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Faculty of Architecture and Engineering



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COMPUTER SCIENCE & ENGINEERING
ELECTRICAL & ELECTRONICS ENGINEERING

CREATING THE FUTURE

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**THEME 1:
ARCHITECTURE**

Page	Author	Title
1	Semih Eryildiz	Ecological Settlement Principles And World Examples
13	Demet Irkli Eryildiz Waddah Ali Al Qadi	Ecological Design Principles And Examples
21	Ayça Tokuç Z. Ebru Yıldızber	Conveying Daylight Into The Spaces With Lightpipes
25	Cüneyt Elker Selin Karabrahimoğlu	Common Use Of Residential Backyards: A Discussion On Problems And Potentials
29	Didem Bağ (Yanarates)	Material Destination As Sustainable Architecture In Detail
33	Ela Aral Selin Karabrahimoğlu	Regenerating Apartment Housing Backyards For The City
39	Kağan Günçe N. Ömer Saatcioğlu	The Potential Of Straw Bale Buildings In Rural Areas Of Northern Cyprus
45	Mehmet Under Munther Diyab Mohd	Fundamental Investigation Concerning The Collapse Of St. George Of The Latins In Famagusta
49	Özlem Atalan	Teos Antique City And Today
53	Rafooneh Mokhtarshahi Sani	Toward Islamic Architecture Future
59	Yelda Durgun H. Metin Felekoğlu	The Role Of Graduate Programs In Conservation Of Cultural Heritage In Turkey
65	Akin Sevinç	Living In A Machine: A City Guide For The Mechanical Fantasies
69	Zehra Ongul	Vouni Palace And Its Architecture
71	Hakan Sağlam	Aesthetics And Spatial Qualities In New Housing Settlements In Ankara
75	Vedat Çağanağa	Space Standards And Factors Affecting Them In Northern Cyprus
77	Simge Esin	A Model For The Transformed Public Space Of Future Cities: Exhibition Stands
83	Tülay Özdemir	The Effect Of Colors On Spatial Perception
89	Faruk Yalçın Uğurlu	A Different Approach For Furniture Design

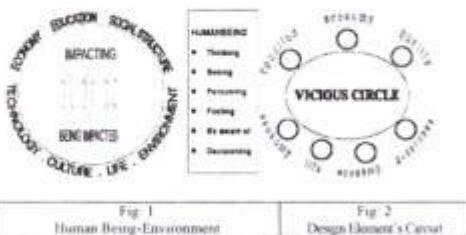
A DIFFERENT APPROACH FOR FURNITURE DESIGN

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Abstract — Multi-sided consciousness is essential to furniture design, production, and utilization stages. In solving architectural space creation problems related to furniture design, macro approaches, which will create new understandings to better cope with human needs, new materials, details and technologies are necessary. Creation of dynamic demand from society for designers is the key aspect of improved consciousness. Wastes in design, production, and utilization of furniture triggers overall qualities of living environment. Becoming a slave of furniture limits movements and creates negative impacts on physical and visual comforts. Experience from applied design systems allows consciousness to be formed through new educational programs.
Keywords: Furniture, Design, Design Education, Living Standards, Consciousness

1. INTRODUCTION

There are misconceptions and conceptual diversities in the design, production, and utilization of furniture placed in different spaces. While on the one hand, this situation causes extra forces on the economy, on the other hand, it prevents the total comfort expectation of the users to be met at rational levels. At the end of this negative process, even the relations of the designers, producers, and consumers become spoiled economically, socially, and psychologically, etc. These missing points and diversions are originated from the inexactness and negativity, as well as the economical and socio-cultural deficiencies of professional formations. Basis of these difficulties are rooted in failures of systematic understandings. (Figure: 1)



Before having any decision made in design, the characteristics and environmental relations of human

being should be clearly learned. The interconnected design elements in any design process create a vicious circle. (Figure: 2)

The partners in the process of furniture design, production, and utilization that are expected to have open and interlinked relations usually fail to solve the problems by way of approaching with a systematic understanding. As a result, it becomes difficult to create mediums, which provide a sharing of cultural accumulations through mutual understanding and learning.

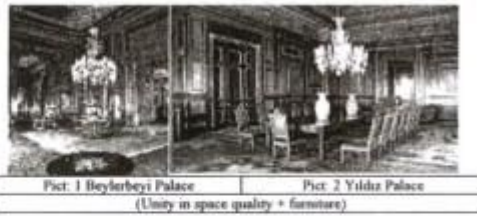
In this new millennium, there are very important conceptual deviations in overall understandings related to furniture and its place in the whole life. These are;

1. People used to own furniture for longer periods. They were feeling furniture's private appreciation, and in extreme cases, the owner used to be proud of or be in love with it. But now, there are some furniture and furniture component productions giving the priority to form and function rather than durability.
2. People began to learn how to utilize second-hand furniture; they try to care about overall cost-in-use understanding, they learn how to balance high initial price with the selling prices.
3. Although since the ancient periods, people had started to settle at certain locations, now, due to the changing global life style, they do not prefer to settle in the same location. They prefer furnished studio-apartment units and for relatively shorter periods.

2. FURNITURE SECTOR & PROBLEMS

There are three different approaches in producing furniture;

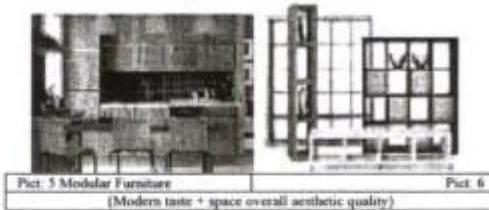
1. The furniture, which has been, used in- or out-side spaces of the wealthy and large scale buildings used to be the sub-products of their designs. (Pictures: 1-2)



2. People with limited incomes, at small-scale buildings, submit to unhealthy designs or even to furniture without any design. In general, open production systems with ambiguous standards have been chosen and bought by the users, or the very elementary advices of their semi-expert advisors are placed in spaces. (Pictures: 3-4)



3. At present, products that are mass-produced with the help of technological improvements have low initial costs and prices. They give the chance and opportunity to the users having very different living cultures, and they create an atmosphere with flexible furniture standards. (Pictures: 5-6)



This situation caused further problems in developed and developing countries. Developing countries with economic limitations have been much more influenced by this problem, because they must utilize their furniture for much longer durations. Demand-supply understanding, design, production, utilization, and even re-utilization stages of the relations between human being and furniture also show the importance of design. Achieving a total unity with "meaning" or transferring and sharing artistic feelings by pieces of art are all missed in above approaches. Progress is rather faced with very chaotic structural totality when functionality, economy, ergonomics, material, detail, technology, form, aesthetic, etc. subjects are added to it. This also extends the adaptation period of poor people to new inventions and technological developments. (Figure: 3)

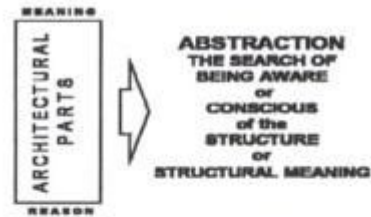


Fig. 3 Consciousness in meaning

If we concentrate on the non-systematic approaches and related problems occurred at the basis of this structural totality which are usually perceived as chaotic, as well as the missing parts and mistakes that occur during the design processes, it becomes apparent that;

- Not gaining enough clarity in the presentation of realistic necessities, open explanations and definitions are to be discussed.
- The outcomes of the requirements are not analysed during the design process and are not evaluated sufficiently by a thorough synthesis in the selection of material, technology, detail and especially the theme, in order to construct an aesthetic and functional product.
- In the origin of the problem, as well as being unable to construct positive communication among user, designer, and producer, there is also the issue of balancing priorities and posterior concerns, which are to be evaluated in the communication and production stages.
- As consumer requirements can not exactly be predetermined, users are not able to choose proper producers and the chosen producer cannot always provide the right answers to their real necessities by understanding their needs. Here, the main problem originates from having no social motion forming the occurrence of adaptability standards with social communication in total, together with the limited education and training standards of the parties.
- Consumers are not very courageous in consulting with professionals during the definition of their needs and necessities. This is because it has not been realized that consciousness influences not only the consumer but also the decision makers from the political and planning stages on space. Furniture utilized by human being, design, and production of instruments, and devices as well as the health of human being, influence all other life conditions, too.
- Personal job organizations or, to be more direct, disorganizations of producers are realized randomly and far from any control totally, either to quickly gain the lost values back, to run the organization with zero operating capital or in an attempt to be successful beyond their capacities with zero investments. There is no job variety or boundary definition and they usually think that they can easily manage in any job organization and by having many job responsibilities; however, parties meet with great losses as a result of

being linked to these unsuccessful and negative organization structure. So much worse is that the process that takes place in these fields is not significantly different for larger scales of investments and organizations.

- Functional peculiarities of produced furniture, spatial relations, form and mass effects, dimensional proportions, utilized materials' quantity and quality of all of the attributes (amount, thickness, colour, texture etc. surface and other material characteristics, hardness, lightness, outwearing, erosion, etc. durability values and ecological standards directly influencing the human being,) are hardly considered under the limitations that are supposed to be known by the producer. The materials that can easily be reached by the producer or those materials procured from neighbouring firms through instalments are added to the total sum in any wise. Basic characteristics expected from a piece of furniture that forms all of the components having a total unity, having characteristics of harmony among them, even at a minimum level, are not considered definitely.

- Periodical cares, maintenance (whitewash, paint, repair, or removal of installations, etc.) of the whole buildings or unit spaces with fixed furniture are not easy. Because these furniture are massive and have no flexible detail.

3. PROPOSALS TO THE PROBLEMS

If we concentrate on short-term, medium-term and long-term solutions in order to bring some scientific approach to these or similar problems presented; Even at primary stages of civilization, it was a must to have training or to have a diploma in the related field, if you wanted to work in that field. This situation is usually closely and strictly under control with local authorities or professional institutions. But at present, although there are many social organizations that work for consumers' rights and conservation, it is surprising to see that they still lack the consciousness about the main roots or basis of the problem. This negative situation cannot be explained by free market economy or capitalism. Society has chosen and defined the administration system democratically and all of the responsibilities are clearly defined in constitutional-law and other laws. That is the higher administrators and decision makers who must care for people, against all related negativity, create necessary consciousness and apply controls and supervisions. All drives and attempts cannot solely be expected from the private sector. For diminishing the negativity of these problems in shorter periods, and for aiming better levels of design, production and utilization, all of the producers, consumers, teaching/training institutions and other decision makers, in other words, all of us, altogether or one by one should have consciousness in our total responsibilities. (Figures: 4-5)

Process of Consciousness

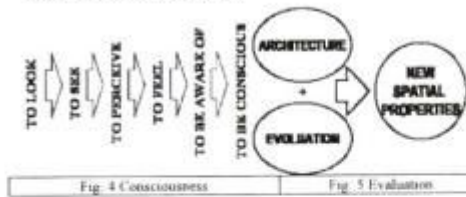


Fig. 4 Consciousness

Fig. 5 Evaluation

4. CONSCIOUSNESS & POLITICAL DECISION

First of all, political decision makers should immediately discuss the professional formations, and prepare the necessary legal infrastructure for restructuring. As it is included in medicine laws and regulations, by considering the direct influence and impacts of space utilizations on human health and country economy; definitions of professional fields and criteria for being specialist should be perfectly and clearly defined, and uncontrolled production-consumption relation should immediately be brought to an end. For example, in general, minimum numbers of technical staff are employed by the producers for related fields, whereas consciousness requires a clear distribution of responsibility distribution and all other boundaries and limitations should be clearly explained in laws or regulations and related rules or punishments should be included into it, as well.

This subject is at least, and even as important as traffic regulations. Not everybody owns an automobile, but surely, all of us own at least a bed or a chair, and many people have a bath, kitchen, and living/working spaces with furniture in them. In order to perceive the structural input-output relation among education, production, re-creation and man & architecture characteristics, one should be aware of the multiplicity of internal and external factors. (Figure: 6)

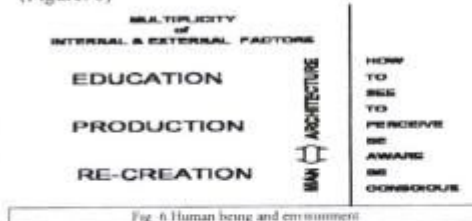


Fig. 6 Human being and environment

5. CONSCIOUSNESS & TEACHING-TRAINING

The other important phase is that the vocational schools having education and training at any level should act consciously according to scientific evaluation; and in measuring the performance, minimum success level should start not from 50% but at least 70%, or even 80% out of 100, and there must be careful controls and strict rules in supervising systems. For instance; if a doctor has a limited knowledge accumulation, his impact will be limited

with his patient only, but if the profession is a technical subject, as architecture, industrial design, etc. then the negative impact is much more important and dangerous for at least more than one, maybe for 100s or 1000s of people in the society.

Another dimension is the stages and scale among parts of the whole educational process. For instance; curriculum planning and transitional consciousness from one-step to another, even to the professional applications should be scientifically researched and applied.

6. CONSCIOUSNESS IN PRODUCTION

In order to create a consciousness for the producers; for example when establishing an atelier for furniture production; during production or selling, the important points that should be considered are;

- The intended production type for the furniture, consumer profile, equity capital needed for investment, running capital, sufficient knowledge accumulation, research on advertisement and marketing potential, optimum production amount that compensates the system, optimum environmental conditions and infrastructure, risks, finding raw materials, cash-flow, healthy living and giving warranty in realizing rational revenues, etc. should be taken into account. Is there rent ability or feasibility in related subjects? Are the stages to improve production and utilization truly defined? In case of any unexpected negative capacity or change in variety and transition to a new medium and planning flexibility of easy adaptation, are total process and running need to be designed from the very start?
- Advertising the establishment, customer relations, production planning and staff organization are adequate or not? Especially, are the design team successfully bringing creative approaches and are the intellectual and dynamic teams realizing active marketing?
- Will they face with any problem during the realization of the production, storing, transporting, and assembling? Is the speed of feeding the market rationally calculated?
- After getting the user approval, are the warranty, spare piece, maintenance-repair process issues planned? What are the warranties reflect to the consumer of the pieces take place in the body of the whole part and produced by other firms? Which of these firms can be responsible again to produce same pieces? By periodically looking at the consumers' problems, will the question of "at which points problems are becoming concentrated on?" be used as feedback input through the utilization of statistical methods?
- Which precautions should be taken in order to be permanent in furniture market? Are short, medium and long term design, production price and payment decisions developed? Are the incentive bonuses, invention, and award for the increase in productivity,

excess work, etc. processes planned for worker motivations?

- Are there studies on aiming for renovation of atelier and technology, depreciation values, disaster problems, insurance etc.? For instance, is there any orientation for insuring the customer works?
- Is material and production storage considered and planned? Are the new technologies examined closely? What are the applications as regards the contribution to trade marking process? Is a marketing network for whole country considered?
- Is an open system for new and creative thoughts established? Is there a communication infrastructure for training youth and professionals? In one sense, is there any organization for the future marketing strategies?

7. CONSCIOUSNESS IN CONSUMPTION

Parallel to the general approach presented above and in order to make the consumer much more conscious; the points that we should pay attention when buying a piece of furniture or ordering for production is presented below:

- Dimension of furniture, durability, material, form, aesthetic, geometry, technology, detail, functionality, environmental relations, ergonomics, comfort conditions, impact on health, relations to other furniture, price fitting etc. issues must be consulted with a specialists (architect, interior architect, industrial designer, technicians, skilled workman, etc.) and we should avoid from instantaneous purchasing decisions.
- We should prefer practical, useful, functional, durable, cleanable and transportable furniture with easily mounted parts having no negativity as breaking, cracking and creating no damages on our body in any negative impact, impulse, earthquake etc. conditions. We should not forget that; an ornamented, high backed and very large, heavy armchair, not fitting to our limited space dimensions, may have striking appearances but always may bring dust collection potential in time, or create movement obstructions risks. (Pictures: 7-8-9)



Picts 7-8-9 Classical styles in armchairs
(Classical taste should be designed with space quality)

- We have seen and perceived that; a wardrobe or a closet may create important problems with very small or big covers, opening to wrong directions, interiors, or interior partitions not dimensioned or designed according to the objects' peculiarities at each utilization step. But just by being carried away into certain peculiarities (colour, aesthetics, cheapness, etc.), we may choose to buy any product. If we do not

have any idea about placing this furniture in a space, or without knowing the kinds of functional expectations that may be charged on before buying it, or we do not have any experiment in use within the returning period; then, at the end, we are not capable of avoiding all of the problems.

As in all over the world, in Turkey too, furniture and construction sector, against all negative environmental, economical, political conditions, represent a significant economical potential. An increasing and important peculiarity of this potential is the rapid improvements in furniture exportation due to environmental changes. The crucial side is the understanding of the real additional expectations and inclinations of this contemporary generation, by rightly annotating this progress in the new social structuring and gaining an extra acceleration for the major youth groups with limited income. In order to amply benefit from this potential and to become a firm, which gains a prestigious and strong future with increasing economical revenues, it is vital that scientific contributions are provided. On the one hand, while the existing situation is being protected, on the other hand, first limited, then contextual openings should be organized with the utilization of balanced capital and directions having a comprehensive risk planning been done. During this process, we should concentrate on new and creative alternatives in order not to loose new markets.

Especially, not perceiving the rapidly increasing number of big marketing firms and companies and producers presenting highly negatively designed products to the society is very dangerous. In time, they will immediately loose social confidence. For this reason, they should be conscious about approaching the subject positively and, right quantity and quality levels of professional experts' employment should be realized in a short period.

8. CREATION OF NEW UNDERSTANDING

When we think on furniture in any space, immediate expression is an object having a function. For example, a chair, a wardrobe, a table, etc. But in reality; they are made out of some material, having applied a production detail, technology, and they have forms, colours, textures, design characteristics, comfort qualities, ergonomic standards, functional peculiarities, etc. Besides all of these characteristics, they have an orientation in the space (sleeping, eating, living, working, service, etc.). We place them near some other furniture or near to a wall, window, chimney corner, etc. We want them as visible, semi visible or invisible positioning; the perception angles change their additive characteristics to the space. (Pictures: 10-11-12)



Pict. 10 Price/O'Reilly house, Tina Engelen, Ian Moore	Pict. 11 Country House in Los "Cerritos de Santa", Picado	Pict. 12 Coelho House, Anderade & Moretto
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Furniture is important not only as an object, but as a part of a total complex design. There must be an overall unification created on purpose. That is, aesthetical meaning in design created by the architects. What are the interesting features of the furniture that adds another taste, attractiveness, or aesthetical value? As designers, producers, users, we should find right answers to these and other questions. This approach is not only true for perceiving furniture in any space. You may look any part or a particular detail in applying same understanding. This also explains human attempt to have a cultural accumulation on his/her living practice. That is the seeing and perception that are very different from each other. This consciousness and understanding may create a very important bridge between an artist designer mind to the users', so the flow of all artistic feelings may be easily realized through this new channel. The creator may send and share conceptual accumulations by using this channel (Figure: 7)

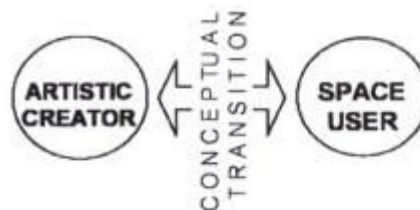


Fig. 7 Channels between Designer & User

9. CONCLUSION

It can be argued that; new directions and methodologies should be improved at the relevant departments of universities (architecture, interior architecture, industrial design, etc.) by the professional application and practice or by improving the scope of courses such as construction management, etc.

It is easily perceived that in any of the relations between the environmental elements and human being, there is the contextual emphasis and the significant position of abstract art perception.

The need for the construction of a lifetime durable and sustainable education and training system is indisputable. The process for choosing, deciding, and applying study areas in the fields of basic design and

design should also follow a course with creative, original, and precise roots. We are in need of having multi-sided programs for improving perception standards.

Instead of educating all of the students as designers through bachelor and master level education and training in related disciplines, other chances should be provided with different study fields. By this methodology, with much, more balanced supply and demand mechanism; we can talk about more conscious, efficient, and healthy productivity. (Pictures: 13-14)



During education and training process, choosing different disciplines and levels altogether must be supported. Technical schools at secondary level education (timber-iron works etc.) should have cooperation with interior architecture and industrial design departments with furniture planning-design-production-utilization subjects. Environmental design, landscape, architecture, interior architecture, industrial design etc. departments in universities are also expected to have communication among themselves and should have very dense scientific communication with scientific subjects, such as material engineering etc. disciplines. Bachelor level

student may be encouraged to have master study in a different field to be able to specialize through beneficial superimpositions. These types of systematic approaches in education may also easily create very specialized new course structures for future design attempts. For instance; "furniture structure or anatomical superimposition of space and furniture" can be futuristic creations in furniture design.

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