Osher Lifelong Learning Institute University of Pittsburgh College of General Studies

## Architecture in the Modern Era



The idealist has always been under suspicion as performer, perhaps justly. The explorer (Henry Morton) Stanley wrote of a monkey caught and tied up overnight by a rope around the neck. The monkey gnawed the rope in two and departed, the knot still tied about the neck. Next morning found the monkey with the strange 'Necktie' trying to go home, but each approach to rejoin the tribe would bring wild cries from his fellows and such commotion – no doubt inspired by the Scribes - that monkey 'with something new about him' now, would stop, dazed, pull at his 'experience' a little, and think it over. Then he would move toward his fellows again, but such commotion would result that he would have to give up. The Scribes had succeeded with the Pharisees. This kept up all day because the poor monkey kept trying to come home, (to 'tell the truth'?). Finally, just before dark, the whole tribe, exasperated, rushed upon the suspected monkey ... tore him limb from limb.

Monkey psychology? Of course; but our own tribe too, often destroys on similar suspicion the man who might impart something of tremendous importance and value to his tribe ... such ideas as this poor 'suspect' might have imparted, concerning how to avoid being caught and tied up, say – or if tied up, how to escape.

In our own tribe we have another tendency, the man with an idea seems to have become an invidious reflection upon his many fellows who have none. And certain effects belonging naturally to the idealist, such as belief in himself as having caught sight of something deeper, wider, higher or more important just beyond, mark him. He, all unsuspecting, will appear soon on the 'path' as peculiar to his own individuality in ways the poor fool, less absorbed, would have realized as unimportant if true, and have kept under cover. Ridicule from his many fellows, safely in the middle of the road, is always ready. And now it is only the incurably young person, in our country, who ever attempts to break through all down the line – and is laughed out of countenance, laughed out of a job, and eventually out of house and home.

[The Future of Architecture, p.184-5]

This was the opening to a lecture FLW delivered to the Chicago Art Institute in 1931, titled <u>In</u> the Realm of Ideas

A lecture that captured much of the spirit of FLW, the image he had of himself - an outsider, attacked by society for new ideas, a new way of seeing things, a new way of living. 'Truth Against the World' was his family's motto.

A world that was also in the midst of great changes, which he could see quite clearly, with the long view perspective all visionaries possess.

In his formative years as a young boy through the start of his professional career in architecture, at the end of the 19<sup>th</sup> century, was the height of the Industrial Revolution, changing every part of daily life.

The transformation of society into the Modern Age.

An age defined by rapid change.

Today we are living in this Modern Age, there is little if anything we live with, our clothes, our food, our homes that existed prior to the Industrial Revolution.

Our species may have a long history dating tens of thousands of years, but our lives are dominated by the last 150 years.

And, it is likely the next 150 years will be made completely of things that do not exist today.

This is the essence of the Modern Era - continuous change, ever accelerating.

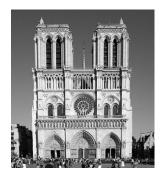
Just this past week, The Economist magazine published an article titled <u>The Return of the Machinery Question</u>, siting a statistic by the McKinsey Global Institute stating a transformation of society (is currently) happening ten times faster and at 300 times the scale ...of the Industrial Revolution. [The Economist, Vol. 419, No. 8995, Special Report p.3] Today rapid change is occurring by the internet, big data computing, deep learning artificial intelligence.



In FLW's time, rapid change was happening in the form of new mobilization – the invention of the steam engine, motor car, airplane, telegraph, telephone, radio, television. He was born just after the Civil War, the horse and buggy era and he died nine decades later at the start of the space age.

All of these new modern agencies held such potentialities, a change in human scale, a great spaciousness. Ease of intercommunication was making ten miles between hamlets and villages seem like the distance of a city block.

An entirely new space-consciousness was entering into all of life, town and country. A new human scale had come in that would change community life, changing everything within it.



In Victor Hugo's 1831 novel <u>Notre Dame de Paris</u>, Hugo's antagonist, Claude Frollo, utters a line that announces the advent of the Modern Age.

Frollo directs the eyes of two visitors from a book on his desk to the massive silhouette of Notre Dame Cathedral beyond his door and declares "Ceci Tuera Cela" (This will kill that).

"Small things overcome great ones," Frollo laments, "the book will kill the building."

It was a premonition that the change occurring in human thought - a shift from the dogma in religious institutions to the free thought of the individual - was being reflected in its outward mode of expression.

With the invention of a mechanized movable type printing in 1450, previously rare handwritten bibles could be produced in quantity for the masses.

A more literate society could read for themselves God's words, no longer dependent on the interpretations of the church.

Each individual could read for themselves, think for themselves, and have ideas for themselves (and by means of literacy, became more literal).

The dominant idea of each generation would, in the future, be embodied in a new material, a new fashion; that the book of stone, so solid and so enduring, was to give way to the book of paper, softer but more enduring.

The history of man was at a transition point, the freedom of the individual would destroy the institution of the church, manifesting physically in the printing press destroying architecture.



Before the printing press, mankind communicated through architecture.

From Stonehenge to Notre Dame, alphabets were inscribed in 'books of stone'. Rows of stones were sentences, columns were 'hieroglyphs' pregnant with meaning.

In effect, from the very beginning of things down to the fifteenth century of the Christian era inclusive, architecture is the great book of the human race, man's chief means of expressing the various stages of his development, whether physical or metaphysical.

Each civilization encased their tradition in monuments.

The history of architecture is the history of writing.



The language of architecture climaxes in the Gothic cathedral.

For centuries, Hugo asserts, priests had controlled society, and thus architecture: the squat lines of Romanesque cathedrals reflect this oppressive dogmatism.

But, by the High Middle Ages, the Gothic cathedral liberates man's spirit. Poets, in the guise of architects, gave flight to their thoughts and aspirations, in flying buttresses and towering spires.

However, this Goliath inevitably would fall to the David of moveable type, the book.

By the start of the 19<sup>th</sup> century, Hugo believed architecture had reached a pinnacle and thus an impasse: architects had nothing new to say.

This artistic bankruptcy was revealed in the profusion of movements that toyed with earlier styles: neo-Classicism, neo-Byzantine, neo-this, neo-that.

Architecture was dead, but architects hadn't yet heard the news.

Wright sensed this decline of architecture, reflecting a transition that was occurring in the modern human mindset away from the controlling institutions of society toward the freedom of individual thought.

For Wright, the elevation of a new modern society would be founded on a free individual.

To draw attention to oneself by a knot tie around the neck was more than a risk or burden, it could be a declaration of confidence, strength, independence.

As Wright stated, the law of change is immutable law; the only law we have not taken into account. It is the only law we have not learned to consider and respect when we proceed to make form. We have tried to stem and hold in check the tides of life. Now, why not go with it? Why not see that if pattern is to be made at all it must be free pattern, the one most suited for growth, the one most likely to encourage and concede growth to life?

That means, I think, the end of the word 'institution' as we have it set up. The moment we have any vested or sentimental interest we feel we have to protect it, to guard it, to fend off its enemies by holding it tight. Our thinking, our philosophy, everything we have, is like that 'to have and to hold'.

I am sure you would be surprised to see how to do that by way of some true human culture, forgetting it 'to have and to hold' precepts and practices, allowing organic culture to come through with its great liberal sense of life, you would find that life can be trusted, perhaps that life is all that can really be trusted. And how interesting you would find its variety of manifestation! [The Future of Architecture, p.248]



When FLW was sixteen, he happened to be passing by the Wisconsin State Capital building as the new west wing under construction fell:

Suddenly I heard the roar of collapse, saw clouds of white lime dust rise high in the air, heard groans and fearful cries of those injured and not killed. The outer stone walls were still standing. Stone basement piers carrying the iron interior supporting columns had given way and the roof took all the floors clear down to the basement. A great "classic" cornice had been projecting godly out from the top of the building, against the sky. Its moorings partly torn away, this cornice now hung down in places, great hollow boxes of galvanized iron, hanging up there suspended on end.

The spectacle of that sham feature hanging there, deadly menace to the pitifully moaning, a working man, went far to deepen the dismay planted in a boys heart by Victor Hugo's prophetic tale. This empty sheet iron thing, a little while ago it was pretending to be stone, and doing this mind you, for the capital of the great state of Wisconsin, what a sham. I began to examine cornices critically. Why was it necessary to make them 'imitation'? Why have them at all? Were they really beautiful or useful anyway?

I couldn't see that they were particularly beautiful, except that a building looked "strange" without one. But it looked more strange when the roof fell in and this thing called the cornice hung down end wise. The cornice was put there regardless of reality, to make the building familiar. It had no other meaning. Victor Hugo foresaw architecture would become a sham.

If they would lie about a cornice, why wouldn't they lie about other parts of the building too? The pilaster was found to be another nauseating cheat. Others followed thick and fast. The wreck of the capital by internal collapse, did something to me for which I have never ceased to be grateful. If the old order is to be preserved - regardless - it is not well for boys to read the great poets nor see classic buildings fall down. [The Future of Architecture, p.112]



Cornice, the image of a dead culture. No building looked like a building unless it had the brackets, 'fancy' fixings of this ornamental pseudo-classic 'feature'.

The cornice was an attitude, that gave the provincial American structure the element of hallowed 'culture'. It had nothing to do with construction.

However, there is a change, it is gone with new American buildings, except on government buildings. The Belmont Hotel in NYC (1908) is the last grand stand, the final gesture on behalf of the cornice.

About this time, the metal anchors that held the cornice on some of the Chicago buildings began to rust, falling and happened to kill some 'leading' people.

Cornices cost outrageous sums, shut out light below, but it wasn't until they became dangerous that the city fathers start to talk ordinance to the AIA (Arbitrary Institute of Appearances).

Nothing ever was quite so pretentious, empty, and finally demoralizing as that pompous gesture we were taught to respect and to call the 'cornice'.

In trees, we dwelt sheltered from the sun and rain by the overhanging foliage of upper branches.

Gratitude for that 'overhead' and the sense of it, has been with us all down the ages as the cornice, a symbol.

The primeval instinct was real, roof water dropped free of the building walls, the sense of architecture as human shelter.

But as soon as this good and innocent instinct became a habit, original meaning, as usual, lost by the time usefulness departed.

Roof water now ran back from the cornice on to the flat roof of the building and down inside down-spouts, the cornice remained for mere aesthetic effect.

The sacred symbol is worn out, to soon be obliterated by free thought.

But for an architect like Wright, a true visionary, with creativity in excess, to carry on traditions of another time and place, was no challenge, held no truth.

What he called for was an Architecture of America, a democratic architecture of a democratic people, not something borrowed from Europe.

A realization of what the founding fathers promised. Such a democratic society had never existed in the history of mankind.

Even the founding fathers knew no such thing, their experiences living under a monarchy too close in their minds. Hence the shock when Washington stepped down as leader, to start a tradition for the 'peaceful transition of power'.

The founding fathers lived in English houses, decorated with English art, wearing English clothes. There was no calling for a New Democratic lifestyle, despite what was written in their Declaration of Independence.

It was not until the top hat, the new industrialist's abstraction of the founding fathers' wig (and cornice), came off during the modern movement, that the individual truly departed from an established society.

The promise of a new society of individuals (the Modernists), to emerge in the first true democratic state if personal freedom perseveres.

Is not democracy the highest form of aristocracy that the world has ever seen – the aristocracy of the man, the individual, his qualities as a man making him the aristocrat?

Democracy is an expression of the dignity and worth of the individual, essentially the thought of the man of Galilee, himself a humble architect, in those days called a carpenter.

The 'Kingdom on Earth as it is in Heaven' of which He spoke was a Kingdom wherein each man was a King because Kingdom and King consisted of that quality of integrity, of which for lack of a better term I call the third-dimension.

That all of the Beyond is within, is a truism.

This simple first principle of being.

Our dyspeptic American souls hunger for realization, for a substantial inner experience, something more than a matter of taste.



Speaking in a 1930 lecture at Princeton, Wright took stock of the current state of the American house: The passing of the cornice with its enormous 'baggage' from foreign parts in its train clears the way for American homes that may be modern biography and poems instead of slanderous liars and poetry-crushers (the suburban house parade). 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 chateaux, manor houses, Venetian palaces, feudal castles, and Queen Anne cottages. 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 or 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 around you. 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 any 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. 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 everyone else, is hopelessly ignorant concerning it. 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. [The Future of Architecture, p.77-78]

Organic simplicity is the only simplicity that can answer for us here in America that pressing, perplexing question — 'now what architecture?' This I firmly believe. It is vitally necessary to make the countenance of simplicity the affirmation of reality. Consider the lilies of the field — they toil not, neither do they spin, yet verily I say unto thee — Solomon in all his glory was not arrayed like one of these. [The Future of Architecture, p.132]

There is no great difficulty in creating an organism, an entity, in the way of a building in which all needed services are incorporated features of the building. I believe an architect should learn the principles underlying the installation of electricity, he should know what constitutes good plumbing, he should be able to invent and arrange and bring all this together as a complete organism.

We are talking of an entity when we speak of an organic building; we are not talking of a shell being set up and appurtenance men cutting it half down in order to get their work into it – then the plasterer coming in, daubing it all up – the painter coming in to patch up defects, and so on. And this new thought demands first a general simplification in the process of building.

The architect must learn to think 'in simples' before he can build a modern building worth building. Soon, however, we came up against the fact that it is useless to attempt to free humanity by way of architecture (organic) so long as humanity itself is inorganic.



In the midst of the Industrial Revolution at the end of the 19<sup>th</sup> century, a revolt was occurring against the scientific Rationalism of the 18<sup>th</sup> century.

There was a growing belief that true enlightenment, the meaning of art and life, was sought through instinct and personal subjective experience rather than through calculated reason.

Writers like Longfellow, Thoreau, Whitman, Ruskin and Morris were fueling this Romantic Movement and as a young boy, Wright was reading all of them.

However, it was Ralph Waldo Emerson that inspired him the most and his 1836 essay, <u>Nature</u>, was one of the most famous passages in American literature.

In it, Emerson describes an emotional epiphany of finding oneness with the universe through nature: Standing on the bare ground, my head bathed by the blithe air and uplifted into infinite space, all mean egotism vanishes. I become a transparent eyeball. I am nothing. I see all; the currents of the Universal Being circulate through me; I am part and parcel with God. [Frank Lloyd Wright: A Life, p.24]

The romantics like Emerson believed in a solidarity communion with nature. And Wright too was a romantic, nature became the place to find all of his answers he sought in creating this modern elevated society, founded on individuals, with an honest integrity.

Despite the fact he pioneered the use of these new modern building materials and construction methods, throughout Wright's career, as his contemporaries embraced the changing graphic mediums for illustration in their trade, such as the use of Magic Marker with their crisp, bold, quick marks, Wright continued to the end of his life making delicate colored pencil renderings, sharpening his pencils with a penknife by hand.



In 1893, Chicago hosted the World's Columbian Exposition, showcasing the newly fashionable academic classicism borrowed from the Ecole des Beaux-Arts in Paris and popularized by the old-boy network of American designers, of which Wright, the 'outsider', never belonged.

However, at the center of the fair on an island in a lagoon designed by Frederick Law Olmstead to be a place of refuge in a natural setting, stood a structure in stark contrast, the Ho-o-den (Phoenix Pavilion), which had far more influence on Wright, who opened his own office that same year.

Wright visited the structure during its three year construction, which was based on an ancient wooden temple near Kyoto, Japan.

The pavilion had a symmetrical, cruciform plan, of three separate structures connected by covered walkways, to symbolize the mythological phoenix bird.

The two-story central hall consisted of four main spaces: a reception area (tsugi-no-ma), a private sitting area (jodan-no-ma), a dining area (kon-no-ma), and a study/library area (shosai).



The humble Japanese dwelling that is a veritable sermon on the subject 'style in industry', is owing to a religious admonition: 'Be clean!', the soul of Shinto. Shinto spoke not of a good man, nor spoke of a moral man, but spoke of a clean man, not only of clean hands but a clean heart. A remarkably simple religious edict or ideal made architecture, art and craftsmanship the cleanest, in every sense. The ideal of cleanliness, held by a whole people, came to abhor waste as a matter of place, saw it as ugly - therefore what we call dirt.

Japanese art with its imaginative exuberance and organic elegance was a practical study in elimination of the insignificant. Art expression in the Momoyama period (Sotatzu, Korin, Kenzan, later in Ukioyé: Kiyonobu, Toyonobu, Harunobu, Kiyonaga, Utamaro, Hokusai, Hiroshigé) was organic, there was no great or small art. Simplicity in art an ideal naturally attained by organic means. In this 'plastic ideal' attained by organic means, we touch the secret of great style. Wood, stone, metal was never asked to be less or more than wood, stone or metal. Nor did they try to make the processes something other than itself.

The modern process of 'standardization' was practiced with artist perfection in the 'tatami' floor mats, removable for cleaning, were all of one size, 3 ft. by 6 ft. The shape of the house was determined by the size and shape of assembled mats (just as houses in U.S. are determined by 4 ft. by 8 ft. sheets of plywood in plan and section, resulting from rotary lathe plywood veneer in France of the 1860s, standardized into 4 ft. by 8 ft. sheets in the United States in 1928). Sliding interior partitions occur on joint lines of the mats. The "odeau" polished wood posts that carry ceiling and roof all stand at intersections of the mats.

When this edict inspires organic results and not the mere picture making that curses so-called 'modernism', we will here find the basic elements of style in our own industry to be the same by machine as they were by hand in the beginning. 'Clean' does not mean 'plain', but it does mean significant. Nor does it mean hard, mechanical or mechanistic, nor that a man, a house or a chair is a machine. [The Future of Architecture, p.98-103]



The reality of the building does not consist of walls and roof but inhered in the space within, the space to be lived in.

This idea is entire reversal of all pagan 'classic' ideals of building whatsoever. Classical or ancient buildings had been great masses or blocks of building material, sculpted into shape outside and hollowed out to live in.

But a deeper sense of architecture has come to light, due to a new sense of building as an organism, to the invention of new machines, and to the discovery of new materials.

This sense of the 'within' took architecture entirely away from sculpture, away from painting, the building now became a creation of interior space in light. Walls as walls fell away, the enclosing screens and windows took their place. This ideal of structural cause as organic effect is destined to be the center line of man's modern culture. An organic architecture will be the consequence.





The Japanese sense of the building was more plastic, therefore more a thing of the spirit. Being 'plastic', the building was treated more consistently as a unit or consistent whole. It was less an aggregation of many features and parts, all remaining separate features, by, and for, themselves.

In organic building nothing is complete in itself but is only complete as the part is merged into the larger expression of the whole.

Of all of Wright's innovations and pioneering, his true genius was found in this seamless fitting of space and scale together to create a unified whole of seemingly ornate simplicity – the definitive example of organic structure.





1890: Began visited the Ho-o-don Pavilion during its construction

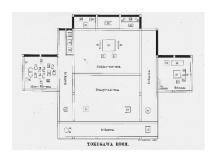
## 1893 Winslow House:

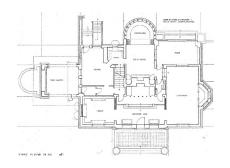
Cruciform plan, horizontal proportions, overhanging shading roof cantilevering outward from inset supports, central decorative alcove (took-no-ma) as fireplace, house as a temple centered around the communal hearth. screen walls opening under continuous wrapping door beam,

1893: Exhibition opens, as the sun set on the pavilion, 'fairy lights' of colored glass oil lamps would illuminate the paths, in contrast to the bright electric lights of the rest of the fair.

## 1897 Isidore Heller House:

first rectilinear motif in windows, first use of colored glass.







1900 Hickox House: no interior divisions of space,





1901 LHJ - House in a Prairie Town: interior spatial massing, interior plan.



The artist is no longer hampered by the stone arch of Romans or stone beam of Greeks. Why cling to these methods, when in modern times the machine is waiting at man's hand as a tool, to put foundations beneath a genuine democracy. Individuality realized as a noble attribute of being. Architecture no longer the sculpted block of some building material or any enfolding imitation. Architecture must now unfold an inner content, express life from within, a development according to nature. Romance, this quality of the heart, the essential joy we have in living – by human imagination of the right sort can be brought to life again in modern industry.

New machines - saws, planers, lathes, presses, shears, pneumatic chisels, rubbing beds, rolling mills, concrete mixers, clay bakers, glass makers... made traditional materials plastic, no longer limited by their inherent properties limiting results from traditional tools. This has stripped the essence of these materials, no longer rendered to reflect the character. They now render plastic, homogeneity without grain, nothing to dictate the application of the gouge. 'Plasticity' implies total absence of constructed effects as evident in the result, the quality and nature of materials are seen 'flowing or growing' into form instead of seen as built up out of cut and joined pieces. To make new use of old materials and new use of new materials instead of making abuse of both.



Glass, once a precious substance, limited in quantity, costly in any size, now has as an industry a perfect clarity in any thickness or dimension up to 250 sq.ft. from 1/8" to 1/2" thick, so cheap and desirable that our modern world is drifting towards structures of glass and steel. It is the machine that makes "modern" these rare new opportunities in glass. The growing demands for sunshine and visibility make walls, even post, something to get rid of at any cost. Glass alone, with no help from us, would eventually have destroyed classic architecture, root and branch. The sense of glass as crystal has not, as poetry, entered into architecture. Shadows were the "brush-work" of the ancient architect, "modern" now work with light, diffused, reflected, refracted [stain glass], for its own sake, shadows gratuitous. We may now live in prismatic buildings, clean, beautiful and new. Here is one clear material proof of modern advantage, glass in uncompromisingly modern.