Looking at
Prints, Drawings and Watercolours

A Guide to Technical Terms

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Jost Amman (1539–91): *The Woodcutter*, 1568. Woodcut, 79 × 59 mm (3⅛ × 2⁵⁄₁₆ in). BM, 159.d.11, 1904–2–6–103(19).

Foreword

Many art-historians and museum curators assume, often wrongly, that the terms which they employ to describe prints, drawings and watercolours are readily understood by the majority of visitors to exhibitions and readers of catalogues. Definitions of these terms are invariably difficult to find in reference books, and therefore the aim of this publication is to bring together many of the most commonly found ones and attempt to clarify their meanings. This book has grown out of two earlier publications by the author, *Looking at Drawings* (1979) and *Looking at Prints* (1981). Although this is more ambitious in scale, the purpose remains the same: to be as accurate as possible within the confines of space.

The book is directed at the person looking at traditional collections of prints, drawings and watercolours and hence deals only briefly with photomechanical processes and some modern developments in original printmaking.

I have relied heavily on the help of my colleagues in the Department of Prints and Drawings at the British Museum, notably Antony Griffiths, Nicholas Turner, Lindsay Stainton, Martin Royalton-Kisch and Frances Carey. I am also indebted to Eric Harding and Alan Donnithorne in the Western Pictorial Art Section of the Department of Conservation.

Aquatint: enlarged detail.
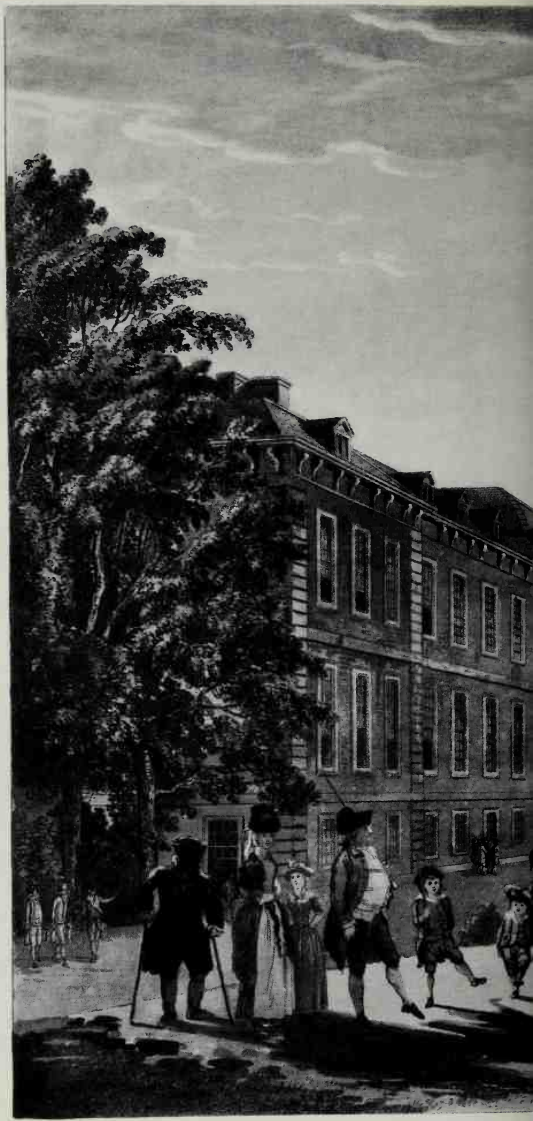
Aquatint
Paul Sandby (1730–1809): *The Encampment in the Museum Garden*, 1783. Aquatint, 340 × 478 mm (13⅜ × 18¹³⁄₁₆ in). BM, 1904–8–19–732.

Note
Words printed in SMALL CAPITALS refer to other entries in the book. Terms which do not have separate entries are in inverted commas.

Aquatint A variety of ETCHING and essentially a tone process which can be used to imitate the appearance of watercolour washes. The chief element of the process, which was invented in France in the 1760s, is the partial protection of the surface of the plate with a porous ground through which the acid can penetrate. The plate is covered with a ground of powdered resin which is attached to the plate by heating. In etching, the acid bites tiny rings around each resin grain, and these hold sufficient ink when printed to give the effect of a wash. The printmaker will 'stop out' with a protecting varnish any parts of the ground where he wishes to obtain pure white. Gradations of tone can be achieved by careful repetition of the biting and varnishing process or by burnishing. This has the disadvantage of being a 'negative' process, since the 'stopped-out' areas remain white.

An alternative 'positive' process is 'sugar' or 'lift-ground' aquatint. The plate is covered in resin as in ordinary aquatint and the artist draws on the surface in a solution of sugar and water. A varnish is then laid over the entire plate, which is then immersed in water. This causes the sugar under the varnish to swell and lift,

exposing the aquatint ground; the plate is then bitten and printed in the normal way.

Artist's proof In twentieth-century print-making, an artist's proof is an impression signed by the artist and annotated 'AP' (or something similar) which is extra to the ordinary numbered edition. The practice of signing PROOFS began, however, in the nineteenth century.

Ascribed A drawing is 'ascribed' to an artist when it has been given to him by tradition, most frequently by an INSCRIPTION on the drawing or on its mount. The term, however, suggests some doubt in the mind of the cataloguer as to the correctness of this tradition.

Attributed A drawing is 'attributed' to an artist on the grounds of style or some good external evidence; however, some doubt remains about its authorship.

Baxter Print In 1835, George Baxter patented a printing technique under his own name. It involved overprinting an INTAGLIO key-plate with numerous wood or metal blocks inked in oil colours. The technique was used by others under licence from Baxter, most notably by Le Blond, and fell into disuse after 1865. (See C. T. Courtney Lewis, *George Baxter the Picture Printer*, London, 1924.)

Bodycolour Any type of opaque water-soluble pigment. At an early period the opaque medium employed was lead white. In 1834 Winsor and Newton introduced Chinese White, which is zinc oxide, and this was marketed as a substitute for lead white.

The bodycolour medium was known in the late fifteenth century when Dürer made drawings of landscapes, animals and flowers in a combination of bodycolour and watercolour. Later artists such as Rubens and Van Dyck also made extensive use of bodycolour, but it reached its greatest popularity in the 1820s and 1830s in England when watercolourists, most notably Turner, exploited it to the full, combining the opacity of the lights with the transparency of the washes of colour. Sometimes they executed works in bodycolour alone. Drawings loosely termed 'watercolours' are frequently found to be done in a combination of transparent pigments with opaque ones. See also TEMPERA, WATERCOLOUR, GOUACHE and HEIGHTENING.

Baxter Print
George Baxter (1804–67): *Gems of the Great Exhibition No. 2*, 1852. Baxter Print, 120 × 241 mm (4¾ × 9½ in). BM, 1901–11–5–20.

Bodycolour
Albrecht Dürer (1471–1528): *Stag Beetle*, 1505. Watercolour and bodycolour, 142 × 114 mm (5 9/16 × 4 1/2 in). JPGM, 83.GC.214.

Brush Brushes have been used for drawing since ancient times. From the medieval period brushes were fine and pointed and were made usually of squirrel hair fixed into the tapered ends of quills. Many drawings described as having been executed in pen are often found on closer examination to have been drawn with a fine brush.

Camera Obscura and Lucida The *Camera Obscura* was an optical apparatus consisting of a darkened chamber, at the top of which was placed a box or lantern containing a convex lens and a sloping mirror. The view passed through the lens and was reflected by the mirror onto a sheet of paper placed at the bottom of the box. In this way a three-dimensional view was

Brush drawing
Rembrandt van Rijn (1606–69): *A Girl Sleeping (Hendrickje Stoffels?)*. Brush drawing in brown ink, 245 × 203 mm (9⅝ × 8¹⁄₁₆ in). BM, 1895–9–15–1279.

reduced to a two-dimensional image, which could be traced or otherwise used to help the artist reproduce the view accurately. The apparatus was first mentioned by the German astronomer Johann Kepler in the first decade of the seventeenth century, but the principles behind its use were described in Chinese texts of the fifth century BC. (See J. Hammond, *The Camera Obscura – A Chronicle*, Bristol, 1981.)

The *Camera Lucida* was a development from the *Camera Obscura*. It consisted of a glass prism mounted on the end of an adjustable arm. It was an awkward instrument to use because the operator's eye had to be placed so that the centre of the pupil was directly above the edge of the prism. A reflection of the view or object was seen in the prism by half the eye and the point of the drawing instrument by the other half. As the images merged on the retina, the
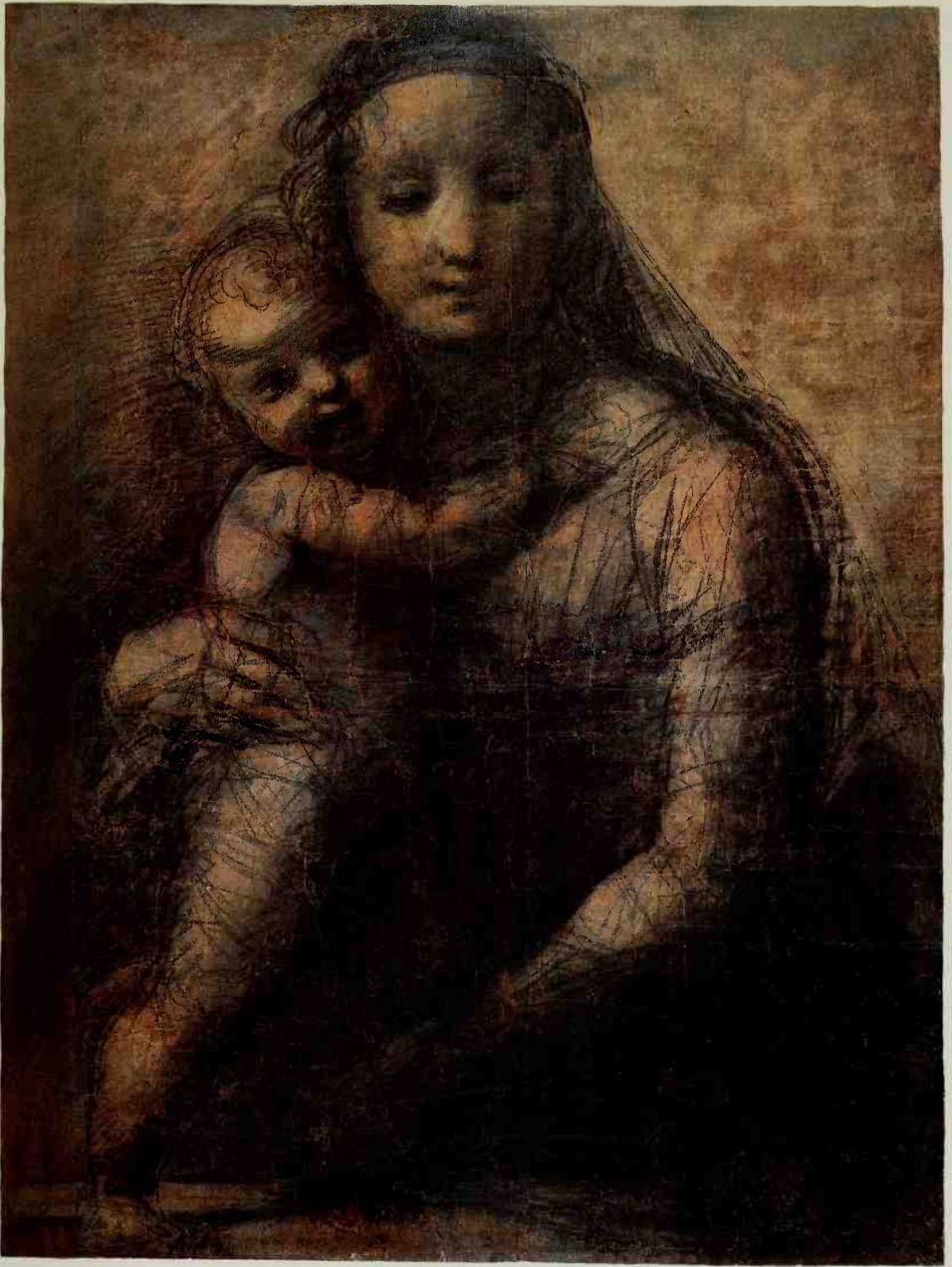
Cartoon
Raphael (Raffaello Santi, 1483–1520): *The Virgin and Child*. Cartoon corresponding with the *Mackintosh Madonna*. Black chalk with some traces of white heightening, 710 × 535 mm (27$\frac{15}{16}$ × 21$\frac{1}{8}$ in). BM, 1894–7–21–1.

outline of the reflection could be traced. It was invented at the beginning of the nineteenth century by Dr William Hyde Wollaston for drawing in perspective. (See J. Hammond and J. Austin, *The Camera Lucida in Art and Science*, Bristol, 1987.)

Cartoon A drawing of the principal forms of a composition, made to the same scale as the painting or FRESCO for which it is preparatory. For some frescoes the cartoon was applied in sections to the wall and the outlines cut through on the wet plaster, destroying the cartoon in the process. The cartoon was sometimes preserved by TRANSFERRING its design onto a secondary cartoon, a sheet of paper placed beneath the first, by pricking (see POUNCE) or indenting it with a STYLUS. This secondary cartoon would be placed on the wall.

Examples of cartoons in the British Museum collection are the *Epifania* by Michelangelo (which is apparently neither pricked nor indented) and the *Virgin and Child* by Raphael which was used for the so-called *Mackintosh Madonna* in the National Gallery, London (which is partly pricked and partly indented). The chalk dust rubbed through the perforations in the paper would also affect the appearance of a cartoon by causing a 'greying'; some small-scale cartoons were drawn in pen and ink, so the main outlines are still visible after this 'greying'. These are usually cartoons for paintings executed on wooden panels. Cartoons have also traditionally been used in the manufacture of tapestries and stained glass.

An 'auxiliary cartoon' is a term coined by the German art-historian Oskar Fischel to describe Raphael's practice of making subsidiary detailed studies based upon outlines traced through from the complete cartoon. Such details were of heads, hands, etc., which the artist wanted to realise with particular care. The drawings would have been kept close at hand as a guide when Raphael came to execute the corresponding passages in his painting.

The more frequent modern use of the word 'cartoon', remote from its original meaning, denotes a humorous or sarcastic representation of a current topic, frequently political. This usage dates from about 1843, when an exhibition was held in Westminster Hall of cartoons from which designs were to be selected for the fresco decoration of the new Houses of Parliament. *Punch* facetiously entered the competition with a composition by John Leech, and this was the first such drawing to be called a cartoon.

Chalk

1 Natural chalks
Natural chalks of various colours are derived from earths. Natural grey chalk is obtained from brick clay, natural red chalk from the red ochre variety of haematite, natural white chalk from the chalk variety of calcite or soapstone, and natural black chalk from carbonaceous shale. For drawing purposes, lumps of these materials were reduced in size and inserted into metal holders, and the drawing end was shaved to a point.

Red chalk was known by the sixteenth century and deposits were recorded in Italy, Spain, Flanders, France and Germany. Numerous Renaissance artists drew in red chalk, and Leonardo da Vinci, Michelangelo and Correggio were among the most distinguished exponents of the medium. These natural red chalks varied in colour according to differences in the natural compositions of the red ochre variety of haematites in different deposits. Variation in hue could also be obtained by wetting the chalk before application. 'Sanguine' is another term for red chalk which is often found in older references.

Black chalk appeared at about the same time as red chalk and was similarly mined throughout western Europe. By the late eighteenth and early nineteenth centuries, however, the use and importance of black chalk had declined, largely

Red chalk
Rembrandt van Rijn (1606–69): *Nude Woman with a Snake (as Cleopatra)*, c.1637. Red and white chalk, 248 × 137 mm (9¾ × 5¾ in). JPGM, 81.GB.27.

Black chalk
Annibale Carracci (1560–1609): *Three Studies of Men* (recto), mid-1580s. Black chalk,
277 × 207 mm (10⅞ × 8⅛ in). JPGM, 85.GB.218.

Aux trois crayons (above)
Jean Antoine Watteau (1684–1721): *Studies of Three Ladies*, c.1716/17. Red, black and white chalk, 268 × 327 mm (10$\frac{9}{16}$ × 12$\frac{7}{8}$ in). JPGM, 86.GB.596.

White chalk
Giovanni Battista Piazzetta (1683–1754): *A Boy Holding a Pear*, c.1740. Black and white chalk on blue-grey paper, 392 × 309 mm (15$\frac{7}{16}$ × 12$\frac{3}{16}$ in). JPGM, 86.GB.677.

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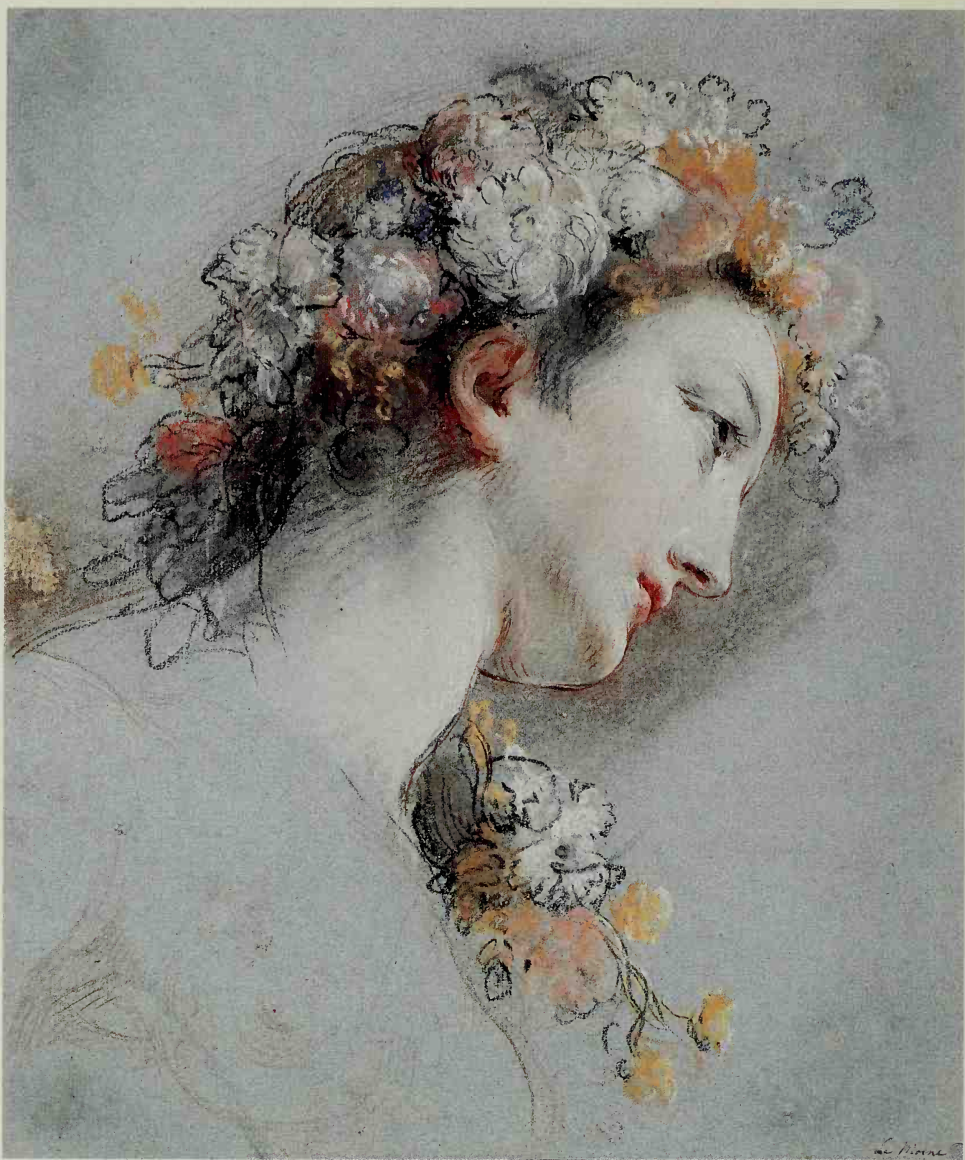
Pastel
François Lemoine (1688–1737): *Head of the Goddess Hebe*. Pastels on blue paper, 311 ×
258 mm (12¼ × 10⅛ in). BM, 1850–3–9–1.

because its quality was variable, and it
began to be replaced with fine black
CRAYONS.

White chalk was known widely in Renais-
sance times, when it was primarily
employed to HEIGHTEN drawings in other
media. Because of its softness it was es-
pecially easy to shape into sticks or insert
into holders.

A technique especially favoured by
French artists of the eighteenth century,
notably Watteau, was called '*aux trois
crayons*'. It was a combination of red,
black and white natural chalks, usually on
a yellowish or off-white paper.

2 Fabricated chalks (Pastels)
Fabricated chalks or pastels are dry draw-
ing media made from powdered pigments

Charcoal
Jean-Baptiste Siméon Chardin (1699–1779): *Study for a Seated Man* (recto), *c*.1720–25.
Charcoal and white chalk, 256 × 167 mm (10$\frac{1}{16}$ × 6$\frac{9}{16}$ in). JPGM, 85.GB.224.

Chiaroscuro woodcut
Bartolommeo Coriolano (c.1599–c.1676)
after Guido Reni (1575–1642): *A Giant*.
Chiaroscuro woodcut, 257 × 193 mm (10⅛ ×
7⅝ in). BM, w.5–30.

combined with non-greasy binders. They
are used in the form of finger-length
sticks. The marks made by pastels are
opaque, and specially prepared papers,
often tinted or ribbed, have been manufac-
tured for pastel drawing since the
eighteenth century. The colours may be
mixed by smudging, using the fingers or a
STUMP, or may be combined optically – a
usage much favoured by Degas.

Pastels originated in Northern Italy in
the sixteenth century and were used by
many artists, notably Bassano and
Barocci. At the same time portraits in
pastel were being made by Hans Holbein
the Younger and Jean Clouet. The tech-
nique was perfected in the eighteenth cen-
tury, especially by artists such as Quentin
de La Tour and Rosalba Carriera, again
chiefly for portraiture, and the art was
revived in the late nineteenth century by
Degas and Toulouse-Lautrec among
others. See CRAYON and CONTÉ CRAYON.

Charcoal Charcoal is made by reducing
wood to carbon in heated chambers from
which oxygen is excluded in order to
prevent combustion taking place. Like
chalk, it was cut into pieces and used in
holders. It was used frequently as a
preparatory medium in drawings intended
for completion in other media, but
sometimes it was used alone, especially
by German artists of the sixteenth cen-
tury, notably Dürer and Hans Burgkmair.
Charcoal drawings are often protected
from smudging by the application of a
FIXATIVE sprayed onto the drawing.

From about the middle of the sixteenth
century a new medium, 'oiled charcoal',
was employed to increase the permanence
of charcoal drawings. Natural charcoal
sticks were soaked in linseed oil, wiped
and then used for drawing before the oil
hardened by oxidisation. This type of
charcoal produced a rich black line that
did not smudge and in time hardened like
oil paint.

Chiaroscuro woodcut A colour WOOD-
CUT used to suggest the effect of a mono-
chrome tonal drawing. A different block
was normally used for each shade of col-
our. The process was particularly popular
in Italy and Germany in the sixteenth
century.

Cliché verre A technique used by several
French etchers in the nineteenth century,
notably Corot and Daubigny. The surface
of a glass plate was covered with an
opaque ground, and the artist would draw
onto this ground with a point, leaving the
glass transparent where the lines were to
print black. The glass plate was then used
as an ordinary photographic negative, and
a print produced by exposing light through
it onto sensitised photographic paper. (See
*Cliché-verre: Hand-Drawn, Light-Printed
– A Survey of the Medium from 1839 to
the Present*, exhibition catalogue, Detroit
Institute of Arts, 1980.)

Collage This French word may be
translated as 'sticking', 'gluing' or 'past-
ing'. (Another French term is *'papier
découpé'*.) The term 'collage' in effect
means any work composed of pieces of

Cliché verre
Jean-François Millet (1814–75): *La Précaution Maternelle*. Cliché verre, 288 × 225 mm
(11¾ × 8⅞ in). BM, 161˙G.21, 1922–4–10–245.

paper or other materials which have been painted, drawn or printed and are stuck onto a supporting surface.

In the eighteenth century the flower artist Mrs Mary Delany (1700–88) invented a medium known as 'paper mosaic' or 'plant collage'. Her method was to cut the petals and leaves from coloured paper, and paste them on a background of black paper. Some unusual tints were created from paper on which the colours had run, and occasionally she added touches of watercolour and even real leaves. During the twentieth century both the use of collage for pictorial effect and the materials involved in it have substantially increased

Collage

Mary Delany (1700–1788): *Stewartia Malacodendron*. Paper mosaic or collage, 331 ×
226 mm (13 × 8⅞ in). BM, 1897–5–5–843.

in range. Kurt Schwitters, for example, employed printed ephemera, fabrics and a whole variety of small objects as elements in his collages.

Collectors' marks These small marks, usually composed of an initial or initials but sometimes a device, are stamped or applied by some other means at the corner or some other unobtrusive area of drawings or prints to indicate ownership. Originally they were often applied posthumously by executors. They are usually written or stamped in ink, but are sometimes embossed into the paper without inking (blind stamps). Such

Coloured print
Anonymous: *Winter Fashions for 1838, and 39. View in the Regent's Park, London*, 1838.
Hand-coloured aquatint, 436 × 570 mm ($17\frac{3}{16}$ × $22\frac{7}{16}$ in). BM, 1931–11–14–357.

marks do not denote authenticity, but a work with a provenance from one or several important collections can often be of high quality. The standard work on the subject is *Les Marques de Collections de Dessins et d'Estampes* by Frits Lugt, Amsterdam, 1921; a supplement to this work was published in 1956.

A 'studio stamp' was applied to drawings left in an artist's studio after his or her death. Such stamps are a useful but not infallible guide to authenticity. Degas had a large collection of drawings by other artists and after his death these were stamped with the Degas studio stamp, as were his own drawings. Such stamps were often applied in France in the nineteenth century, frequently prior to the sale or dispersal of drawings.

Colour printing There is a fundamental distinction between 'colour prints' and 'coloured prints'. A colour print is one printed with inks of different colours; a coloured print is printed in ink of one

Collectors' marks
Detail of a drawing by Correggio (Antonio Allegri, 1489/94–1534), showing the collectors' marks. From left to right, they are those of Richard Ford (1796–1858), Sir Joshua Reynolds (1732–92) and Sir Peter Lely (1618–80). BM, 1895–9–15–738.

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Conté crayon
Georges Seurat (1859–91): *Landscape Study for 'La Grande Jatte'*, 1884–6. Conté crayon, 422 × 628 mm (16⅝ × 24¾ in). BM, 1968–2–10–17.

colour and has had extra colouring added by hand.

INTAGLIO plates printed in colours may either be printed from one plate inked in different colours or from several plates each inked in a separate colour. Colour WOODCUTS, LITHOGRAPHS and SCREEN-PRINTS are normally produced using different stones or screens for each colour.

Conté crayon Invented in 1795 by Nicolas Jacques Conté (1755–1805), this was a mixture of refined GRAPHITE (see also PENCIL) and clay. During the Napoleonic Wars graphite for pencils was in short supply and Conté's invention both used less graphite and improved the quality of pencils for drawing by producing varying degrees of hardness. In this way he helped to increase the popularity of pencils as drawing instruments.

In the nineteenth century Georges Seurat made some remarkable studies for his major painting *La Grande Jatte* in Conté crayon, using the medium to achieve outstandingly soft effects of texture.

What are currently marketed as 'Conté crayons' are different in composition, being a particular variety of fabricated CHALK.

Counterproof An impression made by running a print, before the ink has dried, through a press against another sheet. The resulting image is in reverse to the print but in the same direction as the engraving on the plate, and often helps the artist in making corrections. Counterproofs can be recognised because the image is flatter and weaker than an impression taken directly from the plate. The term is sometimes also applied to OFFSETS of drawings.

Crayon (French *craie* = chalk.) Modern crayons made in the form of sticks are composed of colours combined with oily, waxy or greasy binding media, or with combinations of water-soluble and fatty binders.

In the seventeenth and eighteenth centuries the word was used to describe both

Crayon
Henry Moore (1898–1986): *Sleeping Figures*, 1940. Crayon with pen and ink and washes of grey, pink and yellow, 188 × 165 mm (7⅞ × 6½ in). BM, 1977–4–12–13(60).

CHALK and PASTEL drawings and seems generally to have implied the employment of colour. By the late eighteenth and early nineteenth centuries the modern form of wood-encased crayon (with its essential greasy nature) began to be developed, and various recipes for the manufacture of crayons were proposed, most notably by Alois Senefelder, who needed to use them in his new invention of LITHOGRAPHY. He mentioned combinations of wax, tallow, spermaceti (the white wax from the sperm whale), soap and shellac. In the twentieth century crayons have been used to great effect by artists such as Picasso and Henry Moore.

Crayon manner A technique invented in 1757 by a French engraver, J. C. François (1717–69), in order to imitate the chalk drawings of artists such as Boucher. He developed new varieties of ROULETTES and 'mattoirs' (tools with rounded spiked heads) which he used not directly onto the

Crayon manner
Louis Marin Bonnet (1743–93) after François Boucher (1703–70): *Jeune Fille Assise sur un Lit*. Crayon manner, 438 × 304 mm (17¼ × 12 in). BM, 1985–5–4–6.

Drypoint
Rembrandt van Rijn (1606–69): *Clump of Trees with a Vista*, 1652. Drypoint, 124 × 211 mm (4⅞ × 8 5/16 in). BM, 1973 U.1141.

Drypoint: enlarged detail.

plate, but onto an etching ground in order to soften the effect. By printing on a suitable paper in a red or brown ink he produced deceptively accurate facsimiles of drawings.

Drypoint A member of the class of INTAGLIO prints. The line is scratched directly into the plate with a metal point, which is pulled across the surface and not pushed as in engraving. The metal displaced from the scratched line is thrown up on either side, and this residue of metal fragments is called the 'burr'. This gives the line a rich velvety texture when inked, but the burr is fragile and quickly wears down with each impression. There is thus a noticeable difference in quality between early and late impressions from a drypoint plate. Drypoint is often used in combination with other techniques, especially ETCHING. The earliest pure drypoints were made by the Master of the Housebook, who worked in about 1480 in the region of the middle Rhine, but the greatest exponent of the technique was Rembrandt.

A drypoint can be difficult to distinguish from an etching once the burr has been

the impressions are signed and numbered by the artist; a number such as 6/20 indicates that the impression was the sixth in an edition of twenty impressions. When the edition is complete the plate or block is often defaced by scratching lines across it; this is known as 'cancelling'. In the early days of printmaking editions were not limited: so long as demand continued the plate was used until it wore out.

Engraving A term sometimes used of all INTAGLIO prints but properly confined to those made with a tool called a 'graver' or 'burin', which is a small metal rod with a sharpened point. It is pushed across the plate, forcing the metal up into slivers in front of the V-shaped line. These pieces of metal are removed from the plate with a sharp bladed instrument (the 'scraper').

An engraving can usually be distinguished from an ETCHING by the ends of the lines: these taper into a point in engraving, but in an etching the ends are blunt and rounded. An engraved line, being cut, is sharp and clean, whereas an etched line, being drawn and bitten unevenly by the acid, is slightly irregular.

Etching A variety of INTAGLIO printmaking in which the lines in a metal plate are bitten (etched = eaten) by acid. The polished surface of the plate is first covered with a thin layer of ground, composed of waxes, gums and resins. The melted ground is usually laid on with a 'roller' or 'dabber'. The etcher draws through the ground with a metal point (the 'etching needle'), which exposes the metal. The plate is then immersed in a bath of acid, which bites into the plate through the exposed lines. The depth of the line, and thus its darkness when printed, is determined by the length of time the plate remains in the bath and the strength of the acid solution. The etching ground offers almost no resistance to the needle, so the artist has much the same freedom as in drawing.

Etching was invented as a method of decorating armour, and was already known in the fourteenth century. The earliest dated print from an etched plate,

Écorché
Parmigianino (1503–40): *An Écorché Right Arm*. Pen and brown wash over red chalk, 128 × 77 mm (5 × 3 in). BM, 1905–11–10–15.

worn down, but sometimes the character of the line will give the answer: for example, a rounded end will betray etched lines, and a very closely worked area of shading, drypoint.

Écorché (A French term, meaning 'skinned'.) From the Renaissance onwards artists frequently drew studies from clay or plaster figurines representing the human body with the skin removed to show the muscles. The term '*écorché*' is applied both to the figurine and to the drawing made from it.

Edition The practice of limiting the number of IMPRESSIONS of a print in order to create an artificial rarity for the benefit of the collector is a relatively recent development, dating only from the last quarter of the nineteenth century. Often

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Engraving
Robert Nanteuil (1630–78): *Etienne
Jehannot de Bartillat*, 1666. Engraving,
326 × 256 mm (12⅞ × 10¹⁄₁₆ in). BM,
1927–10–8–92.

Engraving: enlarged detail.

Etching
Jacob van Ruisdael (1628/9–82): *The Cottage on the Hill*. Etching, 194 × 279 mm (7⅝ × 11 in). BM, Sheepshanks 1113.

Etching: enlarged detail.

of 1513, is by Urs Graf, and few, if any, are likely to have preceded it.

The chief methods of distinguishing an etching have been described under ENGRAVING.

Fixatives A fixative is frequently used to protect a dry drawing medium once it has been applied to a surface. However, all fixatives may have an effect on the drawing media and paper, causing colour change or darkening. They can also appear to affect the spontaneity of the work by softening or flattening the strokes.

It is likely that the fixatives used in the sixteenth century and later were composed of adhesive binders obtained from natural sources such as diluted skimmed milk, diluted white of egg, fig juice, rice water, gums and shellac among others. Today most fixatives are produced from synthetic resins in solvents. Modern fixatives are usually applied in the form of a spray, but before this they were often spread quickly over the drawing with a thick brush.

Pastels were often laid face down on a bath of thin glue size or gum-water in an attempt to avoid long-term damage to the fragile colours.

Fresco A highly skilled method of wall or ceiling painting, of ancient origin, perfected during the Renaissance in Italy. The paint used was of the distemper/TEMPERA type, in which the colours are mixed with some binding substance soluble in water,

Glass print
Anonymous: *Autumn and Winter*, 1805. Glass print, sight size 250 × 355 mm (9⅞ × 14 in). BM, 1931–11–14–659.

and was usually applied to the wet plaster. As the plaster dried, the pigment became sealed within it. Paint could also be applied to the plaster when dry – *a secco* – an altogether easier procedure but one which had the serious disadvantage of being less durable. Sometimes the *a fresco* and *a secco* techniques were applied in combination. See also SINOPIA.

In the second quarter of the nineteenth century the interest in fresco painting revived, especially in England and Germany. Some of these so-called frescoes were in fact executed in oil-based paint, unlike their Renaissance predecessors.

Glass prints From the late seventeenth to the early nineteenth centuries MEZZO-TINTS, usually of popular genre or mythological subjects, were frequently glued face down onto glass and abraded from behind to remove all the paper. The film of ink left behind was then hand-coloured and the glass framed.

Gouache The term was first used in France in the eighteenth century to describe a method of painting with colours made opaque by mixing them with chalks or whites in a medium of gum and honey, and only adopted into English in 1882. Its use was extended to refer also to a drawing made in this medium. Today the term is also used loosely to describe any drawing made entirely in BODYCOLOUR. See also TEMPERA.

Graphite The essential ingredient of PENCILS, graphite is a crystalline allotropic form of carbon. It is also called 'black lead' and 'plumbago'. One of the earliest discoveries of it was in England in about 1550 in Borrowdale (Cumbria), where a mine was subsequently opened.

Grisaille A French term adopted into English and derived from *gris*, meaning grey. The term covers works executed in

Graphite
Jean-Auguste-Dominique Ingres (1780–1867): *Portrait of Lord Grantham*, 1816. Graphite, 405 × 282 mm (15$\frac{15}{16}$ × 11$\frac{1}{8}$ in). JPGM, 82.GD.106.

Heightening
Benjamin West (1738–1820): *The Flight of Astyanax (Hector Bidding Farewell to Andromache)*, 1797. Pen and ink, brown wash and blue and white bodycolour on brown prepared paper, 318 × 460 mm (12½ × 18⅛ in. JPGM, 84.GG.722.

grey or other monotones in BODY-COLOUR, WASHES or oils, sometimes to give an impression of low relief. The technique was employed by Mantegna and was later used particularly by sculptors for preparatory studies. The Italian term, which is mentioned by Vasari, is *chiaroscuro*.

Gum arabic The natural secretion of the acacia tree and a substance still used in the manufacture of WATERCOLOURS. Its chief value lies in its ability to assist the paint to adhere to the paper, but it also maintains a stable dispersal of pigment particles in water until the film of wash has dried and the colours are gummed in place, so making a significant contribution to the final appearance of the work.

In the Victorian period gum arabic was also used on its own, applied on top of areas of watercolour. When dry, the gum became a transparent film, causing a deepening of tone and a richer effect. Its presence can often be recognised because it frequently cracks.

Heightening A term used for the addition of highlights by the application of white BODYCOLOUR or WHITE CHALK. A similar effect can be gained by SCRAPING through the medium to reveal the white of the PAPER.

Impression The term applied to any print from a block, plate or stone. In the sense in which we talk of a 'copy' of a book, the word 'impression' should be used of a print to avoid confusion with 'copy' in the sense of a facsimile.

Inks

1 Drawing inks
Iron-gall ink. Most Renaissance PEN drawings were made using iron-gall ink, which was the traditional medium for writing. It was obtained from a suspension of iron salts in gallic acid taken from the nut-galls (oak apples) of oak trees, excrescences caused by disease. Although almost black when first applied, this ink turns brown with time, hence the characteristic appearance of many 'Old Master'

drawings. It is also acidic in nature, which can cause fracturing or holes in PAPER.

Carbon ink. It is known that black carbon ink was used by the ancient Chinese and Egyptians, but it was not widely used for drawing in Europe until the sixteenth century. Carbon particles were obtained from the soot of burning oils, resins or resinous woods or the charcoal of many kinds of woods. These black particles were ground to a powder and combined with a binding medium. This kind of ink does not turn brown or fade.

Indian or Chinese ink. Essentially lampblack (carbon ink) mixed with gum and resin and hardened by baking. It is waterproof and the resin gives the line a sheen.

Bistre. A brown ink made by extracting soluble tars from wood soot. Water was used to dissolve the dark brown greasy soot, the solution was filtered to remove the insoluble sediment, and the ink colour was intensified by boiling or evaporating part of the water in the solution. Bistre was a popular drawing ink in the seventeenth and eighteenth centuries.

Sepia. A pigment ranging from black to yellow-brown, extracted from the ink-bag of the cuttle-fish. This did not become popular as a drawing medium until the end of the eighteenth century, when a suitable chemical extraction method was found to produce a concentrated ink from the natural sepia.

2 Printing inks

Printing ink is an oil-based fluid distinct from the water-based liquid used for writing. It was apparently invented, or at least developed, by Gutenberg, and was as essential to his success as his invention of the printing press and movable type. The ink is made by grinding lamp-black very fine and mixing it with oil; less oil is used in a RELIEF or typographic ink than in INTAGLIO ink in order to make it more viscous so that it will not run into the hollows. Lithographic ink has to contain grease to resist water, this being the fundamental principle of LITHOGRAPHY. In SCREENPRINTING the ink can be almost anything that will pass through the mesh and adhere to paper.

Inscription Any handwriting on a print or drawing which is not a SIGNATURE; if an artist's name is said to be 'inscribed', the inference is that it has been added by someone else. An inscription may be a note by the artist, or by a later owner; or it may have been on the sheet before the artist used it.

Intaglio printing The method of printing used for metal plates worked as ENGRAVINGS, DRYPOINTS, ETCHINGS, MEZZOTINTS, STIPPLES and AQUATINTS. The paper receives the ink from the incised lines and not from the surface of the plate. The ink is pressed into the lines with a pad called a 'dabber'. Any left on the surface is removed by wiping muslin across the
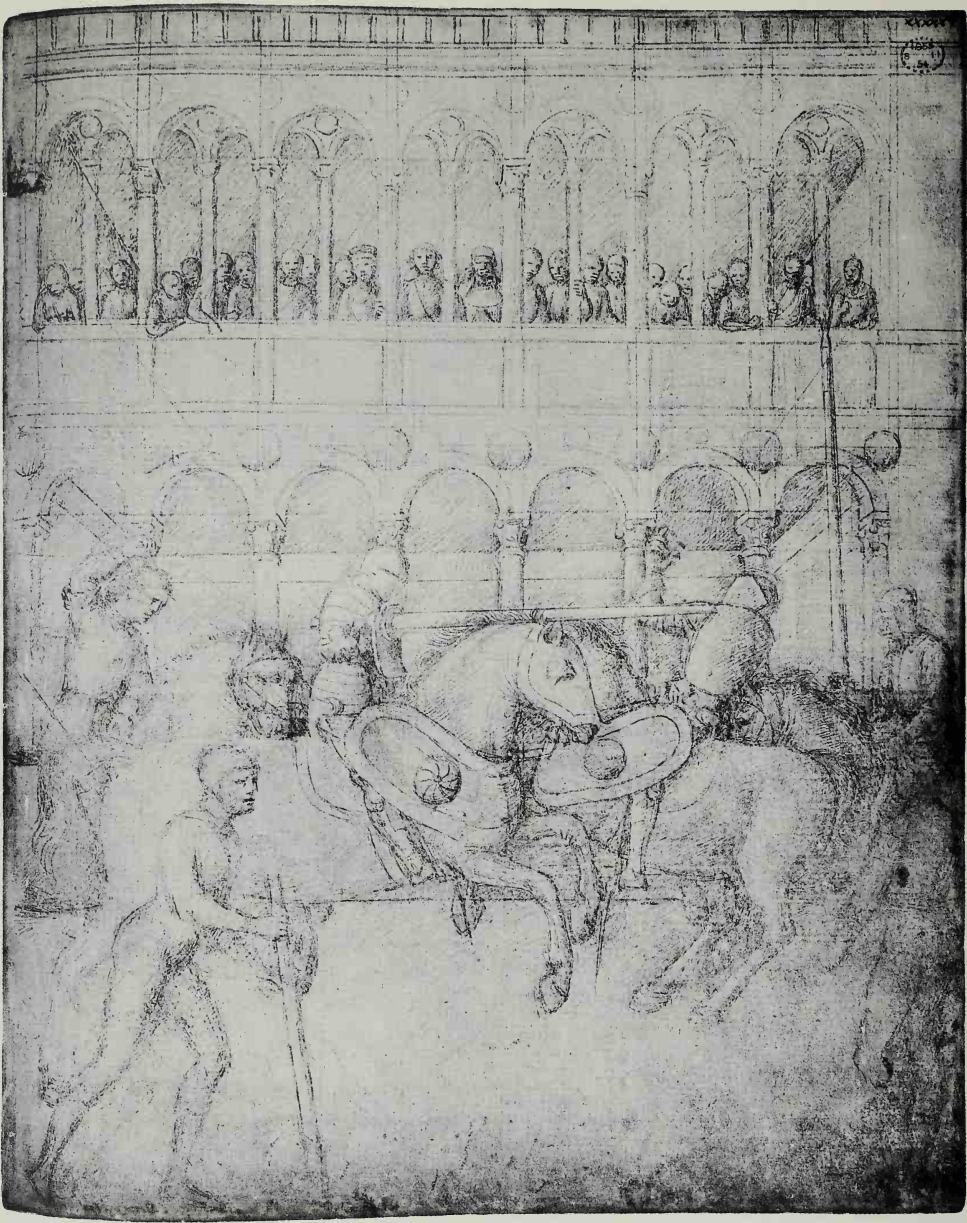
Lead point
Jacopo Bellini (*c*.1400–1470/1): *A Tournament*. Lead point on (prepared?) paper.
415 × 336 mm (16⅜ × 13¼ in). BM, 1855–8–11–54.

plate, and the process is usually completed with the palm of the hand. The paper is dampened and passed through a PRESS on a board that slides between one or two rollers. The pressure must be strong enough to force the damp paper into the lines and lift the ink out onto the paper. Considerable varieties of effect can be obtained by wiping so as to leave a film of ink on the surface of the plate (SURFACE TONE). See also RETROUSSAGE.

An intaglio print can normally be recognised by the PLATE-MARK and by the fact that the ink stands up from the paper in very slight relief, which can often be detected by touch.

A SEABEACH.

Lead point A type of METALPOINT in which lead or an alloy of lead and tin was used. It was commonly employed in the fifteenth and sixteenth centuries as an underdrawing for a work intended to be completed in pen and ink, black chalk or some other medium. The lead point was hard and indented the surface of the paper, but the mark it made was very faint. Occasionally, lead point was used for the whole drawing. Unlike metalpoint, lead point was generally used on papers on which no ground had been laid. It was a conveniently portable implement before the invention of the graphite PENCIL.

Lettering A term used to refer to letters engraved on a print. Information about the artist (designer) and engraver is usually given below the bottom left and right-hand corners respectively. The most commonly found terms are listed below. They are mainly Latin in origin.

Composuit, 'Designed', 'designer'

Cum privilegio, Implying the exclusive right to publish, corresponding to modern copyright, granted by some political or ecclesiastical authority

Delineavit (*delin.*), *delineator*, 'Drew', 'draughtsman'

Excudit (*excud., ex.*), 'Published'

Fecit (*Fec., f.*), 'Etched' or 'engraved'

Incidit (*incid., inc.*), *incisor*, 'Engraved', 'engraver'

Invenit (*inv.*), *inventor*, 'Designed', 'designer'

Lith, 'Drew' or 'printed on stone'. This is ambiguous; it can be used by both the lithographic draughtsman and the lithographic printer.

Pinxit (*pinx.*), *pictor*, 'Painted', 'painter'

Published according to Act of Parliament. This established copyright in accordance with an act of the British Parliament. The first artistic copyright act was passed in 1735, chiefly due to the efforts of Hogarth.

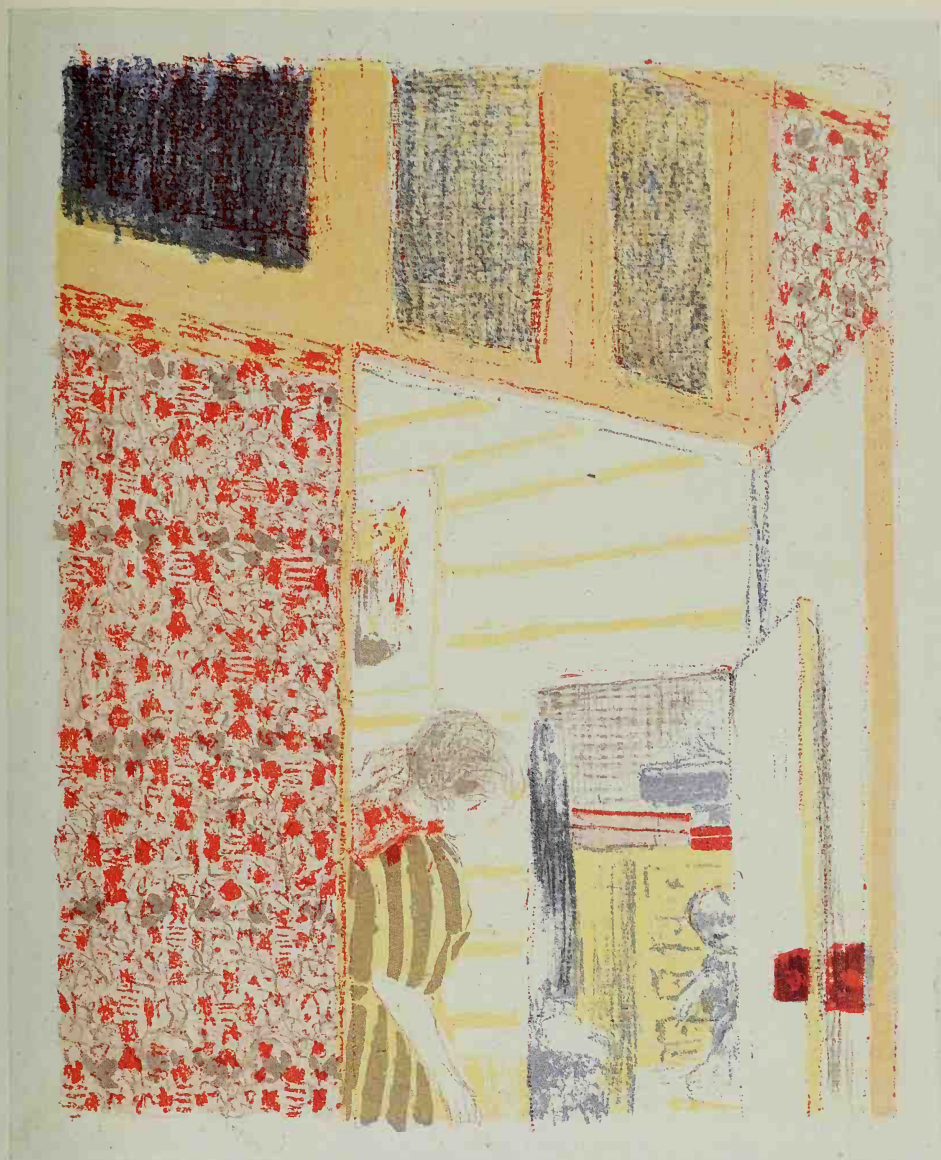*Sculpsit* (*sculp., sc.*), *sculptor*, 'Engraved', 'engraver'.

Lino-cut
Sybil Andrews (b.1898): *Anno Domini*, c.1930. Lino-cut, 430 × 325 mm (16$\frac{15}{16}$ × 12$\frac{13}{16}$ in). BM, 1980–1–26–105.

Lithograph (opposite)
Edouard Vuillard (1868–1940): *Intérieur aux Tentures Roses III*. Colour lithograph, 355 × 271 mm (14 × 10$\frac{11}{16}$ in). BM, 1949–4–11–3600.

Lino-cut (Linoleum cut) The process is the same as WOODCUT, except that the surface employed is linoleum and not wood. Lino-cutting was introduced on the Continent at the beginning of the twentieth century and became especially popular in the late 1920s in Britain in the hands of artists such as Claude Flight (1881–1955). (See Claude Flight, *The Art and Craft of Lino Cutting and Printing*, London, 1934.)

Lithography The basis of lithography is the fact that grease and water repel each other. Anything drawn on a suitable surface in some greasy medium can be printed in the following way: the surface is first dampened with water, which only settles on the unmarked areas since it is repelled by the greasy drawing medium. The surface is then rolled over with greasy printing ink, which will only adhere to the drawn marks, the water repelling it from the rest of the surface. Finally, the ink is transferred to a sheet of paper by running

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Lithograph: enlarged detail.

the paper and the printing surface together through a 'scraper press' (see PRESSES).

Lithography was invented in 1798 in Munich by Alois Senefelder. It was the first entirely new printing process since the invention of INTAGLIO in the fifteenth century. Stone was the first surface used for printing (hence lithography = 'stone-drawing'), and the most suitable kind was found to be limestone from the Solenhofen region in Bavaria. The most frequently used alternative surface is zinc and occasionally aluminium.

Lithographs can present a wide variety of appearance because any kind of drawing instrument can be used so long as the drawing medium itself is greasy. A 'pen-lithograph' requires a smooth surface on the stone but in a 'chalk lithograph' the surface is given a grainy texture by abrasion. A third variety is the 'wash lithograph' (sometimes called a *'tusche'* lithograph from the German term for ink).

A lithograph has no PLATE-MARK as in an intaglio print, but the area which has been flattened in the press, corresponding to the area of the surface of the stone, can sometimes be distinguished.

Maculature   A faint second impression from an INTAGLIO plate, taken without re-inking in order to clean the ink completely out of the lines.

Margin   Any area outside the PLATE-MARK of an INTAGLIO print, or outside the printed border of other types of print. Before the eighteenth century single-sheet prints were almost invariably trimmed to their borders or plate-marks by collectors. A print trimmed just outside the plate-mark is often referred to as having 'thread margins'.

Measurements   Prints and drawings are usually measured in centimetres or millimetres, height preceding width. Normally the entire sheet is measured, but occasionally the term 'sight size' may be encountered. This means that the person measuring the drawing was unable to see the full extent of the sheet (perhaps because of a mount or frame) and so only what could be seen was measured.

INTAGLIO prints are measured to the PLATE-MARK, but if this has been trimmed away the sheet is measured instead. WOODCUTS, LITHOGRAPHS and SCREENPRINTS are measured to the widest point of the image.

Metalcut   At certain periods, metal plates have been cut with the intention of printing them in relief. In the fifteenth century, prints in the 'dotted manner' or *'manière criblée'* were produced in France and Germany. The plate was engraved with the outline of the subject and the large areas that would have otherwise printed unrelieved black were decorated by using punches and stamps. In the eighteenth century William Blake used a different variety of relief printing with metal in his illuminated books; in these the background was etched away, leaving the lines of the text and the image in relief.

Metalcut
Anonymous German: *The Crucifixion*, *c.*1450–60. Metalcut in the dotted manner with hand colouring, 403 × 268 mm (15⅞ × 10 9/16 in). BM, 1845–8–9–205.

Mezzotint (above)
Abraham Blooteling (1640–90) after Paulus
Moreelse (1571–1638): *St Peter*. Mezzotint,
354 × 278 mm (13¹⁵⁄₁₆ × 10¹⁵⁄₁₆ in). BM,
1838–4–20–89.

Mezzotint (left): enlarged detail.

Metalpoint (opposite)
Raphael (Raffaello Santi, 1483–1520): *St
Paul Rending his Garments*. Metalpoint and
white bodycolour heightening on lilac-grey
prepared paper, 230 × 103 mm (9¹⁄₁₆ × 4¹⁄₁₆ in).
JPGM, 84.GG.919.

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Metalpoint This technique was in frequent use in the fifteenth and early sixteenth centuries in Italy, almost exclusively in Florence and Umbria. An instrument with a point of gold, silver or other metal was used for drawing on a prepared paper. A ground composed of powdered bones or lead white mixed with gum-water or size was applied to the paper in several coats. This ground would have been naturally off-white in appearance but coloured pigments were often mixed in. The metal point reacted chemically with the ground on the paper, thus producing a line. Highlights were brushed in with white BODYCOLOUR. See also HEIGHTENING.

During the Renaissance the medium was used for finished drawings of a type that could not be achieved with the quill PEN or with CHALK. Metalpoint was superseded after the sixteenth century by the graphite PENCIL, which could be corrected more easily, but it was briefly revived in the later nineteenth century by artists such as Alphonse Legros (1837–1911).

Mezzotint A member of the class of INTAGLIO prints, and essentially a tone process in which a metal plate is roughened or ground all over using a tool with a curved and serrated edge (the 'rocker'), producing an overall 'burr' which prints a deep velvety black. The artist scrapes down the burr in proportion to the lightness of tone that he requires. The main distinguishing feature of the process is that the artist works from dark to light – from a black ground to the highlights, not from a white ground to the black lines or shadows. As in DRYPOINT, the richness of a mezzotint depends largely on the burr, so relatively few very fine IMPRESSIONS can be taken before deterioration of the surface begins. Ludwig von Siegen, a German, took the first step towards the mezzotint technique (he mentions his discovery in a letter of 1642) by using a ROULETTE to build up a design on the plate; but true mezzotint requires a rocking tool, the inventor of which is thought to have been Prince Rupert, who 'scraped' some plates during his retirement in Frankfurt after the English Civil War.

The technique was particularly popular in England (it is sometimes referred to as '*la manière anglaise*'), where it was extensively used in the eighteenth century, above all for the reproduction of portraits. In the early nineteenth century steel plates were used, which, being harder than copper, permitted many more impressions to be printed.

A mezzotint is easy to recognise because of the distinctive manner in which the design emerges from the black background.

Model books Books of drawings which were intended as patterns or models and used as source material by artists, apprentices and craftsmen. The earliest model books are from ancient Egypt; in Europe they are known from medieval times. Model books transmitted designs from artist to artist and craftsman to craftsman and served as reservoirs of ideas for every branch of the fine and applied arts. From the fifteenth century this role was also filled by printed pattern books. (See R. W. Scheller, *A Survey of Medieval Model Books*, Haarlem, 1963.)

Modello A finished study, on a reduced scale, made in preparation for a larger work. Such studies are often SQUARED for enlargement. Some contracts stated that a modello had to be made, sometimes with a proviso that there should be no subsequent changes in the final work.

Monogram A character usually composed of the initial letters of a name, frequently interwoven. Monograms are often found in the place of SIGNATURES on drawings and prints.

Monotype The artist draws his design in printing ink on a plate or sheet of glass, and transfers it to a sheet of paper by running it through a press while the ink is still wet. The process was invented by Giovanni Benedetto Castiglione in the 1640s. It was revived in the nineteenth century, notably by Degas, and continues to appeal to artists for the remarkable

Modello
Andrea Mantegna (1431–1506): *Study of Four Saints (Peter, Paul, John the Evangelist and Zeno)*, 1456–9. Pen and brown ink with traces of red chalk, 195 × 131 mm ($7\frac{11}{16} \times 5\frac{3}{16}$ in). JPGM, 84.GG.91.

Monogram (above)
Hans Hoffmann (c.1530–1591/2): *Flowers and Beetles*, 1582. Tempera and white chalk over
black chalk on vellum, 321 × 387 mm (12⅝ × 15¼ in). JPGM, 87.GG.98.

effects that can be obtained. Only one strong IMPRESSION can be made by this process, hence its name, but sometimes a second, weaker impression is also printed. Another variety of monotype is thought to have been invented by Paul Gauguin. This involves drawing with a hard pencil on the back of a sheet of paper laid face down onto a surface covered with tacky ink. The design is thus picked up on the other side in lines with a distinctive blurred character.

Offset Offsets of drawings, usually of red chalk (for prints see COUNTERPROOF) were made by damping and pressing a drawing onto another piece of dampened paper. The impression obtained appeared in reverse and offsets were almost invariably fainter in tone than the original drawing, which might also lose some of its original crispness in the process. This was one of the methods used by engravers to reverse a design in the direction in which it had to be engraved on the copper plate.

Offsets were also made (especially in eighteenth-century France) to increase the number of originals available for sale to collectors. Offsetting saved the artist the trouble and hard work of making an identical copied version of a particularly popular drawing. Such offsets could be reworked by the artist.

Offset lithography The design is prepared on the stone, or more usually a metal plate, in the normal way (see LITHOGRAPHY). The inked image is then printed onto a cylinder covered with a rubber blanket, from which it is transferred onto the paper. Hence the image appears, when printed, in the same direction as it was drawn. Offset lithography is now the normal method of printing all sorts of material (not just artistic), as the plate can be wrapped round a cylinder and enormous printing speeds obtained by using rollers.

Monotype (left)
Edgar Degas (1834–1917): *Le Sommeil*, c.1883–5. Monotype, 276 × 378 mm (10⅛ × 14⅞ in). BM, 1949–4–11–2425.

Offset
Abraham Bloemart (1564–1651): *Four Studies of Hands and an Offset of a Kneeling Young Man* (verso), c.1620–30. Red chalk heightened with white, 251 × 171 mm (9⅞ × 6¾ in). JPGM, 83.GB.375.

Oleograph A nineteenth-century process in which an ordinary colour LITHOGRAPH was varnished and/or impressed with a canvas grain in order to make it look more like an oil painting.

Paper Paper is the most common support for drawings, prints and watercolours. According to tradition, paper was invented in China at the beginning of the second century AD, but it was not manufactured in Europe until the twelfth century.

The essential ingredient of paper is cellulose fibre, although some modern papers contain mineral and synthetic fibres. Cellulose occurs in nature and, together with a substance called lignin, provides the structural support for all plants, from grasses to trees. Until the nineteenth century the only source of fibre for paper was cotton and linen rags. These rags were beaten with water into a pulp. The

papermaker placed a tray of crossed wires into the mixture, allowing a thin layer of fibres to settle on the top. When turned out, pressed between blankets and dried, the result was a sheet having the quality of blotting paper. In order to make this surface suitable for drawing or printing upon, it had to be coated with a gelatine or starch size.

There are two main types of paper: 'laid' paper shows the pattern of the vertical 'wire-marks' and the horizontal connecting 'chain-lines' of the wires in the papermaker's tray. 'Wove' paper is made from a tray with a wire mesh which is so tightly woven that it often leaves no marks visible. It was developed in about 1755 to produce a smoother surface than that offered by laid paper, but it was not widely used until about 1790.

At the beginning of the nineteenth century wood began to replace rags as the source of fibre for paper. This often resulted in papers which were brittle and which discoloured quickly, largely because the lignin which was left in unrefined wood-pulp paper during manufacture had a tendency to oxidise, causing the paper to become acidic. Chemical treatments involving bleach were introduced to remove the lignin, which could bring about an improvement in paper quality.

In order to obtain the desired smoothness of surface, sheets of paper are pressed. Traditionally for hand-made papers there are three grades of finish: HP (hot pressed), NOT (i.e. not hot pressed) and rough. Special sorts of 'art' paper are coated with chalk to provide a smooth surface for printing.

Parchment A support for writing and less frequently for drawing in the Middle Ages and occasionally later, made from the skins of animals, usually sheep or goats. 'Vellum' was a finer quality parchment made from specially selected young skins. In order to make the surface smooth it was rubbed with pumice, chalk or ground bone.

Parchment and vellum were chiefly used before PAPER was readily available, although some later artists made use of them on account of the rich effects and fineness of line which could be obtained.

Pastel See CHALK (fabricated chalks).

Pen (Latin *penna* = feather.) Over the centuries six basic types of pens have been developed. These are:

The reed pen. Cut from fine canes and bamboo-like grasses, this is the oldest type of pen, first used for writing and not employed as a drawing instrument until the Renaissance. It was capable of great variation of width of line depending on the way it was held, and was much favoured by Rembrandt in the seventeenth century and Van Gogh in the nineteenth, among many other exponents.

The quill pen. Usually cut from the large, hollow outer wing feathers of the goose or swan, but feathers from crows, eagles or turkeys were also suitable. The plucked feathers were soft at the shaft end and were cured or hardened by being placed in pots of hot sand before being cut as quills. The point of the quill gave great flexibility of line, which made it a popular instrument for artists from the fifteenth century to the end of the nineteenth.

The metal pen. The metal pen succeeded the quill as a writing instrument in the later nineteenth century and soon replaced it as one for drawing. It was essentially a wooden holder into which a variety of metal nibs could be inserted. Such pens were often called 'dip' pens because they demanded constant refilling or 'dipping'. The advantages of the metal pen over the quill were the great variety of shapes of nib which were available and its ability to withstand hard wear. It also tended to produce fewer blots than a quill.

The fountain pen. A writing instrument invented in the nineteenth century and still in use today. It differs from the simple metal or dip pen in containing its own reservoir of ink.

The ballpoint pen. In 1939 Laszlo Jozef Biró patented a device which uses viscous ink in an open-ended capillary tube. His pen contains a replaceable ink reservoir

Pen
Vincent van Gogh (1853–90): *Portrait of Joseph Roulin*, 1888. Reed and quill pen and brown ink and black chalk, 320 × 244 mm (12⅝ × 9⅝ in). JPGM, 85.GA.299.

filled with a viscous liquid of either spirit-soluble or oil-soluble dyes. The ink is transferred to the paper not by a nib but by a 'ball point'. Although the ballpoint is suitable for drawing because of its flexibility and smoothness, many of the dyes used in ballpoint ink fade rapidly.

The felt tip/nylon tip pen. Flexible modern drawing and writing instruments in which the ink flow is controlled by a tip of felt or a bundle of nylon fibres in place of a conventional nib. Their chief drawback is that the ink leaves a penetrating stain which cannot be removed.

Pencil The early meaning of 'pencil' – found in Latin as *pencillus* and Old French as *pincel* – was an artist's paint BRUSH of camel hair, fitch, sable or some other similar material. By the early seventeenth century the term seems to have come to mean instead an instrument for writing or drawing made to hold GRAPHITE, white or coloured CHALK or CHARCOAL. By the middle of the century the meaning changed once more to denote more specifically a strip of graphite enclosed in a cylinder of soft wood, or in a metal case with a tapering end (a *'porte-crayon'*). It is this meaning which is generally understood today.

The term 'lead' pencil is a misnomer which has arisen from the shortening of the term 'black lead' which was the original name for graphite. This is not to be confused with LEAD POINT.

Graphite pencils were not widely employed until the eighteenth century and only became really popular in the 1790s and early 1800s when it became increasingly difficult to obtain good natural black chalks. A graphite pencil leaves a shiny deposit on the paper, while black chalk (with which it is sometimes confused) leaves a duller deposit as well as being more consistently grey in tone.

Pentimento (Italian: alteration/change of mind.) A term applied to both paintings and drawings to refer to visible corrections made by the artist in the course of his work. *'Repentir'* is another term which is occasionally found.

Photomechanical reproductive processes
The term 'photomechanical' covers any process by which an image is photographically transferred onto a printing surface. A variety of such techniques have been developed for surfaces to be printed by RELIEF, INTAGLIO or 'planographic' (i.e. using a flat surface) processes. The standard relief process uses the 'line block' and the 'half-tone block'; the intaglio process is called 'photogravure', and there are two planographic processes, 'photolithography' and 'collotype'. Their complexity forbids any description in a work of this length, but with the exception of collotype they involve the use of a half-tone screen for reproducing graduated tones and colours. The screen breaks up the image into a series of dots of varying size, which are an unmistakable sign of photomechanical reproduction. In recent years, with the increase of interest in photographic and commercial imagery, artists have often incorporated photomechanically reproduced imagery into their prints.
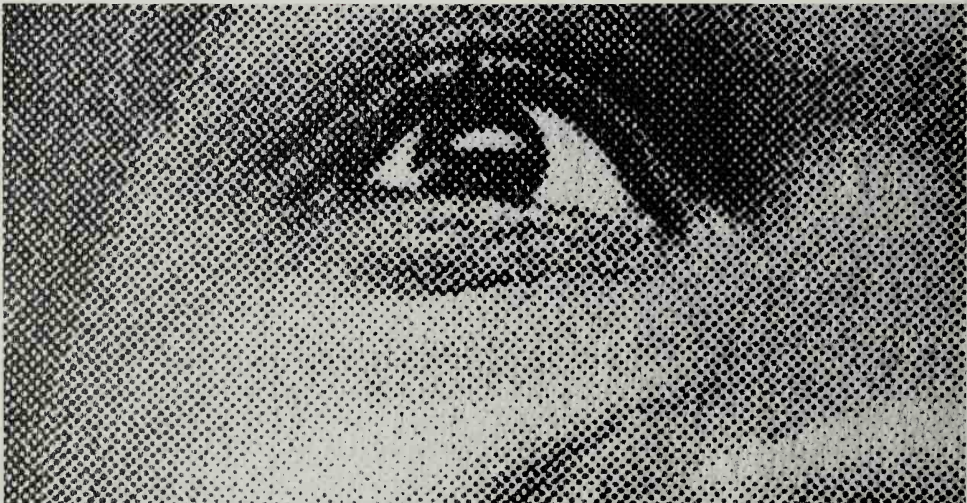
Photomechanical reproductive processes: enlargement showing half-tone dots.

Presses
Abraham Bosse (1602–76): *Intaglio Printing*, 1642. Etching, 254 × 321 mm (10 × 12⅝ in). BM, R.8–15.

Plate-mark   The mark made by the edges of an INTAGLIO plate where it is forced into the paper when run through the press.

Pochoir   The French for a stencil. The term is applied to a class of print usually hand-coloured through a series of carefully cut stencils. This process was much used in Paris during the early decades of this century.
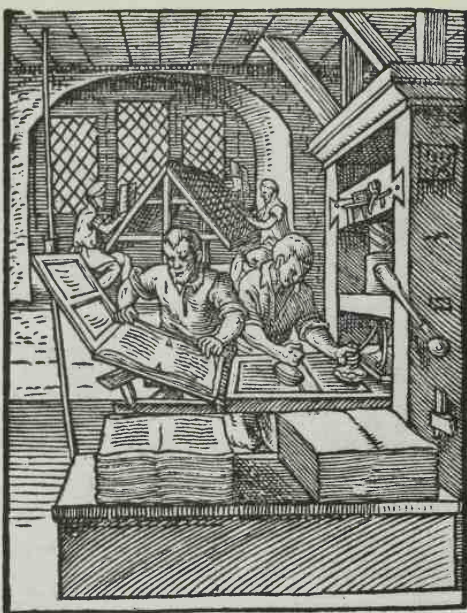
Pounce   A fine powder used in the transference of the principal outlines of a drawing, usually a CARTOON, to another support such as a wall or another sheet of paper. Small prick-holes were made in the paper along the lines, and dust (usually from pumice) was 'pounced' or rubbed through these holes, leaving a dotted outline of the design on the surface beneath.

Presentation drawing   This term was coined by the German art-historian Johannes Wilde in the early 1950s to define some highly finished drawings made by

Michelangelo as gifts for close friends and which the artist regarded as works of art in their own right. The expression is now used to describe many other finished drawings which are not preparatory for other works.

Presses   Each of the four main types of printing process requires a different sort of press. An INTAGLIO press works on a similar principle to the old-fashioned clothes-mangle: a sliding bed passes horizontally between two rollers as the operator turns the wheel. The inked plate is placed face upwards on the bed of the press, a sheet of dampened paper is put on top of it, and several specially resilient blankets (to spread the pressure evenly) are laid over both. As the bed passes between the roller, the paper is forced into the grooves in the plate and drags out the ink.

   In RELIEF PRINTING the surface of the block is inked, using a dabber or (from the early nineteenth century onwards) a roller; the printing INK has to be of a stiff
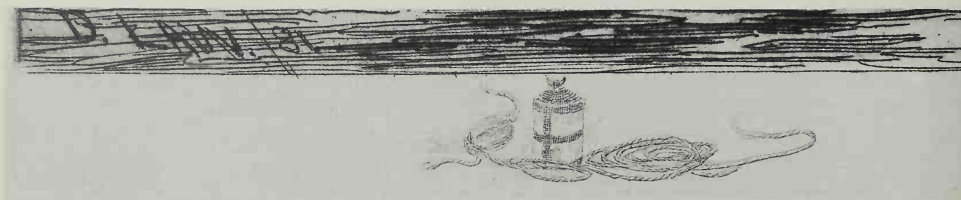
the eighteenth century, 'proofs before letters' (proofs taken before the engraved LETTERING was added) were deliberately printed to be sold to collectors at a higher price, as was also done in the nineteenth century with ARTIST'S PROOFS, REMARQUE PROOFS and 'open letter proofs' (proofs in which the outlines only of the engraved lettering appear, before these were hatched or shaded in). A twentieth-century development is 'printer's proofs'. The term 'proof' is also often loosely and misleadingly used as a synonym for IMPRESSION.
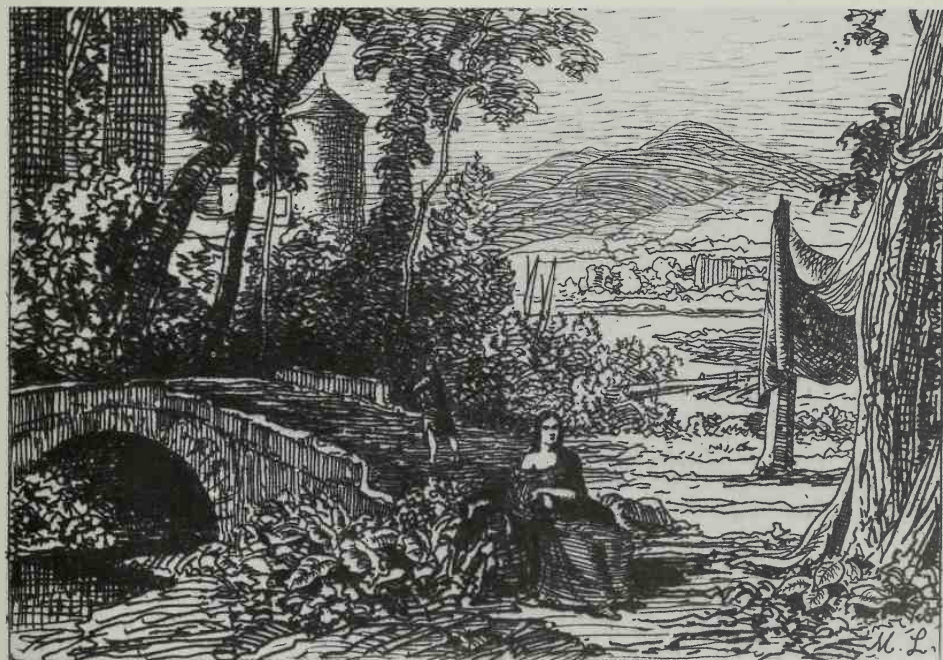
Recto The front, or more fully worked, face of a sheet drawn on on both sides. Also the right-hand page of an opening in a bound volume, irrespective of which, if any, side is drawn on. The other side is the VERSO.

Relief printing The method of printing used for WOODCUT, WOOD-ENGRAVING and METALCUT. For a description of the process see PRESSES.

Remarque Originally a sketch made by the artist on the margin of an etched plate and often unrelated to the main composition. The practice was begun in the seventeenth century as a means of testing the strength of etching acid on a plate before risking the biting of the main design, and was normally burnished out before printing the final edition. In the nineteenth century, 'remarque proofs', in which the remarque served no purpose at all, were specially created as a method of multiplying artificial rarities for collectors.

Retroussage A refinement of INTAGLIO printing used to achieve a softening and more atmospheric effect. Fine muslin,

Relief printing
Jost Amman (1539–91): *The Printer*, 1568.
Woodcut, 79 × 60 mm (3⅛ × 2⅜ in). BM,
159.d.11, 1904–2–6–103(20).

consistency in order to remain on the raised parts of the block and not flow into the hollows. The printing is done in a press which works on the same principle as an ordinary type-printing press; pressure is applied uniformly and vertically but need only be light.

In LITHOGRAPHY a flat-bed 'scraper press' is generally used. The paper is laid face down on the inked stone, and rubbed along the back to transfer the ink.

For SCREENPRINTING see the separate entry.

Proof A true proof is an impression taken before work on the block or plate is complete. These are known as 'working' or 'trial' proofs, or, if corrected by hand by the artist, 'touched' proofs. From at least

Retroussage (above)
Maxime Lalanne (1827–86): *Copy after Claude* (detail), 1886. Etching, 184 × 120 mm (7¼ ×
4¾ in). Two impressions from the same plate. The first has been clean wiped; the second has
been printed with heavy retroussage, which has dragged some of the ink out of the lines.
BM, LLL.2.3, 1881–7–9–784 and 785.

Remarque (left)
David Law (1831–1901): A remarque placed below the margin but within the plate-mark of
a marine etching dated 1881. BM, 1881–11–12–2001.

Screenprint
Robert Gwathmey (b.1903): *Hitch-Hiker*. Screenprint in colours, 427 × 332 mm (16$\frac{13}{16}$ × 13$\frac{1}{16}$ in). BM, 1981–7–25–14.

passed lightly over the surface of an inked and wiped plate, catches a small amount of the ink in the lines and draws it slightly upwards; these traces of ink at the side of the lines cause them to lose some of their sharpness of definition when printed.

Roulette A wheeled tool used in some of the dot processes, first mentioned in connection with MEZZOTINT but used largely in CRAYON MANNER and STIPPLE ENGRAVING in the eighteenth century.

Scraping/Scratching out The removal of pigment with a knife, pointed instrument or even a fingernail. This can be done to make corrections, but also became a popular technique with nineteenth-century watercolourists, who used it to expose the paper in order to produce a white highlight. See also HEIGHTENING.

Screenprinting A variety of stencil printing. A gauze screen, fixed tautly on a rectangular wooden frame, is laid directly on top of a sheet of paper. Printing INK is spread over the upper side of the mesh and forced through it with a squeegee (a rubber blade) so that it transfers to the paper on the other side. The screen is usually of silk (in America the process is usually called 'silk-screen' or 'serigraphy'), but it can be a cotton, nylon or metal mesh. The design is applied to the screen in various ways. One is to cut a stencil of paper and attach it to the underside of the screen; another is to paint out areas of the screen with a liquid that sets and blocks the holes in the mesh.

Screenprinting began to be used by artists in America in the 1930s and owed its early popularity to its simplicity and cheapness. One important development in the 1960s was the use of photostencils, which allow the artist to incorporate photographic images into the print. A screenprint can often be distinguished from a LITHOGRAPH (the process most similar to it) by the wove pattern of the screen which is impressed into the surface of the ink, or by the heavy charge of ink transferred to the paper.

Signature Although some German drawings of the sixteenth century bear artists' MONOGRAMS, the practice of signing drawings in manuscript did not become general before the eighteenth century, and has never become universal. Although many prints bear signatures etched on the plate, the practice of signing individual impressions by hand scarcely occurs before the mid-nineteenth century.

Many names found written on Old Master drawings are not signatures but ATTRIBUTIONS, INSCRIBED by later collectors or dealers. Such attributions may be accurate, but often are not. Purported 'signatures' have sometimes been added to drawings with fraudulent intent to increase their value.

Sinopia A reddish-coloured pigment derived from sinopite, which is a ferruginous clayey earth of brick-red colour. Before a FRESCO was painted, an outline of the composition was drawn with the brush in sinopia on the wall or ceiling. This outline was first drawn in CHARCOAL and then the artist would go over the lines with a small pointed brush dipped in a thin solution of ochre, which left only a slight mark. Then he removed the charcoal with a brush of feathers – 'un mazzo di penne' – and the ochre was reinforced with sinopia red.

These drawings, which are called *sinopie* after the pigment in which they were made, were covered when the plaster was applied for frescoing and have only come to light in recent years when some frescoes and their plaster supports have been detached from walls or ceilings, usually for conservation reasons. *Sinopie* are of great importance because they show the master's earlier ideas for the composition, and are often of great beauty in their own right.

Soft-ground etching A variety of ETCHING which can be used to imitate a PENCIL or CHALK drawing. The soft ground laid on the plate is a mixture of ordinary etching ground and tallow. The etcher draws on a piece of thin paper

method of multiplying drawings, and has in this century again become widely used because of the variety of textures (such as textiles) that can be pressed into the ground.

Squaring A technique to facilitate the enlargement (or occasionally the reduction) of a design. A grid containing an equal number of squares is ruled on the original drawing and on the surface destined for the enlarged design. The design is then transferred square by square.

placed over the ground. When the paper is removed, the ground adheres to the paper where the drawing instrument was pressed, so that the granular effect of the pencil or chalk is reproduced when the plate is bitten.

A soft-ground etching can usually be distinguished from a LITHOGRAPH, with which it is most likely to be confused, by the presence of a PLATE-MARK, or by the ink standing in slight relief as is characteristic of INTAGLIO processes. Soft-ground etching was invented in the 1770s as a

State In the process of making a print an artist often takes a few PROOFS at different stages of his working to check progress. Any impression which shows additional working on the plate con-

Squaring
Taddeo Zuccaro (1529–66): *Scene from the History of the Farnese Family*, 1563–5. Black chalk, pen and brown ink and wash, squared for transfer in red chalk, 302 × 275 mm (11⅞ × 10⅞ in). JPGM, 87.GG.52.

stitutes a 'state'. States are usually created by the printmaker himself; but later additions (such as the address of a later publisher or the reworking of a plate at a later date) also create new states. Most catalogues of prints are primarily devoted to describing the changes of state that occurred during the printing of an image.

Steel-facing A process patented in 1857 (although similar processes had been in use for some decades) whereby an extremely thin coating of steel is deposited by electrolysis on a copper plate. This revolutionised the print business and created a new market for illustrated books and popular magazines because plates no longer became worn. If the steel did wear out, another layer could be added, and at any time the steel could be removed simply by reversing the electric current.

Stipple engraving An INTAGLIO tone process in which the tone is produced by a profusion of tiny dots, sometimes

engraved, but usually etched. Stipple engraving flourished in England during the late eighteenth century, where one of its leading exponents was the Italian-born Francesco Bartolozzi (1727–1815). Stipple engravings were frequently printed in colour.

Stump A coil of leather, felt or paper with blunt points at both ends, which was used for rubbing on CHALK, PENCIL, PASTEL and CHARCOAL drawings in order to produce a softer appearance.

Stylus A drawing instrument usually made of cast metal, with a point often at either end. Unlike METALPOINT or LEAD POINT, it was used only to impress lines into paper and was frequently employed by artists when beginning to work out a composition, in order to avoid the need to rub out incorrect lines. It was also used as a method of transferring the main lines of a composition drawing, as, for example, from a sheet of paper to a copper plate in preparing for ETCHING, or from a CAR-TOON to the plaster in the case of a FRESCO. The artist could see the 'blind'

Stipple engraving (opposite)
Francesco Bartolozzi (1727–1815) after Sir Joshua Reynolds (1723–92): *The Girl and Kitten*,
1787. Stipple engraving printed in colours with some hand colouring, 261 × 185 mm
(10¼ × 7¼ in). BM, 1831–12–12–19.

Stump (above)
Thomas Gainsborough (1727–88): *Study of a Seated Woman* (recto), c.1765–70. Black chalk
and stump, and white chalk on blue paper, 318 × 238 mm (12½ × 9¾ in). JPGM, 86.GB.620.

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Vignette
Beatrix Potter (1866–1943): Illustration for
page 41 of *The Tale of the Flopsy Bunnies*
(1909). Pen, ink and watercolour,
83 × 75 mm (3¼ × 2¹⁵⁄₁₆ in). BM,
1946–11–21–14.

lines he was making in the paper by hold-
ing the sheet at an angle to the light.

Surface tone   Tone created in an IN-
TAGLIO print by leaving films of ink on
the plate in the wiping. This can be
accidental, but certain artists, notably
Rembrandt, deliberately created great
variations in design and atmosphere by
carefully controlling the amounts of ink
left on different parts of the plate.

Tempera (distemper)   A method of paint-
ing in which dry colours are made usable
by mixing them with some glutinous sub-
stance soluble in water, usually on a
ground of chalk or plaster mixed with
gum. The term is also applied to the pig-
ments and to the ground.

The standard tempera vehicle is a
natural emulsion of egg yolk thinned with
water. The egg yolk helps the colour to
adhere to the support.

By the thirteenth century in Italy a
sophisticated technique of painting in
tempera on wood panels had emerged, and
it reached its greatest artistic heights in
the fifteenth and early sixteenth centuries

in the hands of such artists as Fra Angelico
and Botticelli. Tempera painting was
gradually supplanted by oil painting, but
the technique was revived in the late
nineteenth century in Europe and the
United States. Tempera was often used in
the production of wallpaper.

Transferring   The transference of a design
from one surface to another: for the
various methods, see POUNCE, SQUAR-
ING, OFFSET, COUNTERPROOF, STYLUS,
CARTOON.

Transfer-lithography   A LITHOGRAPHIC
process in which the artist draws his
image on specially prepared transfer
paper, from which it is transferred to the
stone and then printed in the usual
manner.

Verso   The opposite of *recto*, i.e. the
'back' of a sheet or the left-hand page of an
open volume.

Vignette   A small ornamental engraving
or design chiefly used in book illustration.
Its essential feature is that it has no
defined border (the edges shading off into
the surrounding paper). When a vignette
occurs at the end of a passage, it can be
called a 'tail-piece' or a '*cul-de-lampe*'.

Wash   When used in connection with
WATERCOLOUR, this term denotes a cover-
ing with a broad layer of colour by a con-
tinuous movement of the brush. When
applied to INK drawings the term often
means the use of a dilute ink, but pen
drawings are also frequently washed with
a different colour, for instance pen and
brown ink with grey wash.

Watercolour   Strictly a pigment for
which water and not oil is used as a
medium, and GUM ARABIC added as a
binder.

A watercolour wash is a liquid composed
of water in which particles of colour
brushed from cakes of pigment are sus-
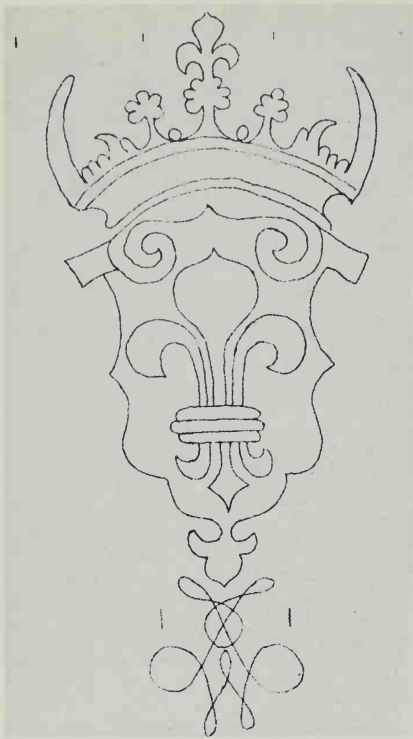pended. It must remain in a liquid state

Wash
Giovanni Battista Tiepolo (1696–1770): *Flight into Egypt*, 1725–35. Pen, brown ink and brown wash over black chalk, 304 × 453 mm (12 × 17⅞ in). JPGM, 85.GG.409.

Watercolour
John Robert Cozens (1752–97): *From the Road between the Lake of Thun and Unterseen.* Watercolour, 237 × 365 mm (9 5/16 × 14⅜ in). BM, 1910–2–12–242.

Watermark
A watermark used by the English firm of
James Whatman, working 1760–1850.

long enough for the tiny fragments of colour to distribute themselves evenly across the paper.

The brilliancy of pure watercolour occurs because its translucent nature allows the white surface of the paper to be used as the lighting agent. Most watercolour papers have a granular surface and the little hollows and projections provide an alternation of light and half-light. Watercolour is sometimes mixed with white pigments to render it opaque (see BODYCOLOUR and GOUACHE).

The watercolour technique was in use on papyrus rolls in ancient Egypt and on vellum manuscripts in medieval Europe. Dürer was one of the first artists to employ watercolour as a medium in its own right, but despite its occasional use by others in the intervening years (notably Rubens and Van Dyck), the technique did not become fully developed until the eighteenth century in England, in the hands of artists such as Paul Sandby and J. R. Cozens.

Watermarks Devices used by paper manufacturers, the earliest being found in Italian paper of the late thirteenth century. The device is made of wire and sewn onto the mould (see PAPER); it leaves an impression on the paper by making it thinner and hence more translucent. Watermarks can usually be easily seen when the sheet is held up to the light. Indications of the date and area of origin of the paper can often be deduced from the watermark by consulting one of the many dictionaries of watermarks that have been compiled.

'Countermarks' are smaller, subsidiary watermarks often found in addition to the main watermark on papers after about 1670. They generally consist of the maker's initials and are usually placed parallel to the main watermark in the centre of the opposite half of a double-folio sheet.

Woodcut Historically the most important of the RELIEF PRINTING processes. The design is drawn directly on the surface of the wood block which is cut parallel to the grain ('plank' as opposed to 'end-grain'). The parts which are to print white are cut away, leaving the black lines in relief. The tool used is usually a knife (see ENGRAVING). The block is then printed on a relief press (see PRESSES).

Printing from woodblocks was known in Europe as early as the twelfth century, but originally only for stamping designs on textiles. The earliest surviving prints on
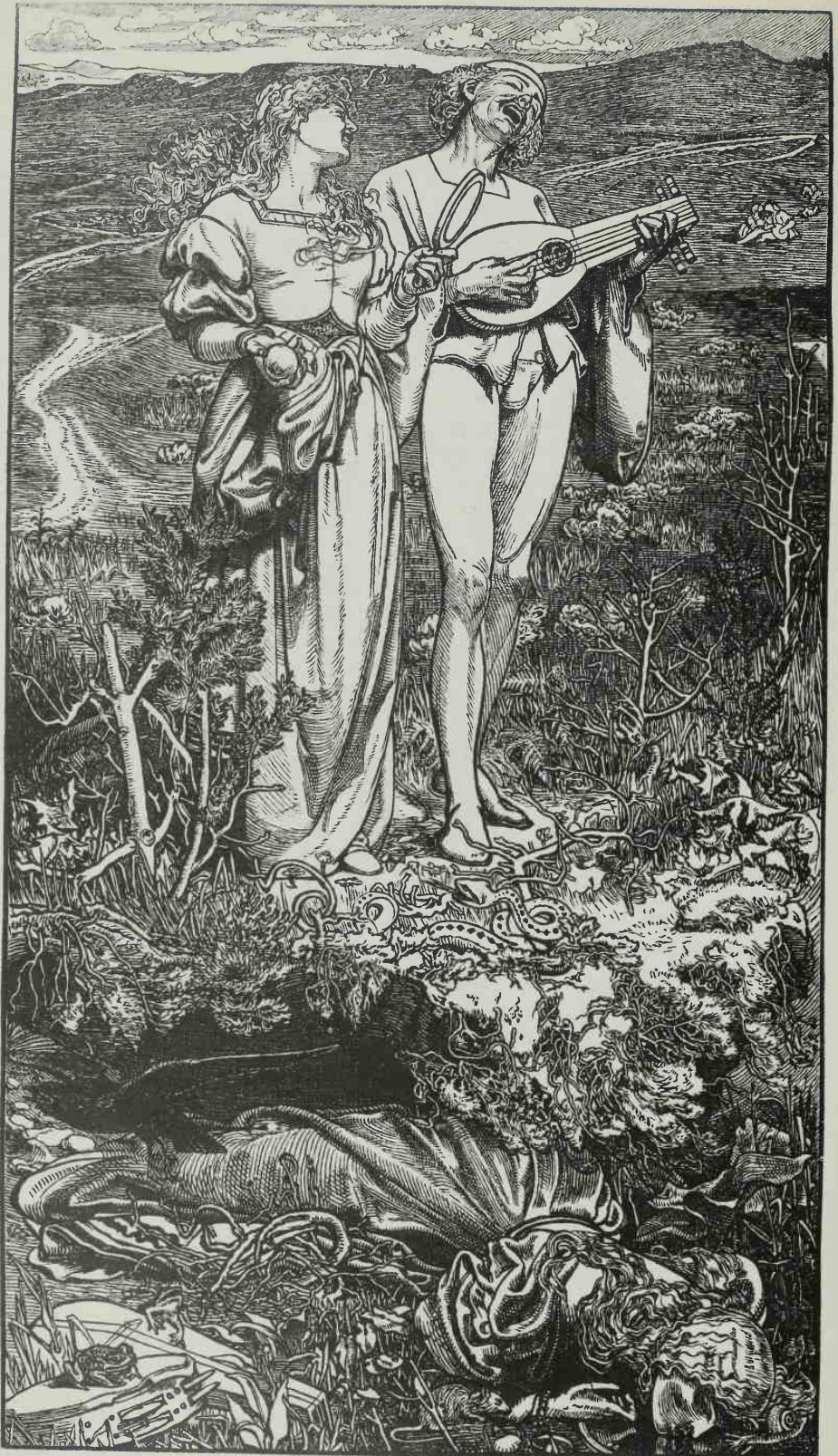
Woodcut: enlarged detail.
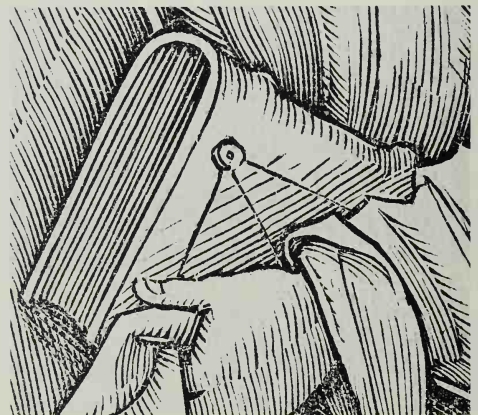
Woodcut
Urs Graf (c.1485–1527/8): *St Paul*. Woodcut, 324 × 207 mm (12¾ × 8⅛ in). BM, 1910–4–18–3.

paper cannot be dated before the last years of the fourteenth century. Since wood-blocks can be printed together with type, this was for many years the favoured method of book illustration.

Wood-engraving A version of WOODCUT developed in the eighteenth century. A very hard wood is used (usually boxwood), which is always cut across the grain. The tool used is a version of the 'burin' or 'graver' (see ENGRAVING), the handle of which is held against the palm and the blade pushed before the hand, making a clean incision into the wood.

Wood-engravings are printed in RELIEF (not in INTAGLIO) in the same way as woodcuts. The wood-engraver is able to produce much more detailed work than the woodcutter and characteristically achieves an effect of closely worked lines that print white against black (the normal woodcut is seen as black lines against white).

Thomas Bewick of Newcastle (1753–1828) was the first great exponent of wood-engraving, which was much used in the nineteenth century for book illustration.
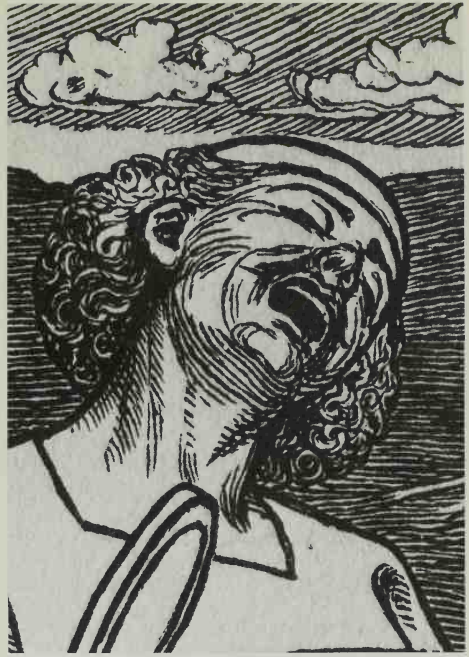
Wood-engraving: enlarged detail.

Wood-engraving (opposite)
Joseph Swain (1820–1909) after Frederick Sandys (1832–1904): *Amor Mundi*, 1865. Wood-engraving, 175 × 99 mm (6⅞ × 3⅞ in). BM, 1912–12–27–182.

Select Bibliography

British Museum Publications have also published *Prints and Printmaking* by Antony Griffiths (1980), which includes fuller accounts of printmaking processes and short historical notes as well as a bibliography. The contents and workings of the British Museum's Department of Prints and Drawings are dealt with in *The Department of Prints and Drawings in the British Museum – User's Guide*, by Antony Griffiths and Reginald Williams (1987), and a survey of the collection of drawings is given by A. E. Popham in *A Handbook to the Drawings and Water-Colours in the Department of Prints and Drawings, British Museum* (1939).

   The following bibliography is confined to a few standard works which are particularly helpful.

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E. J. Labarre, *Dictionary and Encyclopedia of Paper and Papermaking*, Amsterdam, 1952.

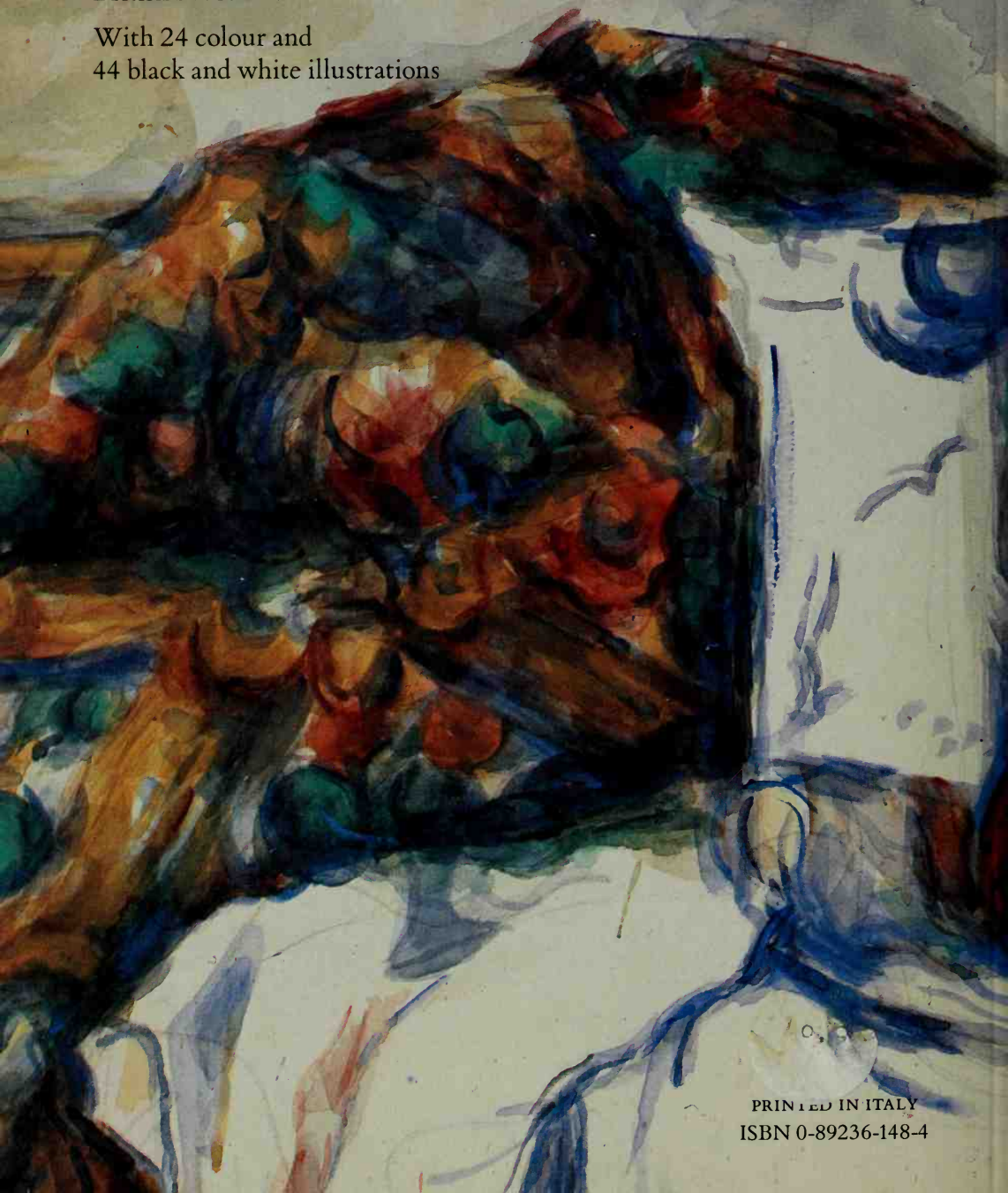James Watrous, *The Craft of Old Master Drawings*, Madison, 1957.

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Martin Hardie, *Watercolour Painting in Britain*, 3 vols, London, 1966–8.

A. M. Hind, *A Short History of Engraving and Etching*, 3rd edn, London, 1923.

A. Hyatt Mayor, *Prints and People, a social history of printed pictures*, New York, 1971.

Joseph Meder, *The Mastery of Drawing*, translated and revised by Winslow Ames, New York, 1978.

What is the difference between etching and engraving, or between aquatint and mezzotint? What is bodycolour? And what exactly does it mean to say a work is 'ascribed' or 'attributed' to an artist? With the aid of numerous illustrations, this book defines and explains the techniques, processes and materials used in works of art on paper. It will be invaluable not only to all those wishing to increase their understanding and enjoyment of prints, drawings and watercolours, but also to anyone who is thinking of starting a collection.

Paul Goldman is a member of the Department of Prints and Drawings at the British Museum.

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