Juhani Pallasmaa

Architecture and Biophilic Ethics

Human Nature, Culture, and Beauty

The Age of Architectural Euphoria

During the past two decades, the profusion of architectural publications, as well as the spectacular character of the publicized projects suggest that we are experiencing an unforeseen era of architectural ecstasy and euphoria. The current accumulations of wealth, global fluidity of capital, and the world-wide competition for commercial visibility, have, no doubt, generated this development. At the same time new material technologies and novel computerised design methods have opened up unforeseen technical possibilities for architecture, and made practically any conceivable formal invention technically feasible. As a consequence of this architectural hubris, the modernist ethos of functional performance, collective benefit, and social empathy have largely been lost.

Regardless of this excitement, I wish to quote Alvar Aalto's assessment of the situation of architecture in 1958: "Architecture's horoscope today is such that my words become negative and that isn't pleasant. Parallelopipeds of glass and synthetic materials, the inhuman dandy-purism of the big cities, has led irrevocably to a fashionable architecture, which is a dead end."[1] This was Aalto's condemnation of the corporate style, but he also saw the formal and structural experiments of his day equally negatively: "Grown-up children playing with curves and tensions that they are unable to control."[2] These are words of the Finnish master more than half a century ago, but could well be said of today's architectural scene.

Today's horizon of unlimited possibilities and the tendency of architecture to increasingly become a vehicle for economic and business interests, devoid of deeper cultural, mental or ecological responsibilities, are awakening concerns and doubts. Architecture used to be the most important means of concretising mythical, cultural and societal order, as well as materialising and expressing the specificity of place and culture. Today's globalised, instrumentalised, technologised and commodified construction forcefully eradi-

[1] Aalto 1958/1985, p. 161.

[2] Aalto, Ibid.

cates the sense of specific place and identity. Instead of serving purposes of cultural rooting and human empowering, the constructions of our consumer culture tend to benefit only the investors and accelerate estrangement and social discrimination, the "existential alienation" that Edward Relph identified,[3] or "the fall of public man", a theme of Richard Sennett.[4]

Has architecture forgotten its fundamental cultural and societal tasks? Shouldn't buildings strengthen our existential foothold and structure our understanding of the world and ourselves, instead of contributing to the vertigo of change and the obsession with newness? Shouldn't architecture provide the warp of tradition and continuity for the weft of cultural change and progress? Shouldn't architecture seek to strengthen equality, human dignity and optimism instead of offering itself unconditionally to the grim purposes of economic and consumerist interests?

Achitecture of the Spectacle

Architecture seems to have become aestheticised and detached from its historical and existential ground. As Guy Debord has remarked, "All that once was directly lived has become mere representation"[5] We live in an obsessively materialist culture that turns everything into consumption and aestheticisation. Politics, behaviour, personality, and even wars, are aestheticised today, and we are all becoming consumers of our very lives. Debord calls our mode of culture "The Society of the Spectacle", and he defines spectacle as "capital accumulated to the point where it becomes an image."[6] Hal Foster, art historian, has noted that nowadays also the reverse is true: spectacle is "an image accumulated to the point where it becomes capital".[7]

Instead of evoking experiences of dignity and pride, the celebrated projects of today frequently appear as forced and shallow formal inventions, devoid of human meaning and empathy. The fact in the human mental world is that meaning cannot be invented. It can only be identified and re-articulated, because human meaning arises from our shared and lived existential ground and the continuum of tradition, not marketing strategies and brands. The lack of authentic experiential ground makes today's projects often appear strangely and paradoxically repetitious. This is the point made by the Norwegian philosopher Lars Fr. H. Svendsen in his book *The Philosophy of Boredom*[8]; the obsessive search for newness results in repetition because the single property that remains in these formalist buildings is their very newness. It is indeed thought-provoking that the most idiosyncratic formal innovations today frequently project an air of déjà vu, whereas projects of early modernity project an air of freshness, inspiration and optimism.

The Mixed Blessing of Globalisation

We have entered the era of globalisation, brought about and strengthened by material and immaterial mobility, as well as the consequent simultaneity of events and things, the simultaneous world of global business. These rapidly advancing processes have both positive and negative consequences. The in-

3 Relph 1986, p. 10 and Sennett 1978.

4 Sennett 1978.

5 Debord 1994, p. 12.

6 Debord Ibid.

7 Foster 2002 as quoted in Vidler 2008, p. VII.

8 Svendsen 2005.

creased awareness of cultural multiplicity and integration of the world could, at least potentially, evoke a worldwide consciousness and concern for the future of the earth and for the vast majority of humankind that live in unacceptable conditions. Today's world of simultaneity should also make it increasingly difficult to close one's eyes to these global realities, but regrettably the reverse seems to be the case. Even during the recent global economic crisis, no major political figure or expert on economy has questioned the prevailing model of perpetual growth, expansion and acceleration. The central concern everywhere is to get the wheels turning again faster than ever. Besides, as individuals we are guilty of emotional fatigue; we may be momentarily shocked, but the next minute we already turn our backs to the tragedy and forget it. Our world is in bad shape today.

It is unarguable that globalisation has so far primarily served the purposes of multi-national businesses and the battle for economic and political hegemony. In architecture, the universalised values and aesthetic fashions, combined with routinely traded and applied technologies, materials and fashions, have largely advanced the erosion of local cultures, skills and traditions. However, there are architectural practices around the world that aspire to preserve and revitalise local skills and crafts for the benefit of local cultures.

The other Architecture

It is true that we cannot speak of contemporary architecture, or its global character, as a singular phenomenon. There is, and indeed has always been, an architectural resistance that continues to regard architecture as a cultural, existential and collective phenomenon and a vehicle for a more humane, just and equalitarian society. Regardless of the general tendency towards uniformity, there are still regional and local architectural cultures in the world. Along with the aestheticised and retinal architecture of the spectacle, that seeks visual effects and the lure of newness, buildings keep emerging around the world that are rooted in the historicity, reality, and specificity of culture, as well as in the lived and authentic human experience. Today, some of the most inspiring architectural projects emerge in severely constricted conditions of the Third World. Abundance seems to produce speculative and careless construction, whereas real limitations of life tend to guide people to more considerate construction. In Finland, for instance, the disasters and limitations of the war period gave rise to a cultural Renaissance of the 1950s in architecture and design. The utilitarian arts turned into a utopian journey into the beauty of everyday life within the meager means after the lost war. The paradoxical fact seems to be that wealth and well-being do not create high quality art, on the contrary, the practical arts turn speculative and uncritically shallow. It is thought-provoking today, that various juries of international architectural prizes and awards, as well as many of the progressive journals, are now turning their eyes to projects from the Third World in order to find an architecture that still projects a sense of reality and human meaning.

The Integrating Task of Architecture

The fashionable architecture of our consumer world today seeks to seduce the eye, but it rarely contributes to the integrity and meaning of its setting. It aspires to support the business of construction, not architecture as a lived metaphor of dignified life. Instead of supporting the large collective, buildings become a medium of social inequality.

Profound buildings always improve their contexts and give even commonplace settings an enhanced significance, instead of disparaging and disgracing their neighbours of lesser value. Besides, the overall quality and integrity of the environment usually have a higher value than any individual foreground building, and that is why the primary responsibility of architecture is to contribute to the integration and harmonisation of landscape and cities. Another paradox is that even the most radical of profound architectural works eventually confirm the continuity and understanding of tradition, and they end up completing a cultural and collective narrative instead of shattering it, or making tradition incomprehensible or ridiculous. The task of architecture is to slowly and patiently improve the inherited human habitat, not to invent a 'Brave New World' at once. True radicality is always embedded in a deep cultural understanding and sense of responsibility and compassion. The real lesson for all the overly ambitious architects today is that the most radical works end up reinforcing the course of tradition. "The shock of the new"[9] is always the birth bang of a continued tradition. Igor Stravinsky's Rite of the Spring caused a cultural riot in Paris in 1913 when it was first performed, because of its intolerable radicality. This radical piece of music has gradually turned into one of the foundation stones of modern music, and besides, it has made us all hear old music with more sensitive ears.

Ecological Ethics

The call for an ecological ethic, life style, and sustainable architectural thinking, is surely the most important force of change in architecture since the breakthrough of modernity and functionalist rationality a century ago. Architectural history is usually seen as a succession of stylistic canons, but today's challenge calls for a new understanding of architecture itself, as well as the understanding of ourselves as historical and biological beings. We continue to see ourselves and our artefacts as being independent of Nature, but the challenge today is likely to eliminate this received polarity between nature and the human realm, biology and artifice (I described this paradigmatic change as the shift from metaphorical to ecological functionalism in one of my earlier books). This challenge calls for a new understanding of goals and processes, aesthetics and performance, form and function, rationality and beauty, artistic objectives and ethics, and, finally, of ourselves.

Today's ecological imperative requires an architecture whose performance is identifiable and measurable, not only metaphoric or symbolic. This requirement suggests a non-autonomous architecture that becomes part of the natural processes and cycles of the ecological system, instead of develop-

9 See the title of Hughes 1991.

ing solely through formal and aesthetic obsessions and aspirations. Yet, the visual dominance in architecture still continues today. In fact, the purely visual understanding of architecture may never have been more extreme in history than in today's architecture of the commercialised image, reinforced by digital media and world-wide publicity. Architecture has often turned into spatialized advertizing and images of privileged life. Even sustainability is rather judged by the eye as an aesthetic and stylistic aspiration rather than through an analyses of the actual long-term performance and impact. However, in the age of ecology, which we are entering, the concept of "form" has to be seen as a temporal process, an emergent situation and becoming rather than a closed and finite aesthetic entity.

False Sustainability

During the past two decades, images of sustainability have become symbolic of progressive and responsible design, and various technical devices are frequently added on to fundamentally conservative projects to create the desired progressive image. Sustainable design has also become a new marketing strategy among designers, builders, and developers. Regrettably, also the established methods of evaluating sustainable qualities of design tend to support this superficial view, instead of stimulating profoundly valid ecological thinking, life style, and ethics. This misguided and opportunistic way of using "sustainable" design as a shrewd means of commercial manipulation merely hides the real issues. The real issues are mental and ethical, not primarily technological, and they arise from values of life, not economics. The emotionally and ethically appealing concept of sustainability can even turn against true sustainability in making us believe that we are already doing our share in this huge task. By designing an ecologically certified building we justify not only the continuation of our suicidal economic ideology, but its continued acceleration.

The true criterion of sustainability implies the evaluation of projects as entire processes from harvesting and producing materials, the processes of manufacture, transportation, and construction, through use and maintenance to eventual dismantling and demolitioning of the structure. The re-use of materials and components, and the analyses of the overall material and energy consumption, as well as the toxic and otherwise harmful side effects of products are equally important. The processes have to be analysed and evaluated in relation to the continuum of time, not merely through the momentary judgement of the aesthetic eye, or short-term balance sheet. As the entire life-cycle is added on to the already complex logistical equation of architecture; nobody today seems to be able to grasp the entity with certainty. Yet, there are countless animal species that have developed in ecological harmony through hundreds of millions of years. Spiders, for instance, are nearly 400 million years old as a species and will most likely continue to build and expand their mind-bogglingly advanced and refined constructions and communities after we have annihilated ourselves.[10]

10 For lessons of animal architecture, see Pallasmaa 1995.

The Lived Metaphor

We architects are used to thinking in terms of space and material form; we think of objects rather than systems, aesthetics rather than processes, visual qualities rather than existential issues, metaphors rather than facts, and the present rather than the temporal continuum. As George Lakoff and Mark Johnson have convincingly shown in their book The Metaphors We Live By (1980), language, thought and action are essentially metaphorical:

> "Metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual systems, in terms of which we both think and act, are fundamentally metaphorical in nature,"

11 Lakoff Johnson 1980, p. 3.

the authors proclaim.[11] Arnold H. Modell argues similarly, that we are not even aware of the metaphors that guide our thought:

12 Modell 2006, p. XII.

> "Metaphor is primarily a form of cognition rather than a trope or figure of speech. Further, metaphor as a cognitive tool can operate unconsciously, so that a metaphoric process is one aspect of the unconscious mind."[12]

This psychiatrist-philosopher suggests that we are unconsciously guided by our own metaphors as much as we can consciously direct our own actions by them. Metaphor and analogy are our essential tools of thought. Like verbal and poetic thinking, architectural thinking is engaged in metaphors and analogues. In fact, we can think of buildings altogether as material, embodied, and lived metaphors which express and articulate our experience and understanding of our being-in-the-world; we live in metaphors constructed of matter.

Changing Methaphors

The guiding metaphors of building have historically shifted from images of shelter to mechanistic images, and further to today's electric, electronic, and digital models of increasingly automated and invisible performance, and "intelligent buildings." However, we are eventually bound to refer to the staggering complexity and precision of biological phenomena as the ultimate metaphor. Edward O. Wilson, the world-renowned biologist, defines biophilia, the new ethics and science of life, "as the innate tendency to focus on life and lifelike processes."[13]

13 Wilson 1984, p. 1.

14 Huxley 1932 / 2006.

The currently prevailing globalised architecture of alluring and memorable images usually flattens architecture into three-dimensional pictures, spatial advertisements, as it were. It is evident that the new Brave Digital World, to paraphrase the title of Aldous Huxley's gloomy book,[14] has so far facilitated questionable processes of globalisation and commerce more than genuinely helped the cause of architecture, not to speak of humanity or human dignity. I have never encountered a building produced through digital means that would have more human and emotional meaning than buildings brought about through traditional methods of design. I venture to say that the computer has been largely misused from the ethical point of view to speed up pro-

cesses that would gain from slowness, and to advance instant and fluid commerce and concentration of power the world over. However, I do not want to underestimate the value of the computer or other advanced technologies in the service of various sciences, medicine and countless everyday operations.

It is most likely that the future models and metaphors of thought and design, from everyday technology to computer and material sciences, and from economics and medicine to architecture, will increasingly be based on biological imagery, not bio-morphic forms, but the incredible subtlety and dynamic complexity of biological systems in their interaction, dynamic balance, and emergence. The world is evidently much more complex and refined than we have been taught to think, and this applies to ourselves as biological beings. This approach, inspired by models of biological performance, has already emerged in such areas of investigation as Bionics and Biomimicry. The single argument by Edward Wilson, world's leading myrmecologist and spokesman of Biophilic ethics, that "the superorganism of a leaf-cutter ants' nest alone is a more complex system in its performance than any human invention and unimaginably old", should convince anyone that the biological world offers exciting models for the refinement of human artefacts and systems.[15] Indeed, complex traffic systems are today conceived on the basis of the circulation systems of ants, and self-cleaning glass and numerous other recent nano-technical inventions have been made on the basis of biological precedents. New revolutionary carbon computers are also being developed on the basis of the computing principles of our own neural nets with their 100 billion neurons.[16]

15 Wilson 1984, p. 37.

16 Mallgrave 2011.

A New View of Ourselves

I believe, that even the view of ourselves that prevails in the thinking, daily practices and education, has to be fundamentally re-evaluated. Edward Wilson argues: "All of man's troubles may well arise [...] from the fact that we do not know what we are and do not agree on what we want to become."[17] We need to give up the hubris of regarding ourselves as the centre pieces of the Universe, and as the Homo Sapiens, the human who knows. The fact is that in the face of the complexities of the world, human knowledge and understanding are more limited than we are used to believe. Without going too far into the issues of our own humanity, which arise from philosophical and ethical judgement as well as recent scientific thinking, I want to mention some of the a

17 Wilson 1984, p. 20.

Firstly, we need to accept the essentially historical and embodied essence of human existence, experience, cognition and memory. As Maurice Merleau-Ponty writes, "The painter takes his body with him [...] Indeed, we cannot imagine how a mind could paint."[18] We can say the very same about architects; architecture is constituted in our embodied way of being in the world and it articulates that very mode of being. Besides, our buildings unconsciously and deeply represent our own body; we and our world constitute a continuum.

18 Merleau-Ponty 1964, p. 162.

Secondly, we are fundamentally sensory and sensual beings. Architecture is possibly engaged with more than a dozen different, but integrated

19 Soesman 1998.

20 Howes 2011.

21 Gardner 1999.

sensory systems, not only the five Aristotelian senses. Steinerian philosophy, for instance, identifies twelve senses.[19] A recent book The Sixth Sense Reader, lists no less than thirty-three sensory systems operative in our relationship with the world.[20] The senses which are especially central in architecture are the existential sense, the sense of self and the sense of temporal continuum and causality.

Thirdly, perception, thinking, and memorising, are complex activities that are fundamentally based on embodied processes and mental or neural images rather than words and language. These are all basically creative acts, we keep creating and maintaining our world through our sensory and mental acts. Language is a secondary articulation of these neural patterns. The language of architecture arises primarily from our pre-conceptual embodied and existential dialogue with our world. This is where the logocentric theories of architecture go disastrously astray.

Fourthly, human intelligence is routinely described by the IQ score, but this is a very crude and uninformed view of intelligence. In accordance with current psychological studies, there are at least ten categories of human intelligence. Psychologist Howard Gardner first lists seven categories of intelligence: linguistic, logical-mathematical, musical, bodily-kinesthetic, spatial, interpersonal, and intrapersonal intelligences. Later, he suggests three further categories: naturalistic; ethical, and existential intelligences.[21] I would definitely add the categories of emotional, aesthetic, and atmospheric intelligences to this psychologist's list of human cognitive capacities.

Emotional intelligence, in fact, could well be the most instant, synthetic, holistic, integrated, and reliable of our systems of reacting to complex environmental and social situations. By emotions, we judge complex life situations, such as the ambience, mood, or atmosphere of a space, place or situation, whereas the scope of the traditional IQ intelligence is limited in its focus. Mood may well be the most synthetic of architectural features, but it has hardly been consciously analysed or theorised in architecture. Indeed, as architects, we need to sharpen at least a dozen categories of sensing and the same number of modes of intelligence in order to do our job responsibly.

I do not suggest that as designers or artists, we should all be aware of the scientific ground of our biological essence. I rather propose that we should not act against our own bio-cultural essence through stubbornly held false preconceptions. I also suggest that the most important issues of architecture are always beyond architecture and related with our mental worlds. As Maurice Merleau-Ponty argues: "We come not to see the work of art, but the world according to the work."[22] This also applies in architecture.

22 Merleau-Ponty as quoted in McGilchrist 2010, p. 409.

The Marvellous Brain
I wish to add that we tend to think of our behaviour in terms of our conscious faculties, but consciousness is only a tiny fraction of the ways through which we are related with the world, environment, and situations of life. As I said earlier, we have great capacities to decipher atmospheres or ambiences, for

instance, which are very complex environmental situations. Also, recent research in neurobiology provides promises of a new understanding of our own neural activities in general, as well as the meaning of aesthetic judgement and pleasure. In his pioneering book Inner Vision: An Exploration of Art and the Brain, Semir Zeki, neurobiologist, suggests the possibility "of a theory of aesthetics that is biologically based."[23] I personally have no doubt about it; what else could beauty be than nature's powerful instrument of selection. Zeki also argues that "art [is] an extension of the functions of the visual brain in its search for essentials."[24] No doubt, architecture is similarly an extension of our neural system in facilitating our constant search for meaning and a favourable relationship with the world. Architecture increases decisively the order and predictability of our world, in other words, architecture domesticates the world for the purposes of human existence.

23 Zeki 1999, p. 1.

24 Zeki 1999, p. 22.

> "Most painters are also neurologists [...] they are those who have experimented upon and, without ever realising it, understood something about the organization of the visual brain, though with techniques that are unique to them."

Zeki writes.[25] Again, we can undoubtedly make the same assumption of profound architects. They grasp the essence of human nature in addition to being sensitive to the characteristics of space and form. Due to this intuited knowledge they are able to create places and atmospheres that make us feel safe, comfortable, invigorated and dignified.

25 Zeki 1999, p. 2.

Human Historicity and the Significance of Beauty

Along with the inspiration brought about by biological models, a deeper understanding of our own biological and cultural historicity is needed. We all have a tail bone as a reminder of our arboreal life, the remains of a horizontally moving eye-lid, plica semilunaris, in the corner of our eyes from our Saurian phase, and we have traces of gills from our primordial fish life, and we certainly must have similar mental remnants in our genetic and collective memory. In fact, Sigmund Freud made the assumption of the existence of "archaic remnants" as he theorised the unconscious human mind. This is one of the truly revolutionary intellectual breakthroughs of the modern man, but still largely ignored.

The origins of architectural meaning and pleasure can similarly be traced back to our evolutionary history. To head enthusiastically into a digital, computer generated virtual world, forgetting where we have come from, seems careless and arrogant to me. I see the defence of our biological and historical essence as a crucial task of art and architecture. A "mental ecology" is needed to expand the notion of ecology into the human mental world, as the real issues of ecology and sustainability cannot be dealt with merely in technical terms. I wish to argue firmly that architecture is too deeply biologically, culturally, existentially, and mentally grounded in the human historicity — and I am

26 Brodsky 1995, p. 208.

27 Brodsky 1995, p. 207.

here referring primarily to our bio-historicity — to be merely a realm of aesthetics, not to speak of commerce. Even our aesthetic desire and longing for beauty have to be seen in an existential and biological perspective, not as a mere source of momentary pleasure, or as a marketing strategy.

As the Nobel poet Joseph Brodsky argues, "Man is an aesthetic being before becoming an ethical being"[26] and, consequently, sustainable architecture has a future only if we can make it aesthetically exciting and seducing. Paradoxically, sustainability has to be turned into a new concept of beauty, a "biophilic" beauty. Even today, the best examples of architecture arise from a deep understanding of place and its geographic, climatic and natural characteristics, that also exploit refined construction methods and new material technologies for the purposes of dynamic energy efficiency, and they project a special beauty, the beauty of reason and ethics. Joseph Brodsky assures us with the conviction of a poet: "The purpose of evolution, believe it or not, is beauty."[27]

(This essay is a further elaboration of the themes of my four lectures *The Existential Task of Architecture* at *The World We Want to Live In Conference* in Prague on October 10-12, 2010 called up by President Vaclav Havel; "Architecture and the Human Nature: searching for a sustainable metaphor" at the Annual Conference of Australian Architects in Melbourne, Australia on April 14, 2011; "Towards a Biophilic Future: culture, beauty and human nature", at the Day of Architecture and Design in Helsinki on February, 3, 2012, and at the "1st Out Of The Box Conference" at the University of Maribor in Maribor, Slovenia on September 17, 2012)

Author

Pallasmaa is a Finnish architect, professor emeritus of architecture and former dean at the Helsinki University of Technology. Among the many academic and civic positions he has held are those of Director of the Museum of Finnish Architecture 1978–1983, and head of the Institute of Industrial Arts, Helsinki. He established his own architect's office—Arkkitehtitoimisto Juhani Pallasmaa KY—in 1983 in Helsinki. From 2001 to 2003, he was Raymond E. Maritz Visiting Professor of Architecture at Washington University in St. Louis, and in 2013 he received an honorary doctorate from that university. In 2010-2011, Pallasmaa served as Plym Distinguished Professor at the University of Illinois at Urbana-Champaign, and in 2012–2013 he was scholar in residence at Frank Lloyd Wright's Taliesin. Pallasmaa has also lectured widely in Europe, North and South America, Africa and Asia.

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