

LETTER TO THE EDITOR

Dear Sirs,

We read with interest the recent paper of Donahue et al. (2002) on the radiocarbon dating of the Vinland map, and concur entirely with its conclusion that the parchment is of 15th century date. However, we have to question what relevance this has for the date of the production of the map itself. The authors themselves note the presence in or on the parchment of a carbon containing substance, apparently constituting some 20–30% of the dry weight of the samples treated, the carbon of which is clearly post-bomb in activity, and which is dated by them to around the time of the first appearance and examination of the object. This material could be removed from the parchment by a solvent based pre-treatment.

The production of forgeries using authentic materials of the correct age for the purported object is well documented and the presence of such a large quantity of modern carbon in this case must set alarm bells ringing. It is therefore necessary to look at possible routes by which this material may have become attached to the parchment. One such route would involve deliberate deception. If it was the intention of a forger to produce a document on old parchment, it would first be necessary to remove any existing markings, probably by abrasion. Regardless of whether any cleaning of the surface was required, it would also be necessary to prepare a smooth surface which could then be drawn on. There are a number of materials which would be suitable for such a task. Parchment and leather are frequently repaired and resurfaced by the application of organic materials such as starch and parchment size (a gelatin based material produced by heating small shavings of parchment in water), or by the application of fats such as lanolin (for examples see KB 1997; Hassel 1999). At the time of the discovery of the map, another material, cellulose nitrate, was also frequently used on such materials. In this respect it is worth noting that in the recent paper of Brown and Clark (2002) on the Raman spectroscopic analysis of the black and yellow lines on the map, a high fluorescence background was found in the pigmented regions. Such a background is explicable by the presence of organic materials on the surface of the parchment. It could, of course, be equally argued that the presence of a large quantity of modern material might be the result of rather clumsy conservation treatment applied at the time of the first discovery of the piece, rather than as part of the process of production, but without clear evidence of this, doubts must remain.

As the authors themselves point out, dating of the parchment itself does not necessarily have any direct relevance to the question of the authenticity of the map drawn on it. The paper has, however, brought something additional to the debate: there is a large amount of modern material on, or in, the parchment. The identification of this material would be of great interest, but would not necessarily resolve the debate over the authenticity of the map. The doubt would remain as to whether there had been a deliberate attempt to deceive or significant interventive conservation.

Janet Ambers and Sheridan Bowman

Dept of Scientific Research, The British Museum, Gt Russell St, London, WC1B 3DG, United Kingdom

REFERENCES

Brown KL, Clark RJH. 2002. Analysis of pigmentary material on the Vinland map and Tartar Relation by Raman microprobe spectroscopy. *Analytical Chemistry* 74:3658–3661.

Donahue DJ, Olin JS, Harbottle G. 2002. Determination of the radiocarbon age of parchment of the Vinland map. *Radiocarbon* 44(1):45–52.

KB and the Central Research Laboratory for Objects of Art and Science, Netherlands. 1997. Guidelines for the conservation of leather and parchment bookbindings http://www.kb.nl/kb/resources/frameset_kb.html?/kb/cons/leather/ .

Hassel B. 1999. Conservation treatment of medieval parchment documents damaged by heat and water. Preprint from the 9th International Congress of IADA, Copenhagen, 15–21 August 1999. http://palimpsest.stanford.edu/iada/ta99_253.pdf

https://doi.org/10.1017/S0033822200031969 Published online by Cambridge University Press