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Blake and the Artistic Machine: An Essay in Decorum and Technology

66 T ECHANISM" HAS BEEN used in the history of ideas as a key term to describe the ideologies and cosmologies of the Enlightenment. Blake's use of the term is an episode in the history of that important metaphor. He used "machine" to describe and criticize a major line of development in the history of the arts, as when he said, "He who makes a design must know the Effect & Colouring Proper to be put to that design & will never take that of Rubens Rembrandt or Titian to turn that which is Soul & Life into a Mill or Machine." His loathing of artistic machines is unmistakable and unequivocal: "vile tricks," he calls them, which "cause that every thing in art shall become a Machine" (DC, E, 537). "A Machine is not a Man nor a Work of Art it is destructive of Humanity & of Art" (PA, E, $564).^{2}$

Blake's use of "machine" as a critical metaphor has been passed over, but its background spreads out and down into his most rudimentary artistic principles, which he held firmly in defiance of the most common and rudimentary artistic principles of his century. Some of Blake's basic artistic ideas have been missed because they involve more than one art and a synthetic vision, if that is the word, of the relation between the arts and the rest of the culture. This, then, is an essay in the history of some ideas about art that involve ideas about commerce, science, and especially their intermediary, technology. To see what technology may have to do with the history of the arts, we must try to think of art, for the time being, as a technology. That is, instead of describing evolving artistic styles, we want to describe evolving systems of production and reproduction—systems of production being in some sense almost always systems of reproduction-in art.

The basic issue might be clarified by noticing how the limitations of a familiar machine impose limitations on the user. If the observant human pot-scrubber, whose washing by hand is almost infinitely adaptable, wishes to trade handwork for mechanized work, he will discover for himself the classic Romantic confrontation between mechanism and organism. The only way to go from one to the other is by translating the principles of one into the principles of the other. To save labor, the organic pot-scrubber gives up the privilege of using dishes that are too small, too large, too dirty, or too fragile. He ends up accepting a mechanical mean, which may be golden for the work it saves, but the quality of the translation is brass. For the user who hesitates to adapt, the machine has no answer except other more specialized machines or a highly complex machine that can adjust in steps (one button for especially dirty, one for especially fragile).

As the dishwasher affects the user, so the technology of reproducing works of art affects the artist. An artistic machine provides a system of translation for the sake of extension. The printing press is a particularly appropriate representative of the class, since printing is fundamentally a branch of engraving whose heredity has been obscured by its own mechanical evolution and the near death of the paternal trunk. Outlining human speech in movable type is made possible by translation, which depends upon fragmentation. One way to look at speech is as a translation of sensations and conceptions into auditory signs, often accompanied by gestures, for the sake of communication. Writing is a translation of auditory signs into visual signs for communication at a greater temporal or spatial distance, with the concomitant loss of many qualities that facilitate communication,

such as pitch, volume, and gesture. *Printing* is a translation of one set of visual signs into another, made possible by the division of words into uniform letters, for the sake of repetition. The capacity for repetition inherent in print makes possible an immense extension in time and space simply by making feasible an increase in quantity.

In printing, as in dishwashing, the system of mechanical execution tends to limit the human tasks that can be performed. In the arts, the problem becomes the limits imposed by mechanical execution upon human conception. To a large extent, for instance, the writer is a slave to the press, and he adjusts accordingly. The easiest way to adjust, and the one discovered by modern humanity after long experience with the press, is for a writer to make himself over in the image of the printer by writing with a typewriter and by imitating the forms and conventions of the press. Take, for example, the novelist who wishes to make the page, rather than the chapter, the unit of narration in a novel. He probably cannot, because the typesetter, not the writer, is the master of the page. A novelist cannot consider the position of a word or sentence on the page; therefore in novels the position of words and sentences on the page is insignificant, and no reader ever thinks to consider it. The unlucky novelist with a regard for the mystical significance of number is liable to suffer if he hopes to work out his literary mathematics at any level less gross than the number and disposition of his chapters. But the graphic artist, who has usually controlled the elements in his composition, has had the option of using upper and lower as significant metaphors, and traditionally he has used them so. The rule for poets, who have traditionally made some attempt to control the appearance of their lines on the page, the poetic line being a unit ill suited to print, is that in a print culture the impression of sincerity and profundity increases in proportion to uniformity, which is a product of the mechanical principles by which the press operates.

I. Intermeasurability in Art

The history pertinent to Blake's term "machine" begins in the Renaissance, when engravers began

to develop shop styles that could reproduce many kinds of pictures well and, at the same time, could be judged according to such rational economic characteristics as predictability, for instance, and consistency, efficiency, productivity, and profitability. It should be recognized that almost from the beginning the technology of picture reproduction was a constellation in the Gutenberg galaxy,3 economically tied to the technology of word reproduction, the printing press, which set a mechanical and economic pace that the picture reproducers could never match from the Renaissance until the engraving trade went the way of the carriage trade at the beginning of this century. The printing press was always faster, always cheaper, and the translation from sounds to print that it provided was always less obvious than the translation from one visual medium to another.4 On the other hand, their kinship means that many of the observations that can be made of word reproduction can be made of picture reproduction. Their economic and technological evolutions overlap; and, of course, whatever characteristics all technologies share, printing and engraving share. Furthermore, the evolution of the printing press as a technology was inextricably part of the economic evolution of the printing and publishing business, which we do not have space to discuss. The most important development (for our subject) was the creation of technological and economic intermediaries between the artist and the audience. The economic middleman and his systems—whether a mechanical invention in the ordinary sense, like the printing press, or a system of organizing production, sales, and distribution—were firmly in place and beginning to be noticed frequently by artists and authors in Blake's century. Of course Blake was not alone in observing that the middleman and his systems were turning words and pictures into a "portable commodity," in McLuhan's phrase.

Blake's century inherited and improved the systems of art making that had been developing since the Renaissance, and it is mainly to these systems that he is referring with his term "machines." Under the economic and technological pressures of the printing press, it did not take the artists of the Renaissance long to learn how to meet commercial need with a system of production based on a rational division of labor (the

fundamental idea that, combined with motion, gives us the assembly line) and a graphic technique (a "style" in esthetic terminology) to match. "To match" means a great deal more than it may seem to, and we will be exploring that as we go.

The efficiently produced copies of Raphael's paintings that came out of Marcantonio's shop were the products of a process of systemization that affected important elements in artistic theory and practice for the next several centuries.⁵ Between Marcantonio and the artists of Blake's time, Rubens is the most important artist-businessman in this line of development. He was influential in England, and what Blake calls "the Enterance of Vandyke & Rubens into this Country since which English Engraving is Lost" (PA, E, 561) is an easily documented event in the history of art.6 In line with the commercial tradition represented in that "well known Saying" quoted by Blake, that "Englishmen Improve what others Invent" (PA, E, 565), the eighteenth century inherited and steadily improved Rubens' methods of production, which were not confined to printmaking. He refined ways of producing works of art in nearly every marketable medium and employed at least the elementary techniques, refined almost to perfection in subsequent centuries, of creating markets where none exists for a particularly profitable product.

We can see these developments with Blake's eyes if we go back to the technological and commercial ideas behind the "systems" of reproduction. For any division of labor to work, there has to be a product that is divisible. The combination of a divisible product of manufacture and a division of labor for producing it is sometimes called in intellectual histories "the rationalization of industry," which was, of course, essential in the Industrial Revolution, when manufacturing processes were "rationalized" on a very large scale. But that kind of rationalization of production had been used on a smaller scale—not revolutionizing the economy, but revolutionizing certain kinds of production —for a long time. Again, printing with movable type is a good example. The letter is the atom of printed language. If sentences cannot be divided into words and words into something like letters, movable type is an impossibility. Consider pictures in the same light, and we can see an aspect of the historical problem in the technology of picture reproduction and perhaps catch a glint of the technical solution that Blake saw as the very death of art.

If pictures could be divided into something parallel to letters in words, then they could be easily reproduced (Illus. 1). Nothing quite so efficient happened until the inventions of photography and the halftone screen in the nineteenth century, but all the systems of art production evolved in just that direction. In painting, which we have not said much about, the example that comes immediately to mind is the system of portrait painting, practiced by Joshua Reynolds and most other painters of the time, in which labor was rationally divided so that the portraitist painted only the head and left the rest to the drapery painters, animal painters, hand painters, marine painters, and landscape painters—a legion of specialists, journeymen "finishers." Many of the most bizarre stories passed around in the painting trade during the century concern this division of labor: the one-man painting factory who adhered to a method so efficient that he could paint the twelve apostles while his wife got supper on the table; the warehouse of partly finished commissions left by Kneller at his death; the cartel of leading portraitists whose entire monopoly depended upon the services of a single drapery painter; and the famous mistakes made when a system seemed so efficient that the human operators who were plugged into it dozed for a moment and produced an admiral with two hats, or a lady in shepherdess garb who had burned to be seen posing in her finery.7 Sometimes the scale of operation was limited to one painter in his studio; sometimes it was extended only beyond the portraitist as far as his favorite drapery man; sometimes it was as large as the workshops in which French engravers had manufactured their estampes galantes;8 and yet again, by the end of the century, it could be as large as the scale on which Rudolph Ackermann in London produced his hundreds of thousands of colored prints manufactured at tables lined with French émigré laborers.9 Though artists and critics made fun of it now and then, on the whole this division of labor-matched to a division of techniques—was accepted as esthetically legitimate. It extended chronologically from Van Dyck and Kneller to Reynolds; hierarchically from the commonest hacks to presidents of the Royal Academy; and, although some of the manifestations and implications are different, across the arts from literature to architecture.

In engraving, the most versatile atom into which all pictures could be divided was the "lozenge" of cross-hatching, which was (approximately) an infinitely adjustable quadrilateral that could be combined with others of its kind into vast nets or webs of varying density to create whatever light or shadow was needed at any point in a design (Illus. 2). (For the reader with little or no knowledge of printmaking, a good example might be the face of George Washington as etched for the dollar bill by George Smillie in 1918, using techniques common two centuries earlier.) The same possibilities were latent in the dot, and eighteenth-century engravers learned to use quite homogeneous forms of stipple (Illus. 3). Mezzotint represents the discovery that to create tone without line it is easier to start from black and go to grays than to start from white. The "atom" of mezzotint, despite superficial differences in the method of production, is still the dot, as it is in stipplebut a dot in relief, created by roughening the surface of the plate.

The perfect system of reproduction would reproduce anything perfectly. Because there is no perfect system, the reproductions will always be imperfect. The technological gap between the original and the reproduction is what interests us, because we can safely guess that the difference that occurs in the gap is significant and affects the artists' originals not only now but also in the future and affects as well the audience, its understanding of the work, judgment of the work, artistic expectations, and so on. The most drastic hypothesis—the one to which Blake seems to have subscribed—would be that the system, the artistic machine, in the middle between artist and audience was capable of making everything over in its image. We have seen this tendency in the dishwasher, though it is not limited to "machines" in the sense of metal things with motors and gears but extends to the systemization of almost any procedure. We notice every day that the mechanization of one thing—tasks like washing dishes or moving down a road at a high speed comfortably—tends to force the mechanization of other things—the consumer's

desires in the marketplace or the process used to manufacture the product—if the mechanical advantage gained by the systemization is great enough.

Blake noticed that systemization is most often based on a principle of intermeasurability—that is, the division of something (a product or a procedure or, most often, both) into rational units (Illus. 4), to arrive at a system of translation by which two or more things can be dealt with in the same way. Blake connected intermeasurability with contemporary science, especially the Newtonian idea of "a space composed of points, and a time composed of instants, which had an existence independent of the bodies and events that occupied them,"10 a doctrine that corresponded to a contemporary notion in art. We could just as easily say, for instance, that eighteenth-century artists believed in a space composed of points, a time composed of instants, and so on. The separation of time and space from bodies and events in Newtonian physics corresponds to the separation of form and content in neoclassical esthetics.11 Blake was thinking of this correspondence when he asked, "What Man of Sense will lay out his Money upon the Lifes Labours of Imbecillity & Imbecillitys Journeymen or think to Educate a Fool how to build a Universe with Farthing Balls" (PA, E, 568)¹²—farthing balls being the commercial version of a Newtonian atom, "A Thing that does not Exist" (Letters, 162). Note the train of Blake's thought in asserting individuality and identity against the mechanistic Newtonian atomism: "a Line is a Line in its Minutest Subdivisions: Strait or Crooked It is Itself & Not Intermeasurable with or by any Thing Else. Such is Job"—Blake means both his Job engravings and Job as a biblical character who asserts his identity against intermeasurability—"but since the French Revolution Englishmen are all Intermeasurable One by Another, Certainly a happy state of Agreement to which I for One do not Agree" (Letters, 162). He goes on to say that "Experimentalists must suppose" that "Up & Down" are "the same Thing" (Letters, 162), meaning simply that technology and eighteenthcentury science had no choice but to believe in intermeasurability, without which they could not systemize.

But Blake's thought goes beyond a simple dis-

tinction between artistic method and scientific method to claim that a mechanical method at one point mechanizes everything that depends upon it: "Englishmen are all Intermeasurable." Furthermore, he connects intermeasurability not only with physical theories and artistic theories but also with political theories: "I know too well that a great majority of Englishmen are fond of The Indefinite which they Measure by Newton's Doctrine of the Fluxions of an Atom, A Thing that does not Exist. These are Politicians & think that Republican Art is Inimical to their Atom" (Letters, 162). With this apparently crazy leap Blake is only saying that a mechanical advantage is often a commercial advantage—and that science and commerce are often partners in a foursome with technology and politics.¹³ To put the matter simply, Blake wanted to live in a society based on artistic principles, and he found himself living in one based on technological principles. The result was the intrusion of commercial technology into art in the form of "artistic machines." The intrusion takes the following form. The system of reproduction is fixed and cannot change. The artist can change his original to accommodate it-match it-to the system, and the system thus becomes the style of the artist who is willing to become what the machine can behold. This is what Blake called the Limits of Opacity and Contraction, man becoming the machine he creates in order to get a mechanical advantage, which is usually a commercial advantage, certainly not often an artistic one. Historically, artists learned to draw for the systems to which they were subject. This is what sympathetic critics of Rubens mean when they refer to his sketches as "rugged";14 another way of describing them would be "general" and "well adjusted": general enough to survive execution by an efficient system of reproduction and still have the trademark "Rubens" on them. The most efficient behavior for artists was to learn to draw for their systems of reproduction. If they failed to learn, the result in the finished product was the same anyway, the machine making over in its own image all things that pass through it. The artistic product of the machine becomes what the machine is able to behold. Blake had this experience many times, perhaps never so memorably as with Cromek and his "finishing" engraver Schiavonetti (Illus. 5).15

II. Technology, Decorum, and the Bounding Line

In lamenting the state of the arts in his time, Blake lamented most the loss of drawing in art, the loss of the line: as "absurd Nonsense about dots & Lozenges & Clean Strokes [is] made to occupy the attention to the Neglect of all real Art" (PA, E, 571); "Engraving by Losing drawing has Lost all Character & all Expression" (PA, E, 561). The loss of drawing Blake saw not as a simple esthetic choice—giving up the line in return for "painterly" values—but as a sacrifice of true art to commerce, whose requirements were dictating the principles of art. Linearity, like its negation, intermeasurability, is a metaphor of explicitness for Blake that is not only artistic (in the narrow sense). Remarks about "the hard and wirey line of rectitude and certainty in the actions and intentions" and the line as the "great and golden rule of art, as well as of life" show the interpenetration of art and life in Blake's thinking. Thus the consequences of the artistic battle between linearity and intermeasurability are immense. Art divided, life divides, and the leviathans of the culture take over: "Leave out this l[i]ne and you leave out life itself; all is chaos again, and the line of the almighty [i.e., the imagination] must be drawn out upon it before man or beast can exist" (DC, E, 540).

Blake's dedication to the artistic line and to its inevitable product, the minute particular, has been discussed many times, and he has been placed where he belongs in art history, on the side of the two-dimensional linearists in the old esthetic battle between the linear and the painterly schools.¹⁶ But there is an aspect of the conflict that is technological and economic as well as esthetic. The capabilities of the systems of reproduction that I have outlined were in the reproduction of tonal values (Illus. 6). No matter what classical geometry says, points do not combine to make a satisfactory line, and neither do lozenges, and yet points are as necessary to the systemization of picture reproduction as they are to the systemization of geometry. Systematic techniques need an atomistic basis. On the other hand, the easiest thing to do with a copper plate and a burin is to make a line or some other coherent mark (Illus. 7); nothing is harder to make than a tone. Until tonal media such as

aquatint and mezzotint became popular in the eighteenth century, tones had in fact to be built up from systems of lines in all the standard systems of engraving. From the Renaissance through the nineteenth century engraving was thought of as a medium of translation and reproduction, following the fashions initiated in other media, oil painting for example, where the painters favored color and tone over line. Color and tone come easily to oil; line does not. As a parasitic medium of translation and reproduction, engraving worked to adapt, and its entire history can be described almost accurately as an extended search for ways of subverting, usually by disguising, what naturally happens when an engraver's tools are put to metal.

Now Blake loved the line and loved engraving, and we can see how his artistic principles and his medium match, though we cannot say which came first. He liked also to combine media where lines were easy to make-tempera with engraving as a base, for instance, or watercolor with lines of pen and ink-and he avoided the favorite "painterly" medium, oil, which he said was invented by his favorite villains, Rubens and Van Dyck (DC, E, 521). But the difference between Blake and many other "linearists" is that, in the historical shift from line to tone and color, he saw art being sacrificed to commerce. As everyone knows, he identified a "class of men" that he variously called false artists, counterfeiters, and Quack Doctors of the "Contemptible Counter Arts" (PA, E, 569), "whose whole art and science is fabricated for the purpose of destroying art" (DC, E, 529) and replacing it with "the Lifes Labour of Ignorant Journeymen Suited to the Purposes of Commerce" (PA, E, 562)—an art completely adjusted to the requirements of commerce. Out of this belief came his paranoid-sounding remarks about the attempts of "S" Joshua & his Gang of Cunning Hired Knaves" (AR, E, 625) to destroy his career and the careers of other true artists, "to Starve me out by Calumny & the Arts of Trading Combination" (PA, E, 566).

To find out why Blake connected bad art with the methods of commerce, we need to resort to the traditional critical problem of *decorum*, the prissy term that covers the relationship between form and content in the arts. Blake's position on decorum has been largely overlooked in favor of those colorful angry remarks of his on the line, generalization, minute particulars, and the like. They are important, of course, but subsidiary to the larger and more central problem of form and content, and it is decorum that makes sense of Blake's complaint about the effects of commerce on art. Since Blake saw the technological and economic effects of systems of reproduction in terms of the relationship between form and content, we can make that our touchstone, and generate other esthetic issues from it.

The division of labor that forces the division of the object of the labor—the product—also forces the division of conception from execution, because the conception is one stage in the division of labor and execution is another. When this division is formalized, the result is the sort of thing Blake saw in the engraving trade: conception was assigned to the original artist, execution to someone else. If execution were by means of a simple and perfect system of reproduction, of course, the division would not matter. But Blake indicated the true state of affairs when he spoke of "the Lifes Labour of Ignorant Journeymen Suited to the Purposes of Commerce no doubt for Commerce Cannot endure Individual Merit its insatiable Maw must be fed by What all can do Equally well" (PA, E, 562). That is, the systems of execution used in Blake's time were systems of translation "improved" ("A Man who Pretends to Improve Fine Art does not know what Fine Art is," PA, E, 562) by centuries of trial and error, manned by journeymen who could learn the system, owned by commerce, and ready for hire to the highest bidders:

While the Works [deleted of Translators] of Pope & Dryden are looked upon as the Same Art with those of Milton & Shakespeare while the works of Strange & Woollett [eminent contemporary commercial engravers] are lookd upon as the same Art with those of Rafael & Albert Durer there can be no Art in a Nation but such as is Subservient to the interest of the Monopolizing Trader [deleted who Manufactures Art by the Hands of Ignorant Journeymen till at length Christian Charity is held out as a Motive to encourage a Blockhead & he is Counted the Greatest Genius who can sell a Good for Nothing Commodity for a Great Price [.] Obedience to the Will of the Monopolist is calld Virtue and the really Industrious Virtuous & Independent

Barry [the artist] is driven out to make room for a pack of Idle Sycophants with whitlors [i.e., whitloes sores] on their fingers] Englishmen rouze yourselves from the fatal Slumber into which Booksellers & Trading Dealers have thrown you Under the artfully propagated pretence that a Translation or a Copy of any kind can be as honourable to a Nation as an Original.... (PA, E, 564–65)

In a system of translation, conception or the original "design" begins to be regarded as "information" or "content," which will be given its final shape, its "form," by the standard systems of translation. Like any other trade engraver, Blake found himself on either end of the process many times, but seldom on both ends, and that is the problem. To Blake's mind the artistic process is a perfect combination, an indivisible continuum, of conception and execution, content and form. The artistic sign of the presence of such a continuum is a coherent "bounding line" (DC, E, 540), which is "a Line in its Minutest Subdivisions: Strait or Crooked It is Itself & Not Intermeasurable with or by any Thing Else" (Letters, 162). An artistic machine cannot produce such a line, and the absence or presence of one is the telltale sign of true art or false.

The legitimization of the division of conception from execution, content from form, poisons true art, in Blake's opinion. But the division is a central assumption behind the most important principles in the mainstream of eighteenthcentury esthetics. The systemized relationships between conception and execution become the set of matched categories we call "decorum," governed by the principle of "propriety." The most common criticism of Blake's art in his time was that he could conceive but not execute: "the Lavish praise I have recieved from all Quarters for Invention & Drawing has Generally been accompanied by this he can concieve but he cannot Execute" (PA, E, 571). Such a criticism could never have been made if a division between conception and execution had not been a naturalized, perhaps unconscious, assumption. The very important neoclassical ideas of "imitation," "high finish," "refinement," "regularity," and "correctness" are parts of an esthetic based on consensus, and they are not possible without assuming a separation between conception and execution: "Why are we to be told that Masters who Could Think had not the Judgment to Perform the Inferior Parts of Art as Reynolds artfully calls them. But that we are to Learn to Think from Great Masters & to Learn to Perform from Underlings? Learn to Design from Rafael & to Execute from Rubens?" (AR, E, 628). "Invention [i.e., conception] depends Altogether upon Execution or Organization. as that is right or wrong so is the Invention perfect or imperfect. Whoever is set to Undermine the Execution of Art is set to Destroy Art Michael Angelos Art Depends on Michael Angelos Execution Altogether" (AR, E, 626). In the Library of the Royal Academy Blake would say to George Moser, the Keeper, "These things that you call Finishd are not Even Begun how can they then, be Finishd? The Man who does not know The Beginning, never can know the End of Art" (AR, E, 628).

Blake defended his art repeatedly on the grounds that were soon after to become a Romantic esthetic commonplace in the idea of "organic form": that conception and execution are not divisible, are one and the same thing, that each must necessarily be perfectly appropriate to the other, or the result is absolute artistic incoherence:

I have heard many People say Give me the Ideas. It is no matter what Words you put them into & others say Give me the Design it is no matter for the Execution. These People know Enough of Artifice but Nothing of Art. Ideas cannot be Given but in their minutely Appropriate Words nor Can a Design be made without its minutely Appropriate Execution[.] The unorganized Blots & Blurs of Rubens & Titian are not Art nor can their Method ever express Ideas or Imaginations any more than Popes Metaphysical Jargon of Rhyming[.] Unappropriate Execution is the Most nauseous of all affectation & foppery He who copies does not Execute he only Imitates what is already Executed Execution is only the result of Invention[.]

(PA, E, 565)

From his eighteenth-century lexicon he may choose a word Pope and Reynolds would have been comfortable with, "appropriate," to express the relationship of conception to execution, but Blake leans very far toward the radical position that conception is execution—the identity of form and content: "Execution is only the result of Invention." Pope, Titian, Rubens, and Rembrandt allowed "their Method" to interfere

and got "unorganized Blots & Blurs" as a result. Blake is claiming to have no method and thus asking to be judged by his execution: "I know my Execution is not like Any Body Else I do not intend it should be so[.] none but Blockheads copy one another[.] My Conception & Invention are on all hands allowd to be Superior My Execution will be found so too" (PA, E, 571).

Blake's position may be most easily seen in terms of contrasting metaphors. Romantic criticism replaced neoclassical metaphors of balance, as in the matched categories of decorum, with metaphors of integrity. Thus in Romanticism the artistic version of self-division is the division between the artist and the work of art. A number of positive Romantic metaphors show the aim for an integrity of artist and work, so that the work seems to be thought of as the direct projection of the artist's imagination. "Sincerity" and the "true voice of feeling" describe this kind of integrity, and, of course, there is the pervasive organic metaphor, used almost indiscriminately to describe both the creative process and the artistic results of it. Blake uses a number of such metaphors—"appropriateness," "expression," "intention," "physiognomy"—all of which work to connect mental conception with physical and formal execution.

The technology of reproduction that I have outlined offers a subversive countermetaphor, of artistic conception radically separated from artistic execution by a nonartistic intermediary—a "machine" that interrupts the "expression" of the artist's "intention." In Blake's opinion neoclassical esthetics, as embodied for example in the scheme of decorum, whose root metaphors are hierarchy and balance rather than integrity, subverted all possibility of true art by sanctioning the interruption between conception and execution. That is the complaint Blake has in mind when he reacts to Reynolds' idea of a "composite style": "There is No Such a Thing as A Composite Style" (AR, E, 641)—in art, that is, though there can be nothing else when commerce and art combine.

The literary and artistic incoherence that Blake saw in Pope, Titian, Rubens, and Rembrandt is the result, Blake thought, of the separation of form from content by "Method," that is, systematic techniques of translation and production. If we understand the causes of "unor-

ganized Blots & Blurs" in Blake's terms, then we can make new sense of Blake's view of some major neoclassical artistic tenets. Since we do not have the space to take up all the ideas that fit into this framework, let us take as a final instance the principle of "harmony" in the arts, which is strongly related to the fragmentation that an artistic machine causes.

Harmony is one of those neoclassical principles that drift over into Romanticism without much change, so that we find Coleridge, for example, using it as a principle around which to organize his discussion, ostensibly of the painter Allston, really of beauty and artistic unity, in the essays on Genial Criticism (1814). Harmony, Coleridge says in the third essay, is the unity achieved by the fine arts when they succeed in the Platonic aim of reducing the Many to One, achieving "multeity in unity," which as it happens is an idea as important to science and technology as to metaphysics, theology, and esthetics.¹⁷ Coleridge's treatment simply adjusts a neoclassical idea to some Romantic premises, but they are the premises to which Blake objected most strenuously when he read Wordsworth, where he found a lot of talk about the fitting of the mind to nature, which Blake saw, not as an original premise on which to base the writing of a new poetry, but as an ominous new step in the application of Lockean epistemology to art that had been evolving for a century at least. He came down hard on Wordsworth, and he would have been equally rough on Coleridge for being a neoclassicist under the skin with his definitions of harmony and unity, confusion of particulars and general ideas, association of universals with geometric forms, and accommodation of the imagination to the natural world.

At least in Blake's terms, Coleridge's passages on harmony and unity will not bear the interpretation one might be tempted to give them on Romantic grounds: that the One is an "organic" (as opposed to a mechanical) unity to which the Many contribute. When criticizing the "disharmony" of Wordsworth's "style" in Chapter xxii of Biographia Literaria, Coleridge defines the harmony he was looking for just as any neoclassical critic would have: "... the business of the writer, like that of a painter whose subject matter requires unusual splendor and prominence, is so to raise the lower and neutral tints,

that what in a different style would be the commanding colors, are here used as the means of that gentle degradation requisite in order to produce the effect of a whole," a sentence that, if Coleridge had been in one of his more imitative moods, he could have paraphrased from any number of passages in Reynolds' Discourses. "Degradation" is a favorite eighteenth-century word for describing artistic harmony, and Blake incorporates it, along with the geometric image of the pyramid and images of systemization (frame) and force (plank), into a serious parody in Jerusalem 45[31], where Los explores simultaneously the artistic and social interior of Albion with his lamp and sees

. . . every Minute Particular of Albion degraded & murderd

But saw not by whom; they were hidden within in the minute particulars

Of which they had possessd themselves; and there they take up

The articulations of a mans soul, and laughing throw it down

Into the frame, then knock it out upon the plank, & souls are bak'd

In bricks to build the pyramids of Heber & Terah.
But Los

Searchd in vain: closd from the minutia he walkd, difficult. (45[31].7-13, E,192)

Minute particulars are lost, of course, because harmony is an overall blending of line and tone, "soft and even tints without boundaries, and of endless reflected lights, that confuse one another," in order to give the work of art "softness and evenness, by a twelvemonth's labour" (*DC*, E, 538); in short, "one Generalizing Tone" (E, 507).

In the well-known, but less well understood, remark that "Demonstration Similitude & Harmony are Objects of Reasoning Invention Identity & Melody are Objects of Intuition" (AR, E, 648), Blake's theory of knowledge is not so important to us as the company that harmony keeps: an artistic principle whose roots are not in art (intuition) but in science, technology, and commerce (reasoning). The opposition between melody and harmony used here (in the margins of a book on painting) perhaps obscures the fact that Blake was thinking of the visual and literary arts as well as music. He is

careful to make the application complete in *Jerusalem*:

I tell how Albions Sons by Harmonies of Concords & Discords

Opposed to Melody, and by Lights & Shades, opposed to Outline

And by Abstraction opposed to the Visions of Imagination (74.24–26, E, 227)

Blake shows how harmony might be used as a legitimate artistic term in his late annotations to Berkeley's Siris: "Harmony [and] Proportion are Qualities & Not Things The Harmony & Proportion of a Horse are not the same with those of a Bull Every Thing has its own Harmony & Proportion Two Inferior Qualities in it For its Reality is Its Imaginative Form" (E, 653), the political version of which, "One Law for the Lion & Ox is Oppression" (E, 43), he had etched into The Marriage of Heaven and Hell as early as the 1790s.

On the other hand, when among the paragraphs "On Homers Poetry" that Blake etched around 1820 he included the cryptic assertion that "... Unity is the cloke of folly ..." (E, 267), he meant the kind of unity that painters, for instance, were trying to achieve with chiaroscurist techniques. In Blake's opinion, the object of artistic harmony is to disguise the true fragmentation and incoherence beneath the surface of a work of art with the appearance of unity, harmony being the most common synonym for unity in neoclassical discussions. Systematic techniques, such as chiaroscuro—not any emphatic use of light and shade, of course, but the systematic techniques that the word designated in Blake's time—for achieving harmony he regarded as ways of covering up the truth with an artificially imposed pattern (Illus. 8). Thus where the painters and critics of his age found in Rembrandt's work lessons in chiaroscurist harmony, 18 Blake found a bag of tricks; where the age found models of harmony and high finish, Blake found "unorganized Blots & Blurs."

The confrontation here has technological roots in a characteristic mechanical paradox: coherence and unity in the artistic machine kill all hope of coherence and unity in the artistic product. So Blake talks of "broken lines, broken masses, and broken colours" in the "Venetian and Flemish practice" (*DC*, E, 529) that he thought had ruined eighteenth-century art. The

point here is that, for the artist who does not conceive in its terms, the artistic machine may as well be a net or a stone wall. The machine does not change, and it is the execution. The array of artistic conceptions flies into pieces at the machine, and only the fragments that the machine can accept get through. These artistic scraps come out sifted into perfect order, but the order is the order of the laws of the machine, not the laws of art, of which there are none. Or, to put it another way, the order of the machine is substituted for the order of art, and the order of art is sacrificed (Illus. 9). This is why Blake can say that the "Blots & Blurs of Rubens & Titian" are "unorganized" and "not Art" (PA, E, 565) and that "All Rubens's Pictures are Painted by Journeymen & so far from being all of a Piece. are The most wretched Bungles" (AR, E, 644). All the arts, conceived in freedom, are executed under the laws of the artistic machine.

But, after all, the machines do not grind and stamp for art, and the system woven into the engravings and the printed pages that come off the press are not woven by the artist. An artistic machine is an impossibility; there are only commercial machines. For a long time there may be some confusion as to who dictates to whom —for example, the grammarian to the printer, or vice versa—but only because there are always artists and estheticians busy converting the rules of commerce into rules of art, often unconsciously, hypnotically, as in Blake's metaphor of "Newton's sleep," but also often consciously, "Picture traders Music traders & Rhime traders" with an "Eye . . . on the Many. or rather on the Money," "A Pretence of Art: To Destroy Art" (PA, E, 569; AR, E, 645, 631). If he had not known it before—though, of course, he had— Blake could have learned in reading Reynolds' Discourses that principles of manufacture can become esthetic principles and that in a commercial empire the approved art is at many points an allegory of commerce. "Economy" as a principle of artistic style and good business simultaneously may advertise its promiscuous relations with art and commerce more boldly than most such principles, but in a commercial empire the approved esthetic is never an obstacle to business.

Blake was a skilled reproductive engraver himself. Prints reproduced with this essay show

how well he could use even the most ostentatious, complicated, and fashionable techniques of reproduction. The question of self-contradiction naturally arises. Obviously, Blake would have preferred never having to do journeywork. But he did it consistently, devoting much of his energy to reproducing the work of others, and in 1799 he wrote in a letter to Dr. Trusler that "To Engrave after another Painter is infinitely more laborious than to Engrave one's own Inventions. . . . [But] I have no objection to Engraving after another Artist. Engraving is the profession I was apprenticed to . . ." (Letters, 30-31). Blake's argument is not against commercial copying but against not being able to tell the difference between the principles and techniques that produce good copies and translations and the principles that produce good art. He thought that in the practice and theory of Reynolds the two were confused and that Reynolds' Discourses proved it. And, of course, Blake's feelings about Reynolds extended to the artistic principles for which Reynolds was the leading representative in his century.

Moreover, the proper distinction to be made between Blake and his contemporary artists is not that he had a horror of systematic crosshatching and they did not.19 The evidence, at least as I read it, will not support that. Blake did not always write tolerantly, but the artistic principles he wrote about are fundamentally tolerant, or at least broad. They do not exclude webs, nets, dots, lozenges, color, tone, rhyme, heroic couplets, or any other aspect of graphic or literary technique. It was rather the transforming of these methods of convenience into artistic principles of imitation, harmony, correctness, and high finish that infuriated Blake, who always could see through the superficial levels of artistic practice into basic artistic principles. Thus Blake's broad principles exclude the ignorant insistence on any single technique. He saw this insistence for what we now say it genuinely was: fashion, represented equally by the poets' obsession with couplets and the artists' with "Chiaro Scuro" and "clean strokes" and dots and lozenges. When he said "I defy any Man to Cut Cleaner Strokes than I do or rougher when I please. . . . Drawing is Execution & nothing Else ..." (PA, E, 571), he was speaking from his basic artistic belief in appropriateness—of conception to execution, means to ends. The worship of a single technique is the worship of the Artistic Machine, which can be Satan himself. Like his hero Los, Blake watched his culture very closely, keeping the "Divine Vision in time of trouble." And every so often in his vigilance he would issue the kind of clear morning call to artists with which *Milton* begins:

Rouze up O Young Men of the New Age! set your foreheads against the ignorant Hirelings! For we have Hirelings in the Camp, the Court & the University: who would if they could, for ever depress Mental & prolong Corporeal War. Painters! on you I call! Sculptors! Architects! Suffer not the fash[i]-onable Fools to depress your powers by the prices they pretend to give for contemptible works or the expensive advertizing boasts that they make of such works; believe Christ & his Apostles that there is a Class of Men whose whole delight is in Destroying. We do not want either Greek or Roman Models if we are but just & true to our own Imaginations, those Worlds of Eternity in which we shall live for ever; in Jesus our Lord. (Preface to Milton, E, 94)

Here we could leave Blake and continue to wander idea by idea over the entire battleground of neoclassical and Romantic esthetics, and then, because there is no particularly good reason for stopping there, beyond artistic principles and the arts, since they are implicated in the transformation of Enlightenment culture in the fullest sense. I have tried only to sketch narrowly, with specialized attention to the ideas of one artist in one small span of time, the relation-

ship of a few basic artistic theories and practices to nonartistic areas of the culture. I would end by offering the personal opinion, though my arguments have been confined so as not to depend very largely upon it, that artistic theories and practices can always be seen in some coherent relationship with the rest of the culture, always at some level interacting vigorously with it, and that such relationship is soon headed for the attention it deserves. This, I confess, is a bookmaker's estimate, coming just when the writings of Marshall McLuhan, Buckminster Fuller, and company have sunk almost out of sight from their height of fashion. I would even admit to betting on a long shot, if it were not for feeling that the sinking at one level has been hiding a sinking-in at a deeper level and observing just recently a new stir of interest in regenerating that sort of study boldly but soundly, with better theory and procedure but without giving up any of the intellectual energy that was spent so generously on those early studies. What I am now trying to pass off as a prediction may only be a scholar's daydream—and, for as long as anyone can remember, scholarship has shared with politics the sophisticated magic of talking marketable hallucinations into walking ghosts for a time—but I predict, anyway, a remarkable increase in our knowledge about the place of the arts in the culture.20

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Notes

¹ Blake's "Public Address" from his Notebook, quoted here from p. 564 of David V. Erdman, ed., *The Poetry and Prose of William Blake*, 4th ed., rev. (New York: Doubleday, 1970), the source of most of my quotations from Blake. For the letters, the text is Geoffrey Keynes, ed., *The Letters of William Blake* (Cambridge: Harvard Univ. Press, 1968). The abbreviations used in the essay are E for Erdman, *Letters* for Keynes, AR for Blake's annotations to Joshua Reynolds' *Discourses*, *DC* for *A Descriptive Catalogue of Pictures*, PA for the "Public Address."

² There are a number of other relevant passages; see, e.g., E, 537, 570, 571, and, for that matter, almost any of the instances listed under "machine," "mechanical," etc., in A Concordance to the Writings of William Blake, ed. David V. Erdman (Ithaca: Cornell Univ. Press, 1967). The larger context of the metaphor in systems of geometry and mathematics cannot even be sketched here, but is at least indicated by this remark from Plato: "By beauty I do not mean, as most people would suppose, the beauty of living figures or of pictures, but, to make my point clear, I mean straight lines and circles, and shapes, plane or solid, made from them by lathe, ruler and square. These are not, like other things, beautiful relatively, but always and absolutely" (Philebus 51c), compared to one of the sentences that Blake engraved around his Laocoon: "The Gods of Greece & Egypt were Mathematical Diagrams See Plato's Works" (E, 271).

³ I am, of course, thinking of the train of thought and association established by Marshall McLuhan in *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: Univ. of Toronto Press, 1962), especially the uses he found for pictorial conventions in discussing the conventions of the printed page. The relationship is closer than it might seem at first, because printing is technologically a branch of engraving.

⁴ Of course this is not to say that artists and public were always aware of the graphic translation—certainly not always aware of the effects. But the distinction between "original" and "copy" or "translation" works one way in the graphic arts, a different way in literature. Blake observed, however, that in both arts his century had lost track of the relative values of originals and translations or copies, and, at worst, had decided in favor of copies over originals.

⁵ This statement weakly summarizes in one sentence the argument first advanced by William Ivins in *Prints and Visual Communication* (London: Routledge and Kegan Paul, 1953). Ivins had a great deal to say on matters closely related to the subject of this essay, not only in *Prints and Visual Communication* but also in his other works, especially *How Prints Look: Photographs with a Commentary* (1943) and *Art and Geometry: A Study in Space Intuitions* (1946). Readers who want more information about the procedures in Rubens' shop and an extended discussion of the development of systematic printmaking techniques should

see Prints and Visual Communication and perhaps Mayor, n. 8 below.

⁶ The rhetoric here and throughout the essay is what might be called, for the sake of a point, empathic. That is, in order to make Blake's ideas clear, I try to write from inside them—as though I believed them. I have been partial in selecting from a range of art-historical facts the facts that Blake thought were most important, and I have tried to see them as he saw them. I am interested in explaining why Blake hated Rubens and Rembrandt; I assume that the reader is not particularly interested to hear whether I think Blake's taste was defective.

⁷ The best source of such stories is William T. Whitley's Artists and Their Friends in England 1700–1799 (1928; rpt. New York: Benjamin Blom, 1968), 2 vols. Those mentioned here are from Vol. I, pp. 23–24, 22, 53–55, 104, respectively.

* Estampes galantes, in which the French upper classes celebrated their own fantasies of themselves at play in a manner not very different from English Restoration comedy, were a pre-Revolutionary fashion. They were produced for the most part in medium-sized workshops, where a fairly strict division of labor was the rule. See A. Hyatt Mayor, *Prints and People: A Social History of Printed Pictures* (New York: Metropolitan Museum of Art, 1971), near Illus. 596–97 (n.p.).

9 Ackermann was a carriage designer turned print entrepreneur who fed the massive appetite for books illustrated with color prints at the turn of the century, using hack poets, popular illustrators, and an efficient system of production that could be operated on a scale vast for the time.

¹⁰ Bertrand Russell, A History of Western Philosophy (New York: Simon, 1954), p. 540.

11 Art historians will notice that I am using "neoclassical" not as they usually do, in a special narrow sense, but as literary historians do—to designate broadly a group of related esthetic principles generally held, though obviously not without significant variation and change, by most important English writers and artists, musicians and architects, from the Restoration to the end of the eighteenth century.

12 Blake always uses "journeyman" pejoratively, as a synonym for "hireling." "Journeyman" originally designated a day laborer, one who had completed an apprenticeship and qualified for daily wages. But his position as a master's employee soon gave "journeyman" the figurative connotations of "underling," slavishly doing the bidding of another. Thus for Blake's time the OED cites Horace Walpole: "The colouring was worse... than that of the most errant journeymen to the profession."

¹³ The mediator between science and commerce is technology, a fact that is usually clear enough, but occasionally obscured by the attitude of scientists. The history of commerce and science is evidence of their kinship. Jacob Bronowski, writing as a scientist and

humanist defending the effects of science on scientists and civilization, sketched the historical relationship in Science and Human Values, 2nd ed. (New York: Harper, 1963), p. 21, n. 3. Science and commerce have shared their histories not because their goals are the same but because they share a material object of interest, nature, and techniques for dealing with it.

¹⁴ Mayor, near Illus. 427.

¹⁵ For the story of the disastrous wrangle between Blake and double-dealing Cromek over the project to illustrate Blair's *Grave*—finally designed by Blake but engraved by Schiavonetti—see G. E. Bentley, Jr., "The Promotion of Blake's *Grave* Designs," *University of Toronto Quarterly*, 31 (1962), 339–53; *Blake Records* (Oxford: Clarendon, 1969), pp. 166–74; "Blake and Cromek: The Wheat and the Tares," *Modern Philology*, 71 (1974), 366–79.

¹⁶ See Nikolaus Pevsner, "Blake and the Flaming Line," Ch. v of The Englishness of English Art (New York: Praeger, 1956), pp. 117-46; Ch. iv of Robert Rosenblum, "The International Style of 1800: A Study in Linear Abstraction," Diss. New York Univ. Institute of Fine Arts 1956; and Rosenblum's Transformations in Late Eighteenth-Century Art (Princeton: Princeton Univ. Press, 1967), pp. 154-59, 189-91. The most recent assessments have been made by W. J. T. Mitchell, "Blake's Composite Art," and Jean Hagstrum, "Blake and the Sister-Arts Tradition," in Blake's Visionary Forms Dramatic, ed. David V. Erdman and John E. Grant (Princeton: Princeton Univ. Press, 1970), pp. 57-81, 82-91. There are books forthcoming by Mitchell and by David Bindman that may enlarge and refine what we know about Blake in relation to the linear tradition, but the basic point is unlikely to change much.

¹⁷ In Science and Human Values, p. 22, n. 8, for instance, Bronowski makes it the main pursuit of science and art, quoting Coleridge for the latter. The phrase

"universal unity" is used by Potts, the character who speaks most of Bronowski's opinions in the dialogue "The Abacus and the Rose," p. 118. The definition of science as "the search for unity in hidden likenesses" is Bronowski's own, p. 13. Also see Potts's poem that ends "The Abacus and the Rose," p. 119.

18 The model for harmony in discussions of painting is often Rembrandt, whom we sometimes almost think of as an artistic hero, at least as a rebellious, idiosyncratic, independent thinker who would have no truck with standard artistic doctrine and practice. But Blake's century used Rembrandt chiefly for his realism and his chiaroscuro, corrected and regularized in the way that Pope corrected and regularized Donne's satires. Rembrandt was filtered, in other words, through the main principles of the century; he was not influential in shaping those principles. When the century produced works that it thought were "in the manner of Rembrandt," we hardly recognize Rembrandt in them today. They are pale, highly finished imitations. Likewise, the theoretical use of Rembrandt as a model of graphic harmony in critical discussions gives us a Rembrandt who is barely recognizable.

¹⁹ This is the view tentatively adopted by Robert N. Essick in "Blake and the Tradition of Reproductive Engraving," *Blake Studies*, 5 (Fall 1972), 59–103, an otherwise informative essay.

²⁰ An earlier version of this paper was delivered at the conference on "Blake in the Art of His Time" at the University of California, Santa Barbara, in March 1976. Michael Fischer and Hugh Witemeyer of the Univ. of New Mexico and Marvin Morillo of Tulane Univ. made a number of valuable suggestions. An NEH Summer Stipend in 1975 and various grants made through the Research Allocations Committee of the Univ. of New Mexico supported much of the preliminary research.

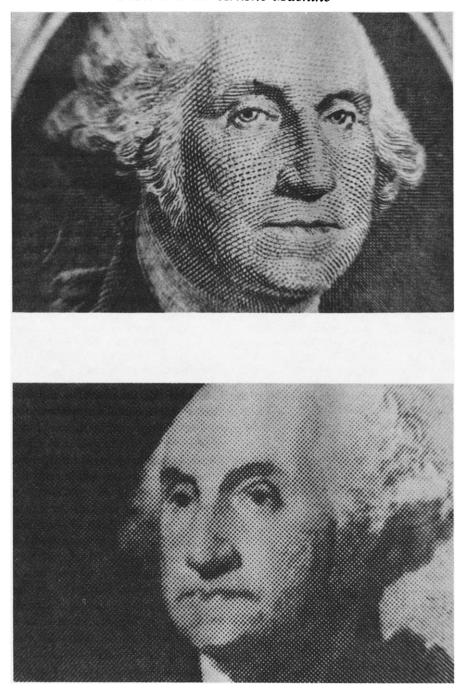


Illustration 1. If pictures could be divided into something parallel to letters in words, then they could be easily reproduced. Here are two systematic ways of dividing pictures for printed reproduction: the face of Washington as engraved with conventional cross-hatching on the dollar bill, and a familiar painting (White House Collection) reproduced by a coarse halftone screen.

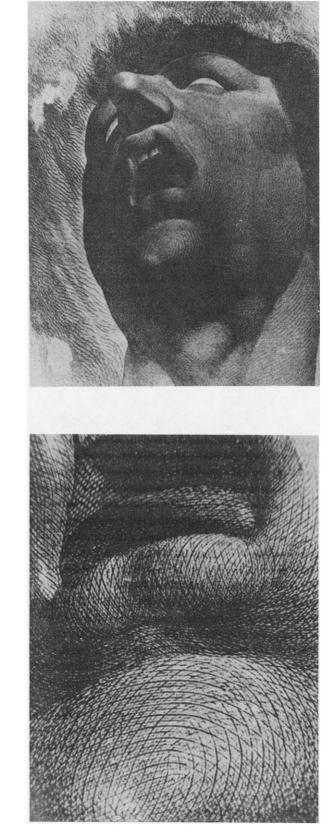


Illustration 2. This print, probably of Satan's head, is the product of a fairly typical eighteenth-century collaboration between designer and engraver, in this case Fuseli and Blake, respectively. Blake's work on the lips and chin is a fine representation of the dot-and-lozenge technique of cross-hatching, which in 1790 was as flashy and as standardized as the tap-dancing in a movie musical in 1945. (By permission of the Trustees of the British Museum.)



Morning Amusement



Illustration 3. The detail from Blake's very early print Morning Amusement (1782), after Watteau, is a good example of eighteenth-century "high finish" in a popular mode, stipple engraving. This sort of slickness must startle the eyes of those who learned who Blake was by looking at his original work. Here we see him just doing his job as a skilled reproductive engraver. Obviously Blake would have preferred never having to do journeywork, even of this fancy kind. But he did it consistently, and his argument is not against commercial copying but against not being able to tell the difference between the principles and techniques that produce good copies and the principles that produce good art. (By permission of the Trustees of the British Museum.)

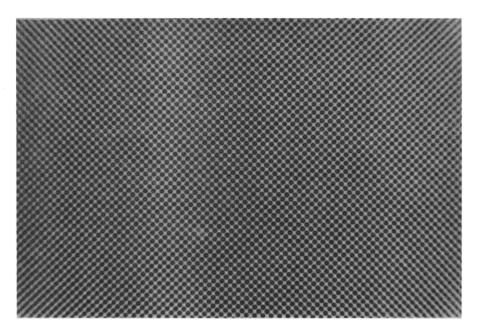
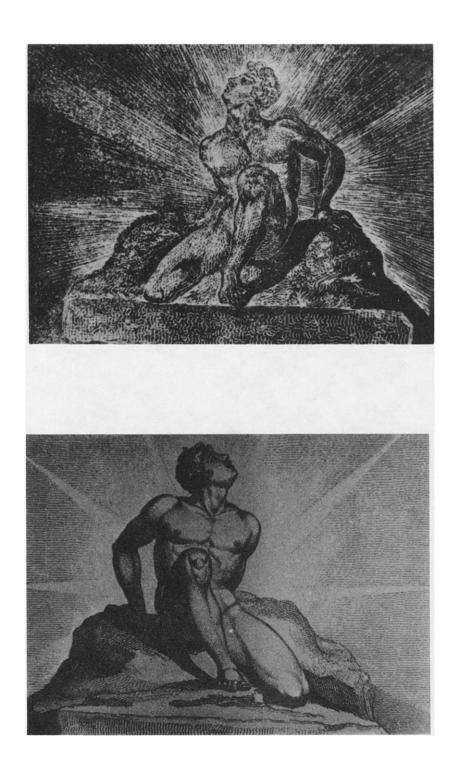


Illustration 4. A halftone screen reproducing only itself, to show the intermeasurable units of which it is composed, and by which it becomes so efficient a reproducer of tones. The halftone screen is the direct technological descendent of reproductive engraving techniques. Many of the screens are named after engraving techniques and media; thus "mezzotint" screens, "circular" screens, etc.

Illustration 5. The effects of systematic techniques of reproduction can be drastic if the original artist does not design for the system of execution—and the result is the same in either case. Is the white-line etching on the facing page (detail from *Death's Door*, Mrs. Charles J. Rosenbloom, Pittsburgh) what Blake showed R. H. Cromek when he came to see how Blake was getting along with the illustrations to Blair's *Grave* that Cromek had commissioned? That seems likely. If so, it is no wonder that Cromek, one of those enterprising Traders whose minds are "on the Many. or rather on the Money," hired Schiavonetti to "execute" Blake's "conceptions," with the result shown in the lower illustration (detail; by permission of the Trustees of the British Museum).

Schiavonetti knew his work, and he knew how to load every rift with neoclassical values. Blake's stark background would have looked barbaric to him, so he subdued it to the point of inoffensiveness with fine, light hatching, just enough tone to set off the figure. Blake's figure radiates light like a human sun; Schiavonetti's figure is posing in front of a natural rising sun. Schiavonetti corrected the distorted face and body of Blake's figure, taking away all but a "reasonable" amount of stress in the posture. And finally, he carried over into his engraving the strong outlines of Blake's figure, but he softened them considerably with fastidious patterns of hatching and stipple. In his white-line print Blake has outlined the body of the figure with a single white line, for a peculiar effect that would have looked simply crude to Schiavonetti, who did the opposite, blending the outline with the shading of the muscles. Thus Blake called his "finishing" engraver "Assassinetti" (E, 495) for his pains.

Morris Eaves 921





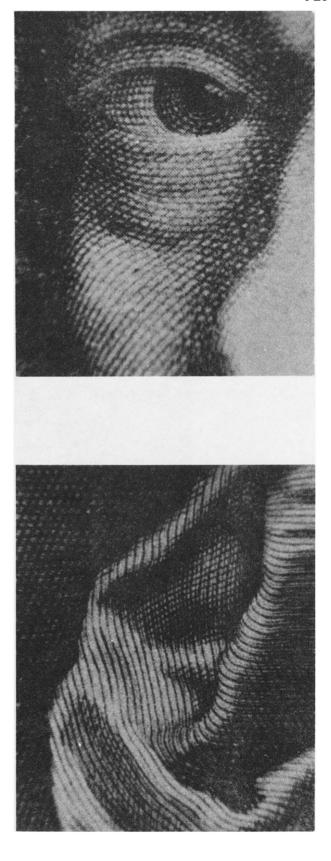


Illustration 6. Robert Nanteuil's seventeenth-century engraved portrait of *Marin Cureau de la Chambre* from the court of Louis XIV and two details show how the capabilities of systematic techniques of engraving were developed for the reproduction of tonal values. The viewer, of course, should admire the luxurious realism of the folds of cloth and the subtle shading of the face—as smooth as the manners of the court in the best fantasies of the courtiers. (By permission of the Trustees of the British Museum.)

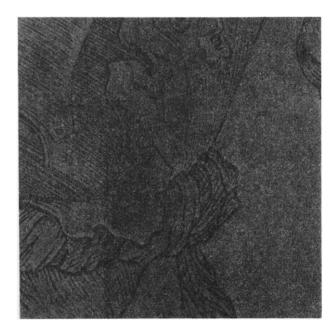


Illustration 7. A magnified detail from a line engraving on a copper plate, to illustrate the simplest and most direct use of the medium. (Hesketh Hubbard, ed., *How to Distinguish Prints* [Woodgreen Common, Eng.: Print Society, 1926], p. 55, top illustration.)

Morris Eaves 925

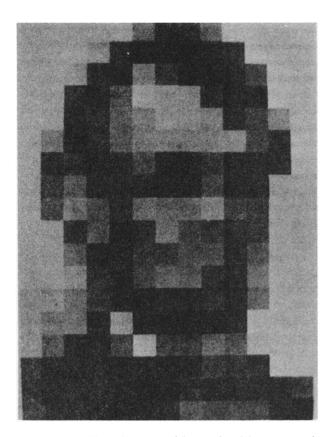


Illustration 8. The "block portrait" reproduced here was made originally to test the human ability to recognize faces, as in police sketches, for example. The method calls for the imposition of a uniform grid over a photograph and the averaging, by computer, of all tones within each grid to a single tone. The experiment was described by Leon D. Harmon in "The Recognition of Faces," Scientific American, Nov. 1973, pp. 70-82. (By permission of Leon D. Harmon and Bell Laboratories.) This is a mechanical simulacrum, a model if you will, of the "Artistic Machine" as Blake conceived of it, a system of representation imposed upon a "vision" and destroying it. The reproduction shows clearly the characteristics of such "machines," whether the modern printed halftone and the electronic television picture or the systematic techniques of engraving in Blake's time: intermeasurability; tone (general effect, "generalization") superior to detail (line, "minute particulars"); and fragmentation ("broken lines, broken masses, and broken colours," DC, E, 529). "Harmony" is the effect obtained by a method of obscuring the "atoms" that compose the picture: squinting, throwing it out of focus, or looking at it from a distance. The paradox important to Blake is that, the closer one looks at such pictures, the more obscure they become.

