

45 F. L. Wright, *The Art and Craft of the Machine** 1901, 1930

At the time Frank Lloyd Wright (1867–1959) prepared this address, he and Sullivan were not speaking. Sullivan had summarily dismissed his assistant in 1893 when he discovered Wright was taking on private work during his off hours (they were reconciled shortly before Wright left for Europe in 1910 and remained close thereafter).[†] Wright shared Sullivan's view concerning the debasement of the profession, and in 1900 he discussed the plight of the architect in a paper read before the annual meeting of the Architectural League of America in Chicago, claiming the architect had sold out, that he had made himself a salesman of prepackaged styles.[‡] An even more important indication of his developing philosophy was Wright's lecture, "The Art and Craft of the Machine," given at a meeting of the Arts and Crafts Society at Hull House, Chicago, the next year. The way out of the dilemma, Wright proposed, was by embracing the machine, exploiting its potential and developing a new architecture on the basis of this new sensitivity. How this might be done he illustrated in designs for small single-family houses published at the same time in popular journals.[§] Wright slightly revised this lecture for delivery before the Western Society of

* Frank Lloyd Wright, "The Art and Craft of the Machine," from *Modern Architecture: Being the Kahn Lectures for 1930* (Princeton, 1930), pp. 7–23.

[†] See Wright's *Genius and the Mobocracy* (New York, 1949), his biographical tribute to Sullivan.

[‡] "The Architect," *Brickbuilder* 9 (June 1900), 124–28.

[§] "A Home in a Prairie Town" and "A Small House with 'Lots of Room in It,'" *The Ladies' Home Journal* 18 (February and July 1901), pp. 17, 15. These were two of hundreds of designs *Journal* editor Edward Bok requested of many prominent and rising architects and published in the magazine between 1895 and 1915.

Engineers in 1901, published it in the catalogue of the Chicago Architectural Club exhibition of 1901, and revised it once more for presentation before the Daughters of the American Revolution in Chicago in 1904. He expanded on it once again, returning to a challenge he believed had yet to be taken up, to open the series of four lectures he delivered at Princeton University in 1930.

No one, I hope, has come here tonight for a sociological prescription for the cure of evils peculiar to this machine age. For I come to you as an architect to say my word for the right use upon such new materials as we have, of our great substitute for tools—machines. There is no thrift in any craft until the tools are mastered; nor will there be a worthy social order in America until the elements by which America does its work are mastered by American society. Nor can there be an art worth the man or the name until these elements are grasped and truthfully idealized in whatever we as a people try to make. Although these elemental truths should be commonplace enough by now, as a people we do not understand them nor do we see the way to apply them. We are probably richer in raw materials for our use as workmen, citizens or artists than any other nation—but outside mechanical genius for mere contrivance we are not good workmen, nor, beyond adventitious or propitious respect for property, are we as good citizens as we should be, nor are we artists at all. We are one and all, consciously or unconsciously, mastered by our fascinating automatic “implements,” using them as substitutes for tools. To make this assertion clear I offer you evidence I have found in the field of architecture. It is still a field in which the pulse of the age throbs beneath much shabby finery and one broad enough (God knows) to represent the errors and possibilities common to our time-serving time.

Architects in the past have embodied the spirit common to their own life and to the life of the society in which they lived in the most noble of all noble records—buildings. They wrought these valuable records with the primitive tools at their command and whatever these records have to say to us today would be utterly insignificant if not wholly illegible were tools suited to another and different condition stupidly forced to work upon them; blindly compelled to do work to which they were not fitted, work which they could only spoil.

In this age of steel and steam the tools with which civilization's true record will be written are scientific thoughts made operative in iron and bronze and steel and in the plastic processes which characterize this age, all of which we call machines. The electric lamp is in this sense a machine. New materials in the man-machines have made the physical body of this age what it is as distinguished from former ages. They have made our era the machine age—wherein locomotive engines, engines of industry, engines of light or engines of war or steamships take the place works of art took in previous history. Today we have a scientist or an inventor in place of a Shakespeare or a Dante. Captains of industry are modern substitutes, not only for kings and potentates, but, I am afraid, for great artists as well. And yet—man-made environment is the truest, most characteristic of all human records. Let a man build and you have him. You may not have all he is, but certainly he is what you have. Usually you will have his outline. Though the elements may be in him to enable him to grow out of his present self-made

characterization, few men are ever belied by self-made environment. Certainly no historical period was ever so misrepresented. Chicago in its ugliness today becomes as true an expression of the *life* lived here as is any center on earth where men come together closely to live it out or fight it out. Man is a selecting principle, gathering his like to him wherever he goes. The intensifying of his existence by close contact, too, flashes out the human record vividly in his background and his surroundings. But somewhere—somehow—in our age, although signs of the times are not wanting, beauty in this expression is forfeited—the record is illegible when not ignoble. We must walk blindfolded through the streets of this, or any great modern American city, to fail to see that all this magnificent resource of machine-power and superior material has brought to us, so far, is degradation. All of the art forms sacred to the art of old are, by us, prostitute.

On every side we see evidence of inglorious quarrel between things as they were and things as they must be and are. This shame a certain merciful ignorance on our part mistakes for glorious achievement. We believe in our greatness when we have tossed up a Pantheon to the god of money in a night or two, like the Illinois Trust Building or the Chicago National Bank. And it is our glory to get together a mammoth aggregation of Roman monuments, sarcophagi and temples for a post office in a year or two. On Michigan Avenue Montgomery Ward presents us with a nondescript Florentine palace with a grand campanile for a "farmer grocery" and it is as common with us as it is elsewhere to find the giant stone Palladian "orders" overhanging plate glass shop fronts. Show windows beneath Gothic office buildings, the office-middle topped by Parthenons, or models of any old sacrificial temple, are a common sight. Every commercial interest in any American town, in fact, is scurrying for respectability by seeking some advertising connection, at least, with the "classic." A commercial renaissance is here; the renaissance of "the ass in the lion's skin." This much, at least, we owe to the late Columbian Fair—that triumph of modern civilization in 1893 will go down in American architectural history, when it is properly recorded, as a mortgage upon posterity that posterity must repudiate not only as usurious but as forged.

In our so-called "skyscrapers" (latest and most famous business-building triumph), good granite or Bedford stone is cut into the fashion of the Italian followers of Phidias and his Greek slaves. Blocks so cut are cunningly arranged about a structure of steel beams and shafts (which structure secretly robs them of any real meaning), in order to make the finished building resemble the architecture depicted by Palladio and Vitruvius—in the schoolbooks. It is quite as feasible to begin putting on this Italian trimming at the cornice, and come on down to the base as it is to work, as the less fortunate Italians were forced to do, from the base upward. Yes, "from the top down" is often the actual method employed. The keystone of a Roman or Gothic arch may now be "set"—that is to say "hung"—and the voussoirs stuck alongside or "hung" on downward to the haunches. Finally this mask, completed, takes on the features of the pure "classic," or any variety of "renaissance" or whatever catches the fancy or fixes the "convictions" of the designer. Most likely, an education in art has "fixed" both. Our Chicago University, "a seat of learning," is just as far removed from truth. If environ-

ment is significant and indicative, what does this highly reactionary, extensive and expensive scene-painting by means of hybrid collegiate Gothic signify? Because of Oxford it seems to be generally accepted as "appropriate for scholastic purposes." Yet, why should an American university in a land of democratic ideals in a machine age be characterized by second-hand adaptation of Gothic forms, themselves adapted previously to our own adoption by a feudalistic age with tools to use and conditions to face totally different from anything we can call our own? The public library is again asinine renaissance, bones sticking through the flesh because the interior was planned by a shrewd library board—while an "art architect" (the term is Chicago's, not mine) was "hired" to "put the architecture on it." The "classical" aspect of the sham-front must be preserved at any cost to sense. Nine out of ten public buildings in almost any American city are the same.

On Michigan Avenue, too, we pass another pretentious structure, this time fashioned as inculcated by the Ecole des Beaux Arts after the ideals and methods of a Graeco-Roman, inartistic, grandly brutal civilization, a civilization that borrowed everything but its jurisprudence. Its essential tool was the slave. Here at the top of our culture is the Chicago Art Institute, and very like other art institutes. Between lions—realistic—Kemyss would have them so because Barye did—we come beneath some stone millinery into the grandly useless lobby. Here French's noble statue of the republic confronts us—she too, imperial. The grand introduction over, we go further on to find amid plaster casts of antiquity, earnest students patiently gleaning a half-acre or more of archaeological dry-bones, arming here for industrial conquest, in other words to go out and try to make a living by making some valuable impression upon the machine age in which they live. Their fundamental tool in this business about which they will know just this much less than nothing, is—the machine. In this acre or more not one relic has any vital relation to things as they are for these students, except for the blessed circumstance that they are more or less beautiful things in themselves—bodying forth the beauty of "once upon a time." These students at best are to concoct from a study of the aspect of these blind reverences an extract of antiquity suited to modern needs, meanwhile knowing nothing of modern needs, permitted to care nothing for them, and knowing just as little of the needs of the ancients which made the objects they now study. The tyros are taught in the name of John Ruskin and William Morris to shun and despise the essential tool of their age as a matter commercial and antagonistic to art. So in time they go forth, each armed with his little Academic extract, applying it as a sticking-plaster from without, wherever it can be made to stick, many helplessly knowing in their hearts that it should be a development from within—but how? And this is an education in art in these United States.

Climb now the grand monumental stairway to see the results of this cultural effort—we will call it "education"—hanging over the walls of the exhibition galleries. You will find there the same empty reverences to the past at cost to the present and of doubtful value to the future, unless a curse is valuable. Here you may see fruits of the lust and pride of the patron-collector but how shamefully little to show by way of encouraging patronage by the artist of his own day and generation. This is a temple of the fine arts.

A sacred place! It should be the heart-center, the emotional inspiration of a great national industrial activity, but here we find tradition not as an *inspiring* spirit animating progress. No. Now more in the *past* than ever! No more, now, than an ancient mummy, a dead letter. A "precedent" is a "hang over" to copy, the copy to be copied for machine reproduction, to be shamelessly reproduced until demoralized utterly or unrecognizable.

More unfortunate, however, than all this fiasco, is the fiasco *al fresco*. The suburban house-parade is more servile still. Any popular avenue or suburb will show the polyglot encampment displaying, on the neatly kept little plots, a theatrical desire on the part of fairly respectable people to live in châteaux, manor houses, Venetian palaces, feudal castles, and Queen Anne cottages. Many with sufficient hardihood abide in abortions of the carpenter-architect, our very own General Grant Gothic perhaps, intended to beat all the "lovely periods" at their own game and succeeding. Look within all this typical monotony-in-variety and see there the machine-made copies of handicraft originals; in fact, unless you, the householder, are fortunate indeed, possessed of extraordinary taste and opportunity, all you possess is in some degree a machine-made example of vitiated handicraft, imitation antique furniture made antique by the machine, itself of all abominations the most abominable. Everything must be curved and carved and carved and turned. The whole mass a tortured sprawl supposed artistic. And the floor-coverings? Probably machine-weavings of oriental rug patterns—pattern and texture mechanically perfect; or worse, your walls are papered with paper-imitations of old tapestry, imitation patterns and imitation textures, stamped or printed by the machine; imitations under foot, imitations overhead and imitations all round about you. You are sunk in "imitation." Your much-molded woodwork is stained "antique." Inevitably you have a white-and-gold "reception-room" with a few gilded chairs, an overwrought piano, and withal, about you a general cheap machine-made "profusion" of—copies of copies of original imitations. To you, proud proprietors—do these things thus degraded mean anything aside from vogue and price? Aside from your sense of quantitative ownership, do you perceive in them some fine fitness in form, line and color to the purposes which they serve? Are the chairs to sit in, the tables to use, the couch comfortable, and are all harmoniously related to each other and to your own life? Do many of the furnishings or any of the window-millinery serve any purpose at all of which you can think? Do you enjoy in "things" the least appreciation of truth in beautiful guise? If not, you are a victim of habit, a habit evidence enough of the stagnation of an outgrown art. Here we have the curse of stupidity—a cheap substitute for ancient art and craft which has no vital meaning in your own life or our time. You line the box you live in as a magpie lines its nest. You need not be ashamed to confess your ignorance of the meaning of all this, because not only you, but every one else, is hopelessly ignorant concerning it; it is "impossible." Imitations of imitations, copies of copies, cheap expedients, lack of integrity, some few blind gropings for simplicity to give hope to the picture. That is all.

Why wonder what has become of the grand spirit of art that made, in times past, man's reflection in his environment a godlike thing? *This* is what has become of it! Of all conditions, this one at home is most deplorable, for

to the homes of this country we must look for any beginning of the awakening of an artistic conscience which will change this parasitic condition to independent growth. The homes of the people will change before public buildings can possibly change.

Glance now for a moment behind this adventitious scene-painting passing, at home, for art in the nineteenth century. Try to sense the true conditions underlying all, and which you betray and belie in the name of culture. Study with me for a moment the engine which produces this wreckage and builds you, thus cheapened and ridiculous, into an ignoble record.

Here is this thing we call the machine, contrary to the principle of organic growth, but imitating it, working irresistibly the will of man through the medium of men. All of us are drawn helplessly into its mesh as we tread our daily round. And its offices—call them “services”—have become the commonplace background of modern existence; yes, and sad to say, in too many lives the foreground, middle distance and future. At best we ourselves are already become or are becoming some cooperative part in a vast machinery. It is, with us, as though we were controlled by some great crystallizing principle going on in nature all around us and going on, in spite of ourselves, even in our very own *natures*. If you would see how interwoven it is, this thing we call the machine, with the warp and the woof of civilization, if indeed it is not now the very basis of civilization itself, go at nightfall when all is simplified and made suggestive, to the top of our newest skyscraper, the Masonic temple. There you may see how in the image of material man, at once his glory and his menace, is this thing we call a city. Beneath you is the monster stretching out into the far distance. High overhead hangs a stagnant pall, its fetid breath reddened with light from myriad eyes endlessly, everywhere blinking. Thousands of acres of cellular tissue outspread, enmeshed by an intricate network of veins and arteries radiating into the gloom. Circulating there with muffled ominous roar is the ceaseless activity to whose necessities it all conforms. This wondrous tissue is knit and knit again and interknit with a nervous system, marvelously effective and complete, with delicate filaments for hearing and knowing the pulse of its own organism, acting intelligently upon the ligaments and tendons of motive impulse, and in it all is flowing the impelling electric fluid of man's own life. And the labored breathing, murmur, clangor, and the roar—how the voice of this monstrous force rises to proclaim the marvel of its structure! Near at hand, the ghastly warning boom from the deep throats of vessels heavily seeking inlet to the waterway below, answered by the echoing clangor of the bridge bells. A distant shriek grows nearer, more ominous, as the bells warn the living current from the swinging bridge and a vessel cuts for a moment the flow of the nearer artery. Closing then upon the great vessel's stately passage the double bridge is just in time to receive in a rush of steam the avalanche of blood and metal hurled across it; a streak of light gone roaring into the night on glittering bands of steel; an avalanche encircled in its flight by slender magic lines, clicking faithfully from station to station—its nervous herald, its warning and its protection.

Nearer, in the building ablaze with midnight activity, a spotless paper band is streaming into the marvel of the multiple-press, receiving indelibly the impression of human hopes and fears, throbbing in the pulse of this great

activity, as infallibly as the gray-matter of the human brain receives the impression of the senses. The impressions come forth as millions of neatly folded, perfected news-sheets, teeming with vivid appeals to good and evil passions; weaving a web of intercommunication so far-reaching that distance becomes as nothing, the thought of one man in one corner of the earth on one day visible on the next to all men. The doings of all the world are reflected here as in a glass—so marvelously sensitive this simple band streaming endlessly from day to day becomes in the grasp of the multiple-press.

If the pulse of this great activity—automatons working night and day in every line of industry, to the power of which the tremor of the mammoth steel skeleton beneath your feet is but an awe-inspiring response—is thrilling, what of the prolific, silent obedience to man's will underlying it all? If this power must be uprooted that civilization may live, then civilization is already doomed. Remain to contemplate this wonder until the twinkling lights perish in groups, or follow one by one, leaving others to live through the gloom; fires are banked, tumult slowly dies to an echo here and there. Then the darkened pall is gradually lifted and moonlight outlines the shadowy, sullen masses of structure, structure deeply cut here and there by half-luminous channels. Huge patches of shadow in shade and darkness commingle mysteriously in the block-like plan with box-like skylines—contrasting strangely with the broad surface of the lake beside, placid and resplendent with a silver gleam. Remain, I say, to reflect that the texture of the city, this great machine, is the warp upon which will be woven the woof and pattern of the democracy we pray for. Realize that it has been deposited here, particle by particle, in blind obedience to law—law no less organic so far as we are concerned than the laws of the great solar universe. That universe, too, in a sense, is but an obedient machine.

Magnificent power! And it confronts the young architect and his artist comrades now, with no other beauty—a lusty material giant without trace of ideality, absurdly disguised by garments long torn to tatters or contemptuously tossed aside, outgrown. Within our own recollection we have all been horrified at the bitter cost of this ruthless development—appalled to see this great power driven by greed over the innocent and defenseless—we have seen bread snatched from the mouths of sober and industrious men, honorable occupations going to the wall with a riot, a feeble strike, or a stifled moan, outclassed, outdone, outlived by the machine. The workman himself has come to regard this relentless force as his nemesis and combines against machinery in the trades with a wild despair that dashes itself to pieces, while the artist blissfully dreaming in the halls we have just visited or walking blindly abroad in the paths of the past, berates his own people for lack luster senses, rails against industrial conditions that neither afford him his opportunity, nor, he says, can appreciate him as he, panderer to ill-gotten luxury, folding his hands, starves to death. "Innocuous martyr upon the cross of art!" One by one, tens by tens, soon thousands by thousands, handicraftsmen and parasitic artists succumb to the inevitable as one man at a machine does the work of from five to fifty men in the same time, with all the art there is meanwhile prostituting to old methods and misunderstood ideals the far greater new possibilities due to this same machine, and doing this disgracefully in the name of the beautiful!

American society has the essential tool of its own age by the blade, as lacerated hands everywhere testify!

See the magnificent prowess of this unqualified power—strewing our surroundings with the mangled corpses of a happier time. We live amid ghostly relics whose pattern once stood for cultivated luxury and now stands for an ignorant matter of taste. With no regard for first principles of common sense the letter of tradition is recklessly fed into rapacious maws of machines until the reproduction, reproduced *ad nauseam*, may be had for five, ten or ninety-nine cents although the worthy original cost ages of toil and patient culture. This might seem like progress, were it not for the fact that these butchered forms, the life entirely gone out of them, are now harmful parasites, belittling and falsifying any true perception of normal beauty the Creator may have seen fit to implant in us on our own account. Any idea whatever of fitness to purpose or of harmony between form and use is gone from us. It is lacking in these things one and all, because it is so sadly lacking in us. And as for making the best of our own conditions or repudiating the terms on which this vulgar insult to tradition is produced, thereby insuring and rectifying the industrial fabric thus wasted or enslaved by base imitation—the mere idea is abnormal, as I myself have found to my sorrow.

And among the few, the favored chosen few who love art by nature and would devote their energies to it so that it may live and let them live—any training they can seek would still be a protest against the machine as the creator of all this iniquity, when (God knows) it is no more than the creature.

But, I say, usurped by greed and deserted by its natural interpreter, the artist, the machine is only the creature, not the creator of this iniquity! I say the machine has noble possibilities unwillingly forced to this degradation, degraded by the arts themselves. Insofar as the true capacity of the machine is concerned it is itself the crazed victim of artist-impotence. Why will the American artist not see that human thought in our age is stripping off its old form and donning another; why is the artist unable to see that this is his glorious opportunity to create and reap anew?

But let us be practical—let us go now afield for evident instances of machine abuse or abuse by the machine. I will show you typical abuses that should serve to suggest to any mind, capable of thought, that the machine is, to begin with, a marvellous simplifier in no merely negative sense. Come now, with me, and see examples which show that these craft-engines may be the modern emancipator of the creative mind. We may find them to be the regenerator of the creative conscience in our America, as well, so soon as a stultified “culture” will allow them to be so used.

First—as perhaps wood is most available of home-building materials, naturally then the most abused—let us now glance at wood. Elaborate machinery has been invented for no other purpose than to imitate the wood-carving of early handicraft patterns. Result? No good joinery. None salable without some horrible glued-on botchwork meaning nothing, unless it means that “art and craft” (by salesmanship) has fixed in the minds of the masses the elaborate old hand-carved chair as ultimate ideal. The miserable tribute to this perversion yielded by Grand Rapids alone would mar the face of art beyond repair, to say nothing of the weird or fussy joinery of spindles and

jig-sawing, beamed, braced and elaborated to outdo in sentimentality the sentiment of some erstwhile overwrought "antique." The beauty of wood lies in its qualities as wood, strange as this may seem. Why does it take so much imagination—just to see that? Treatments that fail to bring out those qualities, foremost, are not *plastic*, therefore no longer appropriate. The inappropriate cannot be beautiful.

The machine at work on wood will itself teach us—and we seem so far to have left it to the machine to do so—that certain simple forms and handling serve to bring out the beauty of wood, and to retain its character, and that certain other forms and handling do not bring out its beauty, but spoil it. All wood-carving is apt to be a forcing of this material likely to destroy the finer possibilities of wood as we may know those possibilities now. In itself wood has beauty of marking, exquisite texture, and delicate nuances of color that carving is likely to destroy. The machines used in woodwork will show that by unlimited power in cutting, shaping, smoothing, and by the tireless repeat, they have emancipated beauties of wood-nature, making possible, without waste, beautiful surface treatments and clean strong forms that veneers of Sheraton or Chippendale only hinted at with dire extravagance. Beauty unknown even to the Middle Ages. These machines have undoubtedly placed within reach of the designer a technique enabling him to realize the true nature of wood in his designs harmoniously with man's sense of beauty, satisfying his material needs with such extraordinary economy as to put this beauty of wood in use within the reach of everyone. But the advantages of the machines are wasted and we suffer from a riot of aesthetic murder and everywhere live with debased handicraft.

Then, at random, let us take, say, the worker in marbles—his gang-saws, planers, pneumatic-chisels and rubbing-beds have made it possible to reduce blocks ten feet long, six feet deep, and two feet thick to sheets or thin slabs an inch in thickness within a few hours, so it is now possible to use a precious material as ordinary wall covering. The slab may be turned and matched at the edges to develop exquisite pattern, emancipating hundreds of superficial feet of characteristic drawing in pure marble colors that formerly wasted in the heart of a great expensive block in the thickness of the wall. Here again a distinctly new architectural use may bring out a beauty of marbles consistent with nature and impossible to handicraft. But what happens? The "artist" persists in taking dishonest advantage of this practice, building up imitations of solid piers with molded caps and bases, cunningly uniting the slabs at the edge until detection is difficult except to the trained eye. His method does not change to develop the beauty of a new technical possibility; no, the "artist" is simply enabled to "fake" more architecture, make more piers and column shafts because he can now make them hollow! His architecture becomes no more worthy in itself than the cheap faker that he himself is, for his classical forms not only falsify the method which used to be and belie the method that is, but they cheat progress of its due. For convincing evidence see any public library or art institute, the Congressional Library at Washington, or the Boston Library.

In the stone-cutting trade the stone-planer has made it possible to cut upon stone any given molded surface, or to ingrain upon that surface any lovely texture the cunning brain may devise, and do it as it never was possi-

ble to do it by hand. What is it doing? Giving us as near an imitation of hand tooth-chiselling as possible, imitating moldings specially adapted to wood, making possible the lavish use of miles of meaningless molded string courses, cornices, base courses—the giant power meanwhile sneered at by the “artist” because it fails to render the wavering delicacy of “touch” resulting from the imperfections of hand-work.

No architect, this man! No—or he would excel that “antique” quality by the design of the contour of his sections, making a telling point of the very perfection he dreads, and so sensibly designing, for the prolific dexterity of the machine, work which it can do so well that handwork would seem insufferably crude by comparison. The deadly facility this one machine has given “book architecture” is rivalled only by the facility given to it by galvanized iron itself. And if, incontinently, you will still have tracery in stone, you may arrive at acres of it now consistently with the economy of other features of this still fundamental “trade.” You may try to imitate the hand-carving of the ancients in this matter, baffled by the craft and tenderness of the originals, or you may give the pneumatic chisel and power-plane suitable work to do which would mean a changed style, a shift in the spiritual center of the ideal now controlling the use of stone in constructing modern stone buildings.

You will find in studying the group of ancient materials, wood and stone foremost among them, that they have all been rendered fit for *plastic* use by the machine! The machine itself steadily making available for economic use the very quality in these things now needed to satisfy its own art equation. Burned clay—we call it terra cotta—is another conspicuous instance of the advantage of the “process.” Modern machines (and a process is a machine) have rendered this material as sensitive to the creative brain as a dry plate is to the lens of the camera. A marvelous simplifier, this material, rightly used. The artist is enabled to clothe the steel structure, now becoming characteristic of this era, with modestly beautiful, plastic robes instead of five or more different kinds of material now aggregated in confused features and parts, “composed” and supposedly picturesque, but really a species of cheap millinery to be mocked and warped by the sun, eventually beaten by wind and rain into a variegated heap of trash. But when these great possibilities of simplicity, the gift of the machine, get to us by way of the architect, we have only a base imitation of the hand-tooled blocks—pilaster-cap and base, voussoirs and carved spandrels of the laborious man-handled stonework of an ancient people’s architecture!

The modern processes of casting in metal are modern machines too, approaching perfection, capable of perpetuating the imagery of the most vividly poetic mind without hindrance—putting permanence and grace within reach of every one, heretofore forced to sit supine with the Italians at their Belshazzar-feast of “renaissance.” Yes, without exaggeration, multitudes of processes, many new, more coming, await sympathetic interpretation, such as the galvano-plastic and its electrical brethren—a prolific horde, now cheap makers imitating “real” bronzes and all manner of metallic antiques, secretly damning all of them in their vitals, if not openly giving them away. And there is electro-glazing, shunned because its straight lines in glass-work are too severely clean and delicate. Straight lines it seems are not so

susceptible to the traditional designer's lack of touch. Stream lines and straight lines are to him severely unbeautiful. "Curved is the line of beauty"—says he! As though nature would not know what to do with its own rectilinear!

The familiar lithograph, too, is the prince of an entire province of new reproductive but unproductive processes. Each and every one has its individualities and therefore has possibilities of its own. See what Whistler made and the Germans are making of the lithograph: one note sounded in the gamut of its possibilities. But that note rings true to process as the sheen of the butterfly's wing to that wing. Yet, having fallen into disrepute, the most this particular "machine" did for us, until Whistler picked it up, was to give us the cheap imitative effects of painting, mostly for advertising purposes. This is the use made of machinery in the abuse of materials by men. And still more important than all we have yet discussed here is the new element entering industry in this material we call steel. The structural necessity which once shaped Parthenons, Pantheons, cathedrals, is fast being reduced by the machine to a skeleton of steel or its equivalent, complete in itself without the artist-craftsman's touch. They are now building Gothic cathedrals in California upon a steel skeleton. Is it not easy to see that the myriad ways of satisfying ancient structural necessities known to us through the books as the art of building, vanish, become history? The mainspring of their physical existence now removed, their spiritual center has shifted and nothing remains but the impassive features of a dead face. Such is our "classic" architecture.

For centuries this insensate or insane abuse of great opportunity in the name of culture has made cleanly, strengthly and true simplicity impossible in art or architecture, whereas now we might reach the heights of creative art. Rightly used the very curse machinery puts upon handicraft should emancipate the artist from temptation to petty structural deceit and end this wearisome struggle to make things seem what they are not and can never be. Then the machine itself, eventually, will satisfy the simple terms of its modern art equation as the ball of clay in the sculptor's hand yields to his desire—ending forever this nostalgic masquerade led by a stultified culture in the name of art.

Yes—though he does not know it, the artist is now free to work his rational will with freedom unknown to structural tradition. Units of construction have enlarged, rhythms have been simplified and etherealized, space is more spacious and the sense of it may enter into every building, great or small. The architect is no longer hampered by the stone arch of the Romans or by the stone beam of the Greeks. Why then does he cling to the grammatical phrases of those ancient methods of construction when such phrases are in his modern work empty lies, and himself an inevitable liar as well?

Already, as we stand today, the machine has weakened the artist to the point of destruction and antiquated the craftsman altogether. Earlier forms of art are by abuse all but destroyed. The whole matter has been reduced to mere pose. Instead of joyful creation we have all around about us poisonous tastes—foolish attitudes. With some little of the flame of the old love, and creditable but pitiful enthusiasm, the young artist still keeps on working,

making miserable mischief with lofty motives: perhaps, because his heart has not kept in touch or in sympathy with his scientific brother's head, being out of step with the forward marching of his own time.

Now, let us remember in forming this new Arts and Crafts Society at Hull House that every people has done its work, therefore evolved its art as an expression of its own life, using the best tools; and that means the most economic and effective tools or contrivances it knew: the tools most successful in saving valuable human effort. The chattel slave was the essential tool of Greek civilization, therefore of its art. We have discarded this tool and would refuse the return of the art of the Greeks were slavery the terms of its restoration, and slavery, in some form, would be the terms.

But in Grecian art two flowers did find spiritual expression—the acanthus and the honeysuckle. In the art of Egypt—similarly we see the papyrus, the lotus. In Japan the chrysanthemum and many other flowers. The art of the Occident has made no such sympathetic interpretation since that time, with due credit given to the English rose and the French fleur-de-lis, and as things are now the West may never make one. But to get from some native plant an expression of its native character in terms of imperishable stone to be fitted perfectly to its place in structure, and without loss of vital significance, is one great phase of great art. It means that Greek or Egyptian found a revelation of the inmost life and character of the lotus and acanthus in terms of lotus or acanthus life. That was what happened when the art of these people had done with the plants they most loved. This imaginative process is known only to the creative artist. Conventionalization, it is called. Really it is the dramatizing of an object—truest “drama.” To enlarge upon this simple figure, as an artist, it seems to me that this complex matter of civilization is itself at bottom some such conventionalizing process, or must be so to be successful and endure.

Just as any artist-craftsman, wishing to use a beloved flower for the stone capital of a column-shaft in his building must conventionalize the flower, that is, find the pattern of its life-principle in terms of stone as a material before he can rightly use it as a beautiful factor in his building, so education must take the natural man, to “civilize” him. And this great new power of the dangerous machine we must learn to understand and then learn to use as this valuable, “conventionalizing” agent. But in the construction of a society as in the construction of a great building, the elemental conventionalizing process is dangerous, for without the inspiration or inner light of the true artist—the quality of the flower—its very life—is lost, leaving a withered husk in the place of living expression.

Therefore, society in this conventionalizing process or culture, has a task even more dangerous than has the architect in creating his building forms, because instead of having a plant-leaf and a fixed material as ancient architecture had, we have a sentient man with a fluid soul. So without the inner light of a sound philosophy of art (the educator too, must now be artist), the life of the man will be sacrificed and society gain an automaton or a machine-made moron instead of a noble creative citizen!

If education is doomed to fail in this process, utterly—then the man slips back to rudimentary animalism or goes on into decay. Society degenerates or has a mere realistic creature instead of the idealistic creator needed.

The world will have to record more "great dead cities."

To keep the artist-figure of the flower *dramatized for human purposes*—the socialist would bow his neck in altruistic submission to the "harmonious" whole; his conventionalization or dramatization of the human being would be like a poor stone-craftsman's attempt to conventionalize the beloved plant with the living character of leaf and flower left out. The anarchist would pluck the flower as it grows and use it as it is for what it is—with essential reality left out.

The hereditary aristocrat has always justified his existence by his ability, owing to fortunate propinquity, to appropriate the flower to his own uses after the craftsman has given it life and character, and has kept the craftsman too by promising him his flower back if he behaves himself well. The plutocrat does virtually the same thing by means of "interests." But the true democrat will take the human plant as it grows and—in the spirit of using the means at hand to put life into his conventionalization—preserve the individuality of the plant to protect the flower, which is its very life, getting from both a living expression of essential man-character fitted perfectly to a place in society with no loss of vital significance. Fine art is this flower of the man. When education has become creative and art again prophetic of the natural means by which we are to grow—we call it "progress"—we will, by means of the creative artist, possess this monstrous tool of our civilization as it now possesses us.

Grasp and use the power of scientific automatons in this *creative sense* and their terrible forces are not antagonistic to any fine individualistic quality in man. He will find their collective mechanistic forces capable of bringing to the individual a more adequate life, and the outward expression of the inner man as seen in his environment will be genuine revelation of his inner life and higher purpose. Not until then will America be free!

This new American liberty is of the sort that declares man free only when he has found his work and effective means to achieve a life of his own. The means once found, he will find his due place. The man of our country will thus make his own way, and *grow* to the natural place thus due him, promised—yes, promised by our charter, the Declaration of Independence. But this place of his is not to be made over to fit him by reform, nor shall it be brought down to him by concession, but will become his by his own use of the means at hand. He must *himself* build a new world. The day of the individual is not over—instead, it is just about to begin. The machine does not write the doom of liberty, but is waiting at man's hand as a peerless tool, for him to use to put foundations beneath a genuine democracy. Then the machine may conquer human drudgery to some purpose, taking it upon itself to broaden, lengthen, strengthen and deepen the life of the simplest man. What limits do we dare imagine to an art that is organic fruit of an adequate life for the individual! Although this power is now murderous, chained to botchwork and bunglers' ambitions, the creative artist will take it surely into his hand and, in the name of liberty, swiftly undo the deadly mischief it has created.