Some thoughts on realia: material sources for art technological source research

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ABSTRACT Ideas are presented about art technological sources other than textual or audiovisual documents. These last two attract the majority of attention, not least because they are by definition meant for communication. The use of material sources or realia is still underestimated in the field of art technological sources, though sources can be rich suppliers of information. Particular expertise is however required for full comprehension of their content.

Introduction

A source is an information carrier. Any source may be valuable for research, but its particular value is related to its availability, to the research project it is used for and to the capacities of the researcher using it. The various types of information carriers for art technological source research can be divided into textual, audiovisual and material sources, as has been discussed in earlier meetings of the ATSR working group (Clarke 2008; Kroustallis 2008; Stijnman 2005, 2008, 2009; Wallert 2005). All contain direct forms of communication, intended as such and understandable for the capable researcher. Techniques, recipes and lists of materials were usually written down as an aide mémoire for the author or his staff. More elaborate versions were published as manuals for students and amateurs in the craft, rarely for professionals, and they serve as historical recordings. Pictures of studio interiors show in what manner and under what conditions people worked; images illustrating practical manuals add information to the text that is more difficult to describe in words. Further art technological information may be gathered from inventories, imposts, guild regulations, interviews, still lifes, coats of arms, portraits, etc.

Material sources are very different kinds of information carriers. Contrary to textual and audiovisual sources, realia are not intended for communication. This makes it more difficult for us to interpret information from these sources such as the production process, the original aesthetical appearance of the object, or in a discussion of conservation and preservation issues.

One of the earlier researchers of historical art techniques, Ernst Berger (1857–1919), in a lecture on Roman painting techniques (Berger c.1890: 3–4), considered that his sources for research were:

1. Les sources littéraires
2. Les découvertes ou trouvailles
   A) Les peintures sur mur
   B) Les peintures sur bois ou sur toile
   C) Les objets trouvés dans des fouilles
3. Les analyses chimiques.

In the same lecture and in his Die Maltechnik des Altertums nach den Quellen, Funden, chemischen Analysen und eigenen Versuchen of 1904 (reprinted 1986) he showed that he also used visual sources and reconstructions. In other words, Berger used all kinds of sources but concentrated on material sources (his nos. 2 and 3). Much of his studies relied on his observations and reconstructions of the objects and on his personal experience (as a painter) in the handling of similar modern materials. This is, of course, because textual and audiovisual sources on painting techniques in antiquity are largely missing.

The study of the material aspects of objects and the use of objects as information carriers is applied in various disciplines. Materials research is the norm in archaeological...
investigations, considering the absence of primary documentation. Codicology – that is analyses of the materials of the written book, its manner of binding and manner of writing, and the presence of marks or stains – is indispensable when studying manuscripts (Clarke 2009: 16, fig. 5 and pl. 6). It goes hand in hand with palaeography for the better understanding of the concept of the text. Researching tools and machines lies primarily in the history of technique. In the field of art technology the research of material sources is not unknown, but a number of areas are awaiting further exploration.

The aim of the study of material sources within the discipline of art technological source research is to better understand historical technological practices in the creation of art objects. Results support further study of the appearance of the object in order to gain insight into the relationship between the aesthetics of the object and its technical aspects. It may show how concept and material, style and technique are related. Studying present appearance may also give an idea of how the object originally might have looked, which in its turn might support further art historical research, as well as providing information for the conservation of the object.

Studying material sources is performed by close observation of the object under research, by comparison with the construction and materials of similar objects, by discussion of the results of scientific analysis, and by comparison with reference materials and reconstructions. Handling historical tools and machines, or reconstructing materials, can give ideas as to how the original may have looked like, behaved or been used. The study of the workshop and the location of the site of the workshop place it in its spatial, economic and social context. Not unimportant is that the choice and use of materials may be related to the place and date of production of the art object.

The following material sources may be considered:

- the art object itself
- materials
- tools and machines
- models, moulds and patterns
- workshop interiors and sites
- modern reference materials and reconstructions

The art object under research is the primary material source because in principle it contains all the necessary data. The object can be observed with the naked eye or under magnification. Observation of its texture may reveal tool marks and particular working methods such as brushstrokes in paintings and thumbprints in ceramics. The layering and consistency of applied materials such as inks, metals or enamels may become clear through chemical/physical analyses. Underneath its surface the construction of the object, such as the core of a bronze cast or the canvas and stretcher of a painting, may be observable.

Raw and semi-manufactured materials are worked and shaped according to the concept of the object created. Materials research has been given attention since the 19th century. The scientific analysis of painting materials had just begun to develop in Berger’s time, though large amounts of original materials had to be destroyed and only modest analytical equipment was available for measurements (Berger 1986: 268 ff.). This branch of research developed strongly, however, to become self-evidently important over the years. The number of publications on the topic is vast, and the scientific analysis of works of art has become important for the conservation of art objects. Vice versa, analytical methods proper to the objects being researched may be selected more rationally by studying documentary sources.

Much less attention has been paid to the tools and machines necessary for the production of the object. This may answer such questions as: What kind of brush causes what kind of brush mark? How sharp does a chisel for sculpting stone need to be? How much pressure is exerted in a press when printing an engraving? Tools and machines leave their marks on the object and by studying these marks we may gain insight into how the object was produced, as already stated above.

The number of studies on models – such as the live model of the painter or sculptor, moulds such as those used for casting metal or ceramic, or patterns such as those used in transferring designs or in printing – is small. Models, moulds and patterns have always been and are still common in workshops of artists or craftsman, however – they are necessary in the transfer of the design in order to materialise the concept (Fig. 1).

Another subject that calls for further study is workshop interiors and the sites where workshops are or were established. Manuals on art techniques describe materials, tools, machines and techniques used in the craft. Description or layouts of the place where it all happens, the studio or atelier, are found only rarely in handbooks. When concentrating on a particular workshop one would be interested in working conditions, as well as the spatial, economic and social contexts.

It is rewarding to carry out such research because it brings the studios and ateliers to life, giving a vivid mental picture of the men, women and children at work there.

Working conditions may give an idea as to what kind of environment and under what circumstances the art object was produced. They may explain about the size, layout and furnishing of the studio, the floor on which it was situated, or about lighting and heating conditions. Health and safety aspects might be considered (Fig. 2), as well as the number of people present in the workshop. Related are questions concerning the working clothes that were worn or required because of the working environment, the kinds of materials that were

Figure 2 Maker of Japanese paper moulds in his workshop. (Photo: Ad Stijnman.)
(See Plate 10 in the colour plate section.)
treated and in what manner these were treated. Clothing may also be ordained by social factors, such as fashion, or by religious factors, such as the obligatory wearing of some kind of head covering.

Information about the spatial context could answer questions about the position of the workshop in its area. This relates to other artists and craftsmen in the neighbourhood, the presence of suppliers, communication facilities and trade routes (Kirby et al. 2010). Even if there are no remains left, worthwhile information can still be drawn from its former position related to a river (transport, communication, energy, water, food) or street (neighbouring artists and craftsmen, suppliers), which places the workshop in its environment, and in its social and economic context.

The social context could reveal relations between the workers in the shop or between the workers and their surroundings, contacts with other artists and craftsmen (where family ties are often found), political and religious aspects – all of which sustained and opened up further business opportunities.

The economic context could refer to craft organisations such as guilds or unions, customers, dealers, publishers, commissions, the numbers in which works are produced, the cost and supplies of works kept in stock, and the trade in artworks. Chances are good for specialisation and further development of professional status within an art or craft if trade is prospering.

These four issues may be connected: they influence each other and they influence the appearance of the objects produced. For example, a commission for an altar in a Catholic church (a religious aspect) may stipulate the use of particular materials such as ultramarine for painting the blue cloak in veneration of the Virgin. This requires a financial investment because of the high expense of the pigment, and suggests trade contacts to acquire the necessary semi-precious stone and to maintain the technical knowledge required to make paint from the stone. In the absence of the pigment or due to insufficient financing, cheaper blues might be used, which might alter the appearance of the cloak.

Institutions and departments for conservation research gather historic and modern raw and semi-produced materials for testing and comparison. Reconstructions of historical recipes, materials, tools, machines, technical processes and art objects give insight into their use and possibilities – this was the main theme of the first ATSR symposium (Clarke et al. 2005).

We can draw information from many sources, value that is related to our knowledge of handling and understanding the information contained. We may and should cast our nets wide, but the catch and the quality of the catch is limited to the sources available and our personal capacity. Cooperation between specialists in different fields is therefore a condicio sine qua non, especially in researching material sources. Only by collaboration with others can the meaning of realia be fully discovered and applied in research projects. This demands mutual respect and understanding between partners, and requires good communicative skills from everyone involved. This sounds idealistic, but it is pragmatic and the only way to generate unambiguous results.

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References


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