** argue, they may also have served a more surprising end – to impart an olfactory dimension to the scenes painted.

The interest in the use of varnishes in tomb-chapel decorations began in 1920, when the British archaeologist Ernest Mackay undertook a first examination of these substances in a short pioneering article. He provided a list of 17 Theban tomb-chapels, classifying them into two groups based on the composition of the varnishes: beeswax or resin. In the article, he stated that the function of the varnishes – ‘fairly frequently used as fixatives, or perhaps mixed with the pigments’ – was to improve the brilliance and brighten the colours. Since then, due to the glossy and attractive appearance they undeniably impart, varnishes have been considered as merely aesthetic enhancers, intended to produce purely visual effects, just like other eye-catching elements of chapel decorations.

In order to validate Mackay’s observations and build on his work, we carried out a visual examination of the walls of about 90 New Kingdom chapels, including the majority of those listed in Mackay’s article, as part of the

Belgian Mission in the Theban Necropolis (MANT). The first phase of our study has led us to reassess the role and significance of the varnishes used by Theban painters of the Eighteenth Dynasty.

We used UV rays to spot the presence of varnishes where today only slight or barely discernible traces remain due to the detrimental impact of light conditions, dust, soot, wall cleanings, or natural ageing (image opposite page, top). Combining the visual examination of varying UV responses with an experimental approach that focused on testing materials identified in similar contexts and hypothetically related to such practices – for example, wooden funerary objects, notably coffins – we could confirm the use of the two types of varnish in at least 37 chapels and sort them chronologically.

Beeswax mixed with *Pistacia* resin was used from the time of Hatshepsut/Thutmose III (e.g. in TT 81) to the beginning of the reign of Amenhotep II (as in TT 100), a period from about 1480 to 1430 BC (image left). Other fragrant resins (most probably of *Pinus halepensis*, i.e. Aleppo pine) are attested in chapels from the reign of Amenhotep II (in TT 93) to that of Tutankhamun (in TT 40) around 1330/20 BC, with a few possible later exceptions. It is likely that the relative scarcity of these imported materials and, eventually, the observation of their rather unsatisfactory natural ageing (detachment of beeswax, yellowing of resins) caused the painters to give up on this practice.

A first examination of the iconographic elements (apart from the colours) confirms the expected aesthetic function of varnishing

Beeswax varnish on the wig of a scribe inspecting the work in the tomb of Rekhmire (TT 100).



Image: Tefnin / MANT



Image: Den Doncker-Tavier / MANT

Detecting faded beeswax varnish with UV rays in the tomb of User (TT 21).

that is common to many painterly traditions. In most cases, these motifs illustrate the high social status and prestige of the tomb owner and his family: skin complexion, hair/wigs, clothes, various kinds of jewellery such as earrings, collars, or bracelets (following page, top), but also objects like gifts, funerary equipment, and offerings (following page, below). At first sight, varnishes were added in order to enhance the aesthetic aspect – and thus the value – of such visual markers. In general, and especially with pine resin, the number of motifs that painters treated in this way is restricted, implying a selection. Nonetheless, in some cases, almost every figure of the various scenes of the iconographic programme, as well as other decorative features, like the *Farbleitern* or register lines, were varnished. In these cases, the tomb owner's prestige is no longer symbolically referred to by few enhanced depictions of elite people and valuable objects but even more visually, on a broader level, in the aesthetic quality of the whole chapel decoration.

However, further observation led us to suggest a secondary function that Theban painters may have attributed to varnishes. In parallel with what seem to be only technical concerns related to evolving painterly practices, we noted a significant development in the way painters apparently sought to depict olfactory realities such as scented ointments, perfumes, unguents or balsams. Banquet scenes provide a good example of this process: from the early Eighteenth Dynasty to the Amarna period

(around 1550–1340 BC), painters developed various pictorial solutions to express the fragrant environment of such scenes. First, unguent cones were represented on the head of the participants. It is now fairly accepted that, rather than being actually worn on the head of elite people, the motif of the unguent cone should be read as a sign indicating, like a metonymy, the pleasant scent of the depicted person's hair. The cone's shape refers to the representations of incense as yellow-orange heaps placed on offering tables and, to some extent, to the hieroglyph of the heap of vegetal product (𓆎), as well as possibly to the way those unguents may have been manufactured. We also know from various scenes and texts that during such banquets, elite people used to anoint themselves, hair and body, with different kinds of ointments and unguents. One may also recall the Eighteenth Dynasty

Fragrant resin varnish applied onto the hand of the tomb owner in the tomb of Tjanuny (TT 74).



Image: Den Doncker-Tavier / MANT



Image: Laboury-Tavier / MANT



Image: Den Doncker-Tavier / MANT

Top: Varnish as an aesthetic enhancer in the tomb of Paser (TT 367).

Above: Varnish used for the same purpose in the tomb of Senneferi (TT 99); probably also in connection with its fragrant/antiseptic properties.

male wig at the British Museum that still bears traces of beeswax and myrrh resin (BM EA2560). Subsequently, from the time of Amenhotep II, painters tended to combine more perceptual, mimetic features, with these semiotic markers: for example, nuanced yellow glazes covering clothes instantiate the very presence of the absorbed fragrances. Afterwards, from the time of Thutmose IV (c. 1400–1390 BC), it appears that due to its scarcity, the pine resin varnish began to be

used more restrictedly, applied preferably onto motifs referring more explicitly to pleasant scents, such as ointments, unguents and perfumes on hair or wigs, to skin and clothes, incense onto offerings, flowers and bouquets, or to royal and divine kiosks. Clients (or painters) often gave priority to the figures of the tomb owner and his relatives. There is thus little surprise that this fragrant varnish was associated to the unguent cone and the yellow glazes (or even used as a substitute for them) on figures of banquet participants or related offering scenes. It seems that the physical materialisation of scents applied onto certain motifs appeared to the painters as a practical solution to the issue of their iconographic representation – see, for example, the image of the musicians in the tomb of Nakht (TT 52) (opposite page, right). Moreover, this implies that those varnished depictions really gave off a pleasant scent. As a matter of fact, one can indeed still appreciate the fragrance of some figures of the tomb owner in TT 74 (previous page, bottom). This reveals how Theban painters were keen to add perceptual ways of expression to the more usual conceptual and representational elements that constitute the decorative programmes of tomb-chapels. Consequently, varnishes shed light on how ancient Egyptians experienced and engaged with those paintings, be it as artist, client or visitor.

Additionally, it is tempting to suggest that the application of fragrant varnish onto two-dimensional depictions might have had some ritualistic function related to purification, as was the case with certain funerary objects and statues since ancient Egyptians used *Pistacia* resin as *senetjer* (incense). This resin shares chemical compounds – terpenoids that generate similar scents – with pine resin and myrrh and frankincense gum-resins, which have often been correlated with the famous *antyu* (although this Egyptian term is generic and most probably covers multiple myrrh-like substances, by-products and derivatives when used as ointments). For this reason, it is likely that varnishes were known to have the same natural properties (e.g. antiseptic, antioxidant) and were therefore imbued with the same magical efficacy as these well-known substances used in daily temple and funerary rituals. Textual evidence for this claim is quite abundant: it is often stated that the use of

antyu as ointment or unguent contributes to some kind of purification, especially the preparation of the dead in funerary rituals (well-attested in the Pyramid Texts and the Book of the Dead) as well as to signal a certain personal prestige (P. Harris 500: 'The one who is anointed with *antyu* comes first'). Some magical papyri and excerpts from the Book of the Dead even seem to allude to the application of some kind of varnish or binder onto specific images or vignettes, for example chapter 100: 'Words spoken over this image which is written on fresh papyrus, with ground green pigment mixed with *antyu* water, and placed on the breast of the transfigured dead to prevent an approach to his body.'

In summary, the depiction of scents was a challenge that Theban painters first addressed through iconographic motifs almost used like hieroglyphs (unguent cone), then more realistic aesthetic devices (yellow glazes) and, finally, in a yet more concrete way by applying directly onto selected figures or motifs the very material standing in for the archetypal fragrance: *senetjer*-incense and *antyu*-ointment as varnish. But beyond purely representational aspects, the natural and magical properties of the resins could also fore be harnessed, effectively and permanently, for the benefit of the deceased.

The next steps of our research will focus on a wider understanding of the distribution of varnish among the decorative programme. In order to better determine the multiple

connections between conceptual and perceptual realities that the paintings embodied, this will include physico-chemical analyses. Ideally, the study would also be extended to other Egyptian necropoleis and monuments (e.g. temple painting) and periods beyond the Eighteenth Dynasty.

Below left: experimental materials: testing the applicability and UV-responses of various varnish recipes.

Below right: fragrant varnish on anointed female musicians (and fattened ducks [?]) given as offerings in the tomb of Nakht (TT 52).

• The work of **Alexis Den Doncker** focuses on the reception of images by the ancient Egyptians, analysing visible reactions to images in the Theban necropolis. **Hugues Tavier** is a conservator and since 2001 has been involved in the conservation programme of tombs TT 29, TT 96 and TT C3 as part of the Belgian Mission in the Theban Necropolis (MANT). His research focuses on the painterly techniques of the Eighteenth Dynasty Theban tomb decorations, employing an experimental approach. Both are PhD students and scientific collaborators at the University of Liège, members of the MANT team and the research project 'Peintres et peintures dans la Nécropole thébaine sous la 18e dynastie', led by Dimitri Laboury. The authors would like to thank the Ministry of Antiquities for the invaluable support and Bianca Madden for her editorial advice. The research summarised here was first presented at the international workshop 'Artist – Client – Beholder: Dependencies and Influences of Artistic Production in Egypt' at the Reiss-Engelhorn Museum, Mannheim, in October 2017.



Image: Tavier



Image: Den Doncker-Tavier / MANT