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Converging Forces on Design, Part 1

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Source: *Journal of Architectural Education (1947-1974)*, Vol. 12, No. 1, 42nd Annual Convention of the Association of Collegiate Schools of Architecture (Autumn, 1956), pp. 7-15

Published by: [Taylor & Francis, Ltd.](#) on behalf of the [Association of Collegiate Schools of Architecture, Inc.](#)

Stable URL: <http://www.jstor.org/stable/1423994>

Accessed: 24/06/2014 06:24

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PANEL DISCUSSIONS OF THE 42nd ANNUAL MEETING

The first panel session, Saturday afternoon, 12 May 1956.

Converging Forces on Design

William Wurster, moderator

MODERATOR WURSTER: The four participants this afternoon are all so famous, so well known, that I suppose except for some minor descriptions they could best tell their own stories. I thought we would call them in this order. First, we will deal with the large and general and come down to the specific. I do this because I feel we are human beings before we are architects. Our first contributor is Abraham Kaplan, philosopher, U.C.L.A. Then comes Edgardo Contini, who has dealt so magnificently with engineering. Next we have Charles Eames, who finds all things can pertain to all things! Lastly we come to Richard Neutra who, I think, is one of our very distinguished people in this part of the world.

With that opening we will start with Dr. Kaplan. It might be well for each of the speakers to give a slight capsule biographic outline on himself. This would be a fine way to place your great words of wisdom in context.

As Viewed By a Philosopher

*Abraham Kaplan**

My interest is in the philosophy of art. I am approaching architecture, and specifically the problems of design, which are to be discussed by this panel, as comprised within the arts most broadly conceived. What I have to say is intended to substantiate a conception of such specific and concrete activities as are involved in design, standing in intimate connection with a number of other activities which sometimes are regarded as remote.

I was delighted to hear the moderator characterize the view that everything was connected with everything else. I thought this was a peculiar prerogative of philosophy. At any rate, I now feel I have some support, so I will plunge in to support that thesis.

It is characteristic of people who are very close to their subject matter to have something of an exaggerated sense of how very different is their particular handling of that subject matter from what has gone before. This is all as it should be, and I do not mean to derogate any sense of self-esteem which

*See biographical note, page 47.

very properly designers might have in feeling that their work belongs peculiarly to this period. At the same time I think it is worth recognizing that one area in which time proceeds at a relatively slower pace in modern culture than in others is that of the arts, in their broadest sense.

I invite you to consider the following. Put yourselves back in memory or history, if you will, a few decades to the political situation in the world, perhaps go back to Czarist Russia, or even to the period before the first World War. Consider also the patterns of family living, standards of morality, habits of leisure time, costume, and all the rest, and contrast them with what you have at the beginning of the second half of the twentieth century. The differences are very great indeed. But look to the painting, to the music, to the literature, to the theatre, and, in short, to all of the various arts of about that time and I think it will be apparent that all of these developments which we feel are so extremely modern were already pretty well established some fifty years ago, perhaps sixty or seventy years ago in some cases.

What I propose to do, then, is to take this rather long-range point of view and see whether I can speak of some two or three tendencies which seem to me to have been marked throughout the practice of the arts in the last half century. These tendencies provide the broad cultural setting against which you face your specific problems of design and differentiate what we can significantly regard as a modern approach to these problems.

The first such general characteristic I call *externalization*. I mean specifically to draw a sharp contrast with a certain kind of attitude that was very marked in the nineteenth century and which persists right down to the present because cultures, as Mr. Neutra suggests in his notes for this discussion, are by no means homogenous, by no means synchronic in every respect. Rather, many things coexist which properly belong to different time-spans.

The point of view to which externalization may be contrasted is that of romantic individualism. You may approach that concept, if you like, in terms of certain conceptions of politics, economics, or morality. I have in mind more specifically certain conceptions of the arts, but I think that all of these are of a piece; they represent the same point of view. This view held that the process of artistic creativity involved essentially the realization of the potentiality of the individual. It is this which we have abandoned in the various arts, including the arts of design, and it is this abandonment that I am calling externalization.

What we are looking for in dealing with problems of design

is not some channel for the expression of a peculiar individuality, not for some originality or novelty or something which will mark out our personality as distinctively individual contrasted with all others. What we are looking for is something which will take fully into account the world around the individual, the physical world for one thing, and the social world for another.

The romantic myth of creativity was, paradoxically, the myth of Narcissus, the beautiful youth fascinated by his own reflection in the pool, and of whom the poet, W. H. Auden, observed with keen insight, "A hydrocephalic idiot who said, 'On me it looks good.'"

This used to be the approach towards the arts. Now we have moved from such an inward directed perspective to an outer directed perspective, to a perspective that what are important are not the particular pangs and sorrows of the creative soul but the requirements that are set by an external reality and by other men. I think this is one general and extremely important characteristic of modern movement in the arts.

A second one which I should like to put forward I will call *objectification*, and I mean by it the following. The content of the arts, or of design more specifically, is no longer conceived as something which can be meaningfully abstracted from physical materials in which it is imbedded. If we wanted to look for the philosophical roots of the alternative conception I think we would have to go back to Plato. This is the fountain origin of this kind of thought, but it has been enormously influential in a world of art and design in the intervening centuries. We usually label it as some kind of idealistic conception of art.

The fundamental notion behind idealism is that we deal in the arts with certain forms. Plato called them that, in fact, with a capital "F." These forms—ideas in some translations—are held to represent the core of all reality and the standard of all values, and whenever these forms become mixed with a concrete matter, they are, to some extent, compromised. The forms in themselves are immaculately conceived by the artist and somehow do not sacrifice fertility by this unusual mode of origination. Because of human limitation, especially the limitations of our senses and our passions, these forms become translated into physical embodiments, so that we can communicate them to others, and so that we can give them a certain kind of fixity or permanence. But in essence they are thought to be free of all such constraints.

I think this whole conception is mistaken from top to the bottom. And I think that modern art has proceeded by an increasingly clear awareness of its being misstated. Modern art has insisted on rejecting the typically Greek separation of the arts from the crafts, or the fine arts from the applied arts.

The Greeks did not develop science not because they were incapable nor because they failed to direct their magnificent intellects into cognitive channels. They did, and they arrived at the most fundamental conception which in the seventeenth century gave rise to modern science, but they had a profound contempt for the crafts. Actually, to get your hands dirty and mess about in a laboratory was an occupation fit only for slaves, not for a gentleman who might perhaps draw geometrical figures to help his duller students to understand the mathematics he is interested in, but who keeps his eyes focused on the abstract forms, not on the concrete figures.

The artist has rejected all this by emphasizing the facts that the arts have an existence and that a human being can only understand them insofar as they have a physical embodiment. This has meant an enormous increase of interest in and attention to the physical properties of materials, and the resources and

limitations of such materials. The artist no longer regards himself as fighting these materials and trying to perform a heroic act of rescue of an abstract form which has been imprisoned somehow in a block of stone. On the contrary, the stone is co-operating with him in an act of creating something which did not exist prior to that co-operation, and indeed which could not exist unless both parties to the transaction, the artist and his materials, were equally involved and enjoyed equal respect and consideration.

A third tendency I would summarize with the label *humanization*. For the arts in modern times have been humanized. That is to say, they have been brought into intimate connection with the interests and values of the culture as a whole. I do not mean to suggest that arts have not always been an integral part of culture, that the practice of design in its various phases is not always something influenced by and influencing in turn a whole social matrix within which it occurred. But I do mean that artists are today much more self-consciously concerned about the relation between the practice of their skills and the social needs and interests than they previously have been.

One specific implication of this new point of view is the recognition that the significant properties of design cannot so much as be meaningfully discussed or described without reference to the concrete biosocial context in which they occur. That is, designs are not just matters of physical shapes and physical relationships. Whenever we are talking about a design we are talking about something psychological and sociological. To get the hang of whatever is involved in a particular design we have to ask and answer questions about the people in whose experiences that design comes to have significance. We have to ask questions about who is going to do what with it, what ends will it serve, guided by what values, and subject to what social and psychological constraints.

The conscious recognition of this human element in the arts has served not to set further limitations on the activities of the creative personality but, on the contrary, to liberate that personality from certain artificial constraints under which it had been placed in other periods. I mean the artificial constraints that result from the imposition of certain dogmas about the nature of design and of the objects to be designed, whether these were racial or political dogmas, or philosophical dogmas as to the nature of aesthetics. This included the notion that the only ways in which things could be beautiful were those in which they were produced in accordance with the standards which a self-appointed academy laid down as necessary and sufficient for artistic creativity. Enormous new potentialities have now developed, commensurate with the enormous range of potentiality that the modern period has disclosed in society as a whole.

These three developments, then, *externalizing*, *objectifying*, and *humanizing* the design seem to point out several fundamental characteristics of the modern movement in art. They serve to co-ordinate some kind of distinctive style or pattern which we consider as belonging to our time, thus differentiated from other cultures and other historical eras.

I think it will be necessary to go beyond these as the culture itself moves into new directions. But just how to go beyond them, in what direction we will move subsequently, this is the problem which I can throw back into your own laps.

But I would add only one final remark to this characterization that I do not mean to imply for a moment now that something has been achieved in terms of which we can rest content and there remains only perfection or the bringing to full flower these three tendencies.

As Viewed by a Structural Engineer

Edgaro Contini*

By way of introduction I am an engineer who has had for friends almost invariably architects and designers, and I think that is my only reason for being here.

For reasons of competence, I will limit my observations to the fields dealing with human shelter and human environment, namely, architecture and planning. I will also limit my comments to our western and specifically United States society at this time. The temptation to go beyond such boundaries is particularly great at this moment, since I have just returned from Paris, as the final leg of a trip around the world. Therefore, we shall be dealing with the biosociological context of the United States today.

Even with such narrow limits there are undoubtedly a great number of forces, both general and specific, in nature that have their influence on design, and perhaps the latter part of the discussion will attempt to pinpoint those that are the most influential and important.

There are three forces the influence of which I would like to analyze briefly. One is the influence of the West European economic system of design in terms of architecture and planning. The second is the influence of communication as immediate and total as it is today. And third, the influence of a philosophy of forced obsolescence as potentially affecting the design of tomorrow.

Thus, we will deal with design not as it is at the wish of the designer, but as it is an expressed independent result. Perhaps we cannot just judge design by the ability and potential of the designer alone so much as by the opportunities that are furnished by one's society for expression of such potential. There have been, undoubtedly, societies and times where greater opportunities were offered and properly exploited, and others where lesser opportunities were offered.

Within our society and a self-controlling *capitalistic economy*, there is no question that with relatively few exceptions the motivating forces, the generating force, and the limiting force that justify the creation of new buildings and new environment relate either to the making of profit or to the limiting of budget. There are exceptions, but basically our environment is molded by these economic forces. This is no place to judge whether the forces are good or bad, but only to view what influence they have, and also to view whether there is any novelty in this.

If you look back in history, we seldom find such a dominance of an influence so narrowing and so materialistic as at this time. Generally speaking even until relatively recent times, the influences of pride, of self-expression were stronger motivating forces in the creation of human environment than they are today.

We like to believe that generally the limiting factors of our architectural design are technical, those set by advancement of our science. But this fact is not so. With the exception of those extreme accomplishments of engineering such as bridges, dams, or large span buildings, generally speaking our environment is not limited in shape or form by technical consideration.

There is a characteristic example of this in our skyscraper which started to follow at close range the advance of technique as new materials were offered which allowed it to go higher. New heights were reached within the range of a relatively few

years. Up to a certain point, the motivating force was one of a remnant of civic pride that kept buildings going higher and higher. That was until about twenty-five or thirty years ago, and as far as the technique would allow so the building would continue to rise. We have reached the maximum point and we have now backtracked from this. There is no Chrysler or no Rockefeller who will still plan his buildings under this motivation. Today the limit of New York buildings is generally established at about thirty or forty floors—not by architectural considerations nor by pride of ownership, but usually by the efficiency charts of an elevator expert.

The decline of motivating forces other than economic that has taken place, can be no more evident than to the inhabitant of this city where not long ago it was established by the ruling fathers that no public buildings will be built with any more than the minimum necessary material for proper operation and maintenance, and that no money would be expended for expression of art that might be controversial or for the purpose of beautification. Thus, we see the paradox that a city in a society that has accomplished the highest standard of living denies for its environment and public buildings, for the *Rathaus* or *Palazzo*, nothing but the absolute minimum that economy justifies.

This is somewhat true in all cases of planned development where tract housing or large apartment housing is planned. Generally speaking, the notion of maximum utilization within the rules the community sets for itself tends to prevail in the basic solution. Within this sort of straightjacket the designer is forced to operate, obviously with certain limited opportunity.

This is on the negative side of the influence of economic pressure on design. It also must be said on the positive side that its influence becomes more constructive once a certain minimum point of return is reached. Within the last four or five years we have seen tremendous revival for urban redevelopment which up to recently has been relegated to the field of ideological planning, spurred by the lack of planning becoming too costly. We see the same factor that can operate negatively at one end can also operate positively at the other end, and it is the simple function of the designer to interpret and to fit in as much as possible the negative factors.

As for the second influence, that of *communication*, it is very hard to establish for our own time. It will be much more obvious to the historians who will look into our own doings years from now. But there is no question that as much as *communication* has been responsible for cross-fertilization of all the cultures that have locally taken place and influence each other through time and space, it has also been true that in times past the lag of time and the lag of a totality of information have allowed the maturing of alien influence into local influence with the enriching of both. Today the absolute total information that anyone anywhere has about anything provides no chance for local ripening and maturing.

On my way to Australia I had sitting by me a very distinguished gentleman with a slight Dutch accent whom I took for a diplomat. He was a representative of Kawneer on his way to Australia to see how Kawneer store fronts could be produced and installed, and was therefore following a route around the world to accomplish this end result throughout.

This is not only a matter of technical information. It is information on all fields that is so total and so immediate. It is on social, economic, and political fields where the identification of exterior expression of design with political and economic factors is almost automatic, and where, generally speaking, the fact that we enjoy a higher standard of living is interpreted almost

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without question as being represented by our own accomplishments in design.

It is rather disturbing as one sees the new growth of cities in Europe, Asia, and Australia that they all look like rather poor imitations of the growth of our own communities. There is no influence any more of regionalism or local influence that has any maturity. Somehow, except for Europe there is a feeling of inferiority because of a low standard of living. Just as in the earlier years of this country all cultural activities were looked upon as coming from Europe; now much of the world is attracted toward the American standard, and thus American design.

The meaning of this is only that it places a tremendous responsibility on the design initiative and design development which are taken here insofar as they have repercussions that are far greater than simply those occurring within our own boundaries. Because we design within a higher standard of living and within a higher standard of production, we have wittingly or unwittingly become extremely important standard bearers for the rest of mankind.

The third concept of *forced obsolescence* is somewhat related to the first—of economic pressure—but it is a far more insidious one because it tends to rob us of our own gains as we accomplish these gains and because its implications in terms of design can be very destructive ones.

The concept of *obsolescence* as such is directly related to the increased reliance upon technological advancement. As new products are designed and as new accomplishments are achieved, new desires are created and new markets are opened. But when the *obsolescence* is artificially created in order to maintain our machine production then we not only defeat the original purpose of progress but we actually defeat our own standards of living.

The influence of artificial *obsolescence* on design has already been quite visible in the fields of industrial design where production for use and disposal have been developed and have become part of our own pattern of living. Kleenex versus the handkerchief is a very good example. Disposable dishes have followed. Now we are getting very close to the disposable car and not very far from the disposable house! And it is conceivable that we are getting quite close to the disposable city. In fact, Los Angeles has already done so. We have disposed of our downtown district by the creation of a number of satellites, and the moment you begin to deal with wholesale raising of slum areas and replanning you are actually applying *forced obsolescence*.

The concept of *forced obsolescence* is not necessarily objectionable. It does create a completely new approach, a completely new set of values on architectural accomplishments. For now nothing has value insofar as permanency is concerned but only as specific other values are concerned. As the object's life span is reduced, its value to be transmitted from generation to generation tends to be obliterated and all of our historical background strenuously rebels at this.

I do not state any conclusion out of this except that *forced obsolescence* is going to be with us to stay for it is a concept inherent within our economic system. We should be alert to exploit its positive side, to reject its negative features as much as our abilities allow.

By way of minor conclusion (because the observations were not meant to have one), I would like to repeat the point that I made before. We have, I believe, reached a point where the determining factors shaping our environment are no longer

determined by technical limitations. If we can recognize that the technical limits apply only to certain specific problems and not to the generality, and that the technical potentials are far greater than the demands of normal problems, then we have avenues open to us for greater imaginative thinking. We are opening a page to the wealth of our civilization if we free ourselves from self-imposed limitation of economic negativism where not the form but the spirit that created baroque can again be ours in new and far richer terms, and I trust we will see this development in our day.

As Viewed by a Designer

Charles Eames*

I am a designer, a certain brand that has come out of architecture, and it is a nice group to be part of. There has been good precedent for it. The reason I am not considered an architect, I suppose, is more because I consider all things architecture than because I am not practicing. You see, I think I am really practicing architecture and anything that I touch would be architecture. However, the architects do not look at it quite that way.

In terms of the subject, one interesting thing is that we have all so far interpreted the subject in different ways, and so far I will go along with either of the interpretations. My approach is a different one. I consider a converging force on design as one which, acting at this moment, will have an effect on design in the future. The word *converging* somehow led me to think of a force which is not normally connected with design in the everyday sense. We may think of force as a pressure that exists in order to fill a need.

I have arbitrarily selected two very important forces which I consider acting at this moment and likely to have significant effect on the design of the future. Actually, I am quite optimistic about these forces, for I feel that they will act in a positive way.

The first of the two forces which I have selected is almost a universal need, *an atmosphere conducive to creativity*. We see examples all around us. This need has nothing to do with attempts to raise the aesthetic level; there is no aesthetic or moral push behind it. It is a need that is very real and down to earth. It comes from a need to cope with problems of a new magnitude that are popping up in all areas—political, social, scientific, and economic.

To cite one example: the attempts to provide intensified exposure to a variety of experiences. Take the work done by the Bell Telephone System in Pennsylvania. Bell Telephone had been using young men out of executive training programs, such as Harvard Business School, fellows who had been well trained to solve a specific set of problems that executives should come up against. As these executives rise to key positions taking the place of some of the men that have come up through the line, they were entirely capable of handling problems in areas in which they had been trained. But more than that was demanded of them. These men proved incapable of handling problems that never existed before, and it caused quite a bit of consternation in the Bell Telephone laboratory. As a result, in co-operation with the University of Pennsylvania, there was

*See biographical note, page 6.

instituted a program within the Institute of Humanistic Studies for Executives that had a marvelous combination of content. The executives studied Joyce's *Ulysses*, music, philosophy, art; they dabbled somewhat in painting and a whole series of peripheral things to which they had never been exposed.

In a way Bell Telephone found that it was introducing into the lives of its college-trained executives some of the very things that automatically come into the lives of the executives that had come up from the line, climbing telephone poles, and so on. This is not unique to Bell Telephone, for Inland Steel and quite a few others have been up against the same problem.

The second example of this need to establish a *creative climate* are the general attempts to break down barriers that exist between the various areas of learning—tendencies to reduce even the number of basic principles that govern the behavior of matter and man. While many things have grown in complexity, actually the basic principles have been reduced in many senses, and in order to treat any area within these basic principles, it is necessary to break down other barriers.

I think an interesting example of that was an article that appeared in *Time* magazine not long ago describing a young fellow who had entered the field of education with great enthusiasm. He started to teach high school—and this was his life's work, to deal with children, to educate, etc. He started out, and during a course, say mathematics—this was in an elementary school, so he had all the various facets of their activities, you know—problems would come out of sociology or other fields. He would go along trails of interest, crossing over borders to other areas of learning, and he became quite popular. The students followed him around, and pretty soon a special table for luncheon was arranged so they could talk about travels, different philosophies, and foods. And these students began to suspect that maybe "store-boughten" bread was not the best kind, and it would be fun to look into the subject of bread, etc.

But then other questions were asked, questions of morals, and he said, all right, what we will do is study all the religions of the world and different political ideas. This led him to suggest that they take a look at Communism from the viewpoint of those who started it and see what makes it tick. Oh, brother, all hell began to break in this little town! The idea was to let the children really know and give them a chance to make the decision.

Another example is the necessary attempt to produce more engineers and fewer technicians. This is a very serious problem. We are building airplanes that fly faster, higher and are bigger, that get more and more complicated all the time, and if we do not come up with a basically new concept, something is going to give.

Another example is the value placed on the ability to associate a variety of ideas and to relate bits of improbable data. How can we do it? How can we train a child from the beginning and give him a background of associations so that in solving a problem he can solve it on a conceptual basis and not on an extension of existing techniques?

I will move on now to the second force which is the *tendency for life in our time to become an open game rather than a closed game*. By an *open game* I mean something like dice or chess where all physical elements involved are out for everybody to see, in contrast to a game of poker where each individual player conceals his holdings and his strategy.

The reason for this trend is obvious. On the one hand, our life has become very complicated. Each individual problem has become complicated. On the other hand, communication theory

and development have been extended so that information can travel at an unprecedented rate.

An example of this is military strategy. This used to be a *closed game*, the tight secret. But during the last war a great emphasis came to be placed on any strategy which fell in the category of an *open game* because it became evident the best possible strategy was one that could function with the complete knowledge of the enemy and still work. Many valuable tools and theories result from this work.

Politics, which always has been the essence of a *closed game*, can never be the same since the 1952 political convention and the McCarthy hearings were televised. Here is a fine example of a trend toward an *open game*.

In business this is well known to anyone who has had to work within production, sell or buy things on a large scale. If you go to Sears Roebuck to sell them a component for one of their products, you say this cost so much and they say they can pay so much. The reason for your figure is this: that you have a basic cost, you have spent so many thousands of dollars for tooling and X dollars to amortize it, and this will take some time. You have some direct labor which amounts to so much and upon which you have to have eighty-five per cent overhead, the nature of the overhead is such and such. You expect a ten per cent profit, realizing eight per cent since two per cent is allowed as a contingency. The fact is that you are practically within one or two per cent of the truth. You are playing an *open game*. So must Sears Roebuck. The complexity of the Sears Roebuck operation would be so great if they began to introduce lies that it would be unbelievable! You cannot handle or delegate a lie with any degree of success. This has nothing to do with the moral issue.

The open examination of personality through psychology and psychoanalysis as applied to both persons and communities is a further interesting aspect of this trend toward an *open game*.

I just ought to point out the impersonal nature of these two forces: the need to construct an atmosphere conducive to creativity and the tendency of life to approach more or less an *open game*. The first one has nothing to do with a desire for new aesthetic values. We must be creative if we want to survive. We have to be in a position to come up with some new basic concepts in order to cope even with the success of past concepts. Mass production for example, was a concept which was going to raise the standard of living. This concept becomes a success, but it introduces other problems. If we are going to maintain the standard of living and also those spiritual and moral values which we consider as part of our cultural development, the need for the *open game* becomes fairly obvious. This has nothing to do with morality. It is not because lies are bad and truth is good. It is because lies are inappropriate and awkward to handle, and in a way, I do not know that this is so bad even from the moral standpoint. I would rather the truth be appropriate than it be highly moral.

The first force that I am talking about brings in the "whole man" aspect. Its greatest effect on design, as I see it, is to encourage the responsibility of men at all phases of activity. I see the effect of this more on design than necessarily on designers. It implies the extension of the responsibility of each individual at every level of activity—the opposite of the curse of specialization that has come in through the specialist where, bit by bit, each man has begun to forsake ideas, concepts, responsibilities on the periphery, retires to his own little dogma and refuses any of these responsibilities. This goes for the produc-

tion man, educator, politician, businessman, etc. Once you can start such a chain reaction of this "whole man" business and once these other responsibilities are accepted as the only way out or possible way out of our dilemma, then everybody is again in the act in some way.

In terms of the *open game*, the greatest effect that I would see on the world of design comes through some of the actual tools that have been developed in military, business, and communication areas. Inasmuch as handling such situations depends very much on the simultaneous handling of a multiplicity of factors, you will find that a potential tool is being shaped that might also apply to architecture, planning, and design. We shall have to remember that no matter how helpful or effective this tool, it has nothing to do with relieving the man using it of responsibility.

Just what the effects of these two forces will be on the designers and architects, the specialists as we know them, we cannot precisely guess. It is also possible that unless the designers are awake to all of these forces and these tools, they might be left off in some corner and the mainstream go right on by.

As Viewed by an Architect

*Richard Neutra**

This whole assembly consists of people who are probably the most influential people in the world whom I have ever seen together in one room. Or they ought to be. The question is if they are not, why are they not? Evidently this is the subject of this panel discussion. What would make them more powerful would be if they could help the convergence of these forces which are so complicated and divergent: forces which determine the physical environment of current humanity, its appeals, stimuli and irritations.

On one of the campuses which I had the privilege of visiting—and I have been on various ones—I see many faces here of gentlemen who have been kind to me as hosts—I met a student, a young man who claimed to have experience with coeds. What he explained to me was, that there was not just one kind of girl, but there were really four types—"the mental," "the temperamental," "the accidental," and "the experimental." It appears to me here is a division which fits also the architecture which Mr. Contini has seen on his world trip.

I would say that mental architecture is supremely steady-going and purposeful. Then there is some "temperamental architecture" which is fashionable, purposefully vacillating.

The accidental architecture evolves and features irregularity. And there is the experimental, over-experimental, experimenting along for the sake of experiment.

Is not that fairly correct when you go all over the world and see what is produced by architects and by students as modern architecture? I am not speaking of the traditional things penetrating the curriculum in New Delhi or Istanbul or in Thailand. I am speaking of current or modern architectural design classes in these places. Let us hope that the discussion will bring out how convergence can be brought about.

I was told to be very brief. I shall stop my verbal presentation right now. Perhaps I can show a few pictures to concretize

*See biographical note, page 6.

these various types of architecture in need of a common denominator.

(Slides) Perhaps I can let the pictures pass without much comment. I think these pictures should speak for themselves, largely.

(EDITOR'S NOTE: *The Journal regrets that it is unable to reproduce the slides but retains some appropriate remarks.*)

(Slide) This is a big city, not in U.S.A. but almost equally unmanaged, Sao Paulo, Brazil, precious little order, things are developing by themselves. In this case it was a traffic engineer who is the Mayor—which would be a rare coincidence with us—clearing out the center and having some freeways or throughways cross over each other, right in the middle of town. The whole world ambitiously tends to look like this if you let it go.

(Slide) This is Caracas. Here is some broader social interest in a young generation of architects who are starting to work. Last September I was privileged to make the main speech at the Pan American Conference of Architects, there, in a city which surely shows all our early dreams coming true—everything looks as if designed by Mr. Gropius, only more so, and developed terrifically fast. When I came back, six months later, in February, I saw much additional mileage of freeways and many new skyscrapers. And I was shown a bridge which, they pointed out, was designed and built in seventeen days! Not quite the size of Brooklyn Bridge, but something on that order.

(Slide) This is housing in the capital of Venezuela. These shacks are being cleared out. Red signs are being painted on. This has only come up since September. In February the red signs were glowing on huge clusters of these shacks, and within twenty-four hours the people are marched away by the police, and the chickens run away on their own account. Everything is burned down to prevent reoccupation, and up they move to the 16th floor. Of course, goats and pets are not allowed.

These are some of the pictures your students see in the magazines with some of the forces which converge on their minds. It cannot be compared with, let us say, what Le Corbusier speaks of as social interest or as the remodeling of the urban scene. There evidently is a special charm in pictures like these here, which goes beyond urban sanitation and clearing of slums. But I must say that in conversations with Le Corbusier he talked of nothing which you see here! He and his young men insisted on discussing rentals in Marseilles, and he would not talk about fascinating looks at all. I have known Le Corbusier for a long time, but I do not think that the main thing he accomplishes is what he is talking about.

(Slide) This is in Chandigar, India, and actually a most successful city which Le Corbusier undertook, though not for reasons which Nehru's political opponents recognize. I was there with the All-India Planning Commission who tried to find fault, in order to build a fire under Jawaharlal. Quizzed as a visiting fireman, I stood up as a defender of the West gone East on invitation.

The high Court Building—the photograph could not do it justice—hung on rods and wire mesh. This shading top baldachin roof looks only like a daring thin shell. It is not, but has the formal appeal of ingenious arbitrariness. This is even more so, if you look at this detail (Slide) and this slide, and if you see the plaster and concrete take on pure blue, red, yellow as color treatment under the canopy of the desert sky, and with the milky vague foothills of the Himalayas as a backdrop.

(Slide) You see here some of what I called charming irregularity in an entirely different part of the world and in different

material. You cannot say Le Corbusier is the inventor of concrete. His significance is another one. His significance is not that nor is it his social philosophy. Nor can you say that Alvar Alto is primarily a man who knows just how to put two by fours or timbers together in some way. Evidently some other charms and other very non-material force are back of this man and propel him to do these things here, which I snapped, and that impress so many people all over Scandinavia and the world. Even in Spain, a country which is extremely masonry-minded, I found the popularity of Alvar Alto amazing. Forces work—if not converge—over a distance. Look here at Miguel Fisacs' University Buildings in Madrid.

(Slide) You can consider these pictures as dictated by constructive craftsmanship. This is a strange suspension system to support a roof. How do you make this converge? This has also something to do with economic accidentalism of local supply, and with the formal one of which I showed a sample in Alvar Alto's work.

(Slide) The interior of the Bavinger house by Bruce Goff. Architecture does not usually look that way—I am lucky I hit on the right exposure time to get the colors to support the forms. Rooms are just carpeted decks, floating in the air, hanging on steel rods and people walk and rise from room to room. It is all possible and evidently can make people supremely enthusiastic, owners as well as students. It cannot be discarded, even by people who could oppose this or that. It has impressiveness and expressiveness. It has allure, and means something to so many young people especially. They may themselves not be able to do quite that but something along that order.

(Slide) Here you see something else, a thing which is evidently quite different. It is great regularity which is the charm here, with Mies van der Rohe. This shows only two towers at the lake the third one is in construction—after all, criticism has rightly not intimidated the backers. If there would be five or six towers more, they would all look alike, of the same regularity. They would not be particularly relating to where the sun rises or sets, nor would they be really following any particular structural necessities. They would not be primarily conceived as to heating and cooling load, and so forth. They would not be particularly interesting to a student in those fields or in individual consumership. However, these designs have surely caught the heart of a tremendous number of people, from Winnipeg to Houston and all over Western Europe. These are forces which are in existence, this side of the great curtain of thought control. East Berlin does look different, of course, and so does Warsaw.

(Slide) Turin—the Exhibition Hall. Here you see some work of engineers. Here, Mr. Contini, I should like to have some pictures of your own work. This here is the impact of prefabrication in reinforced concrete for which Nervi became the pioneer. Lovely, long enjoyed repetitiveness—here by good reason of production feeds a “pattern” to souls, long ornament starved, but ready to sin against austerity.

(Slide) You can see wide span buildings—as Mr. Contini says—only a very small part of our total architectural output. They have been handled by engineers in a superb way, and it has interested architects who are just amateurs with respect to this.

(Slide) This is by Felix Candela. Finsterwalder did those things and Buckminster Fuller makes them fascinating and loves inventiveness. This is the Cosmic Ray Institute at the University of Mexico in Mexico City.

(Slide) Here we see a very wide span church by Candela. Interesting that when the influence of engineers comes to mingle with them, these architects get easily derailed. Felix Candela is one of the most imaginative of men, and Enrique de la Mora is here his running mate.

(Slide) You see Eero Saarinen, in combination with an engineer. Their work has a certain difficulty in mutual connection. These pictures do not show fully the problem. The architect has his problems to get along with the engineer. The engineer if you could leave him entirely alone, would often be a most impressive man to architects and other people. The architect, enthused by engineering, brings up the controversy of fast fusion in minds,—from North Carolina to St. Louis.

(Slide) Here you see Felix Candela again. Now he is acting himself as architect. The historical three nave church. Three quarters of an inch thick vaultings—very different from a Gothic cathedral, non-monolithic in the making. You see these walls of thin shell are winding and warping down into supports which are not really columns.

Now, perhaps I should say something about my own ideas too. I think there is a converging force. *It is the more or less sensitive, more or less conditioned responsiveness of human beings and the ability of the peripheral senses and the “central area” of the minds of human beings.* It is the ability to combine a building with the landscape, to sense them together. “Stereognosis” is the physiological term. I experimented a great deal with steel and with reinforced concrete construction and this and that material when I was young, but I think my main interest is this: I believe the human material is wondrous and touchy. It is constituted to harbor some strain, stresses, and balances inside the skin which can be, and are, very much unbalanced by the designer of our physical environment.

(Slide) Here, to end it, I would like to show you that architecture is not a space art, but it is a space-time art and deals in time just as well as in space.

You see a morning in the desert. The reflectiveness of the pool is rather symbolic for the intent of the composition. The architecture reflects the mood and the unstable characteristics of a landscape as it changes dynamically during a day or during the seasons of the year.

(Slide) This is a blue sky with white clouds, you see, coming over the water. The pool looks quite different now, and the wide banks of window draperies are being opened. Modern architecture is capable of dynamically participating more than ever before in the changing moods of the natural setting. It mirrors them by subtle adaptation.

(Slide) The next picture here: looking into the cavity of the interior. But now, again: everything closed, overcast sky, and the whole building seems to be modified, together with the landscape, turned into a new emotive modality or scale.

(Slide) When the afternoon comes and the sun is low, the building is again different. This has nothing to do with structure. It has nothing to do so much with static forms or colors. Evidently the color play is going on in nature, surrounding it, merely echoed by the sensitive man-made, man-appreciated assembly, placed within this great nature, which extends from the stars into our innermost being. For all the stimuli of this wide range we have our millions of receptors.*

**Life and Human Habitat*, Wittenborn & Co., N.Y.C., recently published, continued the manner of approach first followed by the author in *Survival Through Design*. Oxford Press.

(Slide) Illumination is also tied in to a natural relationship with an evening sky.

(Slide) And finally, everything turns night, but reception of architecture goes on. I really think, to show a series of the same building—as “sensed time” goes on, as the hours go on, as the landscape changes, the weather turns—seems to me to drive home the point that architecture is not just a structural art, nor even merely an affair of space. In many ways it deals with space-time of our responding life processes. This deep response never ceases.

(Slide) Thus, the converging forces have something to do with human responsiveness to the whole—to the landscape, together with the artifact insert which man puts in.

Biological appraisal may be a good appraisal of towns and buildings, “biological realism”—a common denominator to all good design.

Discussion from the Floor

MODERATOR WURSTER: I now open this meeting for discussion and questions. Whoever asks the question should direct it to one of the four panelists.

MR. WAECHTER: I relish the presentations of the four speakers—whether or not they design in three or four parts. I was somewhat disturbed by Mr. Contini’s remarks. Even if we might concede that design perhaps is disposable, I am very much under the impression that engineering has made a building today more stable than ever. In some cases harm is being done in designing buildings of inferior design, and I wonder what could be done to create a better balance and proportion between the efforts being put in architectural design and structural design.

MR. CONTINI: I would like to clarify the point. I did not uphold the desirability of disposable architecture. It is going to come upon us because of forces that we cannot fight single-handed. Historically, we are all opposed to disposability of architecture, but we might not have a chance simply because of historical background to offset other forces. It is quite true that we are capable of building durable structures, but economic forces make this capability an insufficient reason for their permanence.

My point is that if the force of obsolescence is to be with us, we must grasp its positive facets and exploit them to improve those environments which were created earlier in too much haste and without enough thought. In the next twenty or thirty years we will have new environment. Let us accept the concept of change and be the shapers of such change in a design way rather than let the change take place simply out of economic factors.

MODERATOR WURSTER: I did an unpardonable thing in recognizing speakers from the floor and not giving the panel members a chance to come back at each other before general discussion.

MR. EAMES: I think, Edgardo, when you said that you categorically oppose a disposable building—this would not be actually true. If I had a problem of a disposable building I would certainly come to you as the engineer because I think you do a marvelous job of it.

MR. CONTINI: Historically we have been against the concept of disposability. But in the future general pattern of progress, disposability is going to be the prevailing pattern within which

we will be operating and there is no sense being judges of it. Let us just accept it.

MR. NEUTRA: Is not the expression “disposability” introducing also the time factor to architecture? The eternity of the Pyramids has made people call architecture “frozen music”—something like this. Which brings us to what I said, too, that architecture plays in time.

MR. KAPLAN: I am delighted to find there was considerably more convergence in the panel than I had originally inferred. We all converged on a recognition of the primary role which, in the present circumstances in which the designer works, has to be assigned to the human material, to use Neutra’s phrase. This is not merely with respect to the stresses and strains to which that material is subject, but also with respect to its sensibilities and resources.

What has been said is that there is a certain kind of groping for a coherence in our culture which in previous periods was provided, so to say, from above. There were certain ideologies, theologies, or moralities in principles fairly generally understood and accepted. Specific practices, even down to the details of architecture, design or decoration were, more or less, deduced from them. We do not have any such overreaching principles, but we are still looking for a coherence, and it seems we are looking for them in the right sort of way, namely, from below.

It may be that you will have to begin to pay as close attention to the human material as you do to these other materials. When Contini points out, what is perfectly true, that boards of governors and politicians make decisions on characteristics of buildings, it suggests that the man who faces the task of making design acceptable should treat this as data for his problem in the way in which he will treat the properties of various structural elements. He might have investigated beforehand some of the characteristics of municipal government and of public administration, the psychology of taste and political philosophies, and the other elements which enter into his specific problem.

I have an analogy in mind. It used to be the case in medicine, that if a man suffered with gastric ulcer it was thought something was wrong with the tissues of the stomach and doctors addressed themselves to the physiology of that organ. Then comes psychosomatic medicine with the recognition that it makes no sense to tinker with the tissue of that organ as long as he has the kind of wife or employer or temperament he has. It seems to me this points to what might be termed “psychosomatic design.” We have to recognize that a specific and acknowledged part of the training and the interest of the designer is attention to the social and the political, in a word, the human elements which make the design what it is. If there were a single answer to the thoughtful question that Neutra raises as to why architects are not the most powerful people in the world, I think the answer might be because they have been turning their eyes away from the foci of power in human affairs, which is to say, the human being himself.

MR. EAMES: Any comments I have to make are in terms of levelling off some of these ideas. I do feel that Dr. Kaplan’s presentation stands as a measure of not just future design as it is developing but design of all time and as a check list against which we can evaluate our progress. I would like to ask him a question about the Romantic Expressionists. When you get to the height of them, in men like Cocteau, how could they have avoided being external expressionists because they become so much a part of their time?

I would also like to ask Edgardo something in terms of how this materialism differs in any way from pride, selfishness, or

the obsolescence as a motivating force in architecture. I do not necessarily expect an answer except as Edgardo wants to when he gets his turn.

And I would like to ask Mr. Neutra—he is the last person in the world that anybody ever accused of being anti-intellectual—whether in his book he suggests a kind of suspicion of science, a suspicion that I do not really think that he has.

MR. NEUTRA: No.

MODERATOR WURSTER: Maybe Contini will pick up for a moment and then we will pass on to you, Richard.

MR. CONTINI: If I understood your question correctly, it had to do with the emphasis on economic pressure. You offer the answer to my answer already. The two examples that you quoted of the cultural interest of Bell Telephone in its executive and of the attachment to truth rather than lies are both economically motivated, not by real interest in the individuals or in morality and truth, but by better profit in the end. There is nothing wrong with this, but it indicates that we are generally in a society that is profit motivated. The only drawback in such a society is that we usually judge and measure a standard of living by quantity of goods rather than quality of goods because quantity is related to profit and social status. Quality of environment involves direct relationships, enjoyment between man and his surroundings without any profit or participation by others. It is our function somehow to reestablish a balance whereby everything enters the environment directly without any intermediary of profit. We should create an atmosphere that would offer the designer more opportunity for exterior expression and for joy of creativeness, and which would, therefore, create a richer environment for all of us. In that sense only I question the quality of the profit motivation to society.

MR. EAMES: When somebody is concerned with good, it is not that he is being selfish; it is that he is not being selfish enough.

MR. CONTINI: As I pointed out, the extreme of the profit concept is to be found in current urban development trends where society itself will demand it when the price for lack of concern of total good becomes too high.

MR. NEUTRA: I resent, Charlie, that you more or less implied that I walk around spreading a suspicion against science. I think my friend and partner, Mr. Alexander, who just came in, knows that I have been very much interested in defining what science has contributed, particularly that observation, curiosity bring results. If there is a divergence of forces in architecture, first we have to see the pictures that I have shown. These provide examples by people whom we all admire. They are all very different, and they have an impact on the minds of students, your library in which the *Architectural Forum* and other magazines can be seen. The important thing is not to see only the concrete facts but rather to see the forces that lie behind them.

MR. DINWIDDIE: It has been said that Americans have no taste, only standards, and Dr. Kaplan relates that to culture. I wonder whether that time is passing swiftly. That brings me to Mr. Contini who is talking about planned obsolescence. We know there is a kind of design that is temporary, such as a hotel building where we enjoy it for a moment, like the Biltmore, where if we had to live with it for any length of time we grow very quickly tired of it. Are we moving so far that we are coming to a point where we are deliberately designing in a temporary fashion rather than for permanent values? I would be interested in Mr. Eames' opinion on this.

MR. EAMES: We may be just coming into an age of permanent values. If we come into an age where the permanent value is

a changing thing, then it might mean that the permanent value of society was helped enormously by the impermanence of its architecture. Those values then take on other than a physical or monumental aspect. This does not mean that the answer is impermanence. But if the answer is in impermanence planned, let us not avoid it because it is impermanent.

MR. LAING: Mr. Eames touched on this and I am addressing this to Dr. Kaplan—on externalization. There is a certain paradox in the work of some modernists, which seems to be an intensive need for individual expression rather than the abandonment of individual expression. I wonder how this can be reconciled with the general tendency toward externalization.

MR. KAPLAN: We have been talking about the cultural matrix in which design operates as though the forces went in only one direction, and the designer is the passive recipient of these forces and is helpless, at least standing alone, in the face of them. But the fact is there is a force in the other direction. Design is not just a product of culture but also produces culture, and the question about creativity of the individual that you raise, it seems to me, finds its answer not in the fact that he is an individual but in the success of his creativity. But insofar as it is successful, he loses thereby his individuality. It then becomes a part of the common fabric of culture and no longer something which is peculiarly his own mentality.

We recognize all sorts of forces that are converging on design from the outside and because they come from the outside there is, understandably, inevitably, a certain amount of resistance to them. So, Mr. Contini called attention to waste. The conclusion is not that design ought properly to claim for itself a certain kind of autonomy and be allowed to work without regard to these other materials. It should rather examine more carefully what are these external purposes and agencies operating towards, the values. And how far these values, if they remain valid after such a scrutiny, may be adopted in the design.

MODERATOR WURSTER: Like all good things, we must come to an end. I presume I join the whole group here in thinking that four such people could hardly be gathered in another part of the world. This is the comment on the progressive, intellectual and interesting people that are produced or come here. I for one join you in thanking our four speakers for doing a bang-up job.

The second panel session, Sunday afternoon, 13 May 1956.

Converging Forces on Design *part 2*

Arthur Gallion, moderator

*Garrett Eckbo**

Landscape design today begins with backyards and front yards and all the miscellaneous open spaces left over by building, street and utility construction, within the preconceived patterns of standard subdivision and land planning practices. It expands from these problems into larger planned open spaces

*See biographical note, page 6.