

## بازشناسی نسبت فرم و عملکرد در معماری

دکتر قاسم مطلبی\*

// :

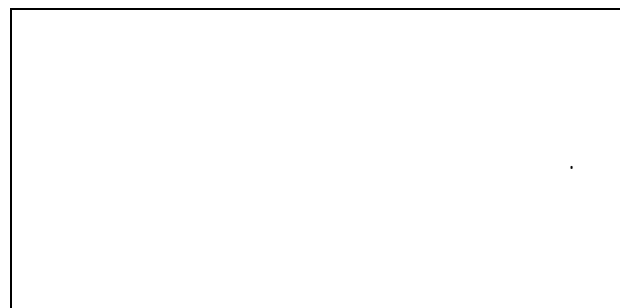
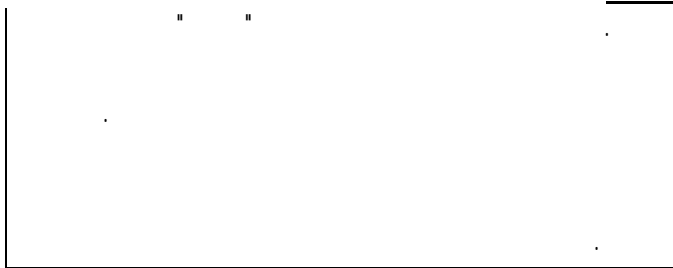
// :

:

این مقاله با هدف عمق بخشیدن به مفهوم "عملکرد" و قبول مشروط شعار معماری مدرن "فرم پیرو عملکرد است" به عنوان فرضیه از طریق تحلیل محتوایی بیانات و نظریه های هنجاری و تجربی موجود در معماری آن را به آزمون می گذارد. یافته های این پژوهش نشان می دهد که قابلیت یک فرم از یک سو به نیازهای استفاده کنندگان و انگیزه های درونی آنها و از سوی دیگر به توانایی های بالقوه شکل و فرم کالبدی محیط باز می گردد. از آن جهت که از یک سو مفهوم عملکرد گرایایی با مجموعه وسیعی از خصوصیات انسانی در گیر بوده و از سوی دیگر به نگرش معمار نسبت به مجموعه ای از پدیده ها مرتبط می باشد لذا طرح او طیف وسیعی از نیاز های انسانی چون زیبایی شناسی و نمادگرایی یا معناشناسی را به عنوان بخشی از عملکرد بنا شامل می گردد. این مقاله گزاره ای جدید جهت شناخت وسیع تر از نسبت فرم و عملکرد را جایگزین شعار معماری مدرن می نماید.

:

تاریخ تئوری معماری، عملکرد، فرم، عملکرد گرایایی، خردگرایی، زیبایی شناسی.



*a thorough awareness of fundamental **human needs** and a universal outlook. Thus, our concern is to develop a new type of designer, able to face all kinds of requirements,"*

*Quoted in Kostelanetz 1974*

## عملکرد و نیاز های انسانی در معماری

*"A fresh outlook can come only through satisfactory designs for our **biological needs**. Our aims today go far ahead of those of yesterday, of the labor-saving devices built into our architecture. When we design we must relate them on a much greater scale with our **psychological, psycho-physical needs** beyond those of our physical comfort. This, I confess, cannot be done easily because **we do not know enough about ourselves**. We must work hard for such a knowledge since our biologists and physiologists, etc. have not supplied as yet sufficient data to enable us to understand the human being and his most important needs. When a clear statement, clear function and clear means are given, the design will not be difficult to execute."*

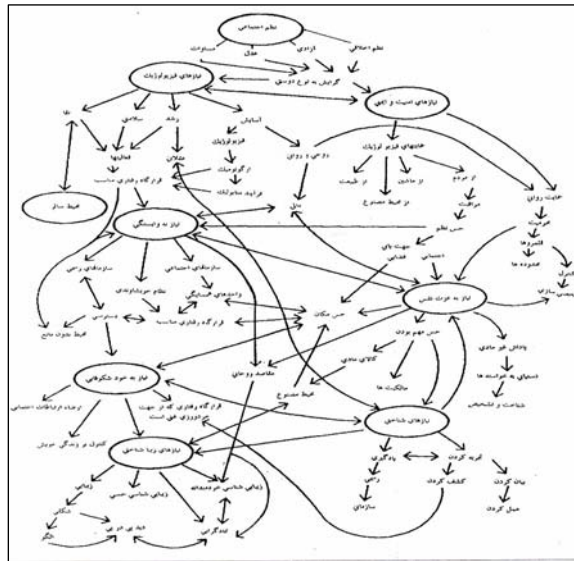
*Moholy-Nagy 1937*

(<sup>1</sup>)  
1937، 1937، 1932a

*"The Starting-point of any artistic creation must be **the needs**, the abilities, the means and the characteristics of "our" time....When considering the solution to a problem, how appropriate is it to its contemporaries, the task, **the genius loci, climate conditions, the available materials and pecuniary means**?...The realism of our time must permeate the work of art."*

*Otto Wagner (1894  
in Vienna Academy), in Gossel 1991: 88.*

*"Our task is to contrive a new :  
system of education which, along with a specialized  
training in science and technique leads to*



( 14 )

( : )

### باز بینی نسبت فرم با عملکرد در معماری

15 )

( " " )

" "

" "

" "

" "

"follows"

"evokes"

24

*"Flexibility is in my opinion about a necessity (these days)...What Sullivan Said "Form follows function" I think that has changed in our time, very much. The function in very short-lived today, and our constructions last much longer. So it only makes senses to make the plan very flexible".*

*Quoted from Broadbent 1978*

*"We do not let the function dictate the plan. Instead, let us make room enough for any function."*

*Quoted from Heyer 1993:13*

26

)

( : : )<sup>19</sup>

فرم "تأمین" کننده عملکردها است

" ( )

"If the dictum, "form follows function," had any bearing at all on building, it could take form in architecture only by means of **plasticity** when seen at work as complete **continuity**....**Form and Function [were] are one.**"

Gutheim,  
Frank Lloyd Wright on Architecture, P  
182,3.

( )

( )



(

1

"The Kitchen wants to be the Living Room. The Bed Room wants to be a little house by itself. The car is the room on wheels....A predetermined total form might inhibit what the various spaces want to be."

Louis  
Kahn 1955, "Two Houses". P60, In Latour  
1991.

( )

"Talk to a brick and it will tell you it likes an arch,".

Louis Kahn 1972, "Structure  
is the Giver of Light". P293, In Latour 1991.

( )

"Desires bring about the new **needs**" and "What a school **wants to be** which is the same as saying what is the form of school."

Kahn in Wurman 1986.

*follows*

*affords*

"Form *affords* Functions"

33

"*affordance*  
*follow*"

"*afford*"

"Form **Follows** Function"

( )

1 Otto Wagner, Quoted in Gossel and Leuthauser, <i>Architecture in the twentieth Century</i> , 1991.	2
3 Basic Needs	
4 Higher Needs	
5 Physiological Needs	
6 Safety and Security Needs	
7 Affiliation Needs	
8 Esteem Needs	
9 Self-Actualization Needs	
10 Cognitive Needs	
11 Aesthetic Needs	12
	13
14 Lawton	
15 Venturi	
16 Multi-functioning	
17 Double-functioning	18
Richard Padovan, <i>Towards universality: Le Corbusier, Mies+De Stijl</i> , 2002.	19
20 Less is More	21
	22
	EVOKE
23 Form evokes function	
24 Deterministic	
25 Availability	
26 Aldo Van Eyck	
27 Multivalence	
28 Plastic continuity	
29 <i>Availabilities</i>	
30 Demand	
31 Invitational	
32 Valance	33
34 <i>Afford</i>	



- Alexander, C. (1969), "Major Changes in Environmental Form Required by Social and Psychological Form", *Ekistics* **28**, 78-85.
- Alexander, C. (1979), "The Timeless Way of Buildings", Oxford University Press, New York.
- Alexander, C.; S. Ishakawa and M. Silverstein (1977), "A Pattern Language: Towns, Buildings, Construction", Oxford Uni. Press, New York.
- Banham, Reyner (1960), "Theory and Design in the First Machine Age", Praeger, New York.
- Benton, Tim. and Charlotte Benton with Dennis Sharp (1975), "Form and Function: A source book for the history of architecture and design 1890-1939", Crosby Lockwood Staples, London.
- Blake, Peter (1974), "Form Follows Fiasco: Why Modern Architecture Hasn't Worked", Boston, Toronto: Little, Brown and Company.
- Cantril, Hanley (1965), "The Pattern of Human Concerns", NJ: Rutgers, University Press, New Brunswick.
- Curtis, William J. R. (1984), "Modern Transformation of Classicism". *The Architectural Review*, Vol 176.
- Curtis, William J. R. (1987), "Modern Architecture, Monumentality and The meaning of Institutions", *The Harvard Architectural Review*, no.4.
- De Zurko, Edward Robert (1957), "Origins of Functionalist Theory", Columbia, University Press, New York .
- Gibson, J. J. (1966), "The Senses Considered as Perceptual Systems", Houghton, Mifflin, Boston.
- (1977), "The theory of affordance", In R. Shaw and J. Bransford (eds.). *Perceiving, Acting and Knowing*, Halsted, New York.
- (1979), "The Ecological Approach to Visual Perception", Houghton Mifflin, Boston.
- Giedion, Sigfried (1940), "Space, Time and Architecture", Mass, Harvard UP, Cambridge.
- (1958), "Architecture, You and Me", Mass, Harvard UP, Cambridge.
- Gombrich, E. H. (1963), "Mediations on a Hobby Horse", Phaidon, London.
- Gossel Peter and Gabriel Leuthauser (1991), "Architecture in the Twentieth Century", Benedikt Taschen , Koln.
- Gropius, Walter (1935), "The New Architecture and the Bauhaus", Faber and Faber, London .
- Gutheim, Frederick, ed. (1941), "Frank Lloyd Wright: Selected writings", Duall , New York.
- Heyer, Paul (1993), "American Architecture: Ideas and Ideologies in the Late Twentieth Century", Van Nostrand Reinhold, New York.
- Holgate, Alan ( 1992), "Functionalism: Definition, viewpoints, and controversy", Chapter 8 in Alan Holgate, *Aesthetics of Built Form*, Oxford University Press, Oxford.
- Koffka, Kurt (1935), "Principles of Gestalt Psychology", Harcourt Brace, New York and London.
- Kostelanetz, Richard (ed.) (1974), "Moholy-Nagy", Documentary Monographs in Modern Art, Allen Lane, London.
- Lang, Jon (1994), "Urban Design: The American Experience", Van Nostrand Reinhold, New York .
- (1994a), "The New Functionalism and Architectural Theory", Unpublished manuscript.
- Latour, Alessandra, ed. (1991), "Louis I Kahn: Writings, Lectures, Interviews", Rizzoli, New York.
- Lawton, M. Powell (1982), "Competence, Environmental Press, and the Adaptation of Older People", pp. 33- 59, in M. P. Lawton, P. G. Windley, and T. O. Byerts (eds.). *Aging and the Environment: Theoretical approaches*, Springer, New York.
- (1990), "An Environmental Psychologist Ages", pp 339-363, in I. Altman and K. Christensen (eds.), *Environment and Behavior Studies: Emergence of Intellectual Traditions*, Plenum, New York.
- Le Corbusier (1923), "Towards a New Architecture", Praeger, New York.
- (1987), "The Decorative Art of Today", The Architectural Press, London.
- Le Corbusier and P. Jeanneret (1927), "Five Points of a New Architecture", pp. 153-155, Translated and reprinted in T. Benton and C. Benton (eds.) (1975), *Form and Function: A source book for the history of architecture and design 1890-1939*, Crosby Lockwood Staples, London.
- Lewin, Kurt (1936), "Principles of Topological Psychology", McGraw-Hill, New York.
- (1938), "Will and Needs", pp. 283-299, in William D. Ellis (ed.), *A Source Book of Gestalt Psychology*, Routledge and Kegan Paul, London.
- Leighton, Alexander H. (1959), "My Name is Legion: Foundations for a Theory of Man in Relation to Culture", Basic Books, New York.

- Ligo, Larry L. (1974), "The Concept of Function in Twentieth-Century Architectural Criticism", Ann Arbor, Michigan: UMI.
- Marcus, George H. (1995), "Functionalist Design: An ongoing history", Prestel-Verlag, Munich.
- Maslow, A. H. (1987), "Motivation and Personality", Harper & Row, New York.
- Mikellides, Byron, ed. (1980), "Architecture for People", Holt Reinhart and Winston, New York.
- Moholy-Nagy, Laszlo (1932), "The New Vision: From material to architecture", Brewer, New York.
- (1937), "The New Bauhaus and Space Relationships", Chapter V, pp. 104-110, in Richard Kostelanetz (ed.) (1974), *Moholy-Nagy*, Documentary Monographs in Modern Art, Allen Lane, London.
- (1937a), "The First Program Announcement, The New Bauhaus, Chicago, Fall 1937". In Richard Kostelanetz (ed.) (1974), *Moholy-Nagy*, Documentary Monographs in Modern Art, Allen Lane, London.
- Moholy-Nagy, Laszlo (1944), "Design Potentialities", Chapter IV, pp. 81-90, in Richard Kostelanetz (ed.) (1974), *Moholy-Nagy*, Documentary Monographs in Modern Art, Allen Lane, London.
- Motalebi, Ghasem (1998), "A Theory of Meaning in Architecture and Urban Design: An Ecological Approach", Unpublished PhD dissertation, Faculty of the Built Environment, The University of New South Wales, Sydney.
- Padovan, Richard (2002), "Towards universality: Le Corbusier, Mies+De Stijl", Routledge, London .
- Read, Herbert, ed. (1934), "Art and Industry".
- Rossi, Aldo (1982), "The Architecture of the City", Mass, MIT Press, Cambridge.
- Steele, Fritz (1973), "Physical Settings and Organization Development", Reading, Mass, Addison-Wesley.
- Steele, James (1997), "Architecture Today", Phaidon, London.
- Sullivan, Loius (1896), "The Tall Building Artistically Considered", Reprinted in R. Twombly, ed. (1988), *Louis Sullivan: The public papers*, The University of Chicago Press, Chicago.
- Tzonis, Alexander (2001), "Le Corbusier: The poetics of machine and metaphor", Thames & Hudson, London.
- Venturi, Robert (1966), "Complexity and Contradiction in Architecture", The Museum of Modern Art, New York.
- (1974), "Functionalism, Yes, But," statement for the symposium "The Pathos of Functionalism", in *Architecture and Urbanism* 47 (November): 33-34, Berlin.