Teaching Portraits with Method – the Technology of Grids, Compasses and Proportions in British Drawing Manuals

Enseigner le portrait avec méthode – quadrillage, compas et proportions dans les manuels britanniques d’enseignement du dessin

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Teaching Portraits with Method – the Technology of Grids, Compasses and Proportions in British Drawing Manuals

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Introduction

Before the foundation of the Royal Academy in 1768, artists and artisans had assembled in studios, schools and societies, as for example the Lincoln’s Inn Fields studio Jonathan Richardson inherited from his master John Riley at the turn of the century, St Martin’s Lane Academy under the management of Hogarth in the 1730s, or the Society of Artists of Great Britain at Spring Gardens at the beginning of the 1760s. These professional associations were meant to foster job security, status and sociability, filling goals that were both political and commercial (Solkin; Hook). But their purpose was also to mitigate the effects of a lagging system of apprenticeship and to disseminate sound pedagogy. If we want to fully reconstruct what training and support were available to artists in 18th-century Britain, to the above list of artists’ assemblies need to be added the learning spaces created by artists manuals, which have been described as “virtual paper-academies” (Bermingham, 42). In the richly diverse bookscape of art writings in the 18th century, we define drawing and painting manuals as these books which specifically purported to teach through a method. Notwithstanding their great diversity of formats and the differing quality and quantity of their illustrations, they made for a coherent group of books that were characterized precisely by the “interchangeability of their models and texts” (D’Enfert, 212). In Britain, these books signalled to the reader their methodological pedagogy by using titles such as “the
principles of,” “the art of,” “the school of,” or “Academia,” for example. Although in part derived from art treatises, these manuals also encompassed many other genres such as courtesy literature, emblem books, surveying manuals or recipe and how-to books. Delving into these British manuals which stitched together translated continental sources and adapted British contents, we notice a specific treatment of portraiture, one both practical and fascinated by measurements. As such, these British manuals participated in the larger movement of modern sciences which, by reducing theoretical knowledge and artisanal skills to a method, increasingly labelled art as a technology (Dubourg Glatigny and Vérin).

2 In 1715, the portrait painter Jonathan Richardson produced his *Essay on the Theory of Painting*, which not only proposed to make continental art theories accessible in English but transformed them by adopting both an English vocabulary and an English pedagogy (Baudino and Ogée). Although he acknowledged the influence of continental art treatises which he was eager to adapt for his British audience, he innovated by his focus on the art of portraiture. Not including the painter William Hogarth’s *Analysis of Beauty*, few subsequent British art manuals of the modern period would achieve Richardson’s radically English art theoretical program (Gibson-Wood). But for the most part, British manuals upheld Richardson’s focus on portrait. They strove to keep up with the obsession for portrait making, as seen in the exhibitions of the Royal Academy or in the silhouette-cutting craze of genteel sociable gatherings. These British manuals translated and adapted continental sources to present them in “a plain and methodical Discourse” although they recognized that “the task is somewhat difficult, the Art is abstruse and most of it is hid from us in a Foreign Language” (Elsum, n.p.). If this resulted mostly in simplifications and down-sized publications, the space devoted to portrait in British art manuals grew in importance, as Elsum acknowledged:

> I designed herein Brevity and Perspicuity, and have kept to my purpose (if I am not mistaken) except in the chapter of Portraiture, which is somewhat too long but this transgression will easily obtain a pardon, especially for Learners, and such as are unprejudiced, because it treats of the most Practicable matter of a Wonderful Art. (n.p.)

3 The pedagogical genre and the small format of the art manual strove to make drawing and painting accessible to a greater audience. However, such printed materials remained unavailable to many in the geographical peripheries or at the margins of disposable incomes. Furthermore, these manuals never resolved the inability for printed texts and immobile illustrations to satisfactorily teach gesture. The learning experience manuals extended to their readers was hampered by the “insufficiency of the written medium” to communicate artisanal skills and to transmit complex embodied processes (Bertucci, 145).

4 Portraits were often termed representation or delineation in the 18th century, from the French *delineation*, meaning an outline. Learning to draw entailed the mastery of tracing, copying or marking out an object and the tools of delineation were therefore not only the graphite, charcoal or sanguine pencil – but also the compass that plots and transfers changes of scale. Tricks and aids available for amateurs and training artists to attain proportion and likeness remained a popular content of drawing manuals throughout the period, offering guidance both through text and illustration. But not all manuals proved to be well translated and transferred in the concise print format of the how-to book. Two methods specifically – the graduated figure and the grid for scale – participated in this very British quest for portraiture skills. While both methods were
recurrent staples of the how-to books, and rested on measurements and lateral translation, their pedagogical efficacy varied widely. Indeed, the graduated figure, recycled in both text and illustrations, was entangled in theoretical ambivalence, and remained largely misunderstood in British manuals, while the gridding scale testified to the enduring artisanal pedagogy informing artistic training throughout the 18th century. Studying how both methods coexisted in learn-by-print ventures with differing results also underlines how varied the audiences were for these marketable books.

**Scaling out the face – or proportion lost in translation**

5 When continental sources were translated for use in British manuals, it created “a product which benefit[ed] from the cachet of foreignness and the authority implied by a pre-existing audience, successful reception history, and the standing of the original author” (Fleming, ii). However, such translations were not subservient to their continental sources, and changes and adaptations were numerous, not only to clarify foreign words, but to adapt the content to the British audience.

6 Such derivative translations were especially perceptible in chapters describing the measurements of the human body, and the appended techniques to apply them to all bodies. On the one hand, they generated their own images, which “act[ed] as ambassadors for the authors and their works (...) and creat[ed] new levels of meaning” (Ferrand, 182). On the other hand, British drawing manuals effected their own textual selections in the act of translation. They standardized and cross-referenced the continental sources, focusing especially on the skills of transferability, and the use of measurements in the practice of picture copying. The theory of proportion was at the crossroads of many disciplines in the early modern period, and it was generally surmised that harmony and symmetry in design were attained by using human anatomy as the fundamental measure. To explain how the Renaissance theory of proportion remained the leading axiom in the early modern and modern period in Europe, historians underline how artistic practices continued to validate art treatises:

> The belief that beauty is only possible through proper proportion would rarely be challenged, since it had its grounding in venerated classical texts that were reinforced by, and seen as demonstrable in, contemporary workshop practices. (Hutson 1)

7 If this was the case in Britain, how did British art manuals reinforce the veneration for the theory of proportions as sanctioned by ancient writings? British publications most often relied on the proportion theories of the Roman architect Vitruvius, Giovanni Paolo Lomazzo (1538-1592), Jean Cousin (1503-1560) and Albrecht Dürer (1471-1528). The first drawing manual in English is considered to be *A Book of the Art of Drawing According to ye Order of Albert Dürer, Jean Cozyn and Other Excellent Picture-makers, Describing ye True Porportions of Men, Women and Children*, by the print publisher Compton Holland, who produced it sometime between 1616 and 1620, at the time he was publishing his famous engraved series of English kings and queens' portraits. If only the titlepage survives, the title clearly references the theories of proportions mentioned above. These had already been circulated in Britain thanks to plates derived from Dürer's measurements of man, woman and child published by the physician Richard Haydocke's in 1585, when he turned both engraver and translator in his *A Tracte
Containing the Artes of Curious Paintinge Caruinge & Buildinge: written first in Italian by Io: Paul Lomatius Painter of Milan. Most drawing and painting manuals of the seventeenth and early 18th century dutifully perpetuated the link of proportion to the human anatomy, both in text and illustration, the one medium reasserting the authority of the other (McGregor).

How accurately did subsequent British manuals’ drawing aides, in their texts as well as their grids, scales and copy-plates, demonstrate the theories of proportion imported from the continent, for training artists and amateurs to read about and experiment? Scaling the human body by using the face and/or its parts as measurement standard was the often-repeated introduction to proportion and this practice was rooted in revered antiquity texts such as Vitruvius’s *De Architectura*. Vitruvius ruled that nature “has created the human body in such a way that the skull from the chin to the upper brow and hairline makes up one tenth of the entire length of the body” (47). To represent a human body in proportion, artists first needed to choose a reference for scale – the first step being to choose a part of the body, to compare its size in proportion to the whole of the body. These body ratio measures, built on the plane of design and ideal beauty, were the first steps of drawing lessons, as ubiquitous as shadow projections and linear perspective measures in early modern and modern drawing manuals. Compass and ruler in hand, the artists in training were promised a foolproof representation if they started with the correct body part as reference.

Some variations on the choice of the body part occurred. To complement his father’s book on perspective published in 1560, the engraver Jean Cousin worked on a portrait manual that applied perspective lines to the body, and he relied on the eye as the base unit of measurement. The eye was used to punctuate the diameter of the face, which added up to five times the length of an eye. Once the eye drawn, the whole body could be extrapolated in proportion if the artist followed the rule of making the body seven times the length of the head, as illustrated in the graded front, side and back body outlines from his *Livre de Portraiture* (1595). These guideposts seized the imagination of the readers, as attested by the many marks of reading that can be found in copies of his manual, which went through numerous editions in the early modern and modern period (Miyamoto, 2020b). Tracing over the sectional lines with a pencil or adding legible numbers to the proportion graduations (as seen in Figure 1) were typical marks of this keen interest.
Early English versions of drawing manuals, such as the one devised by the poet, writer and art amateur Henry Peacham titled *The Gentleman’s Exercise*, would incorporate these face measures to “give as precise an evenness to one side as to the other” and recommended:

> For draught of a full face, you must bear in memory and narrowly observe the bredth of the forehead, and the compasse of both the cheeks (...) your Diameter guideth you for the even placing of nose and mouth, your other line for the just opposition of the eyes between which in distance for the nose, always leave the space of an eye. (22)

Such simplified tips for drawing students only enabled full frontal face depictions, however, and were not applicable to the changes of perspective and composition that were the principal goals of Jean Cousin’s triple-figure demonstration plates in which bodies seated, lying down and turning around could be found to have the same proportional ratio, maintained throughout the changes of postures.

In like manner, the *Principles of Drawing*, an anonymous translation first published in 1733 of Gérard de Lairesse’s art manual *Grondlegginge ter Teekenkonst*, introduced British art students and amateurs to the proportional division of the face in its fourth lesson, this time guided by the length of the nose:

> In drawing a head and face, four equal parts, the length of the nose, are usually allotted from the top to the bottom.  
> From the crown of the head to the top of the forehead.  
> From thence to the top of the nose.  
> To the bottom of the nose.  
> From thence to the bottom of the chin. (6)
As the student reached the fifth lesson of the *Principles of Drawing*, however, the purportedly foolproof golden ratio of proportion became less secure, presenting them with two standing male figures, graded through to divide the length of their bodies into so many heads. The left-hand side figure in profile shows a “figure whose measurements are eight heads,” whilst the right-hand side full fronting one is “a figure whose measurements are ten faces” (7). In the tradition of the British translations of the period, the ‘improved’ English version of de Lairesse’s book operated a selective and distorted cultural transfer by rewriting and repackaging the text. Notably, it added to it “copper plates, after the designs of Albert Dürer, Abra. Bloemart, Carlo Morac, Le Clerc, Hollar, and other Great Masters” and “abstracts from C. A. Du Fresnoy” (Titlepage). The illustrations added to Lairesse’s ‘improved’ English version are not found in de Lairesse’s original work but appeared first in its French translation, the left figure in profile having been lifted from Dürer’s *Vier Bücher von Menschlicher Proportion* (1528) while the right-hand front-facing one is derived from Cousin’s *Livre*.

Inclusion of these plates was at odds with the simplified English translation of Gérard de Lairesse’s text, which offered a one-size-fits-all proportional rule. Did the illustrations provide better guidance than the simplified text? Did the reader gain access to a better understanding of Lairesse’s original text thanks to these figures? The *Grondlegginge ter Teekenkonst*, published for the first time in Amsterdam in 1701 was indeed indebted to the pedagogical structure of Jean Cousin’s *Livre de pourtraicture* and Dürer’s *Proportion*. In the tradition of treatises associating drawing and geometry, it fostered a readership eager to link more closely art and mathematics (Maës). The theories of proportion proposed in both sources would also feed de Lairesse’s later and more theoretical *Het Groot Schilderboekon*. The latter, likewise, was partly derived from Giovanni Paolo Lomazzo 1584 *Trattato dell’Arte della Pittura*, one of the first art treatise writers to expand in detail on how to proportion a human figure, making room for different statures, be these bodies of ten, nine or seven heads high.

These additions of plates distorted the pedagogical method and goals of the original publication. This was in part imputable to the fact that translators and publishers of drawing manuals were rarely experts in the specific field of knowledge in the 18th century. Although many earlier drawing books in the seventeenth century had been devised and composed by drawing masters and painters such as Alexander Browne’s 1695 *Ars Pictoria*, translators and writers of manuals in the early part of the 18th century were trained in the book trade of engravers and professional print publishers and these professionals augmented and recycled manuals contents with a view to expand their trade rather than for pedagogical goals (Hsieh). Such distortions were also imputable to the fact that they rendered drawing manuals more attractive to amateur-customers, always eager for added illustrations. The editors and translators of Lairesse’s text were catering for a readership fascinated by the graduated plates showing bodies overlaid with measurements, and the busy book trade was happy to make republications of artists manuals more marketable by compiling various texts and recycling engravings and woodcuts (Kusakawa 64-69).

The distortions brought about by the mixing of plates was also heightened by the simplification of the texts into a method in the English translations. None of these original art writers of the translated texts had proposed an unvarying rule for the representation of the body. They had indeed been careful to separate the ideal of beauty from the needs of representation. Dürer’s goal in his four books of proportion
for example was to strive to present all body types, using grids to enable variations. The twenty-six possible sets of variations according to body size, age and gender in his book are reduced to a geometrical method, since these proportions could be laterally translated with compass, point by point and geometrically. The graduations of his faces and bodies in the illustration corresponded to a lateral translation to keep to scale. To ensure the body stayed in proportion whatever its position or the needs of foreshortenings, the reference points inked on the bodies enabled one to “compass the image that one undertakes” (Dürer Folio 1v). Therefore, the original lessons that were appended to Dürer’s figures were meant to obtain the proportions of the bodies in space, according to the rules of perspective. The same lateral translation was intended in Cousin’s pinpointed measurements. The marks on his plates of faces were likewise supposed to “lead the said proportions by the compass” (Cousin Folio Bv) to obtain the desired inclination of the head in a picture’s composition. Both Cousin and Dürer thus used graduations in their figures to enable perspective projections, and not to enforce an ideal and unvarying body ratio.

Figure 2. Albrecht Dürer. Les Qvatre Livres de la Proportion des Parties & Pourtraict des Corps Humains. Louis Meigret (trans.) 1614.
the proportions were treated as technically correct and generally applicable, rather than objective and empirical (Barbillon). And although these figures were recurrent in drawing manuals, how conclusive the readers found their use is debatable. A complete manuscript fair copy of the anonymous 1668 *Excellency of the pen and pencil* by the amateur Johannes Guron reproduces the scaled figure of eight heads with reasonable anatomical correctness but with apparently little help from the scale, which upon further inspection turns out to be uneven for the top part, and therefore more of a nod to traditional methods than an actual tool.

Figure 3. [Johan: Guron], “The Excellency of the Pen and Pencil”. 1673. Lessing J. Rosenwald collection, 1515, p. 38.

Many British drawing manuals continued to propagate the misunderstanding of the texts by circulating theory sparingly in their lessons, and their practical orientation veered towards readily applicable pedagogy, since readers favoured “rule-of-thumbs” sum ups rather than theories unfolded and explained in detail. By 1777, de Lairesse’s seventh lesson from the French edition, on catching a likeness by the help of face measurements, was distorted beyond recognition. The measurements were added up according to a literal comparison of the various body parts distributed as fragments on the copy-plate, and the resulting instructions became mystifying. De Lairesse’s text in the French edition *Les Principes du Dessein* specifies that “the eyes are at such distance from one another that a third eye could be placed in between them. The nose is a third of the length of the face. The mouth is as large as an eye” (16). The French edition was already a simplified translation of his original text, but the very loose 1777 English translation, *The Principles of design for the curious young gentlemen and Ladies*, pushes the fallacy of the nose being the base measurement for the whole body to the extreme:
The thumb [is the length] of the nose. From the place where the pectoral muscle, or that muscle which makes the breast, disappears, to the middle of the arm, measure four noses. Carry your measure from the middle of the arm to the beginning of the hand, you will find it five noses. Your longest toe is the length of your nose. [...] The mouth, when shut, has the dimension of an eye. (16-17)

The reader ends up with a jumble of measures that remind us of the jumbled copy plates of these poorly devised drawing manuals. The 18th-century publishers and engravers, along with the readers, understood the marks on the figures as a numerical scale that enabled graduation, when in fact the system of scale in architectural, geometrical and artistic drawings in their original context relied more on the translation of scale with the help of a pair of compasses, than on a numerical, digitized scale (Carpo). The continued misunderstanding of these scaled figures, and the frequent misalignment of text and illustration in their treatment of scale and proportions, underlines the “contingency of print reception (...) and past reading strategies and competences” (Raven 268-9). Mass translation and republication of texts in the modern period did not result in simple replication, neither did it achieve some kind of stability for the printed text. It is indeed highly doubtful that readers with only a modicum of perspective or geometry training understood the perspective projection in these treatises. The frequent recurrences of the standing “figure of ten faces” or its pendant “figure of eight heads” in art manuals without the anchor of a text explaining perspective, body ratio, and the use of the compass instrument, meant that these figures were perceived as models of ideal beauty, to be traced and reproduced. The experiments of Dürrer, Lomazzo and Cousin has indeed been lost in translation – whilst their system of lateral translation was misunderstood for graduation measures.

Compiled manuals and the economy of recycling

Drawing manuals had indeed made current the names of proportions theoreticians, from Vitruvius to Dürrer and Lomazzo, but their texts were largely cuts and adaptations of these original tomes. Publishers and booksellers quickly understood that the readers of manuals would skip the theoretical demonstrations and would prefer to “directly access the results rather than have to experience the learning process” (Ferlier and Miyamoto, 11). These drawing manuals occupied the shifting ground between theoretical writing using illustration as proofs and further support to the text’s theory, and ready reckoners using illustrations and tables as goals that enabled the reader to skip the explanatory texts. On the one hand, the popularity of drawing and painting books in the first half of the long 18th century was therefore largely met by frequent re-editions – augmented, and reformatted – of seventeenth-century texts compiling continental writings. The 1647 Book of Drawing, Limning, Washing of Colouring of Maps and Prints (with further publications in 1652, 1666, 1680) was published subsequently as Albert Dürrer Revived in 1679 (with further publications in 1680, 1685, 1697, 1698, 1718, 1731), and offered for sale surrounded by a web of similar support illustrations by one of the leading map and print seller at the turn of the century “John Garrett at his shop (...) Where you may have choice of all sorts of large and small maps, coloured or uncoloured, and Dutch and French prints (...) and all sorts of the best copy-books.” On the other hand, the first half of the 18th century saw the commercial success of newly designed books of prints, that were largely devoid of texts, such as the engraver Jean-Baptiste-Claude Chatelain’s Book of Landskips in 1737, or his Book of Ornaments in c. 1750.
Chatelain’s numerous books of views and ruins were circulated by Robert Sayer or John Bowles, whose shops were important hubs for drawing amateurs. The fact that these publications were compilations entailed that the use of plates was often opportunistic, and the pedagogy was limited to offering “a repository of source images” (Doherty, 66). The drawing manual in the first half of the 18th century pertained to the economy of recycling engravings, and was animated by the marketing strategy of advertising numerous plates.

Copy-plates showing figure loosely derived from the treatises of Cousin, Lomazzo, Dürer, and the draughtsman, engraver and painter Sébastien Le Clerc (1637-1715) were tantalizing to the British public, because their simple outlines graduated with measures purported to provide an illustration in numerical terms of the canon of proportion, whilst promising easy reproducibility. In 1666, Robert Walton, a publisher and print-seller at the Globe and Compass who specialised in selling continental engravings, commissioned a simplified art manual to sell as a by-product to entice his amateur clientele. The text of his Academia Italica offered the following rule of proportion:

To understand [it], you must take notice that the whole length of a mans Body is divided in eight equal parts, in which eight parts, the Head is reckoned the first, as you may perceive by the Scale that goeth down by the side, figured 1,2,3,4, 5, 6,7,8.

Having taken the head as a reference for the measurement of the body in length, the text uses the same reference for the width, offering for example that “the breadth of his shoulder are the length of two heads, and the breadth of the hips two measures of the Face” (4), concluding after some minimal variations that “this is sufficient for the measure of both Sex,” thus delivering on the art manual’s promise in its title for “plain Examples and Directions” (1). The figure offered as an example is scaled, as explained in the plain description, and the pinpointed parts of the body refer in the text to the names of body parts rather than projection references.
The scaled figure proved a recurring crowd pleaser in subsequent art manuals. Often devoid of any textual explanation, such scaled figures of eight or ten heads reappeared in how-to books, further uprooting the technical illustration from its complex theory of proportion by being jumbled with other figures, as in the anonymous 1791 *Art of drawing and painting in water-colours*. Sold at “1s. or bound together with The art of writing, and The art of drawing in perspective, 3s.6d” (title-page), the booklet offered two lone fold-out plates that assembled recycled copy-plates from other drawing manuals only very loosely referred to in the text.
Amateur-customers of such manuals took their cues from these simplified lessons, and would routinely add the graduation marks indicating how many faces a figure did fit on copy plates.
By 1768, a Royal Academy had been founded in Great Britain, and the publication of drawing manuals had stepped up sharply, both in quantity and quality, diffusing drawing knowledge for the amateur and training artist. However, the lure of the foolproof scaled figure and the tantalizing rule of a single body part as base measure for perfect proportion was slow to be updated and corrected. In his 1809 *Elementary Views of the Fine Arts*, the writer William Enfield instructed the young artist on proportional rules by relaying Royal Academy teachings, and in doing so recycled the flawed instruction texts of previous how-to book:

> The young artist ought, if practicable, to visit the Royal Academy (...) [and remember that] he cannot too strictly attend to the true proportions of the body and limbs, as nothing is more disgusting than to see a man with a head unnaturally large, an enormous mouth, short legs or too long arms; to prevent his falling into such errors, let him observe that in a well-formed person (...) the whole figure is ten faces in length; from the chin to the collar-bone is twice the length of the nose, thence to the lowest part of the breast one face, from that to the navel another, to the groin one, to the upper part of the knee two, the knee is half a face in length. (10)

These base measures of face and nose were relayed in the watercolour painter J. Frederick Lake Williams’ *An Historical Account of Inventions and Discoveries* in 1820 in the following terms, purportedly taken from the lectures of John Flaxman, Professor of sculpture at the Royal Academy:

> The dimensions of the human figure as exhibited in Grecian statuary, as follows – the height eight heads (or usually ten faces) two heads across the shoulders; one
head and a half across the hips, three noses the thickest part of the thigh, two to
the calf of the leg, one the narrowest part of the shin &c. (253)

27 The lesson merged with more detailed measurement, apparently sanctioned by the
president of the Royal Academy Joshua Reynolds himself, according to “a note in
Mason’s edition of Du Fresnoy, and which was approved by Sir Joshua Reynolds”:

1st. That from the crown of the head to the forehead is the third part of a face.
2nd. The face begins at the root of the lowest hairs that grow on the forehead and
ends at the bottom of the chin.
3rd. The face is divided into three proportional parts; the first, contains the
forehead (or brow); the second, the nose, and the third the mouth and chin.
(...)
6th. From the bottom of the breast to the navel, one face. Note - the Apollo has one
nose more: and the upper-half of the Venus is to the lower part of the belly only,
and not to the privities.
7th. From the navel to the genitories, one face. The Apollo has also one nose more.
(257)

28 The list reads less like a digest of textual lessons and more like a fallacious commentary
of drawing manuals’ illustrations that recycled on the same copy-plates both the
graduated figures and the measured proportions of the Apollo and Venus antique
statues as presented by the French Royal Academician and engraver Abraham Bosse
(1602-1676) in his 1656 Représentation de Diverses Figures Humaines, avec leurs Mesures
Prises sur des Antiques qui sont de Présent à Rome. Standardized and cross-referenced to
absurdity, such rules of proportion were often reprinted in a large part because the
pirating and cannibalizing ecosystem of the market for manuals, under pressure from a
modern public of amateur-customers, looked for shortcut methods to a complex art.

29 However, from the beginning of the long 18th century, some of the leading art manual
writers started to put a distance between the ancient writings on the theory of
proportion and their often careless repackaging in British art manuals. In his 1674
Introduction to the General Art of Drawing, translated from the original Dutch, the
printseller and publisher Willem Goeree recommended in an additional chapter the
measurement rules of Cousin and Dürer but warned against its frequent
misunderstanding by the learning public and cautioned against a servile enforcement
in favour of a free manner (34-35). In 1739, the English translator of the painter Claude
Boutet’s popular 1684 Traité de la Miniature operated the usual marketing strategy of
releasing an augmented and improved version, recycling for example some art manual
staple such as proportions teachings. His Art of Painting in Miniature thus recommends in
his additional chapters, Part II, that a figure should be “eight times as high as his Head;
that is from the hair of its forehead to his Chin; his Face is three Noses long,” but also
warns that “this Way of proceeding is very tedious and likely to deter young Beginners”
(138-139). Similarly, advocating art texts that favour looser style of notes rather than
rigid prescriptions, the translator of Leonardo da Vinci’s 1651 Trattato della Pittura. rails
in his Translator’s Preface against “the more Methodical Productions of most of our
System-Mongers [which] are become antiquated and out of Date” and discards figures
of proportions for reasons than where not purely economic, since “to have given
finished designs would have added considerably to the Price of the Book, without any
addition to its real value” (Da Vinci, folio 6-7). There was therefore an undercurrent of
resistance to the continued recycling of proportions and their unsatisfactorily graded
figures in the more elaborate or original art manuals. William Hogarth, in his radically
original 1753 Analysis of Beauty, chose to criticize the theory of proportions as
elaborated in the Renaissance and Early Modern period. He replaced visual aids purporting to transmit proportional measurements with a simpler and more accurate principle of the line of beauty. He thus faulted old masters for having treated as complementary drawing and computing, such as Corregio whose “proportions of his figures are sometimes such as might be corrected by a common sign painter”, and criticized Dürer “who drew mathematically, never so much as deviat[ing] into grace, which he must sometimes have done in copying the life, if he had not been fetter’d with his own impracticable rules of proportions” (Hogarth, ix). The detail labelled 55 in Hogarth central Plate 1 casts doubts on the pedagogical efficiency of drawing manuals. A man holds up a drawing manual which proves an obstacle both in form and content, as it blocks more teachable exemplary statues from his view, and misleads him with the unsound pairing, on the recto, of the measurement of man and women extracted (or rather unmoored) from Dürer and on the verso, of a torso grotesquely reduced to its geometrical shapes.

**Gridding and the professional use of compass**

Other visual aids in these drawing manuals proved more reliable and efficient, however, mainly because they disseminated artisanal and technical knowledge which proved better suited to circulation in the form and format of how-to books than theoretical knowledge. The image gridded through for scale was a recurring illustration, promising ease of copy and perfect reproduction of proportion, as can be seen here in this 1701 edition of the physician William Salmon’s *Polygraphice*.

Figure 7. William Salmon. *Polygraphice*. 1701. Lessing J. Rosenwald collection, 2618, Plate 15.
The artist was taught to apply a network of lines crossing each other to form a series of squares, aimed at reproducing the image square by square in a subsequent grid. Used to scale up or down, or to ‘prove’ a drawn copy, it decomposed the design square by square to ensure a 1:1 ratio was maintained. The technique of grids was a central component of 18th-century workshop training to ensure correct proportions in drawing. Like other mechanical aids such as the camera obscura or the use of a light table, its objective was the accurate rendition of a model. Relying on such mechanical aids instead of attempting simpler devices, cultivating free hand and habitual gestures, are seen as evidence that drawing amateurs strove for accomplished drawing rather than originality. “Talented or not, that amateur tended to prefer step-by-step instruction for ambitious projects, rather than attempting something simpler, and perhaps more original, without guideline” (Strazdes, 16). Here again, the engraved or woodblock illustrations were recycled across manuals, and these became ubiquitous, part of a shared repertoire of body fragments and figure attitudes (Miyamoto, 2020a, 101-104). However, the transmission of the technique to the reading public seems to have been much more successful, proving more effective in supporting the development of drawing skills than the often reiterated but little understood graduated figure.

For one, the audience targeted by the teaching of gridding diverges from that of the scaled figure. Early modern and modern manuals and compendiums were eminently elastic as a genre and accommodated diverse audiences of readers. The gridding – and the use of compass that it entailed – spoke to the more professional experience of readers and artisans trained in surveyance and geometry. “A brush, a chisel and a pair of compasses, composed fretty” (Royal Charter, 7) was the Society of Artists of Great Britain’s choice of coat of arms when it was incorporated in 1765, and the pair of compasses resting on a fretty, a quadrillage design, could not have but reminded the artists of their basic training in scaling, gridding and measuring for drawing in proportion. Gridding relied on transferring parts rather than tracing outlines, and necessitated a modicum of drawing skills, as counter-exemplified by the abandoned attempts in a 1635 copy of Bate’s Mysteries of Nature and Art.
Within each square, to link each plotted reference to the next plotted reference, the hand was guided by the eye. Gridding for transfer or for proportion entailed sightsizing and was not seen as a mechanical trick of copy, or a shortcut to learning anatomy, but an accomplished use of geometry and perspective rules.

Professionals and artisans struggled to make their drawings from models conform to the golden rule of proportion, and their attempts revealed the elusiveness of a body ideal. However, reproducing an image to scale thanks to the gridding technique yielded more satisfying results. Even though most first-step lessons taught the technique of gridding in 18th-century drawing manuals, the process was never presented as easy. The texts underlined its painstaking difficulty rather than the fact that it was foolproof. Laid out in artisans' terms, the technique, unlike the trick of the graduated figure, was a matter of trial and error. Gridding was understood to be an adaptative visual aid rather than an inflexible rule. Recent interest in the change of scale in the modern period, from the microscopic to the macroscopic, has shown that scale changes could produce irrefutably precise images, but that they were also destabilizing in practice (Chico). John Bate's 1634 *Mysteries of Nature and Art* took care to propose copy-plates that catered to drawing students at all stages of mastery. The copy plates accompanying the third book on drawing offer non gridded bodies on gridded backgrounds:

I thought fitting to give you a word or two, wherefore I have not made the crosse pricked lines to passe through the figures. The reason is 1. Because the figures would have been somewhat defaced, 2. Because some chuse rather to draw without such rules; 3. For others with a ruler and black lead plummer they may cross the...
figures through, and with white bread crums take out the same againe at pleasure.

35 In general, the pedagogical efficacy of gridded drawing of the face was well received by amateurs and approved of by professionals. It was also, as seen above, eminently adaptable to the diverse learning stages of the drawing manuals’ readership, and to the diverse types of interactions with the illustrations the readers chose to perform.

Figure 9. John Bate. The Mysteries of Nature and Art. 1635.


36 It made reproducible projection the basic toolbox of the portrait painter artisan, compass in hand, and the tell-tale signs of pin pricking and graphite gridding for exact measurements can often be found in drawing sheets of the period. This beautiful example taken from the engraver George Vertue’s sketchbook after famous portraits and antiques testifies to the widespread and accomplished use of these techniques, with its enhanced gridding of the face area and the compass pin pricks visible on the nose, forehead and eye-balls, as well as at gridding intersections.
This ubiquity of the compass and the reliance on grids in drawing pedagogy resulted also from the association of art with the sphere of booksellers, instrument makers, print sellers and art material suppliers, in the absence of available academic training in artistic drawing. These shops provided the pedagogical texts and images as well as the toolboxes of the early modern and modern artist.
The close association of art with the commercial space predated the early 19th century when drawing became increasingly associated with the sphere of commercial stationers, booksellers and suppliers (Bermingham). Early in the 18th century, the formation of a professional artistic field had to contend with strong ties to the commercial world, as merchants courted the amateurs. London shops sold ever more sophisticated compasses, and drawing manuals multiplied their promotion of grid technics. The flawed drawing books we have studied, notwithstanding the growing availability of reliably translated theoretical texts, further rose in popularity, and became a regular fixture in these print shops and instrument-makers shops. Selling both engravings of famous paintings and the tools to transfer and copy them to scale, these print shops participated in the increased itinerance of images, and the amateur customers they catered for were keen to see a market develop for reproduction skills, since drawing manuals reminded their readers that original drawings and sketches “can only be had for the most affluent connoisseur’s port-feuille” (Hassell, 3). These shops and the manuals they circulated offered to furnish both engravings and the skills to scale down and transfer portraits, which proved especially attractive to readers. The plates of portraits and figures that exerted an especially powerful fascination in British drawing manuals were those that promised to teach drawing to scale and a more efficient handling of proportion, in accordance with an increasing interest for art as a technology, which cohabitated with the advent of less methodical and more Romantic approach to art training (Dubourg Glatigny and Vérin). Thus, portrait copying, portrait scaling, and portrait gridding perdured from the early modern pages of the compendium and encyclopedia writer John Bate’s recipe books to Regency drawing.
manuals such as the watercolour landscape painter John Hassell’s 1827 *Graphic Delineation*.

**Figure 12.** John Hassell. *Graphic Delineation*. 1827.


**Conclusion**

Readers had limited interactions with copy plates when they could only trace their outlines – but graduated figures of eight or ten head high, and gridded portraits and compositions offered readers a glimpse of what they could achieve by assembling to scale different designs and merging them in a composition that respected proportions. The circulation of continental theories on proportioned figures and ideal body ratio was for the most part lost in translation, largely because of the compendium nature of the drawing manual, but the public’s fascination with the figures of ten or eight heads prevailed unabated as the book trade continued to recycle erroneous lessons. The technical recommendation of gridding was another of the drawing manuals’ popular selling points, and it proved more efficient and successful in practice. The gridding and the use of compasses taught drawers to uproot and recycle images and were part of the early modern and modern toolbox of the artist – teaching both reproducibility and honing the amateurs’ sight-sizing skills.

The drawing manual, a genre that commonly resorted to formula and depended largely on self-training, provided guidelines to increasingly ambitious projects – however derivative – as the learner read through the book. Both techniques continued to be reproduced in drawing manuals, however, proving the diverse levels of practice and
theoretical grasp of the readership for these manuals. This shows how comfortable the
reading public and the amateurs of art were with the notion that such how-to book –
like the recipe books they were derived from – left the trialling and testing to their
care.

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**ABSTRACTS**

Manuals teaching how to draw a face and figure were translated into English from their original Dutch, Italian and French, and altered to focus especially on the skills of transferability, and the use of measurements in the practice of picture copying. The texts on proportions and ideal ratio were often misinterpreted while the accompanying plates were often mistaken for ready reckoning tables or copy plates. The resulting unworkability of some of these lessons did not however greatly impact the popularity of these manuals. Gridded illustrations and plates laden with measurements became regular fixtures, luring the amateur-customer with the promise of easily reproducible designs for accomplished results. The geometricized drawing of the face made reproducible projections the basic toolbox of the portrait painter and artisan, ruler and compass in hand.

Les livres de dessins enseignant le portrait et le dessin académique furent traduits de l’italien, de l’allemand et du français en anglais, et transformés pour se concentrer en particulier sur les compétences de transférabilité et l’utilisation de mesures dans la pratique de la copie d’images. Les textes sur les proportions et le ratio idéal furent souvent mal interprétés tandis que les planches d’accompagnement furent souvent confondues avec des tables de calcul prêtes à l’emploi, ou pour des planches à copier. Il en résulte que certaines de ces leçons devinrent inapplicables, mais sans pourtant altérer la popularité de ces manuels. Les illustrations tirées au carreau et les planches chargées de mesures devinrent des incontournables de ces éditions, attirant le client et amateur avec la promesse de dessins faciles à reproduire, pour des résultats aboutis. Le dessin géométrisé du visage devint la leçon de base du portraitiste et de l’artisan, règle et compas à la main.

**INDEX**

**Mots-clés:** manuel de dessin, proportion, compas, quadrillage, traduction, circulation des savoirs

**Keywords:** drawing manuals, proportion, compass, gridding, circulation of knowledge, translation
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