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THE ART TECHNOLOGICAL SOURCE RESEARCH
WORKING GROUP (ATSR)
AND THE DISSEMINATION OF INFORMATION
ON ART TECHNOLOGY
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THE ART TECHNOLOGICAL SOURCE RESEARCH WORKING GROUP (ATSR) AND THE DISSEMINATION OF INFORMATION ON ART TECHNOLOGY

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Résumé

Cet article est une introduction à ce qui est considéré comme la recherche sur les sources de la technologie de l'art réalisée par le groupe de travail ATSR (Art Technological Source Research). Suivent des informations sur ce groupe de travail et ses activités. Pour approfondir le sujet, la bibliographie renvoie à des articles issus des actes de symposia organisés par l'ATSR.

Abstract

This paper gives an introduction to what is considered art technological source research by the working group of that name, followed by information about the ATSR working group and its activities. For more detailed discussions on the subject see a number of articles in the proceedings of ATSR in the Bibliography.

1. What is *art technology*?

Art technology is knowledge concerning the production methods of works of art or craft, *i.e.* knowledge concerning materials, tools, machines, techniques and sites used in making objects with a certain cultural value / from cultural heritage.

2. What is an *art technological source*?

In general any kind of information carrier that supplies data the researcher can comprehend and more in particular historical documentation.

3. What is the *value of an art technological source*?

- The source is available; a copy or reproduction may be informative, but autopsy of the original may show details not observed in the copy, such as the actual materials used for producing the source or the original order within the source.
- The source is related to the research project; that means, be efficient and concentrate on what is useful for the project, but keep an eye open for other interesting material.
- The researcher has the capacities to make use of the source; for example, the researcher can understand the language of the recipe book, or the researcher is not colour blind when studying historic colour samples.

Summarising, art technological source research concerns research of historical documentation related to the production of the art object under study. In principle it can be related to any place, period, art or craft, such as the production of a contemporary video installation, as well as Rembrandt prints or Roman jewellery.

Art technological source research may show the coherence between the style of a work of art and the materials and techniques used in its production. The disclosure of such source material is of importance for both art-historical as well as material-technical and conservation research.

4. What kinds of *art technological sources* can we distinguish?

We can distinguish between *textual sources* and *audio-visual sources*, both of which we may call intentional, because they are intended to communicate

information to an audience, *i.e.* from one person to another person or a group. It is dedicated *dissemination of information* aiming to create *knowledge* with the receiver of this information. Art technological sources concern written or printed texts related to the production of works of art, such as recipe books, practical manuals, inventories of studios, costs of materials, taxa and imposts, as well as audio-visual material such as sound recordings, depictions of studio interiors, tools and machines, or video demonstrations of techniques. All this concerns sources we can hear and see; our other senses – smell, taste and touch – are not developed that much for the exchange of information, nor is there much equipment to support this kind of observation. All together it is the kind of documentation the ATSR working group studies.

The rest may be gathered as *material sources*. When data are derived from the material aspects of an object and the researcher comes to particular conclusions about or through it, we may call this *non-intentional communication*. The object has become an information carrier and a source for her / his project, only because of the particular study the researcher made of it and not because it was originally intended for it by the object's producer. This is common in archeology, but well applicable in the field of art technology.

5. Textual sources

Documentation of historic working processes on art objects in the form of texts is the most common way of communication.

- This may concern technical manuals, recipe books, tax regulations, levies, guild rules, advertisements, inventories, privileges, patents, diaries, house books, trade journals, cargo lists, house books, and many more.
- Texts can be written or printed.
- Language and readability are much related to the capacities of the student / researcher of these sources.
- Terminology is particular for the craft in its place and period, *i.e.* artists and craftsmen use their particular jargon.
- Texts may be instructive or descriptive.
- Copies, editions, reworked versions and translations of an original text can be entered in a *stemma* (for manuscripts) or a *bibliography* (for printed books); this creates an overview of developments and shows mutual relations.
- Texts are about particular subjects and seen from or placed within their aspects, such as place and time; think also of religious, political, economic or military aspects related to the text.

The researcher should be trained in paleography and codicology. Paleography concerns the reading of manuscripts and all what is related to it, such as the sign system (alphabet) and particular language used. Codicology concerns knowledge of the codex, the manuscript. Its construction or compilation, the kinds of writing inks and supports (paper, parchment) used, the binding manner, and further material elements may give information related to the content of the text. Both are also applicable to printed books.

Linguistic skills are needed to understand specific terms, their homonyms and synonyms. For example the term for *green* in heraldry is *sinople* in various languages, but the English use the French word *vert* and the Germans use the common word *grün* (green). The closely related term *sinoper* is nearly a homonym and may signify a kind of red, but then there are many terms for red found in medieval texts standing for similar or different pigments or dyestuffs.

Checking the internet may be helpful, but does not always bring relevant information. For example: *alum* is an aluminium sulphate or a potassium aluminium sulphate, but its homonym has the meaning *alumnus*. Therefore: all terms and (multiple-word) expressions used within a project should be well defined for the project in order that everyone involved knows what it is about. It is practical to compile a glossary of defined terms and expressions for the project, however they may have different meanings in another context.

Instructive texts are practical or technical, and aimed at introducing the reader into the process in order to be capable of repeating the process by oneself. They can be recognised, because they are usually written in the imperative – “take 1 ounce of vermilion” – by an artist or craftsman and meant for students in the art or craft. Descriptive texts concern observation of the process and are not aimed at teaching to carry out the process. They can be correct, but are aimed at informing a third party, such as an encyclopaedist writing for a larger audience.

To create an overview of the various copies of a manuscript a *stemma* is created, allowing to see where in the chronology of a written text a particular manuscript copy stands and how it thereby relates to the other texts in the stemma.

Entering the various editions, translations, reworked versions, reprints and facsimiles of a printed text into a *bibliography* gives the overview of its production and dissemination of this text. Otherwise, an exhaustive list of all printed texts on a well defined theme creates a bibliography on that theme.

6. Audio-visual sources

The other kind of sources may be further divided in:

- *audio sources* (i.e. sound), which concern direct contact, hearing and recorded sound;
- *visual sources* (i.e. imagery), which concern direct contact, observation, still and moving images,

both of which also combine.

Not only are there instructive and descriptive texts, but also instructive and descriptive images. **Fig. 1** instructs how burins for copper engraving should appear, how to hold a burin properly and how to handle it in engraving. **Fig. 2** shows a bundle of various engraver's tools as decorative elements in an allegory.

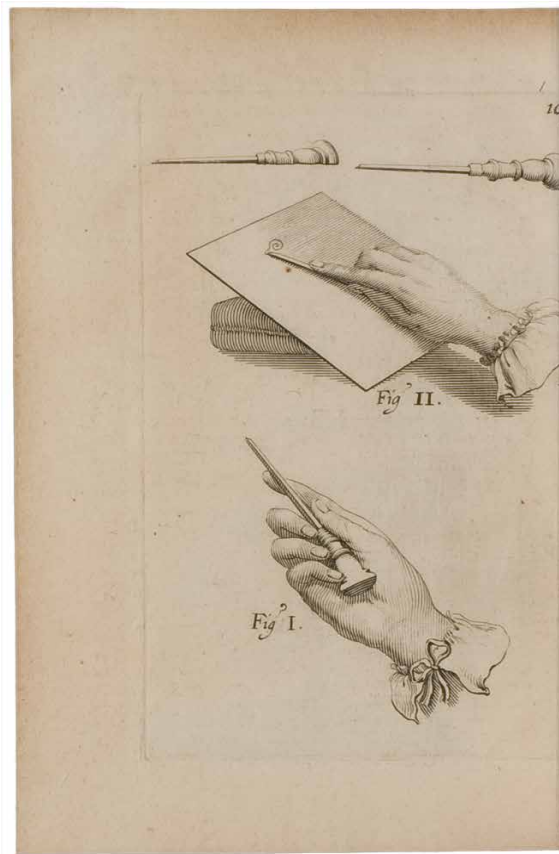


Fig. 1. Abraham Bosse, *Instructions for engraving, etching*, in: Abraham Bosse, *Traicté des manieres de graver en taille douce sur l'airin (etc.)*, Paris, Bosse, 1645: pl. 10; Wolfenbüttel, Herzog August Library, department of photography.



Fig. 2. A.M., *Detail of title page*, engraving, in Mangel Seutter, *Ein schönes und nützliches Bißbuch (etc.)*, Augsburg, [without publisher], 1584; Wolfenbüttel, Herzog August Library, department of photography.

Texts are often transcribed or copied, but so are images. The Italian engineer Vittorio Zonca wrote his *Novo teatro di machine et edificii* (Padua, 1607), a book on mechanics, showing a number of machines with descriptions on how they were built and used. His depiction of a roller press for printing engravings (**fig. 3**) was copied (**fig. 4**) by the German Heinrich Zeissing in the second edition of part three of his *Theatri machinarum* (Leipzig, 1613), a book on engineering, enlarging the scene in his illustration and dressing the people depicted in local, cotemporary fashion.

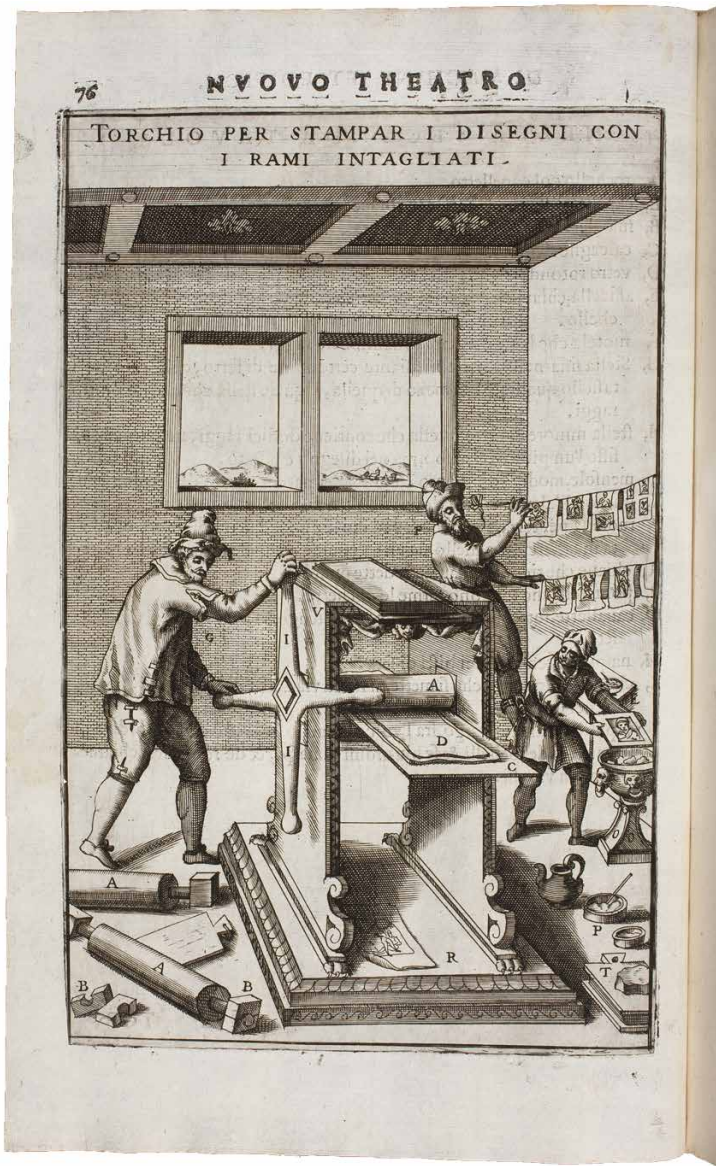


Fig. 3. Anonymous, *Plate printer*, engraving, in Vittorio Zonca, *Novo teatro di machine et edificii*, Padua, Bertelli, 1607, p. 76; Wolfenbüttel, Herzog August Library, department of photography.



Fig. 4. Anonymous, *Plate printer*, etching, in Heinrich Zeissing, *Theatri machinarum*, pt. 3, 2nd ed., Leipzig, Gross, 1613, fig. 6; Wolfenbüttel, Herzog August Library, department of photography.

Tomaso Garzoni's *Piazza Universale*, a popular book on all kinds of crafts, was also translated in German (Frankfurt-am-Main, 1641). This time it was illustrated with etchings by Matthäus Merian the Elder (1593–1650) in order for the reader to also see a workshop interior, such as this one (fig. 5).

The studio of the engraver (left) shows in great detail how he works and with what tools. Next to the obligatory burins we see a drypoint, a honing stone, a ruler and a pair of compasses. It includes a sphere on a stand with which the engraver supports his copper plate during engraving. This instrument is not found anymore after the seventeenth century and never described in any contemporary treatise or manual on engraving. The engraver is wearing long sleeves and not an apron or any garment to protect his clothes, meaning he does clean work. In the background an apprentice is studying. The printshop interior (right) shows the different stages in producing an impression from an engraved plate.



Fig. 5. Matthäus Merian d.Ä., *Engraver's studio and printshop*, in Tomaso Garzoni, *Piazza universale, das ist allgemeiner Schawplatz, Marckt und Zusammenkunft aller Professionen, Künsten, Geschäften, Händeln und Handwerken* (etc.), Frankfurt am Main, Hoffmann, 1641, figure on p. 366; Groningen, University Library, department of photography.

7. Textual vs. visual sources

Comparing texts and images we find that:

- Images can give information not found in texts and the other way around.
- Texts and images can overlap, but can also be contradictory.
- Images can explain art techniques and studio interiors faster and better than texts can.
- Images are often inventions with realistic elements.
- Practical texts are often more general, *i.e.* written from a more ideal situation without giving all the finer details of the production process.
- Consider that reading and writing you learn and practice from childhood, while there is no such specific training for understanding images; *i.e.* it is taken for granted (“you can see what it is, don’t you?”).

8. Material sources

Next to text and imagery, all created with the intention to communicate information to a larger audience, we find sources that in first instance are not intended for communication. Although not part of the ATSR working group core activities they can be useful for researchers, provided these have the skills and capacities to comprehend such material sources. They concern:

- the art object itself, *i.e.* the materials that constitute the object, but also traces of working processes and the handling of the art object during its production and later conservation;
- materials, tools, machines with which the art object, or similar art objects, are constructed;
- models, moulds & patterns that support or are used in the production of art objects;
- sites, *i.e.* production places such as studios, workshops or factories;
- modern reference materials, used for comparison with historic or original materials;
- results of reconstructions;
- results of chemical/physical analyses.

9. ICOM-CC Working group Art Technological Source Research

The Working Group Art Technological Source Research was founded in Amsterdam on 20 March 2002 by ten people from five different countries. Its first symposium also took place in Amsterdam, in 2004, and was attended by a hundred delegates. Since then ATSR organises its symposia biennially, with the next meeting planned for Stuttgart in 2016.

In 2008 the Working Group was invited to join ICOM-CC and its membership grew to some 150 (<http://www.icom-cc.org/21/working-groups/art-technological-source-research/>).

The main objective of the ATSR working group is to encourage research into art technological sources on a professional basis. One of the other objectives is to be a platform for the exchange and dissemination of information on art technological sources. One of its main instruments is the already mentioned biennial organisation of a symposium on art technological source research and proceedings of the past six symposia are published (see Bibliography below). ATSR is an ICOM-CC working group and therefore has also presented itself during its past three triennial meetings and in the publications of its meetings. Apart from this, members – on their own initiative – have

organised courses and meetings, and have published about art technological source research.

In recent years several dozens of publications have appeared in the field of art technological source research, and not only by ATSR members. These publications discuss textual and visual sources and related matter. A selection includes the following (for full titles see Further Reading below). *Kunsttechnieken in historisch perspectief* (Art techniques in historical perspective) is a handbook for students in art history and in restoration practice; it concerns painting, drawing, sculpting, printmaking, architecture, modern video and installations, all discussed from particular cases in the field. *Engraving and Etching 1400–2000* gives a wide overview of all engraving and etching processes, the trade of printmaking materials, the training of engravers and plate printers, the lay-out of workshops and everything else of the trade from the very beginning of intaglio printmaking in the 1430s and its antecedents up to the present day; it is based on an exhaustive bibliography of technical manuals for the engraver and etcher, as well as hundreds of depictions of workshops, tools and machines. *Trade in Artist's Materials* is the result of a conference on artist's materials of any kind, where they did come from, how they were traded and what they did cost. Annotated transcriptions of recipe books or practical instructions on the making of art objects appear regularly, as shows *Segreti d'arti diverse nel regno di Napoli*.

Bibliography

The objectives of the ATSR working group and its theoretical and practical developments are discussed during its symposia and can be read in its proceedings, as presented here in chronological order.

EYB-GREEN Sigrid *et al.* (eds.), *Sources on Art Technology: Back to Basics*, London, Archetype, 2016 (Proceedings of the sixth ATSR symposium in Amsterdam, June 2014)

DUBOIS Helene *et al.* (eds.), *Making and Transforming Art: Changes in Artists' Materials and Practice*, London, Archetype, 2014 (Proceedings of the fifth ATSR symposium in Brussels, November 2012).

CLARKE Mark *et al.* (eds.), *The Artist's Process: Technology and Interpretation*, London, Archetype, 2012 (Proceedings of the fourth ATSR symposium in Vienna, September 2010).

16th Triennial Meeting [in Lisbon] of the ICOM Committee for Conservation, Preprints., 2011, CD-ROM (contains papers of the ATSR working group).

HERMENS Erma and TOWNSEND Joyce H. (eds.), *Study and Serendipity: Testimonies on Artists' Practice*, London, Archetype, 2009 (Proceedings of the third ATSR conference in Glasgow, June 2008).

BRIDGLAND J. (ed.), *15th Triennial Meeting [in New Delhi] of the ICOM Committee for Conservation*, Preprints, New Delhi, Allied Publishers, 2008, 2 vols. (contains three papers of the ATSR working group: p. 3–24).

KROUSTALLIS Stefanos *et al.* (eds.), *Art Technology: Sources and Methods*, London, Archetype, 2008 (Proceedings of the second ATSR conference in Madrid, October 2006).

CLARKE Mark *et al.* (eds.), *Art of the Past - Sources and Reconstructions*, London, Archetype, 2005 (Proceedings of the first ATSR conference in Amsterdam, October 2004).

Further Reading

WESTGEEST Helen *et al.*, *Kunsttechnieken in historisch perspectief*, Turnhout, Brepols, 2012 [2011] (an English translation is planned).

STIJNMAN Ad, *Engraving and Etching 1400–2000: Historical Developments of Manual Intaglio Printmaking Processes*, London/Houten, Archetype/Hes & De Graaf, 2012.

FREZZATO F. e SECCARONI C., *Segreti d'arti diverse nel regno di Napoli. "Il manoscritto It. III.10 della Biblioteca Marciana di Venezia"*, Saonara (Pd), Il Prato, 2010.

KIRBY Jo, NASH Susan and CANNON Joanna (eds.), *Trade in Artists' Materials: Markets and Commerce in Europe to 1700*, London, Archetype, 2011.

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Figure 1: Abraham Bosse, *Instructions for engraving*, etching, in: Abraham Bosse, *Traicté des manieres de graver en taille douce sur l'airin (etc.)*, Paris, Bosse, 1645: pl. 10; Wolfenbüttel, Herzog August Library, department of photography.

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Author

Ad Stijnman, PhD University of Amsterdam, Department of Humanities, and Fellow of the Royal Historical Society in London, is an independent scholar specialising in the history of manual intaglio printmaking processes through all times. He

lectured and published widely on the subject, including his seminal *Engraving and Etching 1400–2000: A History of the Development of Manual Intaglio Printmaking Processes* (2012). His most recent publication is *Printing Colour 1400–1700: History, Techniques, Functions and Receptions* (2015), which he co-edited together with Elizabeth Savage. As a curator he organized museum exhibits on medieval prints, early modern colour prints and Rembrandt etchings on Japanese paper. He was originator, co-founder and first Coordinator (2002–2008) of the ATSR working group.