

Drawing and Sketching

An informal commonplace book of observations, opinions, and quotations

Vitruvius

"Neither natural ability without instruction nor instruction without natural ability can make the perfect artist. Let him be educated, skillful with a pencil, instructed in geometry, know much history, have followed the philosophers with attention, understand music, have some knowledge of medicine, know the opinions of the jurists, and be acquainted with astronomy and the theory of the heavens.

"Geometry, also, is of much assistance in architecture, and in particular it teaches the use of the rule and compasses, by which especially we acquire readiness in making plans for buildings in their grounds, and rightly apply the square, the level, and the plummet. By means of optics, the light in buildings can be drawn from fixed quarters of the sky. It is true that by arithmetic the total cost of buildings is calculated and measurements computed, but difficult questions involving symmetry are solved by means of geometrical theories and methods.

Vitruvius (c75-c15bc)

"The Ten Books of Architecture"

Roger Bacon

Roger Bacon, an English thinker and experimenter, is recognized by many to be the father of modern scientific method. Bacon's groundbreaking advances were due largely to his discovery that experimental science must be based on mathematics. His works 'Opus Majus' and 'De Speculis Comburentibus' contain many carefully drawn diagrams showing Bacon's meticulous investigations into the behavior of light. He gives detailed descriptions of systematic studies using prism and measurements by which he shows how a rainbow functions.

Roger Bacon (1220-1292)

discussed by Brian Clegg "The First Scientist: Roger Bacon" (2003)

Giotto

Pope Benedict IX sent one of his courtiers into Tuscany to see what sort of man was Giotto, and what kind his works, having designed to have some pictures made in St. Peter's. This courtier, coming in order to see Giotto and to hear what other masters there were in Florence excellent in painting, talked to many masters in Siena. Then, having received drawings from them, he came to Florence, and having gone into the shop of Giotto, who was working, declared to him the mind of the Pope and in what way it was proposed to make use of his labor, and at last asked him for some little drawing, to the end that he might send it to His Holiness. Giotto, who was most courteous, took a paper, and on that, with a brush dipped in red, holding his arm fast against his side in order to make a compass, with the turn of his hand he made a circle, so true in proportion and circumference that to behold it was a marvel. This done, he smiled and said to the courtier: "Here is your drawing." He, thinking he was being derided, said: "Am I to have no other drawing than this?" "Tis enough and to spare," answered Giotto. "Send it, together with the others, and you will see if it will be recognized."

The envoy, seeing that he could get nothing else, left him, very ill-satisfied and wondering whether he had been fooled. All the same, sending to the Pope the other drawings and the names of those who had made them, he also sent that of Giotto, relating the method that he had followed in making his circle without moving his arm and without compasses. Wherefore the Pope and many courtiers that were versed in the arts recognized by this how much Giotto surpassed in excellence all the other painters of his time.

Giotto (c1267-1337)

discussed by Giorgio Vasari "Lives of the Most Eminent Painters, Sculptors, and Architects" (1550)

Paolo Uccello

Paolo was forever investigating, without a moment's intermission, the most difficult problems of art, insomuch that he reduced to perfection the method of drawing perspectives from the ground-plans of houses and from the profiles of buildings, carried right up to the summits of the cornices and the roofs, by means of intersecting lines, making them foreshortened and diminishing toward the center, after having first fixed the eye-level either high or low, according to his pleasure. So greatly, in short, did he occupy himself with these difficulties, that he introduced a way, method, and rule of placing figures firmly on the planes whereon their feet are planted, and foreshortening them bit by bit, and making them recede by proportionate diminution; which hitherto had always been done by chance. He discovered, likewise, the method of turning the intersections and arches of vaulted roofs; the foreshortening of ceilings by means of the convergence of the beams; and the making of round columns at the salient angle of the walls of a house in a manner that they curve at the corner, and, being drawn in perspective, break the angle and make it to appear level.

For the sake of these investigations, he kept himself in seclusion and almost a hermit, having little intercourse with anyone, and staying weeks and months in his house without showing himself. And although these were difficult and beautiful problems, if he had spent that time in the study of figures, he would have brought them to absolute perfection; for even so he made them with passing good draftsmanship. But, consuming his time in these researches, he remained throughout his whole life more poor than famous.

Paolo Uccello (1397-1475)

discussed by Giorgio Vasari "Lives of the Most Eminent Painters, Sculptors, and Architects" (1550)

Luca Della Robbia

Luca applied himself to sculpture, insomuch that he did nothing but ply his chisel all day and draw all night; and this he did with so great zeal, that, feeling his feet very often freezing at night, he took to keeping them in a basket full of shavings, such as carpenters strip from planks when they shape them with a plane, in order to warm them without giving up his drawing. Nor do I marvel in any way at this, seeing that no one ever became excellent in any exercise whatsoever without beginning from his childhood to endure heat, cold, hunger, thirst, and other discomforts; wherefore those men are entirely deceived who think to be able, at their ease and with all the comforts of the world, to attain to honorable rank. It is not by sleeping but by waking and studying continually that progress is made.

Luca Della Robbia (1400-1482)

discussed by Giorgio Vasari "Lives of the Most Eminent Painters, Sculptors, and Architects" (1550)

Leon Battista Alberti

“The architect should follow the example of those who study letters. For in this field no one will think he has done enough until he has read and studied all the authors; and not just the best ones, but all those who have written anything at all on the subject. In the same way, the architect will go wherever there happen to be works that are universally admired and esteemed, and he will examine them all with the greatest care. And he will make drawings of them, measure their proportions, and make models of them so as to have them near at hand. And he will study them, and understand the ordering, placing, nature and proportions of all the single parts.

Leon Battista Alberti (1404-1472)

“Ten Books of Architecture” (1452)

“Design or drawing is essential to the visual arts, not only in the sense of line, but also in terms of the intention which initially forms in the artist's mind before it is translated into the work of art. A work of art is, therefore, a material object, but one that has been shaped by the mind and spirit of man.”

Leon Battista Alberti (1404-1472)

quoted by Wladyslaw Tatarkiewicz "History of Aesthetics" (1974)

Leonardo da Vinci

“You who say that it is better to look at an anatomical demonstration than to see these drawings, would be right, if it were possible to observe all the details shown in these drawings in a single figure, in which, with all your ability, you will not see or acquire a knowledge of more than some few veins, while, in order to obtain an exact and complete knowledge of these, I have dissected more than ten human bodies, destroying all the various members, and removing even the very smallest particles of flesh which surrounded these veins without causing any effusion of blood other than the imperceptible bleeding of the capillary veins. And, as one single body did not suffice for so long a time, it was necessary to proceed by stages with as many bodies as would render my knowledge complete.

Leonardo da Vinci (1452-1519)

quoted by Jacob Bronowski “Makers of Modern Thought” (1972)

Leonardo da Vinci did not have the superhuman theoretical brainpower of a Newton or an Einstein, or the math skills of his friend Luca Pacioli. But he could think like an artist and a scientist, which gave him something more valuable: the ability to visualize theoretical concepts. Pacioli may have extended Euclid's theories to produce influential studies on mathematical perspective and geometric proportions, but da Vinci brought them to life, which was ultimately more important. Over the years he did the same thing for geography through the aerial three-dimensional maps he drew for warlord Caesar Borgia, anatomy through his memorable drawings of ‘Vitruvian Man’ and a fetus in a womb, and more – all while creating some of the world's greatest works of art.

Leonardo da Vinci (1452-1519)

discussed by Walter Isaacson “The Making of Genius” Time, December 4, 2017

Renaissance humanism recognized no mutually exclusive polarities between the sciences and the arts, and Leonardo's studies in science and engineering are as impressive and innovative as his artistic work. These studies were recorded in 13,000 pages of notes and drawings which fuse art and natural philosophy (the forerunner of modern science), made and maintained daily throughout Leonardo's life and travels, as he made continual observations of the world around him.

*Leonardo da Vinci (1452-1519)
discussed in "Leonardo da Vinci" Wikipedia*

Michelangelo

For generations, drawing - 'disegno' - had been the activity that best defined Florentine art. Long before they were allowed to apply color, apprentice artists were expected to hone their skills at drawing everything around them, from nature to people to works of art and architecture. Michelangelo's advice to one member of his workshop was typical: "Draw, Antonio, draw and don't waste time." He himself spent long hours in the garden of Palazzo Medici sketching works of ancient sculpture before he began to learn how to hew costly blocks of marble, just as his elder contemporary Leonardo would draw endless plans on paper before he began to paint or build.

Goldsmiths drew, embroiderers drew, architects drew, and thanks to a solid background in drawing a master in one medium could become a master in others. Filippo Brunelleschi turned his talents from the miniature scale of gold jewelry to the gigantic dome of Florence Cathedral. Michelangelo turned from his marble 'David' to the frescoed ceiling of the Sistine Chapel, and Raphael revealed a skill for architecture that equaled his command of paint. They were all trained in Florence.

Normally, drawings were only the means to an end, tools to be thrown away when they had served their purpose. Cartoons, the paper mockups for paintings, were particularly vulnerable. Pricked with holes or scored with a sharp point they were often destroyed when their essential lines were transferred to a wall or wooden panel. Sculptors who drew their designs on a block of wood or stone inevitably hacked their 'disegno' away in the act of carving.

Paper was expensive (and as durable as it was costly). Drawing sheets were pressed into service over and over again. On occasion, artists and architects would use more elaborate, finished drawings to present the projected design of a painting, sculpture, or building to a potential patron, and sometimes these presentation drawings were exhibited or passed around as artworks in their own right, as when Leonardo, perennially behind schedule, displayed his cartoons in public. Michelangelo sometimes supplied drawings to his friends for enjoyment and to his pupils for use in their own creations. In general, however, drawings were as likely to be discarded as kept. At the very least, the sheet of paper would be reused for more drawings until there was no room left on it.

*Michelangelo (1475-1564) et al
discussed by Ingrid D. Rowland "Sublime, Exhilarating del Sarto" NY Review, December 17, 2015*

Baldassare Castiglione

"I would discuss another matter which I consider to be of great importance and which I think must therefore in no way be neglected by our courtier: that is the knowledge of how to draw and an acquaintance with the art of painting itself. And do not marvel if I require this accomplishment, which perhaps nowadays may seem mechanical and ill-suited to a gentleman; for I recall reading that the ancients, especially throughout Greece, required boys of gentle birth to learn painting in school, as a decorous and necessary thing, and admitted it to the first rank among the liberal arts. And truly he who does not esteem this art strikes me as being quite lacking in reason; for the universal fabric which we behold can be said to be a great and noble picture painted by nature's hand and God's; and whoever can imitate it deserves great praise."

Baldassare Castiglione (1478-1529)

"The Book of the Courtier" (1528)

Titian

I remember the description, by his most trusted pupil, Palma Giovane, of Titian at work: how he would rough in the whole design in broad masses, then turn the canvas to the wall; then, when the desire returned, attack it again with equal freedom, and once more relinquish it. Thus, he maintained to the last the passionate eagerness and the instinctive rhythms of the first sketch.

Titian (Tiziano Vecelli, c1488-1576)

discussed by Kenneth Clark "Titian" in "Looking at Pictures" (1972)

Giorgio Vasari

The notion that there exists a generic theory of art of which the theory of architecture is a specific extension, has been widely-held since the mid-16th century, when the artist and writer Giorgio Vasari asserted that painting, sculpture, and architecture are all of common ancestry in that all depend on the ability to draw. This idea became particularly prevalent among English-speaking theorists, since the word 'design' is used to translate both 'disegno' ('a drawing') and 'concetto' ('a mental plan').

Giorgio Vasari (1511-1574)

"The Lives of the Most Eminent Italian Painters, Sculptors and Architects" (1550)

discussed by Peter Collins "Theory of Architecture" Encyclopedia Britannica

Voltaire

"It is natural to admit the existence of God as soon as one opens one's eyes. It is by virtue of an admirable art that all the planets dance around the sun. Animals, vegetables, minerals – everything is ordered with proportion, number, movement. Nobody can doubt the painted landscapes or drawn animals are works of skilled artists. Could copies possibly spring from an intelligence and the originals not?"

Voltaire (1694-1778)

quoted by Edward Dolnick "The Clockwork Universe" (2011)

Oliver Goldsmith

*A flattering painter, who made it his care
To draw men as they ought to be, not as they are.*

Oliver Goldsmith (1730-1774)

“Retaliation” (1774)

Jean-Honoré Fragonard

Fragonard’s manner of drawing was idiosyncratic in the extreme. His preferred method was to block out the vaguest of compositional outlines in faint black chalk or graphite underdrawing that appears as nothing more than a skein of scribbles, often illegible to the naked eye. This speedily sketched black chalk armature – used even by some of his red chalk drawings seems to have been essential in inspiring both his mind and his hand. Details would then be worked out in softer black or red chinks, and with washes of different tones applied with a brush in several applications. Even in wash drawings that replicate a composition, stroke for stroke, Fragonard initiates the process with such black chalk underdrawing that allows him to reinvent his motifs ‘de novo’.

In whatever medium he chose, and in whatever genre he worked, Fragonard imparted to his drawings, as to his paintings, a sense of motion, energy and ‘sprezzatura’ only made possible by his sustained engagement with the art of the past and his keen and constant observation of the world around him. The spontaneity of his draftsmanship is highly mediated; brio and effortlessness are willful, managed effects.

Jean-Honoré Fragonard (1732-1806)

discussed by Colin B. Bailey “Fragonard: The Height of Drawing” NY Review, February 9, 2017

Georg Christof Lichtenberg

“The most perfect ape cannot draw an ape; only man can do that; but, likewise, only man regards the ability to do this as a sign of superiority.”

Georg Christof Lichtenberg, (1742-1799)

“Aphorisms” (1765-1799)

Johann Wolfgang von Goethe

“Even a moderate talent is always perceptive in the presence of nature, which is why really careful drawings always give use pleasure.”

“In connection with the Berlin pattern or model pictures for manufacturers, the question arose whether the extremely careful drawing of the sheets had really been warranted; but it then transpired that it was precisely the talented young artist and craftsman for whom the execution of these designs had the greatest appeal, and that studying and copying such models was what really enabled him to understand the work as a whole and the high worth of its forms.”

Johann Wolfgang von Goethe (1749-1832)

“On Art and History”

John Constable

"A sketch will not serve more than one state of mind and will not serve to drink at again and again - in a sketch there is nothing but one state of mind - that which you were in at the time."

John Constable (1776-1837)

letter to John Fisher, November 3, 1823

"When I sit down to make a sketch from nature, the first thing I try to do is to forget that I have ever seen a picture."

John Constable (1776-1837)

quoted by Richard Friedenthal "Letters of the Great Artists" (1963)

Eugene Delacroix

"The original idea, the sketch, which is so to speak the egg or embryo of the idea, is far from being complete; it contains everything, which is simply a mixing together of all parts. Just the thing that makes of this sketch the essential expression of the idea is not the suppression of details, but their complete subordination to the big lines, which are, before all else, to create the impression. The greatest difficulty therefore is that of returning in the picture to that effacing of the details which, however, make up the composition, the web and the woof of the picture."

Eugene Delacroix (1798-1863)

quoted by Robert Goldwater and Marco Treves "Artists on Art, from the XIV to the XX Century" (1972)

John Ruskin

"There is but one question ultimately to be asked respecting every line you draw: is it right or wrong? If right, it most assuredly is not a 'free' line, but an intensely continent, restrained, and considered line; and the action of the hand in laying it is just as decisive, and just as 'free' as the hand of a first-rate surgeon in a medical incision."

John Ruskin (1819-1900)

"Cestus of Aglaia" (1866)

Ruskin did not feel he had truly seen a thing until he tried to copy just the right contours of it, its colors in and out of shade, its 'individuating.' This made him see that what he had admired when looking superficially was "about five times as beautiful as he used to do, and as I can't draw much better, I am reduced to knocking my fists together and moaning."

John Ruskin (1819-1900)

discussed by Garry Wills "Ruskin: The Great Artist Emerges" NY Review, April 3, 2014

Richard Morris Hunt

"Draw, draw, draw, sketch, sketch, sketch. If you can't draw anything else, draw your boots, it doesn't matter; it will ultimately give you control of your pencil so that you can more readily express on paper your thoughts in designing."

Richard Morris Hunt (1827-1895)

quoted by Russell Lynes "The Tastemakers" (1954)

Edgar Degas

“Drawing is not the same as form; it is a way of seeing form.”

Edgar Degas (1834-1917)

quoted by Paul Valery “Degas Dance Drawing” (1935)

“I always urged my contemporaries to look for interest and inspiration to the development and study of drawing, but they would not listen. They thought the road to salvation lay by way of color.”

Edgar Degas (1834-1917)

“It’s all very well to copy what one sees, it’s much better to draw what one can see only in one’s memory. That is the transformation in which one’s ingenuity toils hand in hand with one’s memory. You reproduce nothing but that which has made an impression on you, which is to say, the necessary. There your memories and your imagination are freed of the tyranny of nature.”

Edgar Degas (1834-1917)

quoted by Anka Muhlstein “Degas Invents a New World” NY Review, May 12, 2106

As I admired a red pencil and chalk drawing by Degas of a young mother nursing her child, he showed me a whole series done from the same model and with the same sort of rhythm. He is a draftsman of the first order; it would be interesting to show all these preparatory studies for a painting to the public, which generally imagines that the impressionists work in a very casual way. I do not believe it is possible to go further in the rendering of form.

Edgar Degas (1834-1917)

discussed by Berthe Morisot in her Journal, January, 1886

Degas may be compared to a writer striving to attain the utmost precision of form, drafting and redrafting, canceling, advancing by endless recapitulation, never admitting that his work has reached its final stage; from sheet to sheet, copy to copy, he continually revises his drawing, deepening, tightening, closing it up.”

Edgar Degas (1834-1917)

discussed by Paul Valery “Degas Manet, Morisot” (1989)

To anyone who is not an artist it must seem strange that Degas, who could do anything – for whom setting down what he saw presented no difficulties – should have continued to draw the same poses year after year – often, it would seem, with increasing difficulty. Just as a classical dancer repeats the same movements again and again, in order to achieve a greater perfection of line and balance, so Degas repeats the same motifs. It was one of the things that gave him so much sympathy with dancers. He was continually struggling to achieve an idea of perfect form, but this did not prevent him from looking for the truth in what might seem an artificial situation.

Edgar Degas (1834-1917)

discussed by Kenneth Clark “The Romantic Rebellion” (1973)

Samuel Butler

"If a man has not studied painting, or at any rate black and white drawing, his eyes are wild; learning to draw tames them. The first step towards taming the eyes is to teach them not to see too much."

"Sketching from nature is very like trying to put a pinch of salt on her tail. And yet many manage to do it very nicely."

Samuel Butler (1835-1902)

"The Notebooks of Samuel Butler" (1912)

Washington Roebling

The drawings for the Brooklyn Bridge by Washington Roebling, the commanding intellect, number some five hundred. One comes to something in these drawings impossible to catalog, that has little or nothing to do with however much biographical or technical background one might compile. It is the incredible care and concentration you feel in even the least of the drawings, the pride, the obvious love - love for materials, love for elegance in design, love of mathematics, of line, of light and shadow, of majestic scale, and, yes, love of drawing – this passion in combination with an overriding insistence on order, on quality, that we of this very different century must inevitably stand in awe before. You can feel what these people felt for their work and you can't help but be drawn to them.

Present day engineering or architectural renderings look very little like these. If in a modern drawing, for example, rivets need be shown, a few suffice, the rest being indicated with a small 'x,' In these from the last century, if there were 140 rivets in a connection, every rivet was drawn, and every one showing how the light would strike it. In drawings such as those for the caissons, each bolt and brace is shown; even the grain of the wood is rendered meticulously in watercolors. In part, but only in part, this can be explained by the fact that many who worked on the bridge were illiterate, or at least so far as reading plans, but as superb craftsmen they could build just about anything if it were pictured exactly as it was meant to look, exactly as it was supposed to be put together.

They who made these drawings were a different breed from our present-day technicians, and possibly the most significant difference can be seen in their regard for the total setting in which the bridge was to stand. In these drawings the bridge is never viewed as an isolated entity - it is not the bridge alone that is portrayed in exquisite detail. It is the geological strata through which the foundations must be dug; it is all the little streetscapes over which the bridge will rise, each building done with careful attention to its actual size and character. One drawing is devoted solely to the mast height of the different sailing ships that will be passing beneath the bridge.

Washington Roebling (1837-1926)

discussed by David McCullough "The Treasure from the Carpentry Shop" in "Brave Companions" (1992)

Paul Cezanne

"In my ideal of a good painting there's unity. The drawing and the color are no longer distinct; as soon as you paint, you draw; the more the colors harmonize, the more precise the drawing becomes. I know that from experience. When the color is at its richest, the form is at its fullest."

Paul Cezanne (1839-1906)

quoted by Joachim Gasquet "Cezanne - A Memoir with Conversations" (1991)

Auguste Rodin

“Drawing is but a means to an end. One imagines that drawing can be beautiful – it is not the lines which are beautiful, but what they signify, the sentiments which they translate. Their beauty lies in the revelation of truth.”

Auguste Rodin (1840-1917)

quoted by Paul Gsell “Augustin Rodin, L’Art” 1911

“The modes of expression of men of genius differ as much as their souls, and it is impossible to say that in some among them drawing and color are better or worse, than in others.”

Auguste Rodin (1840-1917)

quoted by Paul Gsell, “Art” 1912

Pierre August Renoir

Renoir is a subtle and brilliant draftsman. All these preliminary drawings in his studio would astonish the public who obviously imagine the impressionists work at tremendous speed. I don’t believe one can go further in making sketches as studies than this in the study of form in a drawing. I am charmed by his ‘Nude Bathers’ quite as much as those by Ingres. Renoir tells me that he thinks the nude is absolutely indispensable as an art form.

Pierre August Renoir (1841-1919)

discussed by Berthe Morisot in her Journal, January 11, 1886

Berthe Morisot

Morisot always painted standing up, walking back and forth before the canvas. She would stare at her subject for a long time – her look was piercing – her hand ready to place her brushstrokes just where she wanted them. Her method was to start with a light pencil sketch, to remodel the composition in pastel, and to carry forward the theme in watercolor and occasionally, in a finished oil.

Berthe Morisot (1841-1895)

discussed by a friend, 1870

Albert Pinkham Ryder

Often, with the ordinary artist, we are delighted by the freshness of the sketch and disappointed in the finished picture. Ryder had just the opposite ability: his beginnings were dim, and he usually tore up his early sketches: but he had an exceptional ability to carry his work through. He approached perfection slowly; but he had the gift of approaching it: he was not in any sense a hit-or-miss painter.

Albert Pinkham Ryder (1847-1917)

“Paragraphs from the Studio of a Recluse” (1905) discussed and quoted by Lewis Mumford “The Brown Decades” (1931)

Vincent van Gogh

"It is true I am often in the greatest misery but still there is within me a calm pure harmony and music. In the poorest huts, the dirtiest corner, I see drawings and pictures. And with irresistible force my mind is drawn toward those things."

Vincent van Gogh (1853-1890)

letter to Theo, July 1882

"But what is my final goal, you may ask. That goal will become clearer, will emerge slowly but surely, much as the rough draft turns into a sketch, and the sketch into a painting through the serious work done on it, through the elaboration of the original vague idea and through the consolidation of the first fleeting and passing thought."

Vincent van Gogh (1853-1890)

letter to Theo, July 1880

Frederic Remington

"Study good pictures and above all, draw – draw, draw, draw – and always from nature."

Frederic Remington (1861-1909)

quoted by David McCullough "Remington" in "Brave Companions" (1992)

Rudyard Kipling

*When the flush of a new-born sun fell first on Eden's green and gold,
Our father Adam sat under the tree and scratched with a stick in the mould;
And the first rude sketch that the world had seen was joy to his mighty heart,
Till the Devil whispered behind the leaves, "It's pretty, but is it Art?"*

Rudyard Kipling (1865-1936)

"The Conundrum of the Workshop" (1890)

Art Young

Young told Max Eastman, his fellow conspirator at 'The Masses,' that he was as devoted to the aesthetic elements of his work as any painter. "I worry over composition, drawing, light and shade, elimination - above all, elimination - from breakfast time until dinner." I'm pretty sure he was referring not to his digestive tract but to the cartoonist's craft of making a spare, efficient image.

Art Young (1866-1943)

discussed by Art Spiegelman "To Laugh That We May Not Weep" Harper's, January 2016

Henri Matisse

Matisse makes a drawing, then he makes a copy of it. He recopies it five times, ten times, always clarifying the line. He's convinced that the last, the most stripped down, is the best, the purest, the definitive one; and in fact, most of the time, it was the first. In drawing, nothing is better than the first attempt.

Henri Matisse (1869-1954)

discussed by Pablo Picasso "Picasso and Company" (1964)

*"Drawing is like making an expressive gesture with the advantage of permanence."
Henri Matisse (1869-1954)
quoted by Theodore F. Wolff, Christian Science Monitor, March 25, 1985*

Willa Cather

"The higher processes are all processes of simplification. The novelist must learn to write, and then he must unlearn it; just as the modern painter learns to draw, and then learns when to utterly disregard his accomplishments, when to subordinate it to a higher and truer effect."

Willa Cather (1873-1947)

"The Novel Demeuble" in "Not Under Forty" 1936

G. K. Chesterton

"Now those who are acquainted with all the philosophy (nay, religion) which is typified in the art of drawing on brown paper, know that white is positive and essential. I cannot avoid remarking here on a moral significance. One of the wise and awful truths that this brown-paper art reveals, is this, that white is a color. It is not a mere absence of color; it is a shining and affirmative thing, as fierce as red, as definite as black. When, so to speak, your pencil grows red-hot, it draws roses; when it grows white-hot, it draws stars. And one of the two or three defiant verities of the best religious morality, of real Christianity, for example, is exactly the same thing; the chief assertion of religious morality is that white is a color. Virtue is not the absence of vices, or the avoidance of moral dangers; virtue is a vivid and separate thing, like pain or a particular smell. Mercy does not mean not being cruel or sparing people revenge or punishment; it means a plain and positive thing like the sun, which one has either seen or not seen.

Chastity does not mean the abstention from sexual wrong; it means something flaming, like Joan of Arc. In a word, God paints in many colors, but He never paints so gorgeously, I had almost said more gaudily, as when He paints in white. In a sense our age has realized this fact and expressed it in our sullen costume. For if it were really true that white was a blank and colorless thing, negative and non-committal, then white would be used instead of black and grey for the funeral dress of this pessimistic period. We should see city gentlemen in frock coats of spotless silver linen, with top hats as white as wonderful arum lilies. Which is not the case."

Gilbert Keith Chesterton (1874-1936)

"A Piece of Chalk" (1909)

Pablo Picasso

Genius is almost always cultivated by parents and teachers who support and nurture the seeds of greatness. Picasso's mother, Maria Picasso Lopez, prayed for a son and revered her firstborn child. From the start, young Pablo communicated through art, drawing before he could speak. Like Mozart, Picasso had a father in the business, Jose Ruiz Blanco, who was a painter and his son's first teacher. Picasso was still a child when his artistry began surpassing that of his father, who may have been not only astonished but petrified by the talent of his son.

Such a mixture of awe and fear is not uncommon when it comes to prodigies. Prodigies perform at an advanced adult level before adolescence, playing Beethoven's piano sonatas or doing complex math problems while some of their peers are still learning to jump rope.

Precocious artists have core features that include acute visual memories, show remarkable attention to detail, and are able to draw realistically and create an illusion of depth years before their peers. These children have an innate talent propelled by a 'rage to master' – a passion so intense they feel compelled to draw or paint whenever possible.

These characteristics mesh like a checklist with Picasso, who boasted about his exceptional artistry early in life. After seeing a children's art exhibit in 1946, he famously said that he would never have been able to participate in such a show because "at age twelve, I drew like Raphael."

Pablo Picasso (1881-1973)

discussed and quoted by Claudia Kalb "Intense Provocative Disturbing Captivating Genius Picasso" National Geographic, 2018

Ludwig Mies van der Rohe

The Mies Archive proves that he was a constant, compulsive sketcher, forever changing and reformulating both concepts and details.

Ludwig Mies van der Rohe (1886-1969)

discussed by Ada Louise Huxtable "The Making of a Master" NY Times, December 1, 1985

Le Corbusier

"I prefer drawing to talking. Drawing is faster and allows less room for lies."

Le Corbusier (1887-1965)

quoted in Interiors & Sources, April 2014

Le Corbusier's 'Voisin' and other Paris plans that would have superimposed a superhuman scale and order on land ruthlessly cleared of all signs of humanity and centuries of urban culture are models of Cartesian logic and clarity in his cool and correct drawings. But they are also quite mad - arrogant, wrong-headed schemes insensitive to the values of civilization and art. The messianic message got through strongly enough to sabotage the cityscape for the past thirty years, in the hands of both housing theorist and speculative developers.

Le Corbusier (1887-1965)

discussed by Ada Louise Huxtable "The Changing 'Truth' of Le Corbusier" NY Times, February 19, 1978

Erich Mendelsohn

Erich Mendelsohn has described how he used to listen to Bach recordings when he had a new project to work on. Bach's rhythms put him in a special state which seemed to shut out the everyday world and at the same time release his creative imagination. Architecture would then come to him in great visions. His sketches show that they were not ordinary, everyday buildings but strange formations that seemed to grow and develop rhythmically.

Erich Mendelsohn (1887-1953)

discussed by Steen Eiler Rasmussen "Experiencing Architecture" (1959)

Max Ernst

The Dada movement was an anti-movement which corresponded to the need born of the First World War. Although neither literary nor pictorial in essence, Dada found its exponents in painters and writers scattered all over the world. Max Ernst's activities in Cologne in 1917 made him the foremost of the Dada painters. Between 1919 and 1921 his paintings, drawings, and collages depicting the world of the subconscious were already a foretaste of Surrealism. In fact, his previous achievements had certainly influenced, to a great extent, the literary Surrealist exploration of the subconscious.

Max Ernst (1891-1976)

discussed by Marcel Duchamp "Appreciations of Other Artists" (1943)

Joan Miro

"How did I think up my drawings and my ideas for painting? Well, I'd come home to my Paris studio at night, I'd go to bed, and sometimes I hadn't any supper. I saw things, and I jotted them down in a notebook. I saw things on the ceiling."

Joan Miro (1892-1983)

quoted by Janis Mink "Miro" (2003)

Henry Moore

"As far as my own experience is concerned, I sometimes begin a drawing with no preconceived problem to solve, with only the desire to use pencil on paper, and make lines, tones, and shapes with no conscious aim; but as my mind takes in what is so produced, a point arrives where some idea becomes conscious and crystallizes, and then a control and ordering begin to take place."

Henry Moore (1898-1986)

"The Sculptor Speaks" (1937)

Louis Kahn

Louis Kahn was late for his lecture. The UC Berkeley student center was packed with people eager to hear the great man that spring evening in 1968. When at long last Kahn appeared at the far end of the ballroom, he seemed frail and halting. Yet when he began to speak, his impassioned words and images revealed a man not at the end of a long creative search, but rather, still very much in stride. The slide projector advanced one profound project after another, including drawings and models of a new art museum he was doing in Fort Worth. A sense of wonder was his recurring theme, and he stressed its importance to architecture and to people's lives. Though we had anticipated this poetic mode of expression, we were surprised by his sense of humor and the way playfulness sometimes entered into his pronouncements. By evening's end we were left with the impression of having heard from an artist, a sage, and a child."

Louis I. Kahn (1901-1974)

discussed by Max Levy "Library of Souls" Faith & Form, #4/2015

Alberto Giacometti

Giacometti once said: "I recognize faces, but I don't know how I recognize them; even if I've looked at them carefully for countless hours, I still can't draw them from memory." He was one of the century's greatest portraitists.

Alberto Giacometti (1901-1966)

discussed and quoted by David Gelernter "Paradoxes of Painting" Commentary, April 2001

Isaac Bashevis Singer

"I started to 'write' even before I knew the alphabet. I would dip a pen in ink and scribble. I also liked to draw – horses, houses, dogs. The Sabbath became an ordeal for me, because it is forbidden to write on that day."

Isaac Bashevis Singer (1902-1991)

"A Day of Pleasure" (1996)

Carlo Scarpa

Carlo Scarpa thought drawing an inescapable part of the architect's craft. Drawing was the graphic transfer of his thinking. He often used to repeat 'draw to see', and the Latin quote from Pliny 'nulla die sine linea', or 'no day without a line': an appeal or aspiration to the daily exercise necessary for every artist according to tradition.

The drawings made to study and investigate the subject in question represent the expression and development of his design thinking through various techniques of representation, from the tiny rapid sketch to the drawing of exact detail, the general plan and the elevation, which are often on the same drawing and denote the architect's overall vision.

Carlo Scarpa (1906-1978)

discussed by Alba Di Lieto "Carlo Scarpa in Verona" Architecture & Urbanism, November 2009

Jack Howe

"When uncertain how to proceed, I draw something. Even if it's 'potty,' I draw it. The act of drawing seems to clarify my thoughts."

Jack Howe (1911-2003)

quoted by Nigel Cross "Design Thinking" (2011)

Alan Turing

"Mathematical reasoning may be regarded rather schematically as the exercise of a combination of two facilities, which we may call intuition and ingenuity. The activity of intuition consists in making spontaneous judgments which are not the result of conscious reasoning. The exercise of ingenuity consists in aiding the intuition through suitable arrangements of propositions, and perhaps geometrical figures or drawings."

Alan Turing (1912-1954)

"Systems of Logic Based on Ordinals" (1938)

Lina Bo Bardi

Unlike many conventional and well-known designers, Bo Bardi felt that architecture should not just be a formal and visual object, but a place for the staging of life. Her drawings, even from her youth, conveyed that world view.

Lina Bo Bardi (1914-1992)

discussed by Zueler Lima, interview by Erika Heet "Finding Lina" Metropolis, December 2015

Mervyn Levy

"Sketching is the breath of art: it is the most refreshing of all the more impulsive forms of creative self-expression and, as such, it should be as free, and happy, as a song in the bath."

Mervyn Levy (1914-1996)

"Painting for All" (1959)

Richard Feynman

"I wanted very much to learn to draw, for a reason that I kept to myself: I wanted to convey an emotion I have about the beauty of the world. It's difficult to describe because it's an emotion. It's analogous to the feeling one has in religion that has to do with a god that controls everything in the whole universe: there's a generality aspect that you feel when you think about how things that appear so different and behave so differently are all run 'behind the scenes' by the same organization, the same physical laws. It's an appreciation of the mathematical beauty of nature, of how she works inside; a realization that the phenomena we see result from the complexity of the inner workings between atoms; a feeling of how dramatic and wonderful it is. It's a feeling of awe - of scientific awe - which I felt could be communicated through a drawing to someone who had also had this emotion. It could remind him, for a moment, of this feeling about the glories of the universe.

Richard Feynman (1918-1988)

"Surely You're Joking, Mr. Feynman" (1985)

Ada Louise Huxtable

"The state-supported Paris École des Beaux Arts consisted of schools of painting, sculpture, and architecture. The architectural school instruction combined remarkable freedom with the most rigid requirements. The courses consisted of lectures at the École, and design work in the 'ateliers,' or studios. Each student proceeded, not as part of a group, but individually, at his own pace. Every stage of the way was judged by 'concours,' or competitions, in 'equisse,' or sketch, form, for the lesser ones, or as 'projets rendus,' completed sets of plans, elevations, and sections for the major evaluations. A recurring assignment was the reconstruction of ancient ruins. At the time of the concours, students worked around the clock, bringing their large drawings from ateliers to the École for the judging in hand-drawn carts, or 'charrettes,' During the last period of intensive continuous work to make the deadline, students were said to be 'en charrette,' an expression that survives for deadline pressure in architects' offices today."

Ada Louise Huxtable (1921-2013)

"Beaux Arts - the Latest Avant-Garde" NY Times, October 26, 1975

Charles Moore

"Your overall design idea for a building should be recognizable in a very small drawing. This leads to design integrity that can even withstand a client's numerous changes."

Charles Moore (1925-1993)

paraphrased by Mark Simon, quoted by Alexandra Lange "Why Charles Moore Still Matters" *Metropolis*, May 2014

Helen Frankenthaler

"Painting is very private and personal. There's an emotional content, but I'm more involved in the light and color and drawing of a painting. I don't set out to portray an emotion."

Helen Frankenthaler (1928-2011)

interview, *Washington Post*, 1972

Milton Glaser

"From a visual point of view, drawing is the most fundamental way of understanding the world in front of you. There is nothing more direct. It is the way you understand what you're looking at. I always tell students that when I look at someone and think 'I have to draw that person.' I'm seeing them for first time. The physiological act of drawing makes you conscious of the physical world."

Milton Glaser (1929-)

quoted by Martin C. Pedersen "I Love Milton Glaser" *Metropolis*, August 2003

A. Eugene Kohn

"When I do my sketches, the drawing appears to flow from the brain, through my arm and onto the paper. Perhaps I feel that way because I started early in life, influenced by my mother who was an accomplished painter and fashion designer. Now I worry that the art of drawing, in architecture at least, will someday be lost."

A. Eugene Kohn (1930-2023)

quoted by Pranay Gupte "Lunch with A. Eugene Kohn" *NY Sun*, July 6, 2005

Wendell Castle

"I learned a technique when I was a student at the University of Kansas. It's a visualization method that involves layering pages over an earlier drawing, allowing you to make changes without having to start all over again. Since I always draw with a soft pencil, I can see a good black line through the paper. I draw, rapidly, for about an hour a day, producing many alternatives for a single idea. But I don't make decisions quickly. I save all the drawings and put them aside for a while before comparing and judging,"

Wendell Castle (1932-2018)

"The Master Remasterer" *Interior Design*, September 2015

Michael Graves

"We never remember unless we draw it. It doesn't matter if the drawing is good, bad, or whatever."

Michael Graves (1934-2015)

Yale Symposium, "Is Drawing Dead?" February 11, 2012

"Drawing is a magical act, filled with passion. You must draw all the time, even if you don't draw well. It helps you to analyze and remember."

Michael Graves (1934-2015)

remarks, Chicago, March 24, 2012

"Architecture cannot divorce itself from drawing, no matter how impressive the technology gets. Drawings are not just end products; they are part of the thought process of architectural design. Drawings express the interaction of our minds, eyes, and hands. This last statement is absolutely crucial to the difference between those who draw to conceptualize architecture and those who use the computer.

"Today's 'parametric design' allows the computer to generate form from a set of instructions, sometimes resulting in so-called 'blob' architecture. The designs are complex and interesting in their own way, but they lack the emotional content of a design derived by hand.

"As I work with my computer-savvy students and staff today, I notice that something is lost when they draw only on the computer. It is analogous to hearing the words of a novel read aloud, when reading them on paper allows us to daydream a little, to make associations beyond the literal sentences on the page. Similarly, drawing by hand stimulates the imagination and allows us to speculate about ideas, a good sign that we're truly alive."

Michael Graves (1934-2015)

"Architecture and the Lost Art of Drawing"

Richard Meier

"I always sketch out concepts before doing anything. We use lots of tracing paper before going to the computer."

Richard Meier (1934-)

quoted by Suzanne Stephens, Architectural Record, September 2013

"I always take a sketchbook on vacations or when I am working on projects around the world."

Richard Meier (1934-)

quoted in "Insider Secrets of the AD100" Architectural Digest

Renzo Piano

"You start by sketching, then you do a drawing, then you make a model, and then you go to reality – you go to the site – and then you go back to the drawing. You build up a kind of circularity between drawing and making and then back again. This is very typical of the craftsman's approach. You think and you do at the same time. You draw and you make. Drawing is revisited. You do it, you redo it, and you redo it again."

Renzo Piano (1937-)

quoted by Richard Sennett (1943-) "The Craftsman" (2008)

Paul Laseau

"People who sketch extensively are aware that drawing affects the way they see and that the way they see is an important factor in the effectiveness and quality of their drawings. Similarly, what you see critically affects the way you think. This relationship between sight and thought provides each of us with unique ways of drawing and thinking creatively. For these reasons, seeing and thinking should be viewed as an integral part of sketching.

"Individual success in learning to sketch fluidly and competently depends heavily on practice. This means that you must be committed to frequent freehand sketching throughout your career. Sustaining such a commitment is assured by simply deriving enjoyment from your sketching. As beneficial as drawing is to the designer, real skill develops from the pleasure that you get from drawing, not the guilt you feel about your shortcomings.

"Freehand sketching can be a source of simple delight, a process in which you can become completely absorbed. It can be an enjoyable physical experience - the feel of paper and the movement of the pen across the surface become part of the stimulation and reward of sketching. Accomplished sketchers know that the quality of their drawings ultimately derives from these experiences of awareness, concentration, and touch. If you fully engage in these experiences, you need not worry about the results."

Paul Laseau (1937-)

"Freehand Sketching, An Introduction" (2004)

Richard MacCormac

"Whenever we have a design session or a crit review session in the office, I cannot say anything until I've got a pencil in my hand. I feel the pencil to be my spokesman, as it were. I haven't got an imagination that can tell me what I've got without drawing it. I use drawing as a process of criticism and discovery."

Richard MacCormac (1938-2014)

quoted by Nigel Cross "Design Thinking" (2011)

Nicholas Grimshaw

"The value of drawing is that it helps you to feel your way towards a solution."

Nicholas Grimshaw (1939-)

interview, Blueprint, November 2009

Tadeo Ando

"When I draw something, the brain and hands work together."

Tadao Ando (1941-)

quoted by David Savage "Draw Your Way to Better Woodworking" Popular Woodworking, June 2016

Ricardo Aroca

"Architectural training teaches how to draw it. Civil engineering training teaches how to build it. I am unable to draw something if I don't know how to build it."

Ricardo Aroca (1940-)

quoted by Weld Coxe and Mary Hayden "Architects and Power" Progressive Architecture, March, 1993

Nell Irvin Painter

Painter described drawing as an unusually absorbing, almost meditative task – one that makes you look at the world differently even when you’re not actually doing it and pours you into undistracted flow when you are.

Nell Irvin Painter (1942-)

“Old in Art School” (2018) discussed by Margaret Talbot “Starting Fresh” New Yorker, January 18, 2021

Richard Sennett

“Drawing in bricks by hand, tedious though the process is, prompts the designer to think about their materiality, to engage with their solidity.”

Richard Sennett (1943-)

“The Craftsman” (2008)

Rick Sundberg

“I’m never without a tape measure and sketchbook: If I see something I like, I measure it and document it. My eyes are always open.”

Rick Sundberg (1943-)

Architectural Digest, January 2007

Chris Wilkinson

“I always start a project in my sketchbook, and I’ve generally used pencil, although lately I’ve also been using a watercolor wash, which saves time - you don’t have to draw so many lines to get the same effect. In explaining a project to clients, finding a narrative is useful, and I can express it in a drawing with just a few words added. Drawing is a good means of communication and of ordering one’s thoughts.”

Chris Wilkinson (1945-2021)

“Sketchbook: Think Tanks” Interior Design, February 2016

David Macaulay

Macaulay has spent his life evangelizing the notion that we can love the built environment only if we try to understand it - and for him that means drawing it.

David Macaulay (1946-)

discussed by John Huckleberry “The Thrill Is Gone” Metropolis, November, 2014

Stephen Holl

Holl’s creative process always begins on a 5-by-7” pad. “When I draw and paint, I connect the subjective with the objective. It’s a way of open thinking and free-wheeling, and it’s unpredictable,” he says. “In order to get closer to a dreamlike subjectivity, I like to make these little drawings and paintings at dawn before breakfast. There is a joy in this way of beginning.” Holl values quick sketches for the experimentation they allow. “These subjective studies open paths to be tested in the studio.”

Steven Holl (1947-)

discussed and quoted by Miriam Sitz “Eureka!” Architectural Record, May 2016

"You can have a thousand problems in a particular project - the area, the height, the setback, all those things - and you put them into your brain, go to sleep, wake up, and begin to draw."

Steven Holl (1947-)

quoted by Martin C. Pedersen "Morning Rituals" Metropolis, March 2013

Santiago Calatrava

His design process depends heavily on a stream of graphical output, sometimes pencil sketches, sometimes watercolors, which he uses to communicate his ideas to his staff. He sees this very much as a journey of exploration with each sketch following on from its predecessors as the ideas develop. "You are discovering the layers of your project. I mean, to start with you see the thing in your mind and it doesn't exist on paper and then you start making simple sketches and organizing things and then you start doing layer after layer – it is very much a dialogue."

Santiago Calatrava (1951-)

discussed and quoted by Nigel Cross "Design Thinking" (2011)

Jerry Saltz

"How to actually begin? Start with a pencil. Don't worry about drawing. Just make marks. Tell yourself you're simply diagramming, playing, experimenting, seeing what looks like what. If you can write you already know how to draw; you already have a form of your own, a style of making letters and numbers and special doodles.

"While you're making marks and drawing, pay attention to all the physical feedback you're getting from your hand, wrist, arm, ears, your sense of smell and touch. How long can your mark go before you seem to need to lift the pencil and make a different mark? Make those marks shorter or longer. Change the way you make them at all, wrap your fingers in fabric to change your touch, try your other hand to see what it does. All these things are telling you something. Get very quiet inside yourself and pay attention to everything you're experiencing. Don't think 'good' or 'bad', think 'useful,' 'pleasurable,' 'strange.'

"Carry a sketchbook with you at all times."

Jerry Saltz (1951-)

"How to be an Artist" NY Magazine, November 26, 2018

David Collins

"When I travel, I carry a Hermes notebook for sketching. The drawings are terrible, but I use them to develop designs that I file under 'inspiration'"

David Collins (1955-2013)

quoted in "Insider Secrets of the AD100" Architectural Digest

David Ross Scheer

"Drawing remains the key to synthesizing the vision of an architectural idea concisely."

David Ross Scheer (c1955-)

"The Death of Drawing" (2014)

Brad Cloepfil

"Charcoal keeps things elemental. It wants to be big. Every project begins with the big gestures. That's my job. I sketch the project all the way through, on rolls and rolls of tracing paper. My white shirts always get dirty, but it's how I distill ideas. When I show sketches to a client, they reveal concepts in the clearest way."

Brad Cloepfil (1956-)

"Broad Strokes" Interior Design, February 2015

Cloepfil has described Allied Works Architecture's process as akin to investigation, and arriving at answers requires time and patience. He begins with charcoal sketches, which eventually give way to models that are not so much representations of buildings as sculptures. "We're not looking for an image, we're looking for an idea," he says.

Brad Cloepfil (1956-)

discussed and quoted by Jeremy Klaszus "Finely Tuned" Metropolis, February 2017

Ludovico Migliore

I tell my students to always keep a sketchbook. I always have one myself; I cannot leave my house without it. Maybe I should see a psychologist about that? Also, I carry a thin black felt-tip pen and a yellow highlighter. I sketch everything - quickly, not elaborately - in order to visualize, to memorize. I draw for me, not for my clients, but it often turns out that they love my sketches and ask for them. At the start of a project, the younger staff scan the sketches. I'm not very expert on the computer."

Ludovico Migliore (1956-)

"Where the Pen Meets the Lens" Interior Design, April 2016

George R. Walker

"The isometric drawing is unique because it helps your eye visualize an idea in space. It helps to form a valuable image to push your design forward to completion. The beauty of an isometric view is that it also keeps proportions intact from earlier two-dimensional front and side view drawings, and helps you cross an important bridge where you can judge whether the design is unified.

"You might already use digital drawing programs that can generate perspective views with the click of a mouse. Many of these can be valuable design tools. But I know from experience that there are tactile connections formed in the inner eye by walking through this simple process with a pencil, compass, and straightedge. There can be some powerful links you can forge in your brain that only come off the end of your pencil.

George R. Walker (c1957-)

"Ideas that Jump Off the Page" Popular Woodworking, June 2016

“The more I learn about design, the more I’m convinced that we all have within us some hidden treasure just waiting to come out. We each have a sense of beauty, even if it only surfaces in the rare moment when we pause to enjoy a sunset. The challenge for all of us is to learn to tap into that inner sense despite all our business and noise.

"Drawing is a time-honored way to focus our minds and allow us to begin to tap into those inner resources. I'm not talking about drawing in the artistic sense. Don't think you have to be a great draftsman or artist. All that's really required is that you have the desire to unlock your potential and a bit of persistence.

“Drawing in a design sense is a process of unlocking and guiding our imaginations It’s about helping us to see clearly with our inner eye. For that reason, we can employ a number of different drawing techniques to coax out and develop our ideas. These techniques include quick, small-scale sketches, larger proportional drawings of elevations or facades, isometric projections to visualize objects in space and even full- size renderings.

"Try to get your mind to spill ideas by drawing fast, not pretty. Don't spend more than a minute on a quick sketch. Twenty-second sketches get your ideas flowing better than taking your time and trying to overthink it. Somewhere in the process, your ideas will begin to gel. Your airplane is off the ground and you have a destination vaguely mapped out.

"Your final design may end up nothing like this initial snippet, but you at least have a toehold on an idea.

"And most important, don't be afraid to erase, tear up, and restart your drawing at this or any other stage. Sometimes getting to your final destination is just a matter of exploring the bad notes until you discover what resonates."

George R. Walker (c1957-)

"Drawing Strategies for Design" Popular Woodworking, December 2013

“In any creative endeavor there is a set of foundational skills that provide structure to express your ideas. For a painter those skills might be learning about the color wheel or understanding values – light and shadow. For a musician, it might be learning scales and understanding tempo.

“Traditionally, in the building arts, the important foundational arts are mastering proportions, learning to draw, and developing a working knowledge of artisan geometry. Artisan geometry is not some fancy math, but a practical understanding about how to construct simple shapes using points and lines. Geometry is used to imagine a structure and then proportions are employed to tie all the parts in that structure into a harmonious whole. Drawing combines those two skills in rough sketches and more finished renderings to help visualize and sort through ideas.”

George R. Walker (c1957-)

"Put Your Best Foot Forward" Popular Woodworking, October, 2018

Craig Dykers

"I never had any formal training, but drawing simply feels natural. Drawings help me get a large idea out quickly. But I don't treat them preciously. They're all over my office at Snohetta."

Craig Dykers (1961-)

'Renaissance Man" Interior Design, May 2016

Bill Bouchey

"Drawing is not simply one of many skills a designer must have - it is absolutely fundamental to the creative and problem-solving process, the heart of what it means to think like a designer. Designing is not only a visual discipline. It's tactile, sensory, spatial; it's as much an innate sense as it is methodical and analytical. Drawing brings together the mind, eye, and hand with the weight of a pen, the degree of resistance of the writing surface, the mental image of the scale of a space or element. A sketch reveals thinking and process, it expresses the 'why' and 'how' of design decisions, which is invaluable for learning, not just in school but also for a lifetime of professional practice. Sketches suggest and imply, which opens discussions."

Bill Bouchey (c1962-)

"Is Drawing a Lost Art?"

Karl Asplund

"The stereotypical image of a designer is of a person sketching. For once, the stereotype is true. Finding, approaching, understanding, and explaining ideas requires reflection and dialogue, but sketches and illustrations are the most important tools, in that they can quickly show things that do not exist, and in so doing, flesh out our ideas and explain them to clients and collaborators."

Karl Asplund (c1964-)

"The Design Process" (2006)

William Deresiewicz

"What claim does art have on truth? If the latter is indeed so hard to come by, then how do artists manage it? By looking very hard and long, then working very hard and long to tell us what they saw. Anyone who's tried to draw or paint an object or scene will understand the point. It takes tremendous concentration just to start to see what's actually in front of you, let alone to get it down on paper or canvas."

William Deresiewicz (1964-)

"Excellent Sheep" (2014)

Wendy MacNaughton

"Drawing, for me, is this vehicle to look. It forces me to slow down and pay attention to things that I might otherwise not notice."

Wendy MacNaughton (1977-)

quoted by Sarah Yager "Meanwhile in San Francisco" Atlantic, July 2014

Jon Kolko

"Design thinkers tend to use physical models to explore, define and communicate. Those models - primarily diagrams and sketches - supplement and in some cases replace the spreadsheets, specifications, and other documents that have come to define the traditional organizational environment."

Jon Kolko (1978-)

"Design Thinking Comes of Age" Harvard Business Review, September 2015

Joseph Becker

"Drawings are the nucleus of the architectural discourse, and have been since the dawn of the discipline."

Joseph Becker (c1984-)

quoted by Samuel Medina "Coming Home" Metropolis, April, 2014

David Crosby

"Thorough and technically competent design, coordinated drawings, fully developed details, clear specifications, and third-party constructability review all translate directly into quality, efficiency, and value - as well as profitability."

David Crosby

"What the People Who Build Our Homes Can Learn from Those Who Build Everything Else" Fine Homebuilding, spring 2015

Penny Bonda

"A third-grade teacher asked her class to draw a picture of something they loved. Most students began to draw their parents, pets, or maybe a favorite toy. Except for Mary. The teacher, puzzled by what she saw on the paper, asked Mary what she was drawing. Mary answered, 'I'm drawing God.' 'But Mary,' the teacher replied, 'We don't know what God looks like.' And Mary said, 'You will when I'm finished.'"

Penny Bonda

speech at ASID National Conference, Baltimore, August 1, 1996

Lyndon Neri

"I like the discipline of flatness. Flatness does not lie. Elevations do not distort. Perspectives, on the other hand can hide a lot. They are deceiving in their beauty. It can be dangerous for architects to fall in love with a drawing and forget that they are creating space. When I sketch, I therefore go back and forth constantly between perspective and elevation. If I am bored at a meeting, I reach for my sketchbook and felt-tip pen. Because drawing slows me down, it helps me to understand space. Drawing is a tool that forces me to consider if an idea is really right. Details emerge. Something that, in my head, is visually perfect can turn out to be ugly. When a sketch truly comes to life, it dictates the eventual solution."

Lyndon Neri

"Sketchbook: Fabric Lines" Interior Design, June 2016

David Savage

"Drawing is about your response to the patterns of nature. Seeing things – really seeing things – not just taking phone shots and putting them on Instagram. Drawing allows you to make better visual judgments when planning your piece of work."

"Drawing is going beyond 'the golden section' and conventional proportioning systems and going to the essence of how they were developed. Seeing better is what happens when you draw. Drawing is a process of filling up your visual vocabulary, assembling a set of images."

David Savage

"Draw Your Way to Better Woodworking" Popular Woodworking, June 2016

Cathleen McGuigan

"Eureka' moments are common in architectural lore - the cocktail napkin sketch that contains the entire DNA of a design, no matter how complex its execution."

Cathleen McGuigan

"Designing Women" Architectural Record, May 2012

Truc Dang Manh Nguyen

"Sketching forces the eye to focus and the mind to work. It's easier to commit a work of architecture to memory if you draw it."

Truc Dang Manh Nguyen

"Cocktail Napkin Sketch Contest" Architectural Record, August 2010

Michael D. Tatum

*The grads, they pour forth and they make application,
Their drawings in ortho, in plan, elevation,
They come thus from schools all over the nation.
I'm amazed at what folks call design education.*

*An assumption that many now make that is bad,
Is that drawing perspective's not needed since CAD,
Is the rage, now I wonder who's telling these grads
That drawing was one of the world's passing fads.*

*What causes designers that hire them such tensions,
Their blindness to space and connection conditions.
They deserve design disability pensions.
They can't draw or see things in all three dimensions.*

*For designers, learning to draw ain't elective,
And it's never too late for a course that's corrective,
For designers to grow and be really effective,
They must know how to draw and to see in perspective.*

*The best thing 'bout drawing skill? It's a strange guise,
Even when you don't draw, drawing skill is a prize.
It teaches you how to visualize
What's in your head, not in front of your eyes.*

*The practical gain for that so designed?
You keep moving forward, not falling behind.
Bad ideas rejected; good ones refined
Not on a board or a screen – in your mind.*

Michael D. Tatum

"Design's Three D's – Draw, Draw, Draw"