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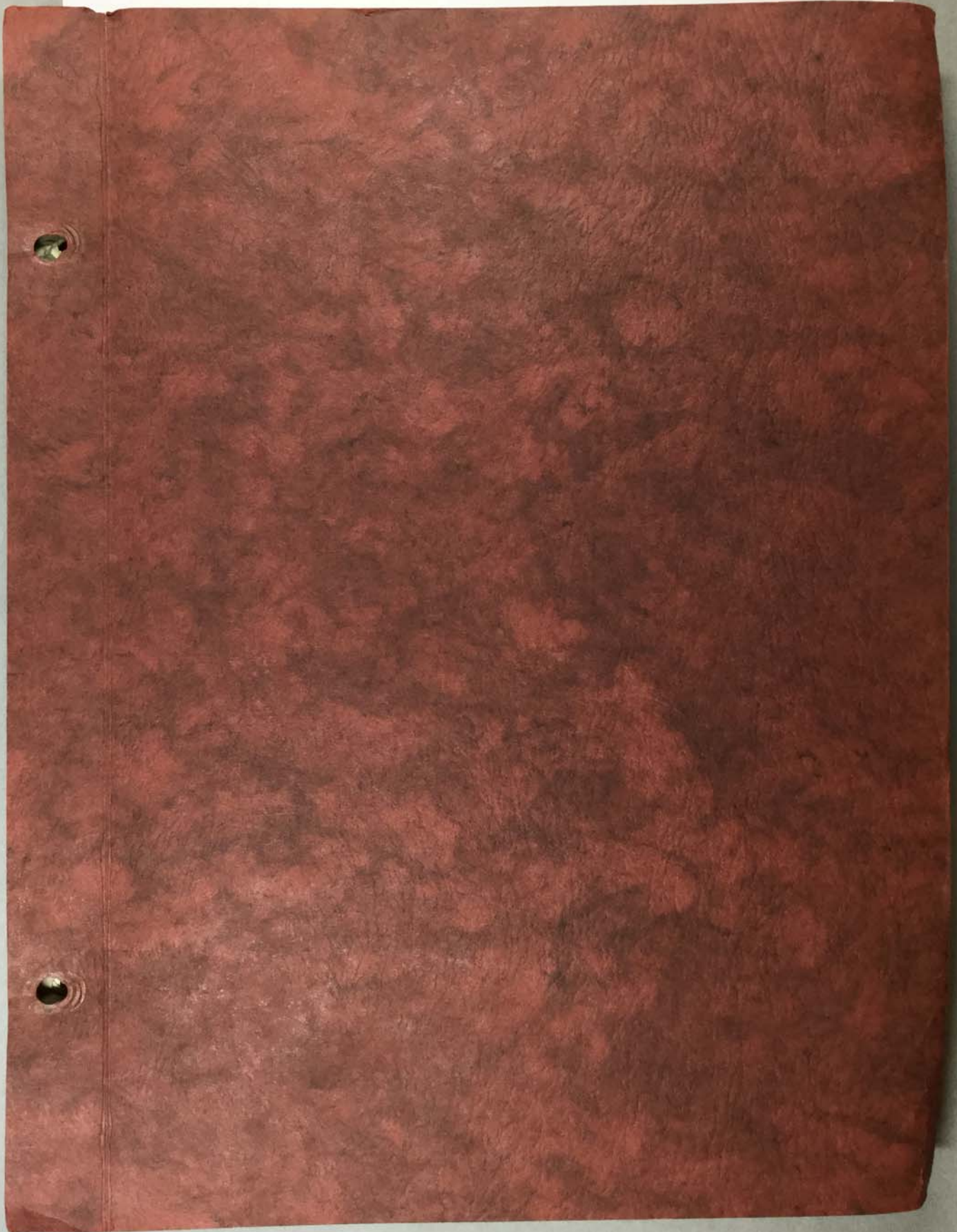
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CONFERENCE ON INDUSTRIAL DESIGN, A NEW PROFESSION

held by the

MUSEUM OF MODERN ART

for the

SOCIETY OF INDUSTRIAL DESIGNERS

Museum of Modern Art
New York City
November 11-14, 1946

STENOTYPE ACADEMY REPORTERS
147 WEST 42ND STREET
NEW YORK 18, N. Y.
BRYANT 9-9650

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why we are having the meeting here. In the past, as you know, the Museum has had many exhibitions of what we confidently called industrial design, and we believe that in many cases these exhibitions have been somewhat useful in drawing the attention of the general public to design that we think is well executed from our point of view. That point of view is one which we believe is a fairly long-range one. We think that it is not a question of the immediate commercial necessity, as it must be from many other points of view, but that it is a question of a sort of general understanding of the fact that an object has laws of growth and appearance inherent in itself, and that this appearance can come through in a form that is often

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held by the Museum of Modern Art for the Society of Industrial
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tions on the part of a great many people. The outcome of
MONDAY AFTERNOON SESSION
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November 11, 1946

Designers kept telling us that they had a really serious pro-

fession in **MR. EDGAR KAUFMANN, JR.:** I believe we ought to

start now, although there will still be a few people coming

in, we think--we expect--we hope. I think that most of those

who will be here later understand, just as most of you do, we

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beautiful as well as sensible. In the past, those exhibitions and the use of the term "industrial design" have caused a great many questions on the part of a great many people. The outcome of some of those questions was that the Society of Industrial Designers kept telling us that they had a really serious profession in hand and that they did not feel that we always recognized all the implications, all the problems, all the necessities, of that profession when we made our judgments. We agreed that that might well be the case. We didn't know whether or not that necessitated a change in our judgment, or whether it simply meant that we were preaching the same problem from different points of view. However, one of the things that we did feel was that their very strong statement that they were a profession was a very interesting one. It had been made to us somewhat less formally than that, and by implication, many times before--not only by S.I.D., but by many other design organizations and designers. We felt that there was a good deal to what they said; that this was a new activity in the world; that mass production and mass distribution had obviously necessitated a new kind of designing, and that it could justly be called

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"industrial designing"; that it was facing problems that had never been faced before; and that it necessarily would benefit the community at large if these problems were faced from a professional point of view, rather than from a purely mercenary and short-range point of view. Indeed in getting Dean George Hudson we therefore asked the Society of Industrial Designers whether they did not believe that the whole problem of a new profession--with new problems to face, with new conditions to meet--could be discussed to mutual advantage by their own organization and representatives of other interested groups in the community: namely, other design groups; other professional groups; such as architects and lawyers; and also, and perhaps among the most important, people interested in education. very well; and he has always been interested in design. I stress that last group because, as the new profession began to take shape, the needs of the new educational program were pretty evident; and the attempts to meet those needs were, I think we can justly say, somewhat chaotic. The different curricula that we have seen have not shared many tendencies in common. They could share such tendencies, and we believe (as, I think, most of you do) that, for the benefit of design as a profession, they should. to go back to some of its In that very brief summary of the way in which

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the meeting happened at all, I have perhaps opened up some of the questions which we hope you will put to us later on. At this point, however, I want to turn the meeting over to our chairman.

We were very fortunate indeed in getting Dean George Hudnut, of the School of Architecture at Harvard, to act as our chairman. We had originally gotten George Howe, who is a well-known architect, to take on this duty for us-- but it turned out later that he could not be present. As it is, I think that we have in Dean Hudnut a chairman who represents a great many of the points of view that are crucial in these discussions: he knows professions very well, since he has had so much to do with architecture; he certainly knows education very well; and he has always been interested in design. I think we are extremely fortunate to have him here. I should now like to turn the meeting over to Dean Hudnut, with the particular hope that he will be able to say a few words to us today about what he believes it means to be a member of a profession in the modern world. I think that most of us know that the word "profession" has a very long and somewhat confused background. It isn't very important, and it certainly isn't very revealing, to go back to some of its original meanings; but it is very important to

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know what the generally accepted meaning of the word is in today's life. We have asked our chairman to say a few words about that before we start the general discussion. Dean Hudnut, I now turn the meeting over to you.

CHAIRMAN HUDNUT: It may seem a little strange that an architect should appear in this company. However, let me hasten to say that I am a reformed architect. I mean that the word "design" has come to be recognized in my mind as embracing all those activities by which men create the conscious, the manufactured, part of their environment. There is no great distinction as to the processes and intentions of design whether one is making a chair or making a cathedral. (It is rather striking that the word "cathedral" means "chair.")

If we were going to pick out the characteristics of a profession, I suppose we would say first that a profession is a body of men who possess some special skill or special competence in a well-defined field.

We might say, secondly, that that body of men continue their interest in that field and their activity in that field for a long period of time, perhaps for a lifetime. A man would not be a professional if he took up the practice of medicine for a month or for a year.

Thirdly, we might say that, to be a profession,

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their responsibility in that field should be recognized; that they should be known to be the practitioners of that art, whatever the art may be. But I think that the fourth definition is the most important; namely, that a profession is a body of men who feel and have accepted some social responsibility. After all, that is the thing which distinguishes a profession from a business or a trade. A professional is a man who feels that his skill and his devotion are directed not only to the welfare of his employer or his associates or his art, but to the general happiness of man. The doctor is concerned not only with his patient and his hospital and his science, but with the health of mankind and the relief of pain, wherever it may occur. The lawyer is concerned not only with his own case in court or with his client, but with justice--with the abstraction of justice among men.

It seems to me that that is the touchstone of a definition of the word "profession," the important consideration in using the word. Among the professions, the profession of industrial designer would seem to be, by definition, one of the most important--and, if it doesn't exist, it will have to be invented. What is more characteristic of our day than inven-

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tion and production? If you were to pick out the things that separate the modern world from every other world that preceded it, you would probably hit upon these two terms: invention and production. We have not advanced very much beyond the Greeks and medieval society in the humanities, in the knowledge of God, in literature and the arts, or even in government and politics. The thing that has assured us of greatness and given us a character beyond that of all other ages is this torrent of invention and of production.

Just imagine the immense range of things that we make and do, the laws of nature that we have put to our service, as compared to any preceding age. There is a dividing line there that brings us into another world entirely. You cannot make any comparison between our age and the Georgian Period or any other.

As for production, we are engaged in a fever of production--perhaps now more than ever. The multiplicity, the wholesale amount, of the goods we make and sell would seem absolutely incredible to any man of an age other than our own.

I sometimes think that, in sharing this need of invention and production, we have come very near to nature.

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We always think of ourselves as living in an artificial world somewhat remote from the realities of life. But just think of it for a moment: What is more inventive in production than nature? The multiplicity and complexity of nature's creations is a striking fact about the natural world--with animals and minerals and vegetables--and her lavishness in production. Perhaps, then, curiously enough, in turning to the mechanical inventions and productions--to the factory, the machine--man has brought himself not further from, but nearer to, nature. There is one thing more which I think is characteristic of nature. If that is so, then it would seem that industrial design as a profession might be more in tune with the actualities of our life; that the industrial designer might be able to contribute more to our environment, to the way of life which we have accepted, could he by chance control that invention and production or could he give it direction and meaning.

If that could be accomplished--if some way could be found through which that could be done--then the industrial designer's profession, among the hierarchy of professions, might stand almost first.

It could be done only where there is a professional group which places that accomplishment above self-

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interest, so that (like the lawyer and the doctor in their fields) they would be devoted to bringing this about: to seeing to it that these horrible and ugly things that surround us, these ghastly architectures that surround us, were changed in some way to bring them back to the ideal which nature sets us--for nature, with all her invention and all her production, never fails to arrive at beauty. Through the creation of functional forms, of useful forms, she surrounds us with a civilization more civilized than our own.

There is one thing more which I think is characteristic of a profession besides a skill, its practice, its continuity, its recognition--and that is an understood and established discipline. One of the things that gives authority and stability to the law is the acceptance by the profession and by the public of some understood discipline requisite for its practice, established by that profession itself and maintained by them.

Perhaps the one thing needful to bring about a solidity among industrial designers and a firmer establishment in the public mind, in the mind of industry, might be some such basis for acceptance and practice in the profession.

You won't get that discipline by accident. You won't have it done for you by anybody. It won't grow up

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naturally. It can't be done hurriedly. It must be the responsibility of the profession itself; that seems to me quite obvious. ~~what it means to be a professional group, what the requirements~~ The matter of educational discipline for an industrial designer is an extremely complex one--extremely so. And don't begin by trying to simplify it or thinking that there is some short way of arriving at it. You cannot throw together a few courses in architecture and a course or two in merchandising and business management and call that industrial design education. Still less, can you throw together courses in fashion-making and poster-making with a course in the history of art and call that industrial design. You can't have a course in industrial design by hiring a young man out of school at three thousand dollars a year. You must have equipment, and you must have a faculty that is competent, and you must have the guidance of this profession. ~~the slow development~~ It is no mean undertaking, then, to establish that curriculum. Yet, I think it is very urgent; I think it is one of the things that will make this profession and give it the authority that it needs.

Now, I have come here not to pronounce on these matters--for I am inexperienced--but rather to listen. I have come not as an educator, but to be educated. At this point,

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then, I should like to throw the meeting open for your comments and discussion. Today, we are to discuss the nature of a profession; what it means to be a professional group, what the requirements are, and what the means are by which that may be attained. I should now like to hear from some member of the group on that subject. [Pause] Mr. Baermann, will you tell us how you feel about this?

MR. WALTER BAERMANN: Of course, as some of you know, my interest has been mainly in education--outside of the actual practice of the profession. I feel at this moment very embarrassed that I should be the first one to stick his neck out, and I am afraid that my comments may really belong at some later session.

Let me say, Dean Hudnut, that I firmly believe that your fourth point is perhaps the most important of them all; and that your unspoken, but illustrated, fifth point--the slow development of a basic training and basic awareness of the relationship between professional education and the (so to speak) existing profession--is of almost equal importance.

In my own limited experience as an educator, I have attempted, with others, to introduce into the industrial design profession a very broad understanding of those things

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which make up our contemporary social and economic life. We have been trying to put it on an educational basis by completely eliminating, as it were, the consciousness or self-consciousness of the designer, and introducing him as a man who conscientiously coordinates forces which eventually lead to the making of a product. We believed--and I myself, I think, still believe--that that is the crux of the matter in the introduction of a recognized professional standard for the industrial designer, or he may take them as they come to him and put. Here, however, I must say something which I think is important: When I talk about coordination of forces, it becomes an enormously important issue as to whether we coordinate forces which we control or whether we coordinate forces which are simply given to us. lies the great problem in any discipline. In order to make clear what I mean, let me illustrate it: An industrial designer (to be very banal about it) coordinates consumer demands, as they are given to him or as he finds them out through research, with merchandising demands, as they are given to him by merchandisers or as he finds them out through research in the merchandising field, and with demands that are put to him by the advertiser in relation to the product he is designing or that he himself sees as appropriate in the advertising of the product.

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He also has to coordinate them with production methods, with manufacturing procedures, with materials which are available and feasible for the product--and last, but not least, with the ultimate function and behavior of the product in our daily life. He may go beyond that--and I wish he would--and also consider it as a social instrument.

Now, these forces may either be primary forces which he analyzes and, in some form, controls through his knowledge and education; or he may take them as they come to him and put them together, and thus produce something which is (by sheer luck, or possibly by his instinct) a good product or which may turn out to be just another focal point of existing uncontrolled conditions. I believe that therein lies the great problem in any discussion of whether we will be a profession or not. Can we, as industrial designers, ever have the opportunity--the concentrated and continuous ability--to coordinate and control and influence these forces which have to be coordinated, or do we have to take what is given to us? Education alone--education in our profession and the education of these professions which give us these forces which we have to coordinate--will eventually give the answer, I think, in the direction of a profession.

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~~that direct~~ CHAIRMAN HUDNUT: Thank you, Mr. Baermann. Will somebody else take up the discussion at this point? I have

~~perhaps a~~ MR. GEORGE SAKIER: I am speaking up at this point only because nobody else seems to want to speak; there was one of those painful silences just now that somebody has to jump into.

I feel that I should take this opportunity to express the gratitude that the Society of Industrial Designers feels for having this open discussion conducted in the manner and the atmosphere in which it is being conducted. I am very happy that it is Mr. Kaufmann under whom these problems are being resolved. I think it is clear to everyone, from Mr. Kaufmann's remarks, that he is primarily interested in getting as close as he can to the truth of the matter. I had a rather reminiscent thrill when I was listening to Dean Hudnut. I was reminded of my college days, when I listened to the inspired wisdom of the men who devoted their lives to the truth in their profession. My remarks are to be understood as the remarks of one who is speaking as a representative of the Society of Industrial Designers. If it is not out of order, I should like to point out how our claims to being a profession follow the pattern (at least, we think so, and we are striving in

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that direction) that Dean Hudnut has laid out.

In the first place, as to the duration; I have perhaps a better right than anyone else to point out our claims in this direction because, with the exception of one person who is not alive today, I am probably the very first of the industrial designers. I do not remember exactly what the second and a third points were, because I was so completely interested in the fourth and the unspoken fifth. I agree with Mr. Baermann that those last two are the most important ones; and I think that directly and indirectly, over a good many years, we have fully demonstrated--as far as we could go--that we were unconsciously obeying the laws that pointed our directions toward a profession. Responsibility to society is really what the last two points amount to. I implied a moment ago that we have followed in these directions almost by instinct. In that connection, I think that many of you will remember the activities, about ten years ago, of the National Alliance of Art and Industry. It was at that time the only--or the most inclusive--representative of the creative artists in industry. It was an institution which included the industrial arts, as they had been known before, and the new overlapping profession of

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industrial design. and, seriously enough, those men constitute the bulk. We had a number of exhibitions, about which we were all very happy, and a number of activities took place which we felt were helpful to everyone. Then, a big exhibition was planned at Radio City--and, for various reasons, some of the people who were then active members of the National Alliance began to feel that the whole thing was getting a little bit too big for its shoes. We suspected that there was a possibility (we never had exact proof and I don't wish to claim so, because I may arouse ghosts) that our artistic ideals had to give way to the possible sale of a certain amount of space to large corporations which would permit the introduction of objects which we didn't think were as honest as they should be, just for the purpose of making a splash and getting someone to pay for it.

We may have been wrong in suspecting this, but we felt we had some evidence to support our position. A number of us therefore drew up a statement of objections and sent it to the papers--and the result was the temporary breakdown of the organization and the exhibition. The curious part of the matter is that almost every one of those men has, in the years since then, become a successful and estab-

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lished practitioner; and, curiously enough, those men constitute the bulk of the founders of the Society of Industrial Designers.

That shows our instinctive objection to the displacement of what we considered an ideal greater than a purely commercial one. I think our objection was valid; and I think we proved by direct action that it wasn't just an empty notion on our part, that we were not merely giving lip service to our ideal. We lost our only public connection or opportunity to express ourselves publicly, and we did that willingly because we felt that our ideals were in danger.

At the other extreme, we felt that industrial art occupied a position which was not identical with that of the old industrial arts that had been going on for centuries; that we were now entering industry, where there was a new type of problem to solve. In this connection, I must speak only for myself, but I think that I represent the point of view of the others. I exhibited my work several times at the Metropolitan Museum of Art--and very gladly--but I was always a little bit disgruntled (begging Mr. Bach's pardon) about the fact that the greatest part of the work, although extremely beautiful, had no relation to industrial design. It was a tour de force

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on the part of this designer or that designer--or this architect or that architect--with no relation to what we thought was the larger problem of mass production. thirteenth room (although ~~the~~ There were a limited number of people invited--twelve altogether--to be represented at the last exhibition, and I had the honor of being one of those who were asked. I said that I would suggest a thirteenth invitee, if I might, in order to make the exhibition--to a somewhat greater extent than was true in the past--an exhibition of what we think is industrial design. way if they had been faced with the issue.

Being asked who the thirteenth invitee was, I said that there should be an "Anonymous Room," devoted to the really splendid things in the five-and-ten-cent stores and the chain stores, and also to the anonymous work of men in the factory who, by a happy faculty of inventiveness--through knowledge of their material and their production and the methods of their markets, and an enthusiasm for beauty--have turned out now and then what I consider some of the gems of industrial design. very important. We are all harness-

~~broken--~~ This may be arguing a little bit against my point that industrial designing constitutes a profession. Nevertheless, I think that these productions that we may call sports in nature are sometimes equal to the finest work of

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the practitioners.

Well, we had a charming and amusing correspondence about it, but they did not set up the thirteenth room (although England, in its exhibition, has agreed to do so). I therefore refused to join in. I am too fond of Mr. Bach, and he has done too much good work, for me to have wanted to do any proselytizing in the matter, and consequently I acted alone. However, I think that the men in the Society--these men who are trying to form a profession--would have acted in the same way if they had been faced with the issue.

I think then, that at both ends of the line we have demonstrated a sense of responsibility to things beyond ourselves.

Mr. Kaufmann, am I blowing the horn of our organization too much?

MR. KAUFMANN: That is just what we would like to hear.

MR. SAKIER: Then, there is Mr. Baermann's point, which, of course, is very important. We are all harness-broken--we men who have become the so-called prima donnas of the industry--to the extent that we have accepted the greater functionalism; that, in order to get any of our ideas over, we had to choose a way which was practical and which permitted

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our ideas, if only in part, to see the light of day. If we didn't do that, we wouldn't function at all; our ideas would remain stillborn. As a matter of fact, I suggested to Mr. Bach that he give an exhibition of stillborn ideas--ideas which were rejected for one reason or another--many of which, I think, will make their way later on. The point I wish to bring out is this: There isn't one of us--and I think this is one reason that we have remained successful--who underneath does not have a burning desire, in spite of his adaptability, to create what I call the highest possible least common denominator in terms of real beauty functioning along the lines of production. The fact of our being harness-broken, together with this inner enthusiasm, has made this idealism function. We have shown, time and time again, that we understand the problems of the men in the plants--the producers, the salesmen, all of the men who make the machinery of distribution go--and that has gained us their respect and an opportunity to put over more and more of this ideal of beauty to which all of us cling. It is the fact that we have adapted ourselves that is going to be the entering wedge for the other things

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which we would like to do. The proof of this is the fact that, when a new object is evolved which doesn't have to drag along with it the carcass of past tradition, an industry that respects a designer will take from him an exciting bit of pure design because it knows that that man is going to do a thing that is sound from everybody's point of view. I have tried to show, Dean Hudnut--I hadn't planned to do this, but everything fell into place so nicely--how we, as a group, have consciously and unconsciously led toward the ideal of a profession. I want to add just two factual statements. The first is that we have established a code of practice--which, in some cases, pinched this person or that person--and we have all sworn to adhere to it. The second is that, as chairman of the educational committee of the S.I.D., I was very glad to hear what Dean Hudnut said about education; that you cannot throw a few courses together and get what we are after. At the various meetings that we have had with educators, I have constantly disappointed them by being unwilling to give any specific and cut-and-dried advice. I keep saying to them, "Yes, that's fine--but you are the people who understand the process of education, and for you the

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important thing should be the creative spirit." If you teach a man this subject or fail to teach him that subject, that may be more or less of a help or a detriment, as the case may be--but, after all, the development of a thinking mind and the creative spirit is primarily the function of the educator.

It is an extremely difficult problem. We, as members of the profession, feel that it is our responsibility to the people who will take our place in the future to participate in this educational movement as much as possible. We feel that it is primarily the function of the educators, but we are always ready to give our time and our thought to any organization that wishes it.

CHAIRMAN HUDNUT: I think you have pointed out very clearly the fact that you have established the idea of a profession. That was one of the hardest things to do. Through the efforts of the pioneer designers and their insistence upon a standard and upon correct practices and relationships, the notion of industrial design as a profession is pretty well established. In doing that, I think that you have also created quite an understanding among industrialists. Among the important industrial managements in this country, I believe, there is a very real sense of a certain responsibility for

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decency in these matters. It is not, I am sorry to say, really universal. But a man's conscience troubles him a little bit now when he puts out a line of hideous lamps or chairs-- or doesn't it? point? [No response]. Mr. McDonnell has written a review VOICE: Not a bit. on these questions. I saw it in the Institute CHAIRMAN HUDNUT: I like to think so. I was brought up in the city of Grand Rapids. (I have tried hard to hush it up, but I guess it comes out. And I hope you won't tell it to anybody at Harvard, because up there they think I am a genuine antique.) My father was a manufacturer of furniture--and I don't think the conception of good or bad design ever entered his head or the heads of his designers. They asked "What's selling, boys?"--and that's what they made. And that is what sent me to Harvard later on. wasn't as much misunderstood. I don't believe that, if you went back to Grand Rapids today, you would find quite that same temper in those large furniture mills. They pick up our graduates frequently-- and even though these graduates can't design a chair, they set them to work at it. I think that, in general, the feeling there is that they ought in some way (when it doesn't cost too much) to throw their weight behind the creation of decent furniture and better taste on the part of people. My feeling is that that is true in almost every

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section of design--except architecture, which quite obviously is going to the dogs. ~~several others.~~ (Certainly, it has some special ~~ness~~ Does anybody else want to continue the discus-~~have.~~)
 sion from this point? [No response] Mr. McConnell has ~~on~~ written a very brilliant paper on these questions. I saw it in the Institute of Architects' Journal, and I agree with almost all of it. Mr. McConnell, would you like to talk for a moment on this subject? ~~loosely that "that is good industrial design."~~
 MR. PHILIP McCONNELL: Yes, I should like to say just one word. I don't think that anybody has as yet really stated what seems to be the crux of the problem. We had ~~of the~~ several meetings with Mr. Kaufmann and other people at the ~~in~~ Museum on the question of the relation between the Museum and the profession of industrial design. There wasn't as much ~~mis-~~ misunderstanding as we had at first feared when the question came up a year or so ago. This series of meetings is one of the results of some of those talks. ~~have the form of a diffi-~~
~~culty, ~~been~~~~ There were some points made in those talks which I think are worth putting forward here. The chief of them was that industrial design is not a gadget or a product; it is an activity. And the people who are making their living at that activity say that it is more than an activity or ~~only~~ more than a way of making a living; that it is a profession ~~air-~~

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which has all the characteristics that Dean Hudnut has mentioned, and possibly several others. (Certainly, it has some special headaches of its own that other professions don't have.)

That seemed to be the crux of the discussion that arose here and that has arisen in several other places.

In one sense, it is perhaps merely a verbal problem. People have been in the habit of looking at a well-designed chair and saying loosely that "that is good industrial designing." It seemed like a perfectly natural thing to say, and it is probably perfectly true. If a lamp or a locomotive is something of which you approve, in terms of the way in which it has been given form and shape and the way in which it has met the problems that the maker and the designer had, you say "That is good industrial design." And you loosely begin to think of the locomotive or the lamp or the chair as an object of industrial design.

Well, that seems to have the germ of a difficulty, because it involves a judgment on something that you can't possibly know very much about. I have not actually earned my living as an industrial designer, so that perhaps I cannot speak with the authority with which practicing designers can speak, but I think I see the point very clearly.

If you are given the problem of designing a hair-

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drier or a locomotive, or anything you want to name, you are very rarely (at least, in this practical world) given the job of designing the most purely perfect product that you possibly can or the product with the greatest possible sales appeal. Consequently, when the result of his work (or his work and the Essentially, you are given a problem, rather than an opportunity. That is the real point that the practicing industrial designers try to get across. The profession of industrial design is a technique, an ability and a vocation that you have to learn, which involves solving problems through to get it to that condition.

The industrial designer is almost never given a carte blanche to produce the most beautiful or most perfect object that could ever be imagined. He is usually given a lot of information about the market to be met, the price to be met, the manufacturing difficulties that are circumscribing the whole situation, the tools to be used that haven't been fully amortized, and any number of things. (You people who are designers know that better than I do.) All of these things mean that what the designer has to do is to solve a problem, not indulge in some ivory-tower creative act. If he is going to solve it well, he has to have certain creative genius or certain creative ability

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within him, and it has to result partly from his natural gift and partly from the training he has had. But essentially he is dealing with hard realities that are thrown in his lap by comparatively hardboiled people. To hear what Professor Hogg thinks about. Consequently, when the result of his work (or his work and the work of several other people) appears on the merchants' shelves to compete with other products, he himself may know--he probably does know, better than anybody else-- what is wrong with it and how it actually has interfered with certain competing products in certain ways. He knows what he has been through to get it to that condition.

If he is then put in the position of having that judged as though he had had complete control and had created out of his inner consciousness the perfect object, which he is here offering as a perfect object, he is put in a rather false position and can be considerably embarrassed as a result. That was the essence of the whole argument, such as it was, and I think that all the people who engaged in it understand one another very well. There comes out of that argument an even clearer understanding of the fact that industrial design is basically a professional activity which requires training and education and considerable experience, and that it is always a business of solving problems rather

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than retiring into towers to wait for the divine thunder to roll and the lightning to strike.

That is the essence, I think, of the point I wanted to make. I should like to hear what Professor Rugg thinks about that sometime.

DR. HAROLD RUGG: Mr. Chairman, I think you should let me remain an onlooker and a listener for a little while. I am afraid I am an interloper here. I should like to hear what you men and women really think and feel about this--and then, a little later, perhaps I will be able to come in with some real intelligence.

CHAIRMAN HUDNUT: People often compare the industrial designer's profession with other professions; for example, with architecture. When it is compared with architecture, it is usually with some envy: one thinks of the architect as he appears in the movies--that very swell gentleman with the pointed beard and the pince-nez. But the problems of the two professions, you know, are quite the same. The architect has a little more steam up; he has had the tradition of studios and association with the rich. He has a little more mystification.

When you come to think of it, less than five percent of our buildings ever go through an architect's office

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(and that is a generous estimate). Ninety-five percent are pure commercial products. God knows, they're ugly enough. And even those that go through an architect's office are largely not the architect's work. The number and the direction of the pressures put on him, only an architect knows. Take, for example, the question of advertising. You think that you are enmeshed in the conventions and requirements of advertising. Well, think how many buildings are advertisements. The Woolworth Tower is an advertisement for Woolworth. It had to be striking and sensational; it had to be not what the architect would like, but what would call attention to Woolworth. The Guaranty Trust Company builds a Medici Palace because that tells the world how strong and secure they are and how you can trust a bank. (Those big rocks are held up by steel braces--but you trust the bank just the same.) All the way through our profession, we are crowded by these things and we struggle with them and give way to them and compromise with them--because we have to. And, all through it, we try--I believe that most of us try--to hold up our heads and give way as little as we can. But no one should imagine that we have an easy time with those things. until a form of specialized training was developed

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It is the same way with the profession of law. Mr. David Sher, a lawyer, is here, and I should like very much to have him give us a few comments on this subject in relation to the law.

MR. DAVID SHER: I was hoping to hear a little more about industrial design, about which I knew nothing when Mr. Kaufmann first asked me to come here. I didn't even know the meaning of the term. I must confess that I rather thought it had to do with the design of production instead of the formulation of products. What I have to say, then, can be only such observations as I think might be pertinent from the standpoint of the law as a profession--and, if they fall here appropriately, then it will be a happy accident so far as I am concerned.

I suppose that the definition of a profession that has been given here contains those ingredients which embrace the law and architecture and industrial design as well as the great additional number of professions that have grown up in the last 100 or perhaps 150 years. In the ancient world, I think, the term "profession" was hardly known--even though there were those who practiced medicine and law and there were those, of course, who were in the religious orders. It wasn't until a form of specialized training was developed

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at a much later period that formal professions, I think, came to be recognized. Particularly within the last hundred years, however, in the light of the mechanical revolution, new professions have sprung up in very great multitude. But all of them, I think, conform to the definition that has been offered here. She said, "I don't want to earn very much; I just want." There is perhaps still another factor to be taken into consideration in arriving at a definition of the term "profession"--one that has been spoken of here implicitly, rather than explicitly--and that is the fact of association of the group that practices the profession. I think that perhaps there can be no such thing as a profession in the full sense of the word unless there is a group consciousness and an association (not with a capital "A" so much as with a small "a") on the part of those who are its practitioners. With respect to the experience of the other professions, such as law and medicine--I think those are the two that come more immediately to mind--the first observation that I think one would make is that those professions have addressed themselves to the development of so-called professional ethics. They vary in content, in significance--and even sometimes, I suppose, in sincerity. I remember the last class I attended at Harvard

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Law School, where it was customary for professors to deliver benedictions to their classes and instruct them in the forms of professional ethics that they should follow. One of the more iconoclastic professors said, "I am going to deliver no lecture to you; I am merely going to recall what Dorothy Parker once said. She said, 'I don't want to earn very much; I just want to make enough to keep body and soul apart.'" And, with that, he sent us off to our profession.

It is true, I think, that in law and medicine--and perhaps in other professions which don't occur to me at the moment--there are characteristics which impose on those professions a pretty solemn duty to maintain a certain degree of professional ethics. They can't go to the source material and in the first place, they practice a body of knowledge which is generally unknown to the members of the public, who may have to call on that body of knowledge at a moment's notice without any opportunity to investigate the caliber or integrity of the person to whom they are to entrust either their personal health or their business health. A certain degree of protection is therefore developed, in order to give the public a little greater assurance that when they do ferret out a member of the profession--perhaps suddenly and hurriedly--they will be able to rely on some rudimentary

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standards that will be followed. Another characteristic of those professions, I think, is the exchange of ideas that is made possible, particularly by the associations. I think that is more true in the medical profession than in the legal profession. Lawyers aren't usually very good listeners--especially to other health lawyers, about the other lawyers' cases. They would much rather talk about their own.

In medical associations, however, I think that one will find a large amount of time devoted to the discussion of technical matters. Perhaps that isn't so true in the legal profession because of the publication of cases that have been decided, so that the lawyer can himself go to the source material and therefore does not have to listen to other lawyers. For the most part, legal associations concern themselves with other matters. That leads me to the third and final point that I should like to suggest: the concern of professional associations with problems and matters of public policy that pertain to those professions. (That, I think, is rooted in the fourth point made by our chairman this afternoon in giving his definition of a profession.)

Medical associations concern themselves with

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questions of public health. Perhaps they concern themselves more with the administration of public health than with the progress in developing new forms of protecting public health; there may be certain conventional views that stand in the way. But, in any event, medical associations do make it their business to see that the administration of public health in their respective communities is on as high a plane as they can possibly achieve. In the same way, the legal profession concerns itself with the selection of judges and with other matters having to do with the general public interest; and architects, I suppose, concern themselves--or should concern themselves--with matters of city planning. Without attempting to philosophize, it does seem that this presents an opportunity for bringing the expert into democracy, for bringing together those qualities which require expert knowledge and expert talent with the general democratic pattern which must leave to the general public the final determination of basic goals. In that respect, of course, professional associations can play a highly significant role--and particularly this association which we are discussing this afternoon. Finally, I think it is the nature of professional

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associations to be, for the most part, rather orthodox and rather formal. Medical associations are not notable for the changes in the nature of medical practice which they suggest; legal associations are not famous for their unorthodox views. Lawyers, I suppose, can live although they remain static. Doctors, too, can live even though the profession does not grow as fast as it might (although, perhaps, patients can't). But in this profession that we are discussing today, it seems to me--as a complete outsider--that there must be progress if the profession is to live; and, in that sense, it perhaps has a unique role to play among professional associations.

CHAIRMAN HUDNUT: I think that the point Mr. Sher has brought out, about the usefulness of association, is an extremely important one. An association of professional men could be directed to the social usefulness of the profession and of the art it represents. In that way, the Institute of Architects was formed; to raise the tastes of the country, to promote a knowledge of good architecture, and to support one another in the practice of good architecture. Then, again, an association might address itself to the protection of its members. It might become merely a pressure group, a group of men having a certain interest to

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promote five years ago and practically unchanged since that
 time. That you find that professional societies seem to
 vary between those two roles. Frequently, a society is
 nothing more than a trade union, to keep other people from
 practicing in its little place in the world or to fight some
 other group that is getting on in Washington--that sort of the
 thing, you know. (Don't think that the architects are entire-
 ly innocent of that.) But that is the way it works. It
 makes it difficult. As to the tendency to be conservative, I am sure
 that that is one of the evils that will not disturb this
 group very soon. It is a fact, however, that old associations
 really stand up very firmly for tradition. I think it took
 about thirty years for the Institute of Architects to recog-
 nize the tubular chair in which you are sitting today as
 having any merit. It will perhaps be another thirty years
 before they recognize the essentials of good industrial de-
 sign. (Perhaps not quite that long.) very important. I
 should there. In that connection, of course, one of the favor-
 ite devices of a professional group is one of the things that
 Mr. Sher has touched upon; the code of ethics, of professional
 practice. I think it would be very interesting to hear some
 comments on that. We have listened to some very interest-
 ing statement. We have such a code in architecture, devised a

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twenty-five years ago and practically unchanged since that time. That code prescribes that you mustn't steal your neighbor's design, and you mustn't compete with him on a financial basis, and so on and so on and so on. It was devised with the noblest intentions--but, oddly enough, it operates every time in favor of the large firm as against the small one. That has gone on for twenty-five years. It wasn't meant to do that, but that is the way it works. It makes it difficult for a young architect to get on, to get started--although I am sure it was meant to help him. I think a code of ethics, then, is a very dangerous thing. I am not going to argue against it, but I think it might be pertinent to hear some expressions of opinion on that subject. Various points that we have discussed and, in particular, MR. JAMES PRESTINI: I think that, in the establishment of a profession, the question of standards--in line with Dean Hudnut's last statement--is very important. I should therefore like to ask two questions: First, what are the standards of design as practiced by the industrial designers; and, second, what should they be? I have ideas, both of which MR. KAUFMANN: Mr. Chairman, may I interject a remark at this point? We have listened to some very interesting statements, but it occurs to me that perhaps there is a

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side of the picture that it would be well to introduce in answer to Mr. Prestini's questions and also for the general purposes of this discussion. ~~Very time a housewife runs around the corner to~~ Codes of practice, interest in the problems of education, professional association and the interchange of ideas, and all these other aspects which we have discussed as being essential to a profession, are things which for a number of years have been part of the practice of another group besides the group for which we have called these meetings. That group is, of course, the American Designers Institute. ~~the New York Chapter of the A.D.I., would like to answer, but~~ Several of their members are here, and I think it would be a very good thing to hear from them how they feel about these various points that we have discussed and, in particular, about the question of whether we (that is, the public on the outside; not professional designers, not members of any organization) can look forward to a day when the necessities of protecting the public interest through professional standards can be met in the design profession by these two active organizations--both of which have ideas, both of which have members, and both of which exert an influence at that particular moment that Mr. Sher described so well: the rush moment, when the general public has to depend

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upon the reliability of a professional person. That happens more often in the profession of design than in any other. Every time a housewife runs around the corner to a hardware store or a five-and-ten-cent store or some other store, essentially she is putting that kind of trust in the designer, wherever a designer is used; and as the designer fights to be used more and more times by more and more manufacturers, he enters that many more times into the consumer's life in just that capacity.

I don't know whether Mr. Kostellow, who is the head of the New York Chapter of the A.D.I., would like to answer, but I certainly hope he will.

MR. ALEXANDER KOSTELLOW: Mr. Vassos is the chairman of that chapter.

CHAIRMAN HUDNUT: Mr. Vassos, would you care to speak on that?

MR. JOHN VASSOS: I don't know whether I should or not; but, since I have been called upon, I should like to speak as a representative of the American Designers Institute. Inasmuch as my colleague, George Sakier, spoke about pioneering, I might say that I am also one of the pioneers.

This profession is jelling now, and we have reached a point where for many years we have accepted educa-

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tion as one of our primary functions. The American Designers Institute has existed since 1938, and at that time we immediately created a group to study the problem of education. Mr. Kostellow has been the chairman of that group for the last three years, and I hope that later on he will enlarge upon this subject. We are very anxious for that, and we screen them. In the over-all picture of the function of industrial design as a profession, there is also the element of safety. A designer is concerned with the well-being of the public; he is very much concerned with producing things that work and that are also safe. His responsibility is very much like the architect's. Sometimes he does things like the Woolworth Building, but it is not because he wants to; it is because one of his functions is to keep his manufacturer in business. All help to bring about our mutual objectives.

If you take a new product and change it overnight, the results may be very disastrous. But the good designer, when he gets an opportunity to create something functional, always does so. When a new product is to be introduced, I think he puts his heart and soul into it. The group that Mr. Sakier represents has narrowed down into a very small group of really active designers. The American Designers Institute has taken in the very people

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whom Mr. Sakier was defending a moment ago; the ones who do things that are not heard of. That is why today our membership consists of 307 people, of whom close to 200 are members of the New York Chapter.

We do want the young designer in America to get his place in the sun. We are very anxious for that, and we screen them very carefully before they enter. We have a code of ethics. (When Mr. Kaufmann invited me to attend this meeting, I immediately presented all this material to him, so that it would be on record.)

What we are hearing today is not a new story. We in the American Designers Institute want to have a profession; we are very anxious for it. The only thing I can say at this time is that I hope this discussion at the Modern Museum will help to bring about our mutual objectives.

CHAIRMAN HUDNUT: The question of ethics touches on the question of licensing. That is a subject on which you might want to comment.

We architects have to be licensed (there are three kinds of licenses: marriage, dogs and architectural), and the reason for that is that we have to produce things which are safe. Otherwise, we wouldn't be licensed. The codes in the various states therefore prescribe that we must know how to

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design certain types of truss and how to calculate a foundation so that they will comply with the building laws, and so on. Then, quite naturally, that is extended to the appearance of our buildings. That means that we have to conform, at least in theory, to certain standards of taste. That has been an exceedingly obnoxious and faulty process in our profession. I had a student who took the examinations for his license in one of our great states only last year. He looked at his examination paper, and the first question read: "A man is going to build a large public garage in the center of a great city. Which of the following styles should it be: (a) Gothic, (b) French Provincial, (c) Grecian"--and so on. When he said that it should be none of these, why, of course, he got a zero for that question. In other words, licensing has been one of the weapons of conservatism in this country. Is there any thought of licensing industrial designers? I am not informed about that. Would that be an evil? Does anyone care to speak on that point?

MR. JAMES C. BOUDREAU: I am in the manufacturing business, and therefore I have a great deal at stake here: I manufacture the youngsters whom you fellows hire. I am the

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Dean of the Art School at Pratt Institute. To me, this is rather like attending a Democratic rally, where you see only Democrats in the audience--or a Republican rally, where you see only Republicans. We are trying to sell ourselves. I am as keen for the professional standing of industrial designers as anybody in this room, but I think you are addressing your discussion to the wrong people.

I also fear that you have not yet hit upon the crux of the question of professional standing, except for the one statement by Mr. Vassos (and, honestly, I didn't tell him to say it) to the effect that the industrial designer is concerned with safety and the welfare of society.

You speak of the industrial design activity as a profession. Gentlemen, it is not a profession. If it were, you wouldn't be meeting here this afternoon. Am I right? In other words, it is accepted within your own circles; it is accepted pretty much in business (and your contact is primarily with business, rather than with other professional organizations). You are not a profession. You are a semi-profession. All the requirements that Dean Hudnut so ably outlined, and that were supplemented by Mr. Baermann and

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amplified by Mr. Sakier, would be met by a very able automobile mechanic. They would be met by a master bartender--~~ian~~ because, for my money, a master bartender is an artist and comes as close to professional standing as a lot of us. ~~work for man~~ We are listed at present as industrial designers, in the same category with bartenders and beauticians and ~~chiropractists~~ chiropractists. When I say "we," I mean you ladies and gentlemen as well as anybody else in the design field. ~~qualifying one to become a~~ The problem I should like to pose for you is this: If you will grant that this is not the group to discuss the desirability of being a profession, let us find out the group we should address in order to become a profession. Dean Hudnut has touched upon it; that is, that you must address your desire to be a profession to legal organizations such as the city, the state, the federal government. If you wish to practice internationally, then there must be a world organization to which you can apply for registration. ~~registration~~ Now, you may register yourself, as in the case of the S.I.D.; you may register on a broader base, as in the case of the A.D.I. But that is still not making you a profession. ~~you are a profession. However, you have the right to set up the~~ I worked for quite a while with the American Institute of Decorators, which has established a profession

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subjectively. They have set up codes of ethics, they have set up an educational program, they have set up an intention of interchange. According to their ethics, they don't work for money. (I don't know what they work for if they don't work for money. I work for money and so does everybody in this audience, unless you have money and don't have to work-- and I don't know anybody here who is in that category, and I know all of you.) They have set up a program qualifying one to become a senior member of the American Institute of Interior Decorators that not one of their members can meet. I am wondering whether the S.I.D. and the A.D.I. are going to do the same thing. ~~proper body (and, for us, that proper body is in Albany)~~ Of course, the architects themselves write their own program, but it goes through each state--and you can't even practice from one state to another without taking examinations (although now the architects are getting very smart, in that they are establishing a national or federal registration). ~~impossible to set up industrial design as a profession.~~ You must address your desires from now on to those legal bodies which are constituted with the power to say that you are a profession. However, you have the right to set up the qualifications, because they don't know what they are. ~~a profession. I told both Mr. Teague and Mr. Loewy~~

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at the time I think you are going to find quite a hurdle in the matter of the safety and welfare of the public. You may say, "Well, anything that we work on and design does have a safety implication." But you must bear in mind that that is already protected by a highly recognized profession known as engineering. They are responsible for the safety of electric irons and iceboxes and automobiles, and so forth; you are responsible for their esthetic appearance.

I should like to see you address your discussion this week to the proper body--or, at least, to direct your efforts toward getting enough material together so that you can go to the proper body (and, for us, that proper body is in Albany) and see whether or not you can crack this thing.

I question that you can. I happen to have looked into this very carefully with Walter D. Teague and Raymond Loewy some years ago, and with my Mr. Dohner (who has since gone, as you know), and we found at that time that it was rather impossible to set up industrial design as a profession.

Of course, one error there was the fact that the desire to become a profession was pressed for economic reasons; the desire to avoid a tax that you wouldn't have if you were a profession. I told both Mr. Teague and Mr. Loewy

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at the time that I regretted that their first request to Albany for professional status was on an economic basis, because, as Mr. Sher said, it is the intention of most professions (at least, in their code of ethics) to keep body and soul apart. I am for you one hundred percent. If Pratt Institute or As I say, I am in the manufacturing business and I have a product: youngsters who want to work with you and who do work with you. We have thrown a few courses together, as Dean Hudnut says, but we do go further than some schools: we have a lot of excellent equipment and power machinery, and we have a professional staff assisting us. We are a long way from being recognized as a school that has a professional course in industrial design. Such programs in the fields of medicine, law, architecture and engineering are firmly established. We have quite a way to go. However, may I remind I say that at present you are a semi-profession. Certain fine arts people are looked upon as professional people: portrait painters, landscape painters, muralists. There are top people in the advertising field who are referred to as "the profession of advertising." None of these organizations and none of those activities are legally professions. Whenever you establish with Albany and with Washington the fact that you are a profession, then nobody

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will have a right to say that he is an industrial designer without having passed some set of examinations and having had a certain amount of schooling and a certain amount of professional experience.

I am for you one hundred percent. If Pratt Institute or I myself can be of help to you in any way, I want you to know that we are at your service. I do know that the product that we now send out gets one hundred percent employment at a very fair beginning wage, and I am content up to this point--not satisfied.

Your big problem, I think, is legal recognition. I should like to help you if it is possible.

CHAIRMAN HUDNUT: We all know that Pratt Institute stands well out in front in the education of designers. What Professor Boudreau says is very disturbing. However, may I remind you that, among the characteristics of a profession which I mentioned, was that of being recognized as such. (If I didn't say that, I meant to.) That does not necessarily imply legal recognition, but might be said to be a prelude to it or a step toward it.

Once the industrial designer is recognized as a professional man--recognized by industry, by advertisers, by the public--it seems to me that the legal difficulties

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will not be as formidable as they are now. And surely you could not be recognized as a profession--legally recognized, I mean--until you had attained some standing in public opinion. That seems quite obvious. State Tax Commission brought against some As it is now, whenever an architect is refused a license, he calls himself a designer. The woods are full of them, practice do constitute a profession recognized as such (I have the I must tell you a story about that. I was chairman of the licensing board in one of our great states for six or seven years (I don't know exactly why), and I had to license both engineers and architects. It was quite a problem to decide on standards. Finally, I hit upon what I think is a perfect solution to the question. I gave two examinations, one in design and one in construction, on two different days. If a man failed in design, we licensed him as an engineer. If he failed in construction, we licensed him as an architect. It worked extremely well. Judge's definition of what is At this point, somebody always asks me, "Well, suppose he failed in both?" Then we licensed him as an architectural engineer. (page of attorneys) a very definite precedent. I think that this legal question ought to be followed a little further. I wish someone else would continue this discussion. defined in what way: the industrial designer

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state himself MR. KOSTELLOW: There are two points that I should like to make. First, in certain decisions handed down in relation to the suit which the State Tax Commission brought against some designers, there was some agreement by the Supreme Court of New York that certain aspects of industrial design practice do constitute a profession recognized as such (I have the abstract of that), and there was even a definition of what it consists of. Some of the efforts in this direction, then, have been very definitely successful. On the other hand, the effort was not successful in another case (the De Vries case, to be specific). That industrial design is a profession was denied because it has not been recognized as an occupation of the character that Dean Boudreau has described. We, as designers, certainly have something to start with in the form of a Supreme Court Judge's definition of what industrial design is. We have a very definite basis for proceeding; it is there in black and white. It establishes (to use the language of attorneys) a very definite precedent. In this discussion that has been going on, we have not really defined in what way the industrial designer

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puts himself in a position paralleling that of the lawyer, the doctor, the engineer, the preacher and the teacher, who are very much recognized as professions and to whom licenses must be granted (that is, in certain states--not everywhere, but in certain states--certain examinations have to be passed).

That is why. What is interesting about the decision I have referred to is that the Judge said that the practicing of the profession of creating esthetics is legally more or less of a profession.

I think, Dean Hudnut, that in the little booklet that they give to architects in the State of New York-- I don't remember what page it is on, and I don't remember the exact terminology--it is stated that the creation of esthetics is part of the architect's equipment. Now, the industrial designer unquestionably has a claim in that direction. He contributes to the general cultural growth of the country, and naturally he has to be well informed (both societies, whether they agree among themselves or not, agree on this point) and has to be able to work with an engineer. In other words, he has to be to some degree an engineer, a chemist, a market analyst. To be an industrial designer demands a certain quality of brain and a certain training which takes time.

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Most of the designers get to have gray beards by the time they get to be good designers. ~~And I think it is~~ There is every reason, then, to presuppose that we can make some progress if the problem is properly approached and properly defined and if certain things are established. That is why I am here: to hear what the Society and the individual designers and the outsiders here have to say with respect to what they consider that the industrial designer is contributing. ~~And what Mr. Star said. Every profession is governed.~~ Mr. McConnell, I agree with you that the designer has a problem rather than an inspirational effusion. But, by the same token, the doctor has a problem. If he has a certain definite patient to treat, he has a definite problem: there is something wrong with the patient, and the doctor has to solve the problem of what is wrong with him. So does the lawyer have a problem, and so does the engineer.

Problems are anything that you have to do--and, if you are trained properly, you will always be able to express yourself within the limits of the problem. Certainly, architects have a problem in the use of materials and the matter of considering human needs and considering certain building laws and codes, and so forth. The point that Mr. McConnell raises, then, is not particularly a hindrance.

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I think we will expose ourselves to precisely the kind of analysis that Dean Boudreau made of us--and I think it is justified--if we do not place ourselves in a very clear position as to the parallelism and the relationship between ourselves and other professional practitioners in terms of what we are trying to accomplish. Then, when the time comes, maybe we can discuss whether we are doing it. But the question now is: What are we trying to accomplish?

I liked what Mr. Sher said. Every profession is concerned, institutionally, with certain aspects of that profession with relation to the public good. The doctor is concerned with public health. The profession of law is concerned with preserving certain aspects of human relationships and protecting property and protecting personal rights. The engineer is concerned with certain safety factors involving the public. What are we contributing?

Mind you, safety is not the only purpose. For instance, preachers are more or less of a profession; they enjoy all the immunities and privileges of a profession. They are concerned with public morals. Teaching is concerned with public enlightenment. We also have a very definite place in the scheme of things, and I think that very definitely it is of a professional character.

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I am sorry, Mr. Sakier, that not enough representatives of your Society are here to really do something. I think our A.D.I. is better represented than your S.I.D.--strange as it may seem. (I don't consider Mr. McConnell as one of yours; he is just a hired hand.) But, really, this is a question that goes beyond societies and beyond personal ambitions: What do you think we are contributing to the public? I know what I think--but why should I force my opinion? I should like to discuss this question, Dean Hudnut, long before we begin to discuss organization and standards and ethics and all those things. Why create headaches? It seems to me a little bit too childish to speak of those things now, when we don't know where the heck we are.

As to this accidental designing, it is not quite good. Accidentally, when I was a youngster, I had my tooth pulled by another youngster. I don't remember whether my tooth was good, bad or indifferent; but it was almost out, and he pulled it. He wasn't a dentist--but he did a good job, I assure you. (A good many times, the youngsters took out splinters, and so forth.)

Before there is organized human knowledge, there is human experience, out of which grows the basis of a profession. That is what I am primarily interested in.

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century--at Would you agree with me, Dean Hudnut, that we don't really know what it's all about--some of us, anyway?

CHAIRMAN HUDNUT: Professor Rugg, did you want to say something?

DR. RUGG: I should like to interject one note, Dean Hudnut, just at this point. I confess I am inspired by what Mr. Kostellow has said. I am impressed by the enormous scope of the problem that you people have undertaken to deal with, and with the interminable time that it will take in order to get anywhere with it.

I watched the development of this little group of industrial designers with enormous interest, as an educator trying to learn how to bring this into schools and institutions of learning. But you are amazingly young for the problem you have undertaken to work at. When I first ran afoul of you and was told that engineers and manufacturers and you abstract artists and social psychologists and I don't know how many other kinds of groups of people had come together to create one new group, I said "Well, that's marvelous--that's wonderful--but what a problem!"

Of course, in a real sense, your very emergence is a reflection, it seems to me, of one of the most important trends in our society. As you look back on the nineteenth

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century--at least, as I look back on it--it can be said (and perhaps this is true of the eighteenth century also) to have been primarily concerned with analysis. Everything, it seems to me, was analytical. In trying to get at the ideas underneath the rise of professional groups in those centuries, we may say that they were concerned fundamentally with mechanical processes; the idea of mechanism ran all through it.

In our day, however, as a result of the last hundred years of astounding developments on a good many frontiers, the very converse of that is true; the organismic view, the organic view, the integrated view, is the thing. I have looked at the products of a score of you with profound admiration for many years--and, in a sense, you are the very acme of that trend toward the integration of professions. In one sense, it is almost naive to ask "Can you be a profession?" for a very long time. I look back upon that engineering in that connection. I was originally trained as an engineer. I am a renegade engineer; I ran away from it a good many years ago and turned to the social sciences, where I worked for a quarter of a century trying to get the young people of America to understand a few of the great outstanding trends in our own history.

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manufacture). In the doing of that, I was pushed out on to still other frontiers. That is, in order to understand our culture, I had to try to understand the art life of our people. And I ran afoul of the emergence of a tremendous worldwide expressive movement after 1880 or 1890--beginning in Western Europe and emerging, independently of Western Europe, here in this country. profession a generation from now, than I would be happy indeed. In a very real sense, it seems to me, your group is taking all of these expressive movements and combining them. You take the engineer, who is gradually learning--and has learned amazingly, in the last three generations--how to make mechanical things through the processes of invention and through his interpretation of design. But you reach over to the abstract artist--and some of your first designers were abstractionists of the extreme type, and it seems to me that they succeeded because they were abstractionists. Then you reach over to the public and you say, "These things that we now design must sell; therefore, we must make a scientific study of the psychology of the wants of the people, the needs of the people." And then you go to the manufacturer--who, I guess, hasn't raised any questions as to whether or not he is a profession, but who brings together a tremendous body of rigidly documented knowledge (because otherwise he couldn't

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manufacture). I mean, they are beginning to learn scientifically. All I am saying, ladies and gentlemen, is that I think these meetings are wonderful things to have, and I hope you will have more of them and will have more people here (as Mr. Kostellow says) from the S.I.D. But let us not be too impatient as to whether we can be a profession now. If we could feel a profession a generation from now, then I would be happy indeed. And I think I speak now as a layman here and as a student of education--the oldest profession in some ways, and yet the youngest--because, as a professor of education, I am a mere infant in the realm of higher education. So here it is--a tremendous thing that you are trying to do, and a fundamentally right one and sound one. I would say: Let's explore all we can this week. Let's explore fundamentally, though, and get down to the bottom of it. years later, I don't think I would share Dean Boudreau's concern as to whether you are a semi-profession or a quarter of a profession or what-not. We have to see all the time whether we are getting at the ideas that are necessary to create new design. And I think we are going to have to ask ourselves how we can bring together all these bodies of knowledge. You ought to have here some people such as the psychologists of consumer education--that whole group. They are beginning to

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learn something; I mean, they are beginning to learn scientifically. There is a whole sector that has to come into this thing. These fellows were willing to use iron beams and to show them. Well, I am afraid that perhaps I am interjecting a false note, and I think I had better sit down. I actually recognized them.

CHAIRMAN HUDNUT: It is quite interesting, Professor Rugg, to know how the engineers became a profession. As I recall the history of it, there was no profession of engineering at the end of the eighteenth century; there were only architects. The word "engineer," coming from the Latin root meaning "to be witty" or "to be ingenious," was used about that time, I think, actually developing into its own profession. When they built the Waterloo Bridge in London, the largest bridge of its time--in 1802 or 1804, I think--they had a competition among architects. And only thirty-five years later, when the great Avon Bridge was built, they wouldn't allow an architect to compete! In thirty-five years-- I am trying to remember the exact dates, but I know it was about as sudden as that--this new profession had sprung up and pushed the architects out of the bridge-building business.

The curious thing about it is that the architects were greatly pleased. They let them go with a "hurrah"; they didn't want them around. The consequence was that the engineers

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did better design in the nineteenth century than we did, because we were clinging to a tradition--we established a profession--and those fellows were willing to use iron beams and to show them, to expose them. Doing it. I wanted a bigger ~~some~~ I want I don't know whether they became legally recognized then or not--but they were there. And Telford built bridges as beautiful as ever were made by any architect-- and he did it with no training in esthetics or design of any kind. (Of course, we know that Eiffel did, too--and so on.) design a ~~that~~ I think that industrial design might be imagined as in some way associated with architecture (if that isn't ~~too~~ too big an insult) and gradually developing into its own profession, in something of the way in which landscape architecture did. There were no landscape architects until the time of Repton. (That was around 1850, wasn't it?) He called himself a landscape architect and he designed estates and gardens--and the architects said, "God bless us, we don't want to bother with little things; let them go." Too bad!

Really, there is only one profession of design, and all of us--even though we have our separate organizations--ought in some way to be able to know one another and to stand together and to realize that we all have the same objectives. It's a great pity that we weaken ourselves by these divisions.

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a true story. It might be well if we all had one general name. When I came to Harvard twelve years ago, I changed the name from "School of Architecture" to "School of Design"--and almost got thrown out on my ear for doing it. I wanted a bigger term. I wanted to tell the people that we thought of city planning as design--and landscape and industrial design--and that all things which have to do with the creation of forms for civilized living, for the environment of man, are plastic design and are therefore basically one activity. To design a chair and to design a cathedral is the same process: the same organization of form, the same evolution of techniques.

I was in Vienna some years ago, at Professor Josef Hoffmann's school--he was the great teacher of thirty years ago--when a young man, a freshman, came in. Professor Hoffmann went over to him and said, "Well, my boy, what do you want to design this morning?" The boy said, "I will do a cathedral." And Hoffmann said, "Good; start right in. We will do one." Just like that!

Well, I thought Hoffmann was a pretty good teacher--because the boy wanted to do that, and he found out something when he tried it.

I want to tell you one more story before we end today's meeting. I thought of it just a moment ago--and it is

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a true story. It has to do with the question of the social responsibility of the designer--and that ought to be very close to your hearts, ting members of society. If both of these groups I was speaking about this problem of social responsibility to my wife, and I said, "We ought to start right here in our own house. Here we have a colored maid, named Nellie, and you give her the most horrible set of dinnerware to eat on." (It had a pheasant and a rose and a castle.) "It is our job to teach her some good taste; it is our social responsibility." hope that the rest of these meetings (the first of which I was so eloquent that my wife said, "Yes, I will give her my best set; I will give her my Russel Wright." And, the next day, Nellie gave notice. member, helping along the integration. Well, we have spent two hours here, and it is now time to adjourn. We will meet again tomorrow at 2:30, to continue the discussion from this point.

MR. BOUDREAU: Before we break up, Dean Hudnut, may I correct a misinterpretation that Dr. Rugg has made of something I said? I am not overanxiously concerned as to whether we are a semi-profession or a profession; that is the concern of these two societies (to neither of which do I belong; I guess I am a maverick). that our Society has, as far as the What I am concerned with is having an ever-better

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program of education that will allow the people who graduate from the art school of which I have the honor to be dean to become self-supporting members of society. If both of these groups together can help me produce a better product, and at the same time contribute toward becoming eventually a profession, I am all for it. But what you interpreted as being my concern, Dr. Rugg, is really their concern. I want to get my product on the market; I am in business.

MR. SAKIER: I should like to say a word before we close, in the hope that the rest of these meetings (the first of which has been so tremendously inspiring--and I may say that I hope Professor Rugg would accept an invitation from us to be our first outside member, helping along the integration of which he spoke) will not be tainted by a continuation of this talk of two organizations. I think that I am a member of the A.D.I.,

I should like to say, with Professor Boudreau, that we believe that we are not legally a profession. I, personally, hope that we never will be, because the thought of licensing industrial designers is revolting to me--and, I believe, impossible.

The only distinction that our Society has, as far as the other is concerned, is along the lines mentioned

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by Mr. Sher; that is, we have tried to set up a standard which will enable the prospective user to have some sort of yardstick, and all build together, whichever organization we are in.

In answer to Mr. Prestini's question, I can say that we have tried to make it as inclusive as possible, without a specific definition of what a designer is or is not. We hit upon a very simple pragmatic method of determining it (which we are willing to change): that a man who has served three diverse industries with fairly honorable and good results is eligible to join and is welcome in our midst. If any other society cares to set up standards equally satisfying to a prospective buyer, I think it would be a marvelous thing--and there would be no question of our being eliminated.

The curious part of it is that our younger members--we now have over eighty--are the ones who are conservative. Most of us, I think, have reached the point where we would probably hire them. We have tried to include as many young people as possible--and they are the ones who are becoming exclusive because they are jealous of a certain measurement which distinguishes them commercially in the eyes of those who might wish to see the yardstick.

What I wish to say is that I hope that, at the rest of the meetings, there will not be a question of two

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societies. Every speech here has been so inspiring in a
broader sense that I think we should forget about the two
societies and all build together, whichever organization we
are in.

MR. KAUFMANN: Dear Robert will be back in the
room in just I am sorry to have delayed you, but I wanted to
make that statement.

MR. KAUFMANN: Thank you very much, ladies and
gentlemen. I hope you have all enjoyed this meeting as much
as I have. We will meet again tomorrow afternoon.

We had asked him to talk because we felt he had some
experience as a client of the industrial designer. His long
association with retailing and his very close contacts with
manufacturers made us think he would be a good guy to say a
few words about that.

Since he can't be here, however, I think we have
come up with a very wonderful solution to the problem. Both
Mr. Leovy, who is the president of S.I.D., and Mr. Teague,
who has been president, have said that they will be glad to
say a few words about how the demands of the client and the
expectations of the client limit and affect the functioning
of the designer as a professional.

Perhaps it would be better if we were just to
ask them to start right in, instead of having any further

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preliminary words, Mr. Loewy, if you would like to start off,
TUESDAY AFTERNOON SESSION

that would be fine.
November 12, 1946

MR. RAYMOND LOEWY: It seems to me that the gentleman who

MR. KAUFMANN: Dean Hadnut will be back in the room in just a few moments, but perhaps in the meantime I can get the meeting started.

We were a little disappointed when Mr. Ira

Hirschman, who was supposed to give us a few leading ideas

today, phoned at the last moment to say that he couldn't be

here. We had asked him to talk because we felt he had some

experience as a client of the industrial designer. His long

association with retailing and his very close contacts with

manufacturers made us think he would be a good guy to say a few words about that.

Since he can't be here, however, I think we have come up with a very wonderful solution to the problem.

Both Mr. Loewy, who is the president of S.I.D., and Mr. Teague,

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preliminary words. Mr. Loewy, if you would like to start off, that would be fine. MR. RAYMOND LOEWY: It seems to me that the gentleman who should really discuss that with us--unfortunately, I don't think he will--is Mr. Breen. I didn't know he was coming, but I see him here now. He is business manager of my organization, and he does the contacting of clients--at least, at the beginning of a contract--much more often than I do.

However, Mr. Teague, let us try to discuss it together. Would you like to take the part of the client? MR. WALTER D. TEAGUE: All right, fine. Well, Mr. Loewy, I know that you are a designer of very substantial and eminent reputation, with a great many successes to your credit, but you have never served a business exactly like mine. I am perhaps the largest widget manufacturer in America.

MR. LOEWY: What type of product did you say?

MR. TEAGUE: Widgets. MR. LOEWY: Oh, yes.

MR. TEAGUE: You probably don't realize it, but the business of making widgets is very different from any other business. I know that you have designed trains and

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automobiles and household appliances and business machines, and many other products, but widgets are quite in a class by themselves. I am just wondering what gives you any assurance that you could do for us what my own staff of engineers has not been able to do.

MR. LOEWY: Well, frankly, Mr. X, we have designed widgets before. However, to answer your question and try to convince you, I will take the attitude that we have never done anything with widgets--never designed any.

We have studied the record of your company for the past few years. We know that you are doing very well; we know the reputation of your firm; we know that the products you are manufacturing are excellent, priced correctly and for the most part styled right. However, we feel that the influence of an outsider with an open mind, with no inhibitions about your product--working in cooperation with your own staff--could bring some fresh and unusual answers to your problems.

We can't promise to do so; but we feel reasonably confident that if we have the cooperation of your design department, of your engineering department, and if we have an opportunity to study the manufacturing facilities you have, the kind of equipment you use, we can do a job for you.

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We would like to study the widget market, however, before we go ahead and make any proposition to you. We would like to know what is being done in the field by competitors, and in what price range, and which are the widgets that sell best (and we would try to isolate the reason why they sell best; whether it is price, appearance, function, quality, or a combination of these factors). Then we can talk to you intelligently about doing design work for your organization.

MR. TEAGUE: Well, of course, Mr. Loewy, that goes much further than I had in mind. I had assumed that you would simply make me some sketches of what you thought my product ought to look like. After all, that is all we had in mind in connection with your ---

MR. LOEWY: Well, I regret to say that we don't work that way. The leading designers, those who have established reputations and have reputations to maintain--such as Mr. Teague, a namesake of yours, or Mr. Dreyfuss or Mr. Arens--don't work that way. They don't like to start doing any fancy designing or blue-sky designing without knowing all the factors of the problem involved.

We couldn't do that, then. We wouldn't be interested, and I don't think you would.

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completely. MR. TEAGUE: Well, do you think that you could come into a business like ours and in a short time acquire enough information about it to be able to make wise decisions in the various fields in which, as you have outlined it, you would like to operate?

MR. LOEWY: Yes. That is the reason we are here to discuss it with you. We have done work in fields very close to widgets. The products may not be exactly widgets; but they are in the same price range, they sell through the same kind of retail outlet, and the servicing problem of these units is quite similar to yours. We feel confident we can do a job. I would like to have a look at your facilities, at your plant, and see what kind of equipment you have. We would also like to talk to your sales manager, if that can be arranged, in order to have some idea about your retail outlets.

MR. TEAGUE: Then we would more or less have to take you into the family and into our confidence in a matter of our business methods and procedures and so on?

MR. LOEWY: Yes--completely. That is the only way we could possibly work. You may not have heard about the reputation of our firm as far as ethics is concerned. You may be sure that any new development that happens when we work with you, or any new idea you may have, will be kept

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completely confidential. You don't have to worry about that. But we want to feel that we are admitted as a member of your family and that we have your complete confidence and respect, so that we can get the cooperation of your engineers and your development department and your sales force.

MR. TEAGUE: Well, of course, that opens up a whole new vista in regard to this work, and the question of personalities immediately intrudes itself. Do you feel that you could get along with our technical staff? After all, our engineers are very experienced in their work, and they are a little sensitive about people intruding from the outside. I just wonder whether we wouldn't have a conflict on our hands when your people come into our organization.

MR. LOEWY: I don't think so. We have worked for railroads--which should answer that question. Anybody who can work for a railroad can work for any type of manufacturer.

MR. TEAGUE: Just remember that the widget business is different, you know. It's different from any other business.

MR. LOEWY: You can't be tougher or more impossible than railroad people. And you just don't look like people who will be especially difficult to get along with.

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we have that As far as gaining the confidence of your own men is concerned, we could give them examples of the way in which the introduction of the services of our organization into a certain company was of great benefit to the staff designers of that company. We are not trying to take credit for successes developed together. We are always anxious to have your own men get a great share of the credit. They appreciate the fact that we are not trying to say that this product is "designed by Raymond Loewy"; we always say that it is designed "in collaboration" or "in cooperation" with the design department of the particular company. The chances of success are very great, and we lean over backward to give them all the credit possible and to make them feel that we are not after their jobs. I'm not interested in getting a job with your company; I have my own (which is doing reasonably well). They don't have to fear, then, that they will be out of a job because we come into the picture. They will very quickly realize that we are a great help to them. So I don't think you have to worry about that problem, either.

MR. TEAGUE: Well, you have answered a lot of the doubts that were in my mind. I am just wondering, though, what guarantee we would have of success. After all, this is going to be a very expensive thing for us. What assurance do

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we have that we will get the right returns? Of course, if you were just to make a bunch of sketches, and then if we could buy some if we liked them, we would feel safe. But if we are expected to commit ourselves to a long program of development, we have to feel reasonably sure that it is going to be profitable for us. We must account to our stockholders for the way we spend this money.

MR. LOEWY: Well, I don't think you would ask a doctor, for example, to give you a positive guarantee of success. It is very difficult to give such a guarantee. All we can do is to tell you that the chances of success are very great, and that the record of our past performance in the field of design has been a rather successful one. No doubt, you know many of our clients--presidents and sales managers of companies we work for. You might ask them, "How did you get along with Loewy? And what about the results? Did his stuff sell?"

MR. TEAGUE: Then you wouldn't mind our discussing this with some of your clients?

MR. LOEWY: Oh, not at all. In fact, I would welcome it. I will give you a list of our accounts--there are ninety-eight at present--and I am sure you will find some people you know on that list. We are paying for that investment,

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than we want. Now, in regard to your asking us to make some sketches and then buying them if you feel that they are good or that they represent possibilities, I am sorry to say that we can't do that. It is against the ethics of the profession. ~~might make~~ MR. TEAGUE: Well, you are very convincing, Mr. Loewy. I think we might like to try this out for a few weeks, or for a month or two, and see how we get along --- which would MR. LOEWY: Well, that's very difficult; I don't think we could possibly do it. One of the most important items in the code of ethics that I have mentioned is that one designer cannot work with several manufacturers in the same field. We are interested in your field. Therefore, we want to make a permanent connection. We are not interested in working for you for two months and then going somewhere else; the fact that we had started with you would keep us from designing for a competitor of yours for quite some time. If we are to be associated with you, then, it should be understood that it is for a minimum of one year; that is an absolute minimum. MR. TEAGUE: It looks as though you have a lot of confidence. MR. TEAGUE: Well, if you are going to really inform yourself about our business, I suppose it would take some little time for you to get your feet wet in the widget business--and after all, if we are paying for that investment,

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then we want to capitalize on it. I suppose it is a fair proposal that we should undertake to go along for a reasonable length of time, to find out how it is going to work out ---

MR. LOEWY: I have suddenly had an idea. We might make it easier for you. If you don't feel like getting involved with us or any other designer for a period of a year because you feel you would be gambling on a big fee, which would be hard to justify with the Board of Directors-- I say that you're not gambling but, after all, you are entitled to your ideas--why not make an arrangement whereby the retainer would be a nominal one of a few thousand dollars a year, and then we would get paid on a royalty basis according to the success of the product we design? Your original investment would then be reduced to a minimum.

As designers, we would welcome such a financial arrangement, which has been extremely successful in the past. It is one of the most successful arrangements we have in our organization. We like that sort of deal.

MR. TEAGUE: It looks as though you have a lot of confidence in what you are going to do. Of course, if that's a good gamble for you, maybe it isn't for me. Perhaps we had better have something more in the nature of a fixed-fee arrangement.

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MR. LOEWY: Well, that's just what I was trying to lead up to.

MR. TEAGUE: You have given me an entirely new slant, Mr. Loewy, on the possibility of industrial designing in our business. I will have to discuss it with my associates and my Board of Directors. We would then like to have you visit us and look us over on our home grounds--and maybe we can come to an agreement.

MR. LOEWY: I certainly hope so. Thank you very much. [Applause]

MR. TEAGUE: [To the audience] That was entirely unrehearsed.

CHAIRMAN HUDNUT: It was a very exciting experience to have an inside look in this way at the processes of the designer vis-a-vis his client. It isn't so very different from what takes place in the case of an architect--except that unfortunately we can't take a royalty on our buildings.

I was struck by the fact that there was one omission from the conversation which, as a bystander, I should like to bring to your attention. Neither the designer nor the manufacturer mentioned the consumer: the man who is going to use this product. I wonder whether he shouldn't impinge a little on the situation. How do we find out where he stands?

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Has he a stake in this matter, other than to be told some-
thing? Do you think it would be proper to discuss that for
a moment? over a period of years must build a reputation
for producing MR. LOEWY: Surely, that would be welcome. We
assume that if the product is going to be a success (and that
is what we were talking about; the success of a product), it
has to do a job for the consumer at a reasonable price, has
to require a minimum of maintenance, and has to be of good
quality. We assume that the interests of the consumer would
be taken to heart, that that would be Problem Number 1. If
that weren't so, I don't see how the product could be a suc-
cess for long--or be a success at all. We assume, then,
that whatever we would design for Mr. Teague's company would
take care of the consumer's interests and requirements.
CHAIRMAN HUDNUT: Would you say that it is a
question of importance to the manufacturer and the consumer
whether the design is good or bad, or is the important ques-
tion whether it is something that can be made efficiently at
a profit and can sell? Does it matter, from a practical
point of view, whether the thing is really good or not?
MR. TEAGUE: Oh, yes. Each year, we put
out one good CHAIRMAN HUDNUT: It really does? will buy it.
But nobody has MR. TEAGUE: Practically none of our clients, I

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think, are in business on a short-range program. If they are, we don't want them as clients. People who are going to stay in business over a period of years must build a reputation for producing a valuable product, a product that is worth all it costs and that will serve the public.

I think that that question, as it touches upon the matter of the industrial designer's relation to his client, was covered briefly by Mr. Loewy when he spoke of market surveys. We usually do go into the market, and we'll examine not only the selling of the product in the market and its competition, but the consumer public--what the consumer is looking for in the product and what wins his favor. Our designs are influenced primarily by that.

CHAIRMAN HUDNUT: I know someone who is a salesman for one of the big houses that put out trade catalogues--not Sears Roebuck, but the same kind of firm. Once, after looking at the catalogue, I said to him, "My God, but you have a horrible line of lamps!" He had about fifteen lamps, and each one was worse than the next--except for one lamp that was quite good. He explained it this way: "Each year, we put out one good design, in the hope that somebody will buy it. But nobody has ever ordered one."

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In which the Now, it didn't make any difference to him whether the thing was good or bad, did it--just so long as it sold? Perhaps, then, if he were going to employ an industrial designer, he would say, "Give me the ugliest lamp you can design, because it sells." Basis of performance. The housewives understand that.

MR. LOEWY: Really, I don't see that sort of faulty case. Do you see it, Mr. Teague?

MR. TEAGUE: No. Of course, I do think that there are curious hiatuses in public taste--and they usually occur in connection with products which are bought on purely esthetic standards, rather than practical standards. Until quite recently, radio cabinets provided a very vivid example of that type of lack of taste, because the actual functioning of the radio had practically nothing to do with the design of the cabinet, and it was bought on appearance standards by a public which had no functional standards by which to judge it. They make or break any of the furniture or any of the lamps that might be bought.

The same thing is true of lamps. They will all give you the same amount of light with a 50-watt bulb in them, and they will all give you the same amount of light with a 100-watt bulb in them. Consequently, they are bought for what are presumed to be their decorative values. That lack of taste does not occur in any field

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in which the function of the product is a factor in the design or an influence on the design. For instance, in buying kitchen equipment, most housewives show excellent taste in their choices, because these are functional products which are judged largely on the basis of performance. The housewives understand the performance of these products, and consequently they are influenced by other standards than the period styles or the home-furnishing magazines or what-not.

Most of the products that we deal with are in that latter class. I think that very few of us design in those fields in which products are bought purely on esthetic standards.

MR. EGMONT ARENS: There is another point that has to be considered in this secondary class, the class that includes such things as furniture and lamps--and that is the taste of the buyers of the large department stores, who can either make or break any of the furniture or any of the lamps that might come into their department either by stocking it or by simply refusing to stock it. If a department store puts in a buyer who has good taste, the department immediately gets better. However, one of the reasons that the department stores don't do that is that the buyer who has good taste is

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usually more expensive. Therefore, they usually get along with one who receives a smaller salary, and consequently the department has a lower standard. In refrigerators and kitchen equipment, on the other hand, and things like that, the buyer's taste is not consulted.

CHAIRMAN HUDNUT: It seems to me that, in the average American home, the only really beautiful thing is the refrigerator. That usually has some esthetic merit. Next, perhaps, is the range. The kitchen, then, is certainly far in advance in the matter of good design. ~~see, that is the basis of our approach.~~ MR. TEAGUE: Kitchens, bathrooms and furnace rooms. CHAIRMAN HUDNUT: Wouldn't that be the basis,

fundamentally? MR. ARENS: The reason for that is probably the advertising. Manufacturers of kitchen equipment and of bathroom equipment have spent millions of dollars in the magazines, and the result is that the public has been educated to accept those things. There is no similar movement, however, in furniture or home furnishings. ~~thing which works well, which requires a~~

CHAIRMAN HUDNUT: I was struck with a line in the pamphlet published by the S.I.D. It said (if I quote it correctly), "Although our principal interest is in the appearances, yet we also must take into account the function and usefulness." In the case of the kitchen, you have a

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striking example of the work of designers who are chiefly interested in the function, and who yet arrive at the only really satisfactory and beautiful thing in the house. Isn't that true?

MR. TEAGUE: Yes.

CHAIRMAN HUDNUT: I would think, then, that the process should be just the reverse: their principal concern should be with function--and, if it were, they would arrive at something satisfactory in appearance.

MR. TEAGUE: Actually, you see, that is the basis of our approach to all design.

CHAIRMAN HUDNUT: Wouldn't that be the basis, fundamentally, on which the manufacturer would approach it?

MR. TEAGUE: Yes.

CHAIRMAN HUDNUT: Wouldn't he first want something which worked and was technically correct?

MR. TEAGUE: Yes, he would.

MR. LOEWY: Something which works well, which requires a minimum of maintenance (and that is quite important), which is easy to keep clean and to dust and to oil, and which is silent (if it has any motion in it).

CHAIRMAN HUDNUT: When you come to think of it, the kitchen has just about as firm a tradition as the parlor.

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The old-fashioned kitchens were beautiful things, with their great hearths and their brick ovens and the beautiful old utensils hanging around. Isn't it strange that that tradition should die so easily, while people still cling to the Colonial and Georgian and what-not in the living room? and that the qual-

MR. TEAGUE: I think the reason for that is that the preparation of food, like bathing, is a modern art. As they are practiced today, they have no traditional backgrounds. The preservation and preparation of food and the use of bathrooms, as known in American homes, are wholly new phases of life. that seem to intersect one another, that have little chronology have-

MR. LOEWY: Do you mean cooking? seem to me to be particular-

MR. TEAGUE: Yes, as practiced today. The gas range is a wholly new thing; you can't build one to look like a wood-burning fireplace. If you could, someone would probably have done it, see, is what makes it sell. (At least, that is the reason we-

MR. LOEWY: That's right. these drawings.)

CHAIRMAN HUDNUT: Well, you have the old Elizabethan telephone booth, you know, see, I don't think you see many projects-

MR. TEAGUE: That's a little easier, you see, because that's merely an enclosure. I saw some telephone booths just the other day that were obviously copied from Gothic confessionals. just and take photographs to see where it

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collects. MR. KAUFMANN: Mr. Chairman, I should like to ask a question. To excuse what I am going to say in a moment, I should like to say first that I agree, of course, that kitchens and bathrooms are far ahead of the rest of the American home in their design and in their efficiency, and that the quality of their design is rooted in the understanding of the function that is performed in them.

However, as I sat here listening to this eulogy of the American kitchen, I began to wonder about some of those refrigerator doors that are divided up into four or five panels that seem to intersect one another, that have little chromium bars tacked on the bottom that don't seem to me to be particularly functional or particularly easy to clean.

I would appreciate understanding what happens between the functional solution of a problem and that thing which, I suppose, is what makes it sell. (At least, that is the reason we are so often given for these trimmings.)

MR. LOEWY: If you look at the latest style of refrigerator unit for household use, I don't think you see many projections that are not absolutely essential. Even the hinges are recessed and faired in.

When we design a Frigidaire, for instance, we like to spread fine dust and take photographs to see where it

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collects. When we say that we streamline a door handle, then, it isn't as silly as it sounds. It is streamlined in the sense that it offers a minimum of resistance to the flow of dust and therefore collects a minimum of dust.

We also designed all these units of a Frigidaire so that the lint from a piece of cloth, when the housewife cleans the surface, does not get caught between the hardware and the door. You see, we are really thorough about that kind of thing. If you look at the drawer-pull at the bottom of a Frigidaire, you will see that in the latest models it is very often recessed, so that a little child playing in the kitchen will not get hurt by the hardware. That also applies to the door handle: many accidents involve children who strike their eyes against handles.

All these things are taken into consideration, and it seems to me that the latest type of unit--if you look at it carefully--is not complicated at all. It has been reduced to its simplest expression consistent with correct functioning.

MR. KAUFMANN: Do you think that is a real tendency: to eliminate some of the trimming?

MR. LOEWY: To eliminate projections, yes.

MR. TEAGUE: Oh, yes, definitely.

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MR. LOEWY: Or, at least, to recess them to get a perfectly smooth surface.

CHAIRMAN HUDNUT: I heard an interesting comment on the kitchen just last week. I was at a meeting of the Woman's Foundation, which is a mysterious organization to promote the happiness of women (as if that were necessary)-- and the argument was made, rather persuasively, that kitchens are too small and that the concentration of counter and range, and so forth, into a small unit is not congenial to family happiness. Family happiness depends upon cooperation and collaboration. The housewife should have her children helping her to wash the dishes, and they should all work together, and the husband should come in and do his share. But now the housewife retires to a kind of laboratory, and she is losing her importance and dignity in the family. (I am just quoting this now.) I thought, in that connection, of what my uncle told me when I was married thirty-four years ago. (I have been happily married ever since.) When I asked him the secret of a happy married life, he said, "It's very simple: you just have troubles together." And so, if we found ourselves growing apart, we would get one of these new kitchens, you see, and move in there.

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But isn't it true that the tendency to make the kitchen into a laboratory has gone pretty far? and so forth-- is brought in. MR. LOEWY: The architects, you know, give us very little room to place in that kitchen all the things that the housewife requires for efficient operation of her home. We therefore have to make the best of the area that is given to us. influences of the time. These influences are somewhat contradictory. Our choice would be to have a very compact assembly of units (such as sink, washing machine, ranges) in a large room, so that the housewife would have to expend a minimum of effort in order to have access to the various units. This compact group would be in a large and airy and pleasant and cheerful room. The family could have access to her from the outside of that unit, so that they could still talk and be together--and she wouldn't have to run around a large kitchen at the same time in order to go from the sink to the range. on, along the line that has been mentioned by Mr. Loewy. CHAIRMAN HUDNUT: The proposal has been made, especially in California, that the kitchen should be brought into the living room. I mean, of course, in a small house. for serving MR. LOEWY: With all its smells, too! Frequently, there are CHAIRMAN HUDNUT: The smells are going to be eliminated. Mr. Wurster, who is one of the leading archi-

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tests on the Coast, has built such houses. That means that the business of living--the business of cooking, and so forth--is brought into the family life. Mr. Rodefsky, do you want to speak on this? MR. LOEWY: It is integrated with the rest of it.

CHAIRMAN HUDNUT: Yes, that's right. MR. TEAGUE: I think that design always responds to the influences of the time. Those influences are somewhat contradictory, and they change from time to time. I think that kitchen design in the past twenty years has been perhaps too much influenced by apartment house design. After all, apartment dwellings in this country represent a very small percentage of the number of homes (a surprisingly small percentage; only about five percent, or something like that), and nevertheless those very compact apartment kitchens have unduly influenced kitchen design.

I think there is a very definite tendency in the other direction, along the line that has been mentioned by Mr. Loewy. You see that in many of the designs that are now being shown. Kitchens are now larger and more airy rooms, as Mr. Loewy said, and they usually provide pleasant arrangements for serving meals and dining right in the kitchen. Frequently, there are also desks and telephones and cases for cook-books, and so forth, for the use of the housewife. I feel

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that the kitchen is now becoming more what it used to be: a sort of center of home industry and activity. in with the kitchen equip

CHAIRMAN HUDNUT: Mr. Rudofsky, do you want to speak on this point? HUDNUT: I should like to raise a question as to

MR. BERNARD RUDOPSKY: I just want to say that I am very, very surprised to hear a eulogy of kitchen and bathroom equipment, because I always thought it was completely inadequate. I am of average height, but I have never found a bathtub in which I could really take a bath. I ask myself why all the American bathtubs are from four to ten inches too short. English merchandise and French merchandise are much more adequate. Did you go around and explain these things to people, and Then, too, I have never found a bidet (and I think that that is where hygiene begins). I think there are six houses in the United States in which there are bidets. of refrigerators The same goes for the kitchen. I think all the equipment is for warming food, but not for the preparation of food. I haven't seen an iron pot, a copper pot, or anything of that kind which anybody who likes to cook food would want to see. consumer demand was not there first; isn't that true?

Then, why is the refrigerator always treated like a piece of sculpture? Why does it have rounded edges, when it has to fit into a wall unit? I never found a satis-

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factory form in a refrigerator. It looks very wonderful in a store by itself--but, when you try to fit it in with the kitchen equipment, it is always a very awkward form. ~~should like to know~~ CHAIRMAN HUDNUT: I should like to raise a question as to how it happens that designers can sell these, and extraordinarily beautiful and efficient things for the kitchen. I am referring not only to the range and the refrigerator, but also to the knives and the other utensils. That question is rather pertinent from the point of view of an architect, because occasionally we also do modern designs--and we never sell them. ~~this subject now?~~

Did you go around and explain these things to people, and find out that some consumers wanted them, and then come back to the manufacturer and say that people want these fine simple aluminum things, that they want this kind of refrigerator, and so on? Did some consumers say they wanted them? Just how did it come about? It really would be a godsend to architects if we knew that secret. I suspect that what happened was that somebody made them and sold them, that the consumer demand was not there first; isn't that true?

~~standing with~~ MR. TEAGUE: I think you have to give the manufacturer a lot of credit in that field. After all, a great many manufacturers are quite forward-looking. I should like

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to hear from Ray Patten on that subject, because he has designed a lot of household appliances and kitchen equipment.

MR. LOEWY: And later, if possible, I should like to answer Mr. Rudofsky's criticism of bathroom equipment and Frigidaires--the reason why we have rounded corners, and so on. millions of dollars to put that type of product on the market--until CHAIRMAN HUDNUT: Would you like to do that first, before Mr. Patten speaks?

MR. LOEWY: It is up to you, Mr. Chairman.

CHAIRMAN HUDNUT: Mr. Patten, would you like to speak on this subject now?

MR. RAY PATTEN: I want to say--as far as General Electric is concerned, of course--that, when we first started in, we made square boxes. However, as soon as you get into a business which is competitive, and somebody else makes a better-looking refrigerator for the same price, and the consumer buys it, you have to compete with that other manufacturer.

MR. LOEWY: The latest type of refrigerator is really not so. It is my opinion that, as long as refrigerators and other kitchen equipment are sold as individual free-standing units, they must be designed as such. As soon as you design a kitchen as a complete unit, then you will be able to reduce the cost of refrigeration, the cost of your range,

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and the complete cost of your kitchen. I think that eventually that will come about.

At present, however, when a concern such as General Electric puts out a million refrigerators a year, it cannot afford to change over all its tools and dies--when it spends millions of dollars to put that type of product on the market--until it obtains that acceptance. It is a gradual evolution. I think that is the reason why we design them as free-standing units.

CHAIRMAN HUDNUT: I can see that there is an evolution there--but what puzzles me, as an architect, is this: Here is a horrible Victorian chair--and you make a beautiful, simple, functional chair, and nobody buys it. But here is a horrible refrigerator, all dolled up with baroque trimmings--and you make a beautiful white refrigerator, and they all buy it.

MR. BAERMANN: It's advertising.

MR. LOEWY: The latest type of refrigerator is really not covered with chrome.

CHAIRMAN HUDNUT: No; I know it's not. It's very beautiful.

MR. LOEWY: It is much more chaste and simple.

MR. ARENS: If you formed a company to manufac-

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ture beautiful chairs and spent millions of dollars in advertising and improving them and having beautiful colored pictures in the women's magazines, showing how lovely they look--and if you kept it up for ten years--you would sell them just as the refrigerators are sold.

CHAIRMAN HUDNUT: Well, we have been designing simple houses now for twenty-five or thirty years, and putting them in the magazines, and winning prizes--and we are now building in Boston, someone said, 170,000 Cape Cod cottages. None of our new buildings are being built. But you people who design things for the kitchen and the bathroom have no trouble in establishing your market.

MR. ARENS: When the architects get into pre-manufactured housing, the manufacturer will then build a house in the way in which an automobile is built. He will decide on a style, and then he will go out and sell that, and then probably ---

CHAIRMAN HUDNUT: In other words, the decision comes from the manufacturer first, and then from the consumer?

MR. ARENS: Partly.

CHAIRMAN HUDNUT: Rather than from the consumer to the manufacturer?

MR. TEAGUE: I think the question is largely

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influenced by the fact of mass production. that are put on
furniture are MR. BAERMANN: That's right. ed products. Furn
niture is MR. TEAGUE: When you mass-produce a million
refrigerators a year, as Ray Patten has said, you must make
your tool and die investment first. The reason that refriger-
ators have rounded corners is that they are stamped out of
sheet steel ---tain that you are betting on a sure thing.

MR. LOEWY: I wanted to say that, then, that mass
production is MR. TEAGUE: [Continuing] --- and they are
covered with porcelain enamel--and you can't put porcelain
enamel on square corners, and you can't economically stamp
steel if you have square corners. example.

MR. LOEWY: That is exactly the reason we have
to do it. ic taste, because the public and the manufacturers
of a mass go MR. TEAGUE: To my mind, they look better, any-
how. It gives them an effect of unified form which they
wouldn't otherwise have. The outstanding example of such a
rying need. I think that the reason that taste is so superior
in those fields where mass production prevails is simply that
the manufacturer must commit himself in the beginning to a
very great expense and must risk his fortunes on a design
before he ever gets into production. Consequently, he is
under a great compulsion to make it a good design. Further-

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more, all the silly extraneous elaborations that are put on furniture are too expensive in mass-produced products. Furniture is mass produced only in a very minor sense. It isn't made from jigs and dies, as refrigerators and ranges are made--jigs and dies that cost hundreds of thousands of dollars before you ever make one object, so that you have to make pretty certain that you are betting on a sure thing.

CHAIRMAN HUDNUT: It would seem, then, that mass production is a means of raising the public taste. MR. TEAGUE: I think so--definitely.

CHAIRMAN HUDNUT: That is just the opposite of the theory of William Morris, for example.

MR. McCONNELL: It is also a means of holding the back public taste, because the public and the manufacturers as a mass get committed to a particular design. The result is that something which everyone agrees would be an improvement is not available. The outstanding example of such a crying need is a gas stove with an oven that you can get at without busting a pair of nylon stockings.

CHAIRMAN HUDNUT: You might ask whether the consumer buys these things for the kitchen because they are good-looking. Does he know they are good-looking?

MR. McCONNELL: He knows it because he is told it.

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products, and VOICE: Not necessarily. The competitors of that manufacturer MR. TEAGUE: I don't think it is quite that. I think that consumers respond to the beauty of those things when it is shown to them in a functional object, an object that they judge on the basis of its functional qualities. With one man Mr. McConnell is right in criticizing the range and the kitchen arrangement. The reason for it is that the range is still manufactured as a separate appliance which is imported into the kitchen, and is not actually an integrated part of it. Economy and other considerations of convenience, rather than the use of the oven, dictate the rectangular or cubical form that the ranges have taken. and over ago MRS. LOUISE LEICESTER: Isn't it a fact that the consumers--the mass mind--if they see an awful lot of some one thing, all of it looking just about the same, more or less automatically think that it is good? On the other hand, if they see hundreds of different kinds of the same item, they are completely bewildered and don't know what's what. I believe that Mr. Arens and Mr. Teague have covered that; that it is these two things--the mass market and competition. As soon as one manufacturer took a chance and made one of these very expensive experiments--and the mass saw a lot of it all over, in competition with other

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products, and liked it--then all of the competitors of that manufacturer had to do something of the same kind.

I believe it is true that, as a whole, industrial design would raise the standards of taste in masses of people much more quickly. You can't do it if you are dealing with one man after another; he is going to see ten different things and try to decide which one he likes best--and finally he is going to go back to the thing with which he is familiar, because that is the only standard he has.

CHAIRMAN HUDNUT: A curious thing is that houses are standardized in given localities; there is a certain type in Chicago and a certain type in Boston, repeated over and over again, like refrigerators. The Cape Cod cottage appears again and again and again. There are several million blinds in Boston with little heart-shaped perforations in them, and they go on being made. They are just as monotonous as refrigerators. The difference is that they are very bad.

MR. TEAGUE: They never shut those blinds, either.

CHAIRMAN HUDNUT: That's right; they are perfectly useless. Just consider the dormer window. A dormer window is one of the most illogical forms that man could think of; it is expensive to frame, it cuts out the light, it always

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leaks, and you can't furnish the room. Nevertheless, all the new houses, square miles of them--not the old houses, but the new ones--have two little dormer windows. Now, the same man who puts on that dormer window will have the most efficient and beautiful refrigerator and range and radio that you can imagine. Isn't there something very strange about that? you see, is the MR. WEBSTER: I have noticed a sort of dividing line in people's lives between those parts of their lives where they would follow along with a contemporary trend in design and those parts where they show a great resistance to it. It seems to divide itself into the functional end of their lives, which is cooking and eating and heating their houses and moving around from one place to another, and the social end of their lives, which is shown in their living rooms and front yards and dormer windows. You can sell them anything new, provided that it operates in the functional end of the thing, such as the kitchen or the heating room or the rumpus room in the cellar; you can sell them anything for their garage or even for the sun-porch, which is not an important part of the social end of their lives. But you can't sell them anything functional for a living room, even though you explain the ease of keeping it clean and dusting it and all the rest of the things

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which a housewife who has lived with functional furniture can tell you about. It is very difficult to get it across because, as in the case of so many social things, it is hard to get people to change and to get away from tradition. That is where I have noticed this dividing line, you might very well say to him, "MR. ARENS: The opinion of their neighbors, you see, is the thing that determines it. Furniture?"

MR. PATTEN: Aren't we a little off the subject? Isn't the problem that we are supposed to discuss today the problem of the industrial designer and the client, rather than the consumer? his taking a chance. Then, if he backed it up with

CHAIRMAN HUDNUT: I think the point is well taken. Let us say that you are an industrial designer who is engaged by a manufacturer. If he is a manufacturer of drawing-room furniture, you would say to him "My dear sir, I must be a traditionalist; otherwise, you won't sell your line"--and you would be serving him efficiently by saying that. That is what he would expect of you. Am I right?

MR. WEBSTER: It is one of the things he would expect of you. On the other hand, you might point to some recent surveys on trends in public taste. We are getting to a point now where people who are planning to build--at least, some ten or eleven percent of them, according to figures that

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have been mentioned--want a so-called modern house.

That is beginning to open the door. If you were dealing with a manufacturer of drawing-room furniture who said that he not only wanted to sell a lot of furniture, but wanted to lead in the field of furniture, you might very well say to him, "Do you have the courage to go along with us on a program of truly functional drawing-room furniture?"

CHAIRMAN HUDNUT: He would have to decide whether he wants to take a chance or doesn't want to take a chance.

MR. WEBSTER: You might give him some figures which would warrant his taking a chance. Then, if he backed it up with adequate advertising and produced in a mass way, so that the price would be proper, this would be about the right time to get started on it.

CHAIRMAN HUDNUT: The reason I bring up that question is that it goes to the heart of the discussion today, doesn't it? Does a designer, as a professional man, say to the manufacturer, "I will not design anything that isn't good; and, if you are going to insist on this kind of stuff, you might as well take it to somebody else"? Or does he say, "I will find out for you what will sell, and I will give it to you"?, but it also means a lot of splashing on the floor

of the bath. MR. WEBSTER: You have put your finger on a very

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delicate point. years of practice, it has been decided that
the drain should be... CHAIRMAN HUDNUT: I know I have. The upper edge
of the tub, MR. WEBSTER: I know a good many designers who
have said, "No, I won't design that lousy stuff; you go some-
where else with it." That would be different. Then we could
have the water... MR. LOEWY: Absolutely. That happens all the
time. to design for the masses, not for a few people.

MR. WEBSTER: They say, "You want somebody in
Grand Rapids; you don't want me."

CHAIRMAN HUDNUT: Careful, now--I come from
Grand Rapids.

MR. WEBSTER: I was using it as a generic term.

CHAIRMAN HUDNUT: My father was a manufacturer
of furniture.

MR. LOEWY: May I answer the gentleman who made
the remark about bathtubs?

CHAIRMAN HUDNUT: Please do.

MR. LOEWY: I know that there is never enough
water in a bathtub to take a really comfortable bath. How-
ever, we have found that housewives who have little children
don't want too much water in a tub; it might not only be
dangerous, but it also means a lot of splashing on the floor
of the bathroom--and they have to clean it up. Therefore,

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after years and years of practice, it has been decided that the drain should be at a certain level below the upper edge of the tub, so that it will be practical for the whole family.

If we could make bathtubs for grown-ups and bathtubs for kids, that would be different. Then we could have the water level near the top edge of the tub. But we have to design for the masses, not for a few people.

As far as the range is concerned, let me say this: When a company like the Consolidated Edison Company, with its unlimited resources and unlimited scientific talent, designs a range, it is the best range that can be produced and developed at a given time. If they knew how to produce a better one, they would do it.

The same thing applies to the electric range. If you could see the laboratories where General Electric is developing those electric ranges, or where General Motors is developing electric ranges, you would realize the tremendous amount of effort and talent and intelligence that is put into the development of such units. There is just no way to make them better. If there were such a way, they would make them better. Certainly, it is not in Europe that they make better bathtubs or better ranges, either electric ranges or gas ranges.

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splash. But MR. KAUFMANN: They certainly make a better refrigerator in England, don't they? through; it is just enough water so that MR. LOEWY: What kind? ate and which will be tracked all MR. KAUFMANN: It fits right into the unit and is very nice and inconspicuous. It would be of no practical value in the MR. LOEWY: What make is it? MR. KAUFMANN: I don't know the make. Thousands of houses in MR. LOEWY: We happen to have designed these in Europe. With the exception of Electrelux (which is a Swedish concern), I really couldn't agree with you on that, Mr. Kaufmann--and we happen to know that market very well. I think they are years behind. I am for a drain in the kitchen and bathroom. MR. RUDOPFSKY: I think it is a mistake to consider all these things piece by piece. Mr. Loewy, in talking about the bathtub, has mentioned the splashing. I always ask builders here why they don't do the same thing that is done all over South America: in every modern house in South America, there is a drain in the kitchen and a drain in the bathroom. That would take care, of course, of all splashing of water. But nobody wants to put a drain in that room, because the costs would go up and because we can do without the drain. MR. LOEWY: It would take care of an enormous

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splash. But the splash that creates dirt is not twenty gallons of water on the floor of a bathroom; it is just enough water so that walking in it will create mud which will be tracked all over the rest of the house. The drain would not help that situation very much; it would be of no practical value in the average home. ~~the basis of what they assume to be~~ ~~esthetic.~~ MR. RUDOFSEY: Why would hundreds of thousands of homes be built with drains, then? After living for several years in apartments with such bathrooms and kitchens, I felt that they had a tremendous advantage. But I think it is all part of the design of the bathtub. ~~ical design and a good~~ ~~design; when~~ MR. LOEWY: I am for a drain if it doesn't penalize the cost of construction too much. You see, the hundred dollars used for a drain could be used somewhere else, in most cases, to much better advantage. Don't you think so, Mr. Teague? ~~It so happens that we are designing a great deal~~ ~~of furniture.~~ MR. TEAGUE: Yes. You can't overlook the factor of cost in mass production. After all, we have bathrooms in pretty nearly fifty percent of the homes in this country now, which is a very high percentage--far higher than exists anywhere else in the world. One of the reasons for it is that a practical and attractive bathroom has been developed at a low cost. The factor of cost influences design in every

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field of mass production.

As to the question about the difference in standards of taste as between house furnishings and house equipment, there are two things to be considered. One is that the public judges the equipment on the basis of function, but judges the furnishings on the basis of what they assume to be esthetic standards. (They may not be esthetic standards, but the public assumes them to be.) There is that difference. Secondly, the factor of mass production enters into it. The manufacturer of equipment must stake his money on a practical design and an economical design and a good design; whereas the furniture manufacturer can afford to make a thousand chairs or a thousand couches, and then change his design and make a thousand different ones--and that is what he does.

It so happens that we are designing a great deal of furniture. None of it is for mass production, however; it is all for special installations, where we can do things that we feel are right. (I must say that it is not bent plywood furniture. I think there are other ways to make good furniture.)

CHAIRMAN HUDNUT: You shock me! Most of my students don't realize that there was anything good before

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the invention of plywood.

I do think that people buy these things for the kitchen because they like them, because they are good-looking things. I have come across so many women who are very proud of their kitchens and will tell you how beautiful their kitchens are. For some reason, you have succeeded in getting them really to feel that those things are beautiful.

MR. ARENS: One of my clients in a small town in the Midwest is an engineer--the president of his firm. He has a conventional house: big thick brick walls and small windows and a dark interior. When we go to his house, we always arrive in the parlor first. That is full of overstuffed furniture, and none of it is very comfortable. Everybody sits around on the edge of his seat for a while--and then, all of a sudden, this client of mine says, "Now, come on--let's go out in the kitchen." Then we all go into the kitchen--they have a little breakfast nook, and everybody goes in there--and they get something out of the refrigerator, and everybody has a good time.

This man does that with all of his friends. They all go through the convention of sitting in the parlor for a few minutes, and then they go out to the room which has

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been designed to have a good time in.

I find that that is true more and more; that women like their kitchens a little better than they like the rest of the house, but they have to keep up these conventions because of the Joneses across the street and the Ladies' Aid, and so forth, that might disapprove of modern taste.

CHAIRMAN HUDNUT: The bar is apt to be functional, too, isn't it?

MR. WEBSTER: Yes--but why not the bedroom?

CHAIRMAN HUDNUT: Well, why not?

MR. WEBSTER: I don't know. It seems to be a social room.

CHAIRMAN HUDNUT: Oh, it's the railroad company?
MR. LOEWY: Mr. Chairman, could we talk about some other field? Could we try to get away from the kitchen and talk about locomotives or railroad stations or buses? After all, they are completely in the field of industrial design--and they have quite an impact on the public taste, too.

CHAIRMAN HUDNUT: All right, let us take the locomotive. What is it that is transforming the locomotive? What impulse is giving it the streamlined appearance and making it really good-looking? The recent ones are very handsome, aren't they?

MR. LOEWY: Yes, they are. At least, they're

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better-looking; that this thing had been thought through in

CHAIRMAN HUDNUT: What is doing that? What is the secret force that is bringing that change about?

MR. LOEWY: It is simplification, just as in many other products. We are trying to eliminate all projections (or as many projections as we can) or superimposed units. We try to fair in all the piping, all the tubes, all the various elements.

CHAIRMAN HUDNUT: Well, that impulse didn't come from the consumer.

MR. LOEWY: No. But it means easier maintenance.

CHAIRMAN HUDNUT: Oh, it's the railroad company?

MR. LOEWY: It is in the interest of the operator of the locomotive to group all his units together in accessible places, to try to make replacement easier, and also to have a better-looking and simplified unit. The British have done that for years--long before we did it in America.

MR. ARENS: I have just read a statement made by a chief engineer of the Budd Company. He said that one of the reasons that the streamlined train was so successful was that the outer appearance of the cars more or less dramatized the inner functioning of the cars, which had been greatly improved; that it was a sort of outer demonstration

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to the public that this thing had been thought through in terms of travel comfort. He said that the railroad companies were beginning to accept the streamlined train as a whole unit for that reason; that the whole thing had been engineered from beginning to end, that all its functions had been re-examined and redesigned.

CHAIRMAN HUDNUT: Do you think there was any resistance on the part of the railroad companies to the new idea? MR. LOEWY: To any new idea.

MR. KAUFMANN: I think that perhaps it would be a good idea to take about two minutes (or less) to look over what we have been saying, because I believe that a number of really very basic points have come out through the discussion of various concrete instances and actual products. It seems to me that what I have been listening to is this; that the client of the industrial designer has influenced the professional work of that designer in the following two principal ways:

First of all, because of his very large investment and his very great gamble, he imposes on the designer certain very serious limitations in his work. The work must conform to the laws of such a gamble and of such an average

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taste and such an average distribution and such an average acceptance. The new way of handling the material here also had their part. The other factor that I think has been mentioned a number of times, although not quite so strongly (but I have a suspicion that it is equally important), is the one that has been touched upon most recently by Mr. Arens: that the manufacturer does expect the designer to evolve adequate symbols for the product that is being sold to the public. Mr. Arens mentioned the outside of the Budd car. It is supposed to be a symbol of the thinking and the work, and the results that have been achieved, inside the car.

It doesn't seem to me that that kind of dramatization--I suppose we could call it a kind of symbolic salesmanship, in a sense--is very different from the kind of ornament that has existed in design in any age. The curlicues on a rococo clock actually fulfilled a similar function: they proclaimed certain virtues of the owner and certain virtues of the maker, in exactly the same sense in which that is done by the decoration on the outside of the Budd car.

MR. ARENS: But you must remember that the outside of the Budd car has been manufactured on the basis of an entirely new conception of the handling of materials. They are using thin sheet metal--sandwich construction--and it is

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an entirely new method of manufacture. Therefore, the material and the new way of handling the material have also had their influence on the form. In generalities, if possible--with MR. KAUFMANN: Of course, they have. ~~only through the general~~ MR. ARENS: It is the same in the case of the kitchen stove: when it changed from cast iron to sheet metal, you got an entirely different form. ~~Now (and so would most of you, I am sure)~~ MR. KAUFMANN: True enough. I wasn't trying to say that this is just the same old thing all over again; I was trying to say that it is a series of similar necessities met by entirely different means --- ~~and here is another of them~~ ~~through~~ MR. McCONNELL: As to your second point, though, the impact of mass production has made it a very different thing. When the maker of a rococo clock put a lot of gadgets on his clock, he was doing it in order to make that particular clock--or one of two or three clocks--look pretty or attractive or interesting to somebody. ~~think it is quite true the way you state~~ MR. ARENS: Or expensive. ~~And sure; when everybody said you~~ MR. McCONNELL: The man who puts some characteristic symbol either on a mass-produced thing or on a thing like a railroad train, which is a symbol of service to a mass of people, really has quite a different objective. At least, the quantitative element there is so large as to make it

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actually a different thing qualitatively.

MR. KAUFMANN: Yes. All I was trying to do was to bring us back from particulars to generalities, if possible--with the hope that, by funneling the particular through the generality, we could perhaps get a little more reaction in the conversation. I think all great art springs from limitations. What I should like to hear (and so would most of you, I am sure) is this: As to this impact of the client on the designer--an impact which forces the designer to work within the limitations of mass production, as we understand it, and which (as we have heard it said here a number of times) thereby seriously limits the kind of product made available to the general public--what does that really mean? Is it a good idea? Is it a bad idea? Has anybody questioned it before? Is it worth questioning? Maybe it isn't; maybe it is a swell idea. MR. KAUFMANN: But he did have. There were very elaborate. MR. ARENS: I don't think it is quite true the way you state it. Consider the first Ford car: when everybody said you couldn't make a cheap car, Ford went ahead and did it--and then he proved that he could sell it. In other words, he was creatively imaginative. I think that happens in the case of the industrial designer all the time. The designer is creatively imaginative, and he does something to

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which the public then responds. But it is not art. That is, it is not art. MR. KAUFMANN: But he does it only if it happens to fit in with the tremendous overhead that is worrying his client. That is what I should like to bring out here, and that is what I should like to have discussed. world--like less in the aspect MR. TEAGUE: I think all great art springs from limitations. That is true in the arts of expression as well as the arts of utility. The thing that has made painting a great art is that it is necessary, in two dimensions, to create with pigments an illusion of three dimensions and to express qualities of the visual world which are not always visible to the naked eye. MR. KAUFMANN: True. of creating and conveying certain aspects MR. TEAGUE: If the artist had a medium whereby he could simply re-create that world, no art would be involved. MR. KAUFMANN: But he did have. There were very elaborate sculptural groups, there was the art of bas-relief, and there were many --- Well, if we can agree that the limitations MR. TEAGUE: Then, again, you are working with very different limitations, you see. MR. KAUFMANN: Oh, always. with Mr. Teague that the limitations MR. TEAGUE: The nearest thing I can think of is three-dimensional Kodachrome. If you have seen that, you may

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feel that it is very, very beautiful. But it is not art. That is, it is not an art of expression; it is a technological art.

MR. KAUFMANN: Isn't it possible, sir, that the art--in the illusionistic art of the Western world--lies less in the capacity to reproduce the third dimension by an illusion in two dimensions than it does in the expressive distortions that were achieved on the way?

MR. LOEWY: Ah, now we are going to have a good discussion on art!

MR. KAUFMANN: I don't want to use a lot of highbrow nonsense that is ---

MR. TEAGUE: I spoke of creating and conveying certain aspects of qualities of the visual world which are not evident to the ---

MR. KAUFMANN: In the world itself.

MR. TEAGUE: That's right; in the world itself.

MR. KAUFMANN: Well, if we can agree that the limitations produce the art, let us now translate that into what we have been talking about.

MR. KOSTELLOW: I agree with Mr. Teague that the limitations unquestionably channel the effort of the designer into the right direction, because that immediately involves

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economy and involves the proper use of the material and the equipment and everything that goes with it, and it immediately begins to click in terms of market, designer, manufacturer and consumer. It is a very integrated picture.

MR. KAUFMANN: But does it? Let us take the case that Mr. McConnell brought up--about the nylon stockings. There is one case in which it doesn't seem to be feeding directly into the needs of the consumer.

MR. TEAGUE: I think that is only one factor in range design. That matter of the position of the oven bothers every range designer, but there are always other factors involved. The oven of a modern gas range is heated by the passage of flue gases around it. The modern designers of gas ranges have studied that problem very, very closely and assiduously, and have arrived at a very high degree of efficiency by means of various baffles and conduits whereby the flue gases are conducted around the oven and, with a minimum of fuel expenditure, you get the maximum heat--and even heat--all over your oven. Now, that is far easier to do when the oven is integrated in the cube of the range than when it is placed up on top.

What will happen eventually is that the range will be designed as part of the kitchen, and the oven will be

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a separate unit from the cooking top, and so on--and then it can be placed where it will be most convenient. The broiler will also be a separate unit and will be placed where it is most convenient.

In all design, I think, you start with these limitations, and they always condition the result--and the value of the result depends on the success with which those conditions are met. In modern design of mass-produced products, you have first, of course, the consumer and his needs; secondly, you have the manufacturer and his facilities; thirdly, you have the materials with which you work. They are going to condition your result.

That, I think, is why the results in mass-produced products for the kitchen, the bathroom and the furnace room are so superior to the equipment for the rest of the house. In the rest of the house, limitations do not apply; the sky is the limit. They can do any damned thing they want with tables and chairs--and so they proceed to do it.

MRS. LEICESTER: In connection with that, I was just going to suggest that that theory of limitations might account for the differences in the home furnishings. What it really comes down to in home furnishings is a matter of style instead of design. They have so few limitations, and

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their competition becomes a matter of having two or three or four lines a year. Those can't be really designed lines; they are just style lines. Facturers and retailers had nothing to say about

MR. KAUFMANN: Well, isn't that really because the limitations aren't recognized? Every manufacturer in the country had

MRS. LEICESTER: Well, perhaps. They had uniform items at a

MR. LOEWY: Yes, only because they couldn't afford the transition

MR. BAERMANN: There is always retail tradition which hampers it. I think that is the major point in this transition from the limitations of the manufacturer to the consumer. The distribution handicaps the progress of good design in the home furnishings field, let us say, more than anything else (as Mr. Arens has already pointed out). I think the retailing and the merchandising of those things which go to the consumer have much more influence on the final product than the designer and the manufacturer really have.

MR. KAUFMANN: Certainly, there is a great difference between that influence as exerted on things that are manufactured in great masses and that influence as exerted on things like lamps and furniture.

MR. TEAGUE: The mass manufacturer controls his retailers. as well as good, in order to make competition effective.

MR. KAUFMANN: Yes, to a much greater extent.

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That is certainly the major difference. People in charge of the furniture. Well, we have had a chance to watch an experiment in England, where the manufacturers and retailers had nothing to say about how furniture and chinaware and lamps looked. A few designs were settled on, and every manufacturer in the country had to do those designs in order to produce uniform items at a uniform price--simply because they couldn't afford the tremendous over-variety that we enjoy here.

I don't know how many of us have had a chance to look at the utility designs in England, where the same uniformity that we are talking about in mass-produced appliances existed in the case of furniture and similar items. I think it would be fair to say that the improvement over what had previously been available was very largely of a negative quality; there were fewer real monsters on the market. But I doubt whether anybody would fall head over heels in love with what they did put on the market.

MRS. LEICESTER: But the element of competition was lacking in that. able to resist a seven-dollar chair?

MR. KAUFMANN: That's right. the retailer would--

if he were MR. MCCONNELL: In other words, you have to have bad things, as well as good, in order to make competition effective. dollars retail.

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MR. BAERMANN: One of the people in charge of the furniture department of a large department store in Los Angeles once said that, when a woman comes into a store to buy something, you gauge her--whether she is Mid-Victorian, French Provincial, rococo, or whatever the case may be--and then try to sell her what she is. As long as that kind of sentimental traditionalism is fostered by our retail outlets, you cannot expect mass production in home furnishings.

If Charles Eames wants to produce economically a chair that retails for seven dollars, he has to produce at least ten to twenty thousand a month--a molded product, a mass-production thing. Unless he can do that, he cannot produce an inexpensive modern chair. No modern chair can be produced inexpensively unless it is done in mass production--on dies and jigs, just as Mr. Teague said before--where it requires precision work. Consequently, we have no good, modern, inexpensive furniture.

MR. KAUFMANN: Do you think, Mr. Baermann, that a retailer would be able to resist a seven-dollar chair?

MR. BAERMANN: I don't think the retailer would--if he were not scared.

MR. KAUFMANN: He couldn't afford to be scared at seven dollars retail.

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MR. BAERMANN: No, I don't think he would be scared; that's true. --and they are pure Colonial, you know.

MR. KAUFMANN: In that case, while I agree with all your strictures in regard to the retailer up to this last one, I don't agree with the ---

MR. BAERMANN: Maybe Charlie is going to be successful? He's selling them. They're selling too good-looking.

MR. KAUFMANN: Let's hope so.

MR. McCONNELL: The logic of that is that if you can find a manufacturer who is willing to take a big enough gamble ---

MR. TEAGUE: What this country needs is a good \$2,500 house.

MR. KAUFMANN: To be a big enough manufacturer ---

MR. TEAGUE: That is why we don't have mass-produced houses which are as good in their entirety as our mass-produced accessories--because no one yet has been willing to take what would probably be the \$100,000,000 gamble that would be required to go into production of a house which would be sufficiently inexpensive and sufficiently good in quality to supply the waiting market.

CHAIRMAN HUDNUT: You have seen the Gunnison houses, haven't you, that the United States Steel Company is putting out?

MR. KAUFMANN: I hope that none of us think of

those fields

MR. TEAGUE: Yes. I think they all interest on

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one another. CHAIRMAN HUDNUT: They are putting out a good many thousands of them--and they are pure Colonial, you know. would really MR. TEAGUE: Exactly. That's the trouble. Gunnison is trying to do a cast-iron range out of pressed sheet steel. (That's a good analogy.)

CHAIRMAN HUDNUT: He's getting away with it, isn't he? He's selling them. MR. TEAGUE: Yes--at \$15,000. that, do you?

MRS. LEIGESTER: It could be a lot cheaper if he forgot the cast-iron business. MR. TEAGUE: What this country needs is a good \$2,500 house.

MR. KAUFMANN: Exactly. For instance, there is that famous MR. WEBSTER: Some day, we will probably admit that a Quonset hut is rather good-looking.

MR. LOEWY: It seems to me quite obvious, Mr. Kaufmann, that you have the impression that the designer is restricted by the manufacturer.

MR. KAUFMANN: Surely. of it, anyway. That's the kind of MR. LOEWY: I should like to clarify in my own mind whether you mean restrictions in the esthetic field or

in the price field--or just how you mean it. MR. KAUFMANN: I hope that none of us think of those fields too separately. I think they all interact on

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one another.

MR. LOEWY: They are interlocked, but--well, it would really take a long discussion to clarify that.

MR. KAUFMANN: I agree with Mr. Teague and all the rest of you that these limitations are an advantage.

MR. LOEWY: Do you mean that the manufacturer tells the designer, "I don't want anything too good-looking, because it wouldn't sell"? You don't mean that, do you?

MR. KAUFMANN: Not in the least.

MR. LOEWY: You mean restrictions of cost, more or less?

MR. KAUFMANN: Exactly. For instance, there is that famous restriction that we hear about so often, when a man brings a new design in to us, and we say, "Well, that's kind of interesting, but how did this happen?"--or "how did that happen?" And he says, "Oh, well, that's because we had to use the old dies over again--but we were supposed to make something that was new-looking out of it, anyway." That's the kind of restriction I have in mind.

MR. LOEWY: There is another angle there: If using the old dies and still making a reasonably good-looking unit allows a manufacturer to sell his product at a much lower price, he can then reach a mass market of poor people who

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could never afford that sort of unit if it were just a few dollars higher. If, by retaining the old dies for another year, we can reduce the cost of a carpet sweeper (let us say) by five dollars, and still have a reasonably good-looking carpet sweeper, there are hundreds of thousands of families who normally could not afford a carpet sweeper who will be able to buy that one because it is a little cheaper. Therefore, restrictions sometimes have a beneficial influence, because they enable more people to afford those things.

As long as a designer does not have to compromise with his esthetic sense, I think that it has certain advantages for the masses if he has enough imagination to do a good job while using the previous dies for another year or two.

MR. KAUFMANN: Yes, I think we would all agree.

MR. RUDOFSEY: Do people really buy the cheapest things? How about consumer acceptance? (That's always the last argument.) It has never been defined. I don't think that people buy the cheapest things.

CHAIRMAN HUDNUT: I don't know much about that. I am inclined to think they do, but I am not very well informed.

MR. TEAGUE: Your market always expands as the costs go down. You can sell four million cameras at a dollar

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apiece--and you can sell only a hundred thousand cameras at ten dollars apiece. acceptance and consumers' selective capacity. I think the MR. RUDOFISKY: Oh, yes, there is merchandise and there is merchandise--but we are talking about gas ranges and sweepers and things like that. That is another class. his Mid-Victorian MR. TEAGUE: The same thing applies. The ornate lamp is not MR. LOEWY: Absolutely.--because the Joneses have it. MR. RUDOFISKY: Or take cars. You must know about cars. This sentimental attitude is fostered. Reich advertising MR. TEAGUE: In ranges, for instance, there are certain standard categories of price--\$59, \$69, \$75, and up to \$98, \$125, and so on. The big market is in the low-price range, and the manufacturers try to give the maximum value they can give for those low prices. a great deal to do, I think, with MR. RUDOFISKY: I take that for granted--but when it is a question of twenty different lamps, why is the ugliest picked (or nearly the ugliest) when it costs even more than the well-designed and cheaper one? lamp or that lamp, we will be MR. WEBSTER: The consumer has complete freedom of choice on the lamps--in fact, much greater freedom than on a lot of these mass-produced items--and the ugly ones just move out of the stores. I don't know why. MR. TEAGUE: I don't know the answer.

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MR. BAERMANN: One should make a distinction between consumers' acceptance and consumers' selective capacity. I think the consumers' selective capacity is conditioned (and very strongly conditioned), firstly, by the retailer; and, secondly, by the misuse of advertising--exploiting his Mid-Victorian sense of possession and such things. The ornate lamp is nothing else but a showpiece--because the Joneses have it, being perhaps the most conspicuous example--in which deliberately this sentimental attitude is fostered. Buick advertising doesn't show a Buick car, but shows a beautiful girl. I saw a piece of Dow Chemical advertising which, instead of having plastics displayed, had carnations or something like that. This indirect selling through associations and through false sentimentality has a great deal to do, I think, with the selective capacity. I think the acceptance depends completely at this moment upon price, for there is no really qualitative selective ability.

MR. KOSTELLOW: If we keep on much longer, we will be through with tomorrow's meeting, because this is precisely the subject set for tomorrow.

MR. PRESTINI: I have a question on styling. Is our industrial society becoming so efficient that we can produce more than we can consume?

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obsoleting the MR. TEAGUE: Oh, no, only because new tools must
be made at MR. PRESTINI: Well, then, why must we change
styles each year? Styling, to me, is not a question of good
designing. How do industrial designers direct their clients
in the use of styling? that the tools wear out every so often,
and then they MR. TEAGUE: I should like to make one comment
on that. There are certain lines--women's hats and other
clothing being perhaps the most conspicuous examples--in which
deliberately created obsolescence is apparently one of the
objectives of all manufacturers. There are other lines, how-
ever, in which that is not true. little spots of red--and
everybody in Take the automobile industry, for instance.
With a mass-produced automobile, it costs a great many million
dollars (about fifty million dollars, say) to tool up for a
line of cars. Those tools will last for about two years'
production. At the end of that time, new tools must be made.
That gives the manufacturer a chance to redesign his car and
incorporate such improvements as appear to him to be desirable
and eliminate the bugs that he has discovered in previous
models. Those happen to be the things that people respond
to; however, I don't say that they are always guided in that
by one hundred percent pure esthetic motives. However, the
new models are introduced not primarily for the purpose of

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obsoleting the old cars, but simply because new tools must be made at certain intervals, and it is quite possible to incorporate improvements and changes at those times. I think that is true of most mass-produced consumer products in household appliances; that the tools wear out every so often, and then they must be replaced.

MR. ARENS: I think a very simple answer can be given to the basic question of whether new things stimulate interest. Perhaps you have been watching the leaves turn this fall. In the summer, everything is green. Then, pretty soon, as you drive along, you see little spots of red--and everybody in the car says, "Isn't that pretty?" Then, a little later, all the woods are red--and then brown--and then that no longer creates very much interest. Soon after, the white birches begin to appear in the brown woods--and everybody sees them. Then, when the snow is on the ground, the green (which was utterly unimportant all summer long) suddenly comes up, and you see the great old pines--and that is very exciting.

Those happen to be the things that people respond to: newness, difference, interest. I think that is one reason why the manufacturer, when he does change his tools, has a very legitimate reason for changing design to create new in-

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designer is called in, does a beautiful job--and it doesn't
terest.

sell very well, because the public isn't conditioned to it yet.

MR. PRESTINI: But does he do it for newness
or because it is good design? I think that is the fundamental
difference.

MR. LOEWY: As long as he has to have new dies
for his next model, he is trying to incorporate in the design
everything he can imagine that will make his product more
attractive, not only esthetically but from the functional
point of view.

MR. ARENS: Take the change from mechanical
transmission to fluid transmission. Fluid transmission was
used and demonstrated twenty years ago, but it couldn't come
into general public acceptance until there had been more or
less tentative trials here and there. One manufacturer would
put it into one model, and then another manufacturer would
put it into another model, and so on. Gradually, fluid
transmission gets to be the accepted thing. In a few years,
it will be on most cars.

That is the same thing that happens in design
elements. The best possible design couldn't possibly be sold
until the public had been conditioned to an acceptance of it
by trade shows and people's discussion of it. Gradually, the
good design is accepted. It very often happens that a

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designer is called in, does a beautiful job--and it doesn't sell very well, because the public isn't conditioned to it yet.

CHAIRMAN HUDNUT: Mr. Vassos, would you like to say something?

MR. VASSOS: Yes, I would. I am very much interested in the question of what good or bad design means to the manufacturer (which is the third point on the agenda for today) and the question of how the distributor judges industrial design (which is the last point). We have omitted those two points completely.

Since it is in order for us to discuss them, I think the best way is to refer to case histories. (Mr. Loewy and Mr. Teague gave us a very good idea of what happens when a designer meets a manufacturer, and how they go about getting together.) I happen to have been involved in a product--radio--which was fast-moving. True, it was best to spend most of your time on safe objects, which you knew you could clean up and market and not worry about their ultimate consumption. But radio was a problem; it had to be treated as such, and eventually improved. We cleaned up the radio, put the dial on top, and took all the extraneous nonsense out of it. It took four years to do it--and then Philco produced that horrible, awful object which you all remember, and it

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was priced at \$69.50. it were a hot potato. I think we should face it. The manufacturer who was producing a cleaner object, a better object, was completely rattled; and the public itself was confused by the introduction of such a device. Eventually, that affected the distributor, who insisted "From now on, give me that type of merchandise." The architects,

as I have said, This is something that does not have to do directly with the problems of the designer. It is a problem of education--and it is going to take many, many years before we really achieve the ultimate. Literally by the tone of these

words from us. We know what a room should look like tomorrow. We think that designers--or those who are here, who are competent and good--should devote their energies to the living room and forget the kitchen for the time being, because the kitchen is well done and well taken care of.

Architects are responsible, to a great extent, for this lack of design. As long as we are given Cape Cod cottages, we cannot produce the perfect living room; and as long as the cottage is not thought out--inside out or outside in--as a complete unit, we will not have good design. Perfectly

stunning. It is not fair for designers to worry constantly about doing only refrigerators and trains. I think our daily living in America should be taken care of. The living room

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has been avoided as if it were a hot potato. I think we should face it. I believe the industrial designer can do a very good job in making the architects conscious, and they will eventually evolve a better interior.

CHAIRMAN HUDNUT: I don't think there are very many architects who design Cape Cod cottages. The architects, as I have said, design less than five percent of the houses. These Cape Cod cottages are a kind of mass production; they don't come off the assembly line in the way in which an automobile does, but they are made literally by the tens of thousands from one pattern, with little variations. They are a kind of industrial product and they force these conditions on the designer. If the architect had his way, certainly all the architects under thirty (or under forty, I might even say) would design modern houses.

MR. KOSTELLOW: Why don't they? They would like to, but they don't.

CHAIRMAN HUDNUT: I think they would--but they have almost no influence. That is the most astonishing thing to me: that you people in industry can design these perfectly stunning things (like an airplane, for example--the most beautiful thing you can imagine) and do it so simply, and nobody objects--whereas we can't sell a modern house to anyone.

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MRS. LEICESTER: Again, it is that tremendous impact that the mass has. One designer doing an airplane or a refrigerator affects a great mass of people with that, and almost instantly another manufacturer has to come forward in competition with it. In the furniture industry, however, or in fabrics or lamps--or any of those details that go into the living room--one designer would be just a drop in the bucket; his stuff would never appear in any mass to affect the taste of the people or their buying habits. If you are going to affect the mass, it has to be by mass production, which does not exist in any of those industries. review some of the machinery the

MR. ARENS: One means by which you will affect public opinion in the matter of interior decoration is to be found in the movies--especially now, with a lot of color movies. One of the things that is important in taking a picture, which has been discovered in recent years (if you look at some of the early Charlie Chaplin pictures, you will see that they didn't know it then) is the fact that, if you have a simple background, your action is much clearer. You are therefore seeing more and more simple backgrounds in the moving pictures, and that is very definitely going to influence taste in the direction of simple home decoration. There you have an example of the conditioning of your public.

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true that is MR. GORDON OBRIG: We happen to have quite a little to do with home furnishings in the line of furniture. I have sat here and listened to statements to the effect that it is an archaic industry. I think that industrial designers as a whole could very well profit the whole country if they would realize that there has been a terrific change in the methods of making furniture--the basic methods, in the way of the development of machinery--in the last few years. Plywood as such is not the only way of making furniture. The possible mass production of furniture would be very evident to you if you were to review some of the machinery that Miles-Wysocky has produced, some of the machinery that has been produced in the South in the last two-and-a-half years, and some of the new methods of upholstery. I think you would find that the furniture industry as such is changing, that furniture is on the way to becoming a mass-produced article. The price of furniture--the cost of factory production--has dropped considerably within the last two years. I think you could very well look over the diathermic machines, the thermex of Girdler, and a few of the other innovations. You will find that changes have taken place. The industry is not quite so archaic today. It is

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true that it is embryonic, but it is well on its way to turning out a mass-produced article--not with jigs and fixtures, but with methods that will develop good production. ~~And today,~~
~~Mr. Kaufmann~~ MR. PRESTINI: I disagree with that. They are using machines to make a handmade product; the design is still a handmade design. Before you can do what this gentleman is talking about, you must have designs that are designed for the machine. I think that what has been done is hardly progress; they are using a machine to imitate handwork or hand design. ~~of business in the automobile industry, and it is done~~
~~by seventeen~~ MR. OBRIG: May I reply to that? ~~plain the situation.~~ It is CHAIRMAN HUDNUT: Certainly. ~~important in the~~
~~subject of~~ MR. OBRIG: I think you will find that that is not true--or, at least, it is true in only certain parts of the furniture industry. I don't know whether that gentleman has been through the Mengel plant and seen its productive possibilities. I think you will find that they are not producing handmade designs, that the assembly work is jiggled up, that there are no cabinet-makers fitting drawers, that there are none of the old handicraft attributes. ~~our attention~~
~~to the living~~ MR. KAUFMANN: Mr. Obrig, isn't it true that Mr. Mengel's drawers are fitted by hand in the department stores, however? ~~all, we are subject to the wishes of our~~

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clients. (MR. OBRIG: I don't believe so. In the beginning, when they first came out, there was trouble--just as in the case of any new article. But I think you will find today, Mr. Kaufmann, if you ask any warehouse superintendent, that they are not fitting anything. *have industry--with a few notable exceptions--* MR. PRESTINI: It is impossible to get mass production in the furniture industry because they do about three billion dollars' worth of business a year, and it is done by three thousand companies--whereas you have about the same amount of business in the automobile industry, and it is done by seventeen companies. I think that will explain the situation. *It is impossible--* *side showed an interest in the services of* MR. OBRIG: I think you are confusing mass production in terms of large volume with the possible use of mass production in terms of a smaller volume. I think the two things are not the same. *When you get through with the furniture in* MR. TEAGUE: I don't want to talk too much, but I do want to make a comment in connection with this discussion of furniture, and especially in connection with something that Mr. Vassos said: that we designers ought to turn our attention to the living room and not have it directed exclusively to kitchens and bathrooms and so on. *a horribly "humiliated" and that* After all, we are subject to the wishes of our

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clients. (This discussion has to do with the client-designer relationship.) Most of us may have the status of call girls, but we are not streetwalkers; we wait for the clients to come to us. and I looked at a number of them in Grand Rapids; and I find that, so far, the furniture industry--with a few notable exceptions--has shown quite marked indifference to the services of industrial designers. (I think Mr. Rohde has done some awfully good furniture designs, and done them very successfully.) Unfortunately, there is an attitude that can perhaps be so I am sure that the industrial designers are not shooting the furniture industry. It is quite the reverse. I am sure that, if Grand Rapids showed an interest in the services of industrial designers, the designers would respond with a great deal of alacrity. That interest just hasn't been evident up to now. he announced that he was bringing a furniture for CHAIRMAN HUDNUT: When you get through with the furniture industry, I hope you will turn your attention to the architectural industry.

MR. ROBERT WHITELAW: I don't want to hurt your feelings, Dean Hudnut, but I don't believe that Grand Rapids is the center of the furniture industry any longer.

CHAIRMAN HUDNUT: I'm horribly "humiliated"; out loud. I MR. WHITELAW: Mr. Prestini has pointed out that

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the furniture industry is scattered over multitudes of little companies all over the country. I had an opportunity to discover that for myself. I looked at a number of them in the South, and I looked at a number of them in Grand Rapids; and I find that, as far as Grand Rapids is concerned, the horse has already gotten out of the barn.

They are now looking for designers. Possibly, they haven't found the right ones yet--but they're hunting. Unfortunately, there is an attitude that can perhaps be encountered in too many little cities in the South, where Chambers of Commerce raise postwar planning funds and hire industrial engineers, so-called, to bring in little industries. (There is quite a movement of industry into the South today.) I had an opportunity to talk to one of these industrial engineers, who announced that he was bringing a furniture factory into this particular city. I said, "Tell me about it. Why did you do it? Just how did you happen to hit on furniture?"

He explained that furniture was very logical: the state bought three times as much as it made; they had a lot of hard woods; and they had cheap labor.

Well, I didn't disagree with any of those points out loud. I said, "Well, that's logical to an extent. Now,

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what about the designer? Where does he fit in?"

WEDNESDAY AFTERNOON SESSION
November 13, 1946

The engineer said, "Oh, well, we don't have to worry about the designer, because the public will buy anything we can make for them for at least another five years."

By and large, then, the furniture industry is not hunting for designers yet.

CHAIRMAN HUDNUT: I see that we have arrived at the cocktail hour. I think this would be a good point at which to adjourn. We will meet again tomorrow at 2:30.

In thinking about yesterday's discussion and the subject of today's discussion, it occurred to me that we might classify the preferences of consumers under two heads: rational and irrational preferences.

When a consumer wants a garage, his preferences are apt to be rational. He wants the right kind of door, that operates smoothly; he wants good drainage; he wants a good firm cement floor; he wants good lighting and heating. His choice will be determined in accordance with a reasoned process. But the same man will go into his drawing-room or his bedroom, and out pop his irrational preferences, and take control of the ship. The architect, then, has to be a double

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personality--like his client, the consumer. He has to work
his client on these two levels. . . .
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I think that is pretty much true of industrial
products. CHAIRMAN HUDNUT: We discussed yesterday the
attitude of the manufacturer and the distributor toward the
profession of industrial design, and I am afraid that we also
introduced the subject of the consumer from time to time.
(It is pretty hard to avoid it.) Today, we want to talk
especially about the consumer and his problems and to note how
he feels about good and bad design and the development of a
profession of design. . . . those corner windows, which are so
difficult to In thinking about yesterday's discussion and the
subject of today's discussion, it occurred to me that we might
classify the preferences of consumers under two heads: rational
and irrational preferences. . . . settle down around you and give
you a feeling. When a consumer wants a garage, his preferences
are apt to be rational; He wants the right kind of door, . . .
that operates smoothly; he wants good drainage; he wants a
good firm cement floor; he wants good lighting and heating.
His choice will be determined in accordance with a reasoned
process. But the same man will go into his drawing-room or
his bedroom--and out pop his irrational preferences, and take
control of the ship. The architect, then, has to be a double

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personality--like his client, the consumer. He has to meet his client on those two levels, or loss of an authority, and to which he I think that is pretty much true of industrial products. You can design a refrigerator rationally--but don't try to do it with a bedroom set or with textiles: a man's choice there will be dictated by fashion or habit or emotion. I think we greatly underrate the role played in design by feeling, temperament or emotional values. I presented to Mr. Kaufmann I was speaking yesterday about dormer windows, and I was wondering why in the world clients (my clients and everybody else's) want those dormer windows, which are so difficult to construct, which always leak, and which are so difficult to furnish in the interior. I think the answer is that there is a feeling about it. That form gives a kind of snugness, you know: the roof settles down around you and gives you a feeling of protection and enclosure. You like that kind of thing because of that emotional content in the form. The flat roof, on the other hand (which one can easily prove is infinitely better from the point of view of planning and construction), does not give you any of that symbol, that romance, that feeling which the dormer-window roof gives you.

I am going to ask Professor Rugg to lead the

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discussion today on the point of view of the consumer. That is something on which he is more or less of an authority, and to which he has given a good deal of thought. Dr. Rugg, will you please carry on from this point?

DR. RUGG: I must immediately disclaim any competence to speak as a student of the consumer, as regards either his acceptance of your designs or (to use the term that was mentioned yesterday) his selection. I protested to Mr. Kaufmann that my meager contribution would be much better placed tomorrow, when you talk about education. For a good many years, I have been a student of education. I shall therefore be glad to come together with you tomorrow and make any minor contribution that I can make. I am not sure as to how much I can do today. At any rate, I shall not take long.

I am terribly tempted, by what Dean Hudnut said in his opening remarks this afternoon, to be drawn off into making a comment in regard to his stress on the role of feeling in the work of the designer. It so happens that it came as a rather exciting coincidence to me to hear him make those remarks, because that particular idea is one that I have been working with in the last three or four years--particularly in the case of a new book to which I have devoted the war years.

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concept of It is a book on the foundations of education--
and I mean foundations. I mean the concepts that we have
discovered in our modern times in the field of psychology,
biopsychology, upon which the form and organization of a pro-
gram of study rests; and in the field of the study of society
and culture, in the field of esthetics and ethics. 1890 and
precisely the Of course, the concept of design is one of the
central ones in that body of foundational material. That
has compelled me to become for a good many years a student of
design, of the process of design, in order that we can carry
over to education whatever we find from all these other fields.
tribution on In the study of that process, if you do it his-
torically (and I am referring particularly to recent history--
since 1890, let us say), the chief line which has been empha-
sized by Dewey and the people associated with Dewey has not
been the main line which William James and Charles Peirce
originally developed. psychologist--was very much concerned,
of course. Just this week, I have gotten a new book on
Peirce, who was the forerunner of James and the teacher of
James and of Oliver Wendell Holmes, Jr. and of Thorstein
Veblen and other students of society. This book has organized
the Peirce material which has not been available. being body
of material. Concept Number 1 to Peirce--what he called the

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concept of firstness, the basic idea--is precisely what Dean Hudnut has been talking about: that is, "feeling." The second idea is "body reaction," which is the instrument of feeling, the conveyor of feeling. The third idea is "idea" or "concept." body, in terms of feeling, and so on. It is documented in William James's great psychology of 1890 did precisely the same thing. I am inclined to think that James got it from Peirce, but I am not so much concerned with that. Scattered through James, however, is an enormous amount of material that has gotten lost in the last fifty years--due, I think, to John Dewey's tremendous prestige and his great contribution on the side of what he calls problem-solving or thought--reflective thought. "Concept" or "idea" became the same thing, and "feeling" got sloughed off. Moreover, James, as a student of the body--he was Professor of Anatomy at one time at the Harvard Medical School, before he was psychologist--was very much concerned, of course, with the body as the vehicle of feeling. Well, I mustn't go on and take up your time with this--except to express my delight at Dean Hudnut's concern with that idea. The concept is confirmed by an overwhelming body of material that came from a wide range of investigation--

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the German psychologists (Lipps and others), from the whole field of esthetics. You go to a modern painter like John Marin and find that, wherever he does become articulate, he speaks in exactly the same terms--always in terms of the reaction of the body, in terms of feeling, and so on. It is that documented from a vast range of sources. ~~not at all aware, on the level of~~ Well, that is more a kind of laryngeal spring-board for me than anything else--but I must confess that I am delighted to hear Dean Rudnut place the emphasis on that point. Now, let me come more directly to the subject of today's meeting. ~~points, but they are working for a Master's degree, and~~ As was said yesterday by Mr. Kostellow and others, yesterday's meeting did deal to a very large extent with the question that is set for today: "To what degree is the consumer aware of design as a value in his purchases and as a stimulus to his purchasing?" Perhaps I can restate that question and we can address ourselves to it more deliberately today. But, first, let me review briefly certain comments that were made yesterday. ~~would say that not more than four or five per~~ The point was made fairly frequently that consumer acceptance is dependent upon mass publicity that comes from the body of advertising of the sales department of a manufacturer, but a clear distinction was made between consumer

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acceptance and consumers' critical selection. I should like to devote myself to the latter for a moment and give a brief answer out of my experience with one very selected group of students of the problem. From that, I think, we may arrive at a sound answer to the whole question. It is my belief that that answer will be that the consumer is not at all aware, on the level of critical selection, of the design elements in the products that you men and women create and produce. For example, in Teachers College this year, we have seven thousand students on the graduate level: they are not graduate students, but they are working for a Master's degree, and a couple of hundred of them are working for a Doctor's degree. They are about as good as most students working for a Master's degree throughout the country--not the best, but the rank and file. From my experience with groups of that type for a good many years--and I deal with a very small cross section of them that are selected primarily in terms of interest in esthetics in education--I would say that not more than four or five percent of that entire group are consciously aware of the design elements in these modern products.

They are conscious of certain appearance values; it has been drummed into them. They are conscious of certain

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sloganized terms that have been broadcast a good deal (such as "streamlined," and so on). But to expect even those people to appraise the products that are put before them in terms of clear criteria of good design would be asking too much, I think--asking too much, I repeat, even of those people. This point--to see Now, my guess is that they represent a small fraction of one percent of the general buying public. They are much more intelligent, in general terms, than that buying public as a whole; and they are much more alert to problems of design. They are beginning to make a conscious use of the concept of design in their own educational work. (They couldn't make a good defense of the concept--but they are making a good deal of progress.) Yet, I am confident that not more than five percent of that group--which means, of course, a tiny fraction of one percent of the whole larger group--could appraise your products in any such terms as have been outlined. So you curve it in certain ways because of your studies I have three or four points to make, Dean Hudnut. I think I will make one point first, and ask the designers here to react to it; then I will make another one later; and so on. your studies of the consumer's needs and your studies of the market. The first point springs from yesterday's discussion. A number of the people here (Mr. Teague and Mr. Loewy

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and, I think, three others) commented at various times on what has become practice in your midst: that market surveys are made, that that is a step--and a very important step-- in the total process of design.

I should like to stop my brief remarks at this point--to continue them later at an appropriate time--with this question (and a comment): Will you tell us a little bit here--to refresh the memory of those of us who are not professionals in your group--as to how these market surveys are made? In doing that, I hope, you will make two distinctions:

Firstly, I think you should distinguish between the needs of the consumer and the consumer's expressed interests. There is a fundamental difference there. Are you studying his needs--what he really needs? Do you curve that refrigerator handle in certain ways (as Mr. Loewy described it yesterday) because of certain expressed interests of the consumer? Or do you curve it in certain ways because of your studies of human behavior; and because, in terms of those studies, you know what will function best for the safety, comfort (and so on) of the consumer? Distinguish, then, between your studies of the consumer's needs and your studies of the consumer's interests, awareness of design, and so forth and so on.

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Secondly, will you tell us a bit more as to whether--and how--these surveys are used? Are those surveys of needs of consumers actually used in connection with design; or is that just a good talking-point for industrial design? The point was made yesterday, two or three times, that the manufacturer's decision comes first and that the consumer's role is a decidedly bad second.

I think we might have a more worthwhile discussion of this subject if, instead of your listening to a layman in this field (which I am, utterly), you were to tell us something about how these market surveys are made. I shall therefore stop at this point.

MR. KOSTELLOW: I should like to say a few words. Originally, you know, we started out with a discussion of industrial design as a new profession, and that was more or less supposed to control the subsequent meetings. Dean Hudnut and Mr. Sher defined the general meaning of "profession." The industrial designer seemingly wants to pursue the common path of other professionals (if he is not already a professional).

Mr. Boudreau said that we are semi-professionals or quarter-professionals or something like that. Well, I am not really interested in the percentages. I am interested

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in the fourth (explicit) definition given by Dean Hudnut, and the fifth (implied) definition. What does the industrial designer as a professional contribute to the public, and what degree of interest does he show in the consumer? If we find out what general attention the industrial designer pays to the consumer, what interest he shows in him, a lot of these questions which are posed would begin to answer themselves.

MR. KAUFMANN: I think we would all agree with you, Mr. Kostellow. I think that is exactly what Dr. Rugg has been saying. He would like to know in exactly what way (and he has just asked that question) the industrial designer, in his professional capacity and using the means which were mentioned a number of times yesterday, attempts to sound out the interests, the desires and the needs of the general public. That is precisely what Dr. Rugg has been saying. I think that both of you have posed the same question.

MR. KOSTELLOW: Not quite.

MR. KAUFMANN: Very nearly, certainly.

MR. KOSTELLOW: Dr. Rugg's is a very practical question which is still bound up with a problem of production. Mine is in the field of humanities, completely and absolutely, without any consideration of practical aspects--because I believe that the industrial designer is not an engineer. On

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the basis of yesterday's discussion and some of the comments that have been made so far today, it would seem that the industrial designer is a sort of illegitimate offspring of the engineering profession who concerns himself with function. Now, that doesn't lead anywhere. The big movements in culture (Renaissance, Greek or Egyptian) did not concern themselves so much with the function. That is a little bit away from the type of profession which the industrial designer is trying to create, which is something to satisfy the esthetic ---

on the previous MR. BOUDREAU: I think I can put us all back on the track by saying that very possibly Mr. Kostellow is anticipating some of the important things that Dr. Rugg is going to bring out. I am sure that Dr. Rugg, as an expert in sociology, is going to raise the implications involved in a possible profession of industrial design in terms of its obligations to society, other than just designing goods that will sell. Am I right, Dr. Rugg?

DR. RUGG: Well, I think that is involved in the problem, certainly.

MR. BOUDREAU: That will come in later, I feel confident.

MR. KAUFMANN: I am sure you are right, Mr. Boudreau. However, I think there is another point of view

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from which we can look at it. These meetings were planned to have a very simple arrangement: The first meeting would include a general definition of the problem of being a professional in today's society. Then we would spend the next three days in studying a number of the practices in the field and a number of the problems that the designers face, as people (regardless of whether we want to call them professionals to any degree or to no degree). Then, on the final day, we would come back and draw together what we had learned on the previous three days, and find out to what degree those experiences and that knowledge could be related to the initial definition presented on the first day. What we are trying to do, then, is to come around in a spiral. We started out with the generalities (which, you correctly believe, are important); we are going to take a circuit around the problem; and we hope to come back to the very point at which we started, after having explored some of the practices and problems on the way to coming back.

I think that perhaps we have to have a little time to explore the field before we can find out whether some of these problems and practices are amenable to the definition with which we started, and to what degree they are amenable. Does that explain it for you a little more?

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his behavior MR. KOSTELLOW: Yes. In other words, let us start with the public, rather than with the designer.

MR. KAUFMANN: Surely. It is divided into two parts: What DR. RUGG: That is why I asked my question. Here

is the public, with its actual knowledge, its wants, its habituation to style (as was mentioned so often yesterday), its tendency to buy the worst (if you like) instead of the best in design, and so on. The designer is a professional student not merely of the limitations of the manufacturer's facilities and the limitations of the material. He is a student of the consumer, too. He must be. What I am trying to get you to do is to apply yourselves directly to the third point: How does the industrial designer study the consumer? But, even more important, does he use the results of the study after he gets them; or does he go ahead in his own sweet way and design these products irrespective of what he finds out about consumer needs and interests? It is going to be of tremendous help.

MR. WEBSTER: I have indulged in various market surveys from time to time. I think that the first I ever got involved with was back in 1931. I have defined market surveys as of two types: One is aimed at discovering what the consumer wants that he doesn't now have; the other is a study of

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his behavior --- is was during the period when the gas stove
was going th DR. RUGG: His needs as shown by --- to sheet metal.
We had sarbe MR. WEBSTER: Well, no. It is divided into two
parts: What does he want that he doesn't have, and what is ed
his present behavior? help a struggling gas stove manufacturer
to capture a DR. RUGG: Yes, but the question is: What does
he need, as shown by his behavior? What does he really need?
MR. WEBSTER: That is the point I want to make.
A study of the consumer's behavior can very often help any
industrial designer in figuring out what the consumer needs.
If you ask the consumer what he needs, he isn't able to tell
you--because it is something that he has never experienced.
DR. RUGG: That's right. ad out what the cooking
behavior of MR. WEBSTER: Any market survey, then, that is
directed at getting the consumer to help you design a product
is a waste of time. A study of his behavior, so that you can
apply your brains to giving him something better with which
he can behave, is going to be of tremendous help. to go to the
floor, into: I am now going to mention a particular example
which is so old that it can be publicized now: a study of gas
stoves. We got down to gas stoves yesterday, and I hate to
bring up a specific product again--but this happens to be one
on which we went out and surveyed the behavior of the consumer.

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~~reduced the~~ This was during the period when the gas stove
was going through the transition from cast iron to sheet metal.
We had marbelized gas stoves, with Queen Anne legs, at the
time. The particular organization with which I was connected
had been asked in to help a struggling gas stove manufacturer
to capture a larger share of the market. (He made a good
stove.) ~~considerations that entered into it~~; it was brought
down so that we went out and asked the consumers all kinds of
questions. We didn't ask them what kind of gas stove they
wanted. We asked them how many times a week they fried food,
how many times they made coffee, how many times they used the
oven and whether they used it to roast meat or to make pies
or cakes, and so on. We tried to find out what the cooking
behavior of the average family was. ~~every day; you don't have~~
~~to do that~~ We didn't ask them whether they would like to ~~ask~~
have electric lights on the stove, or electric clocks or
timers, or any of those fancy things which have since been
introduced; or whether they would like the stove to go to the
floor, instead of standing up on legs. We asked questions
designed to show how they were actually using their stoves
as of that time. ~~Did your publicity people, your sales~~
~~department,~~ Based on the answers to those questions, we came
through with certain recommendations. In the first place, we

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reduced the number of styles or units of stove that this manufacturer was making from some thirty-odd down to five. (There was an economy in manufacture right there.) We brought the stove down to the floor, and we made it white. The oven was placed low because, as far as we could find out from this survey, it wasn't used very often (and because of certainly other considerations that entered into it); it was brought down so that the top of it was flush with the cooking top. ~~hope nobody will~~ That was a case in which a consumer survey was used to good advantage. After we had learned the behavior of those people, we sat down and figured out ways to make it easier for them to cook. The advertising department could then pick that up and say, "Look, you have been taking this thing apart and washing it in soda every day; you don't have to do that any longer. You have been trying to get underneath it with a mop; you don't have to do that with this stove." ~~of the survey~~ In other words, it was a study of behavior-- ~~not a request that the consumer help us to design a stove.~~ Does that answer your question? ~~is interesting, Dr. Rugg~~ ~~he got a look~~ DR. RUGG: Yes. Now, there is another question I want to ask you: Did your publicity people, your sales department, your advertising department, and so on, then make use of these improvements (improvements from the standpoint

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of the needs of the consumer) in the advertising itself, so as to educate the consumer? MR. WEBSTER: Instantly. In other words, we gave the advertising people something to put their teeth into, instead of just going on talking about "this is the oldest stove company"--or this, that or the other thing. We really gave them some features that they could talk about--features which made that stove entirely different from others. (I hope nobody will mention a stove again this afternoon.) MR. BOUDREAU: In other words, you incorporated your conclusions both in your design and in your sales? MR. WEBSTER: We used the information from the survey to help us in improving the stove. MR. BOUDREAU: And also in your sales? MR. WEBSTER: We did not refer to the survey in the sales, but the features that were developed as a result of the survey were used in the promotion and advertising campaign that put that stove across. MR. BOUDREAU: That is interesting, Dr. Rugg: he got a double result from the survey. DR. RUGG: Are there any other comments? MR. GEORGE NELSON: I should just like to state a conviction I have that the survey (except in the way in

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which it has just been described) is not only a useless thing, but is a positively destructive and degenerating influence in the design picture. There are many examples of that; they could be cited almost indefinitely.

Take this business of canned meats, like Spam and others, which were originally made of good beef, with herbs, onions, garlic, and so on. They didn't sell quite so fast enough, and they were subjected to surveys. It was discovered that certain people didn't like onions, others didn't like garlic, others didn't like various types of herbs. All of them were therefore taken out, in an attempt to offend as few people as possible--the result being mush.

MR. WEBSTER: Negative design, I call that.

MR. NELSON: I saw the same thing in connection with the design of several new lines of furniture by a very large manufacturer. The furniture was designed by this negative survey method, and a more denatured product could not possibly be imagined.

I suggest that there is some basic thing which is operating, which is that your industrial designer is obviously a continuation of an ancient type of artist who has a distinct creative function. Whether it is a gas stove or an ancient piece of pottery, the fundamental operation must be

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absolutely the same--and essentially it is a creative operation. In the end, the guy has to turn out a thing which he thinks he likes and which he hopes that other people will accept. There is no replacement for that process. The survey, as I have seen it used, is actually an instrument for evasion of responsibility by the manufacturer and the designer, and all it does is take out whatever positive qualities the thing might have. I don't think that is in disagreement with what Mr. Webster was saying---greater and different. MR. WEBSTER: It is in complete agreement. I haven't seen an actual program of this sort, but I know that some designers have been using panels of consumers throughout the design process--and the result has been a very negative type of design. GILBERT NOKH: I have never used a consumer survey, either. If you know what the consumers are trying to do, and then show them a way to do it, you have performed your function as an industrial designer. If you go to the consumers every month while you are designing a product and ask them how they would suggest doing it, that is a negative thing. The consumer can tell you only about what he has already experienced. In the mass, he is not the person with the imagination and the creative faculty that industrial designers are presumably bringing to the problem of the consumer.

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a student be MR. NELSON: He can never add anything. He can only take something away; he can only tell you what he doesn't like. selections at the consumer level. Now, then, can you expect the

MR. KOSTELLOW: That is precisely in line with what I was saying; that it is not something new, that it is a continuation. What Mr. Nelson says is completely correct; that it is an art and, as such, is based on emotional responses rather than on the study of processes of manufacturing. To be sure, the new tools and the new materials give a greater and different scope to the designer, but they do not fundamentally change the original problem of creating things for the consumer. A survey was once made in the Boston station by Professor

CHAIRMAN HUDNUT: That is very true. Giving people's rear shapes.

MRS. GILBERT ROHDE: I have never used a consumer survey, either by myself or while I worked with my late husband, and yet I think that we have done as good design for the home furnishings industry as has been done. You wouldn't go to a doctor because you had an ache here, there, or some other place, and say to him, "Call in my neighbors and find out what's the matter with me." Well, I certainly can't understand why a designer who is hired and paid pretty big money would go to the public and ask these things of them.

Dr. Rugg says that only four or five percent of

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a student body representing a select group of people, far above the average consumer, would be capable of analyzing their selections at the consumer level. How, then, can you expect the general consuming public to select the things that they do select on other than emotional or price bases? Therefore, the whole thing is just so much nonsense--even if there's a decent choice there, which there rarely is. (I'm speaking of normal times, not the last five years.) Added to that is the fact that there is this sort of survey that manufacturers and other very reputable people make. (I think most of you will recognize the thing I am talking about.)

A survey was once made in the Boston station by Professor Hooton, the Harvard anthropologist--studying people's rear shapes. Now, it was very lovely to have several thousand passengers of the Boston & Maine (or whatever railroad it was up there) that sat in this seat--but who, out of the millions of people who sit in a railroad car, has that average shape? That was only the average that they got.

The same thing applies to everything else. If you take an average, you get nowhere.

DR. RUGG: The average is a myth; that's right.

MRS. ROHDE: Every one of us here could sit in a lump of clay (or as many lumps of clay as we have people here),

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and then take that average to make a seat--and it would be the most uncomfortable seat for any of us. Isn't that true?
DR. RUGG: All but one, perhaps. It just doesn't work that way.
MRS. ROHDE: Harvard sponsored such a thing. The publicity was in all the New York papers and the Boston papers. It doesn't make sense. I've evidently had an awful lot of nylon.
MR. WEBSTER: I'm sorry Mr. Arens isn't here; he has had people sitting in clay, and he selected Powers models to do it ---
MRS. ROHDE: It just doesn't make sense. I used that as an example because it was the only thing that came to mind as you spoke, Doctor.
Another thing is that I have sometimes been stopped on the street by Gallup or somebody else, just casually, and my answer never fits in with what other people have said. Questions are so designed as to make the person answer in the way that is wanted.
There is also the fact that psychology enters into that. When a young man with slick black hair comes and knocks on the back door and asks questions of you as a housewife (and I am a housewife, too, you see--which most of you boys can't say), you say what you think the young man is going to be impressed with, not what you really think. When you

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go to Gimbel's or to Macy's to buy a mop, you're not going to buy the kind of mop you said you wanted when that young man knocked on your back door and asked you. It just doesn't work that way. Some day. The other is that those who can wear them -- It's the same with your stoves. And whoever designed the low-down oven in a stove evidently had an awful lot of nylon stock. That's all I can say. Didn't go the same in our field. CHAIRMAN HUDNUT: If it's true that only two percent of consumers are design-conscious --- with architecture, it is. DR. RUGG: Less than that, I think. Are not design-conscious? CHAIRMAN HUDNUT: Yes, less than that. Mainly seem to have very DR. RUGG: Less than one percent. Says God's cottage, and CHAIRMAN HUDNUT: Then you certainly couldn't get very much out of a survey by asking them questions. You would have to get their subconscious feeling, wouldn't you? man is not. MR. McCONNELL: Is it important that the consumer be design-conscious? Does it make any difference --- style-conscious? MRS. ROHDE: That is our job, as designers. We should do the same thing that the fashion people do. Even Mrs. Doakes in Staten Island -- or anybody else -- knows names like Nettie Rosenstein and the black basic dress and all that stuff. There is no reason why such names shouldn't be as important in home furnishings and industrial-design goods.

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There are two reasons why these names are known in the fashion field: One is that ladies like to read about those clothes which they can't wear and which they hope to be able to afford some day. The other is that those who can wear them like to let their girl friends know, and they tell them whose design they are wearing.

There is no reason why it shouldn't be the same in our field. We just haven't done enough propaganda. CHAIRMAN HUDNUT: In connection with architecture, it is rather surprising to learn that people are not design-conscious in regard to buildings. They certainly seem to have very positive opinions: they may like a Cape Cod cottage, and nothing else--and they won't take anything else. Is that an emotional or a racial habit, or what is it--that they should be so firmly aware of their own needs? The same man is not aware in the --- primitive scale of forms. I don't

know when. DR. RUGG: Isn't that a matter of being style-conscious? When they say that they like a Cape Cod cottage, they are really talking about a style that they recognize and want. It isn't that they are design-conscious, is it?

MR. BOUDREAU: Not only that, but they are buying a capital goods product and they want to be safe. I think there is a great deal of ecological nostalgia.

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CHAIRMAN HUDNUT: I grant you--and yet I think that fundamentally it has an emotional basis. ~~It's not~~ ~~some cultural~~ MR. NELSON: Is it possible, Dean Hudnut--this may sound like heresy in this group--that the Cape Cod house provides certain legitimate emotional satisfactions? You were talking about the feeling produced by the inside of a roof with dormer windows. (That can be traced back to the womb, or a cave, or whatever you like--but apparently it has a solid psychological basis.) Is it possible that a design like the Cape Cod house provides certain satisfactions which are not obtainable in a modern flat-roofed house? ~~out is~~ ~~that the sp--~~ I have had the feeling more and more in recent years that a good deal of the so-called simplicity that we associate with "modern" could more properly be labeled as impotence on the part of the designer, who is currently restricted to an exceedingly primitive scale of forms. I don't know when, since the lake dwellings, architects have had a more limited vocabulary that they consistently use. ~~question~~ ~~if I say, in~~ MRS. ROHDE: I would like to ask Mr. Nelson since when a modern house is limited to a flat roof. ~~article, in~~ MR. NELSON: All right; I said "flat roof" because Dean Hudnut was talking about flat roofs. We all know that there are other shapes of roofs used on modern houses.

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have been all MR. LASZLO MOHOLY-NAGY: I think that the designer's task is a creative task, and every creative task has some cultural aspects and implications. I feel that among designers there are people who have vision, who actually know the rational and irrational preferences, just by study, by feeling, by their whole background; and there are some few designers who are just trying to improve the status quo by which they imagine it can be improved upon.

I believe that this discussion has brought out something which it is worth while to nail down--and then go over to your second question. What it has brought out is that the so-called market survey and consumer survey are mainly an unnecessary evil, and mainly an excuse for the negative design about which one of the people here spoke. But the study of needs and functions is something different. I think that we have learned about this--so that we may now continue, if nobody else wants to make a statement.

MR. NELSON: I should like to ask one question, if I may, in connection with this survey discussion. Going back to this idea of the industrial designer as a creative artist, is it possible that a basic problem is the contradiction between the activity of an artist, whose function has always been to please himself (in spite of the fact that there

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have been all sorts of social justifications attached to his creative activity), and the existence of a system of mass production and distribution such that the producer is forced to attempt in some way to so modify his product (Bond Bread, you know--mush) that nobody will dislike it? ~~functioning of~~ the designer. Is it possible that between these two pressures there develops this contradiction that gives the profession of industrial design its peculiar atmosphere and its particular problems? I don't know; I am simply asking a question.

~~motivated or~~ MR. KAUFMANN: I should like to answer that. I think, Mr. Nelson, that there is a point there that it is good to mention. The industrial designer is an artist--and all designers were artists in every period, even before there was industry. Nevertheless, the conception of the artist as a romantic lost individual, isolated from the rest of society, is one which has comparatively a very short history.

The real meaning of the artist did grow out of the artistic activity of craftsmen. At that particular layer--and until you get to this very recent and very top development of the artist as the isolated individual--the artist was completely integrated with society, completely ready to serve his fellow beings at every level. ~~one conceals that the ordi-~~ nary man, and if the conflict that you have mentioned exists

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today, it is because we are slightly bewildered by this recent phenomenon of the isolated artist. Certainly, there is no reason to be bewildered by it, because there is a much longer history of the artist who is integrated with society and whose activity is much closer to the actual functioning of the designer.

MR. McCONNELL: You could make it more emphatic by saying that the truth is almost the opposite of what Mr. Nelson said. The artist in history has not been a self-motivated or a self-engrossed individual, but rather a person entirely engrossed in his problem, which was a concern with materials and the application of materials to some particular problem.

CHAIRMAN HUDNUT: I heard that explained once rather neatly by a critic who said that the artist believes himself to be engrossed in himself.

MR. MOHOLY-NAGY: The artist believes himself to be

CHAIRMAN HUDNUT: Yes. He is not really engrossed in himself; he is really answering to currents of thought and feeling which are a part of his time. However, being more sensitive (for some reason) to those currents than the ordinary man, and feeling them more deeply and more acutely, he

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believes them to be his own feelings. anything in the history of man was a The great artist, then, is almost always a man who, in that somewhat mysterious way, has caught the feelings of his times and made them articulate. Wagner writes his operas and believes that they come out of his soul--but they come out of the French Revolution. we could do the things we want to do. MR. McCONNELL: It may make the artist, as an individual, offensively self-centered. by that same divine dissatisfaction. CHAIRMAN HUDNUT: He is both: he is a great individual, and he also represents the time and space in which he is born. of his creative desires and abilities, but he does adjust. MR. BOUDREAU: Dean Hudnut, I should like to take a middle road between these two extremes; the one extreme according to which the artist is the self-centered, self-absorbed, perpetuating and self-satisfying person (which has come out of the romanticism of the Latin part of Paris); and the other extreme according to which the artist finds himself in the service of his contemporary society. should like to tie together what Mr. I think the artist is half-way between the two; I think he is in the middle of the road. He serves society as much as he has to in order to survive as a human being, but at the same time he gets as much of himself into his product as he possibly can. he is still trying to learn

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Any artist who ever sold anything in the history of man was a commercial artist--just as you people are commercial artists today. When you don't sell, you may call yourself--if you wish--a fine arts person. That is a distinction that is not as important as the fact that all of us are motivated by dissatisfaction. If we could do the things we want to do, I would bet that none of us would be here this afternoon. We are urged to come here by that same divine dissatisfaction--and we are trying to adjust ourselves to society. It is difficult for the artist to make that adjustment because of his creative desires and abilities, but he does adjust if he survives. I think it is a middle-of-the-road situation.

CHAIRMAN HUDNUT: Somebody once asked Dr. Johnson whether he wrote for money. His reply is a classic. He said, "Sir, a man would be a blockhead who wrote for anything else."

Mr. Wright, did you want to say something?

MR. RUSSEL WRIGHT: I should like to tie together what Mr. Kaufmann said with the idea that was brought up with regard to the Cape Cod cottage, and particularly with what George Nelson said.

It seems to me that the industrial designer is still trying to learn his tools; he is still trying to learn

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something about engineering. I think that we have gone
 through, or are still going through, a stage of being com-
 pletely fascinated with the whole school of functionalism,
 and that we have forgotten that we are artists. I think we
 must also be artists. I imagine that more attention will soon
 be directed to that in industrial design. I think that that
 will have to be the case if we are to do away with the Cape
 Cod cottage. I don't think that simplicity needs to be
 sterility in the hands of an artist. ~~that framework. Instead~~
~~of Mr. Boudin.~~ CHAIRMAN HUDNUT: If it is agreeable, we will
 ask Dr. Rugg to go on to his second point now. ~~above the road.~~
~~He said in~~ DR. RUGG: In the last half-hour or so, as I
 understand it, in placing before us what it is that the in-
 dustrial designer surveys, what it is that he studies, you
 have agreed that he studies--as an integral part, an inherent
 part, of designing--what the people do. That is, he studies
 the behavior of the people. No matter what the product is
 to be, the designer does not ask them what they want or what
 they like or what they are interested in. He studies how
 they behave, and he designs a product in terms of the limita-
 tions of the manner in which they behave. ~~new household~~
~~goods not as~~ There was talk yesterday about limitations;
 the limitations of the manufacturer in his plant, his tooling,

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his facilities; the limitations in the materials themselves. Some very good illustrations of these limitations were given. There was also a very brief reference to the limitations that are to be found in the consumer. It seems to me that today you have defined what you passed over yesterday: you have said that you design in terms of limitations set by the consumer's behavior, first and foremost. It seems to me that the discussion of the artist which has just taken place is also in that framework. Instead of Mr. Boudreau's middle-of-the-road idea, I had the feeling that Dean Hudnut was trying to get the artist above the road. He isn't in the middle of the road or on one side or the other, but above the road, and he is behaving as an artist--not reconciling or compromising social needs with his own expressive urge, but producing a new expressive urge which is born of a self-conscious living in a particular culture. Actually, the artist is not only a product of the culture. That is, he is not a naive product of the culture. If he is a creative artist, he is self-conscious. He is a self-conscious, fully aware, student of the culture. It seems to me, then, that he produces his new household goods not as a giving-up of something he wants to express, but as an inevitable new kind of expression which he has been

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forced to make by the culture itself. I know what we did.

I don't know whether that is what you are trying to say, Dean Hudnut. That is what I felt in what you said.

Now, is that the totality of what you designers get from the public? Have we canvassed it all? I want to be sure, because I am going on to a different point.

MR. McCONNELL: I want to suggest the possibility that Ray Patten may have something to add to that. As director at G. E., he has had a good deal of experience with surveys--and surveys on a very large scale.

MR. PATTEN: In our company, of course, we have a consumer research group at various plants throughout the country, and they are continually making all sorts of surveys. We get copies of almost all of them, especially those that pertain to the products we work on. Some of them are very helpful. However, the majority of them are not; the majority of them are confusing. I can recall one survey in regard to refrigeration that was made some years ago, at a time when we used to make refrigerators on legs. In that survey, we asked whether we should make a refrigerator going down to the floor. About ninety percent of the answers said that we should not; that we should keep the refrigerators on legs, so that people could

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clean underneath them. Of course, you know what we did. However, it is true that the surveys are helpful to a certain extent. You just have to use your own judgment as to what you think people need. I feel that we get quite a bit out of them--but, naturally, we don't always follow them.

DR. RUGG: The survey that you have just given as an illustration was a survey of what the people felt they wanted. The others who have spoken on that subject were talking about what you, as designers, saw that the people needed on the basis of their behavior.

MR. MOHOLY-NAGY: Why did you make the refrigerator reach the floor? What was the reason?

MR. WEBSTER: How did you sell the idea to your company of going against the survey?

MR. MOHOLY-NAGY: And what was the reason for it?

MR. PATTEN: It's just a matter of judgment.

We have an executive committee in all the various groups, and the people on the committee decide. A lot of the answers you receive, you know, may go against your better judgment.

MR. MOHOLY-NAGY: Oh, I see. It would be better, then, to survey the executive committee.

MR. KOSTELLOW: We are speaking of the consumer as one body. I think there are different levels of consumers--

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and therein lies most of the trouble. We are a huge country, a huge consuming public--and five million, ten million, constitutes quite a body of consumers. After all, industrial design is not only a matter of a refrigerator or a stove or an automobile or something else which is sold in the millions. (I would be pleased if all designers were doing those things. I would then engage in other sidelines of designing. (It would be wonderful; I would have an open field.) If you take five million teachers, let us say--consumers who have certain cultural advantages and have a more or less enlightened taste--you find in that category, on that consumer level, lots of answers which you might not get from the totality of the consuming public. What people need in the room and what they need in the

CHAIRMAN HUDNUT: The remark about making the refrigerator go to the floor, when the people had said that they didn't want it to go to the floor, reminded me of something that Alvar Aalto, the great Finnish architect, said to me the other day: "I don't have to ask the people what they want. I know what they want better than they do." And that is a remark by a really great artist. He is so much in tune with the times that he feels these ideas and sentiments beyond the factual analysis, as well as what they like or don't like, and we have

MR. BOUDREAU: May I ask Dr. Rugg one question?

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before we leave the subject of surveys? From what has been discussed here this afternoon, Dr. Rugg, do you feel that the survey still has a place in the activity of industrial design and manufacturing? Interrupt me and indicate that I am wrong if this is DR. RUGG: Well, I distinguish very sharply between the survey of interests (what the people say they want and think they want) and the survey of what they do (from which you designers draw inferences). Mr. Patten said that, despite the fact that the people they questioned were divided ninety percent to ten percent, his company went along with the ten percent because the judgment of the people in his company so dictated. I assume that their judgment was based upon a study of what people need in the room and what they need in the way of refrigeration. I need to be discussed-- and I don't MR. PATTEN: That's right. Naturally, the needs of the consumer are the first requisites--and also the function of the product. I do think, though, that the consumer surveys are very helpful. I need to be discussed-- trends of thought that could be developed DR. RUGG: Do you mean that you get leads or hunches from them? that the designer is the priest of some kind of myst MR. PATTEN: Surely, we do. We get ideas as to what the people need, as well as what they like or don't like, and we have to try to use our judgment as to whether they are

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right or wrong. ~~sumar, as a conscious individual, ever being~~
~~aware that~~ DR. RUGG: Well, ladies and gentlemen, shall we
move on to some other aspect of this problem? I assume--
and I want you to interrupt me and indicate that I am wrong
if this is not a correct assumption--that the industrial
designer and the manufacturer would like to have the consuming
public more alert to design; that they would like to have the
consuming public buy what you call the good designs, rather
than the bad ones. That is to say, you people, as designers
and manufacturers wanting to sell goods, would profit by
having the public more intelligent about these things along
your lines, along the lines of good design, wouldn't you?
You would like that, wouldn't you? [No response] ~~the basis~~
~~of what are~~ Well, if that doesn't need to be discussed--
and I don't know whether it does or not --- ~~to be responsible~~
~~to that also~~ MR. MCCONNELL: I am not absolutely sure of that.
What I am going to say is just my own idea, but it seems to
me that there are two general trends of thought that could not
be developed there. ~~MCCONNELL:~~ Well, I am just suggesting there
~~that the designer~~ One is that the designer is the priest of some
kind of mysterious knowledge through which he is able to tell
the manufacturer what will be the best thing for the user of
the product, and what will make the user buy that product--

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without the consumer, as a conscious individual, ever being aware that the designer is in the picture or has a function at all.

MR. PATTEN: I should like to say, along that line, that "There may be a variation from one kind of product to another, but I don't think it can be taken as absolutely proved that the consumer, when he goes to buy a flatiron, should necessarily always be taught to think consciously, "Now, this one is a better design than that one." He should be taught to think, "This one is a better flatiron than that one." conservative; if it is in Brooklyn, it is borax. You have to see.

DR. RUGG: I was just going to draw that ---

MR. McCONNELL: Otherwise, the possibility is opened up that the consumer is taught to judge on the basis of what are really fashion elements, rather than design elements. you can go to one design. But it has to be acceptable to that class.

DR. RUGG: Oh, yes. By the way, when I spoke of elements of good design, I didn't, of course, mean appearance value only. I meant the total production of the product.

MR. McCONNELL: Well, I am just suggesting there that the danger is a sort of partial education of the consumer, so that he becomes conscious of design as another kind of magic word like "streamlining" or like various other words that become the vogue. The advertisers then take hold

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and you have a great run on that particular word or that particular idea--which I don't think really does any good.

MR. PATTEN: I should like to say, along that line, that that is one of the reasons that we have a variety of designs. A flatiron, for instance--just like horse-racing--is a matter of opinion to a certain extent, as to what people like or don't like. One person likes a borax job, and another likes a simple one. Of course, that depends on the location, and whether it is national or local. If it is in Boston, it is conservative; if it is in Brooklyn, it is borax. You have to consider all those factors.

That is why we have to have a variety of designs--in order to have them acceptable to the various markets. If you are just catering to a certain class, that's a different thing; you can go to one design. But it has to be acceptable to that class to which you are catering.

MR. KAUFMANN: Dr. Rugg, might I suggest that there is a small body of people who still hope that good modern design is based on function?

MRS. ROHDE: I want to ask Mr. Patten something. Suppose that you, Mr. Patten, as head of the design department of General Electric, and the executives and the Chairman of the Board, and so on, decided that there was no place in

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the world for borax design and refused to put out a borax iron or refrigerator; and that all your advertising money and your name and everything else were put solidly behind good design (because that would be the only kind of design you would have available); Do you think that people would refuse to buy G. E. products because they weren't borax, and that they would go on buying Mr. Zilch's stuff? Why couldn't you just not produce borax design?

MR. PATTEN: Well, we've tried it ---

MRS. ROHDE: And you went broke?

MR. PATTEN: You have to sell what the consumer will buy. You can help educate him to a certain extent. We have done it to a certain extent.

DR. RUGG: You are now denying what you said a while ago.

MRS. ROHDE: Yes--you see?

MR. NELSON: I don't think he is.

MR. PATTEN: Just a minute. Let me tell you what happened in the radio line. Years ago, we had to put out the clock-radio sets because Mrs. Zilch like to be able to think "How fine! We've got a new radio" when her neighbor came in to see her. From a design standpoint, I don't think anybody particularly cared for them. But that's what that

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market would buy. we sold for about \$200. we haven't seen
MRS. ROHDE: If it weren't available, they
couldn't buy it. PATTEN: When you show designs to people,
they think it's
MR. PATTEN: They would buy the product that was
put out by a competitor. a different thing. was the market
MRS. ROHDE: The competition was much smaller
than you and the others. If you big boys didn't do it, the
little guys couldn't do it. you want to insist that, if you
think something
MR. PATTEN: We would go out of business. think
so, too. You
MRS. ROHDE: Not G. E.!! that some people are going
to like simple
DR. RUGG: Then we want to qualify what we said
a little while ago. You actually pay attention to surveys of
wants--what people say they want. wrong. somebody thought
MR. PATTEN: You pay attention to what they buy.
they say they
DR. RUGG: That's the same thing. lot of people
who will always
MR. PATTEN: But the survey doesn't always con-
sider what they buy. Let me tell you about a radio survey
back in 1933, in regard to putting a radio in a clock. It
came out fine: that that was the thing to do. We built about
ten thousand of them --- Well, that's the point I was trying
to bring out
MRS. ROHDE: I hope you were stuck with them.
signal parity
MR. PATTEN: We couldn't sell them. We were
stuck with them and we sold them out for about \$25 apiece--

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and they should have sold for about \$200. *we haven't men-*
tioned: then MRS. ROHDE: Good! *double-waterfall, juncton*
radius for MR. PATTEN: When you show designs to people,
they think it's fun; but, when they go to spend their money
for it, they think it's a different thing. *and the market-*
sizing man: MR. SAKIER: Mrs. Rohde speaks of making only *if*
good design. The question of what is good design can become
a very puritanical one if you want to insist that, if you
think something is good design, everybody else should think
so, too. You can't deny the fact that some people are going
to like simple things and some people are going to like things
that are not simple. No one can say that the first group *only*
is right and the second group is wrong. *seriously functional-*
thing is one It isn't a question of slavishly following what
they say they are going to buy. There are a lot of people
who will always really be happy with fancy things, and a *smaller*
smaller number who will always be *rather die*
than have as MRS. ROHDE: There are fancy things that are in
good taste, too. *rial design, and which people have every right*
to be happy MR. SAKIER: Well, that's the point I was trying
to bring out. Let us not talk about borax and about func-
tional purity. Both of those are extremes which are narrow
and puritanical. SAKIER: I would like to stop talking, then.

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just about MRS. ROHDE: There is a thing we haven't mentioned: these large double-borax, double-waterfall, jukebox radios for 198 bucks, where the speaker is this big [indicating], and there are five tubes and a chassis and nothing else. But the manufacturer and the buyer and the merchandising manager say, "People want a lot for their money." If you want to be that phony because you want to stay in business (which G.E. has to be), you can put that in a big package--but the package doesn't have to be quite so awful. Even you won't say that those packages are good--and it isn't a case of my taste against yours.

MR. SAKIER: I am not defending borax. I merely say that borax is one extreme, and the strictly functional thing is another extreme; that one is overcommercial, and the other is highly puritanical. I didn't want to see the argument just proceed on the level of those two extremes, because there are fancy things (which the Museum would rather die than have as part of their list) which are still good design and sound industrial design, and which people have every right to be happy to possess. As I say, Mr. Kaufmann, I know that you would die rather than have them on your shelves.

MR. KAUFMANN: I would like to see them.

MR. SAKIER: I would like to stop talking, then,

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just about those two extremes of borax and functional things.

MR. KAUFMANN: All right, let's stop.

DR. RUGG: Before we go on, perhaps I have to return to what I said about assuming that you would like it best if the consuming public were more intelligent about good design, about the question of why you design and build the way you do, and qualify it with the possible question-mark which Mr. McConnell and some others have now introduced.

I think we can now turn from this phase of the subject to the positive side: the question of how we are going to build that understanding in the public. How do you do it? How do you develop that?

Well, briefly, from my own very small contribution, I think we have to distinguish between the long-time job and the immediate short-time job. They are quite different. The long-time job is the one that I know best. It is the generation-long job that comes out of a cycle of slightly better schools and slightly better higher institutions--those going back into another generation of families producing slightly more intelligent families, and so on.

It is a long developmental process in a culture. A hundred years from now, it will be looked back upon as the only fundamental one, of course. It is the thing that my

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heart and soul are in (or is in, if they are one): the question of what to do with young people. The ground that he would be the I can't prove this statistically, but I think we have learned what can be done in one generation. Consider the phenomenon of a small body of self-conscious private schools that sprang up just after 1900, under the leadership of men like Colonel Parker and Dewey and the people who were inspired by those leaders and by others and who went into the higher institutions and then out into the schools and colleges. Accumulate that, put it together--and, in thirty or forty years, there is a tremendous development in the awareness of a small segment of the population in that field. Statistically, I say, we don't know what that development is; and how great is the contribution that it has made to the general population in one generation, I don't know. But from a small group of schools you can get a pretty clear inkling of what could be done if the public schools and the great state institutions on the college level and the university level could consciously apply in their educational processes what you now know. In one private school, which was established more or less to be an experimental school, I have tried to get the administration to set aside money to put on the staff

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(part-time, because they probably couldn't get one full-time) a professional industrial designer, on the ground that he would be the integrating person, he would be Edward Gordon Craig's regisseur--the artist-director who is a student of industrial civilization. For industrial design is just that, isn't it? It is a design for industrial civilization. It isn't a design for a factory, it isn't a design for industry; it is a design for the whole civilization. ~~knowledge that you men and women~~ The industrial designer is, then, par excellence, the key man--as regisseur or artist-director--to put on the faculty of a school. He reaches out to such a vast range of materials--materials in industry and production and the materials of the consumer (that is, the psychology of the public), and the processes or art design themselves, and the materials in the culture and in society--that, of all the key people, the industrial designer is a person of tremendous potential on the staff of a school. ~~itive problem of educating the consuming~~ As I say, I tried to get this one school to do it and to set aside some thousands of dollars a year for his part-time services. That would be a worthwhile thing to do instead of depending upon a sculptor to come in and build up a series of courses in ceramic sculpture and the like in the school (although there, too, the result would be very useful),

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or employing a painter, as these newer schools have done. upon as the. Those schools have learned that, if you are going to get children to paint, you must put a painter with them, not a pedagogue; if they are going to write, you have to put a novelist or poet with them; if they are going to make music, you have to put a musician with them. That, I say, has been learned. It follows, then, that if they are going to profit by the tremendous body of knowledge that you men and women are finding and putting together, it has to be done through the personality of an industrial designer. Now, that is on one side. That is my pet hobby, but I will stop talking about it now and go on to the more immediate problem of whether this practical result is possible in our day (because the result of this long-time process is meager in any one generation).

On the other side, then, what can be done? In our time--right now--what is the positive problem of educating the consuming public? Let us take the phases of it--A, B, C, D--very briefly. (A) Will the mere mass production of commodities of "the better design" (as per yourselves), placed upon the shelves and counters of hundreds of thousands of retail outlets--bought at low cost, mass-produced and placed at low

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cost--itself "educate" the public? Is that to be depended upon as the educative device? I assume that that is coming now. We are in the midst of that, aren't we? The five-and-ten-cent store (as was said the other day)--multiplied n-fold throughout the culture--is already educating the public.

But note; that is a naive process. The people now go to stores where they can't buy things of bad taste (we will assume they can't--although the bad is there and they will still get it, Dean Hudnut says), and they are not told why this is so. The stuff is there. They buy it and take it home and use it; they wear it, eat it, eat with it, and so forth. But there is no articulate self-consciousness about the quality of it. Pretty largely, that is what we are in the process of doing now, isn't it?

Now, what else do we do? Is there a conscious plan on the part of the sales departments of your clients--big or small clients--to make articulate the qualities of excellence in these commodities? That is, of course, the second stage--and we have to raise that question.

(MR. SAKIER: May I bring out a very interesting point in that connection? The one country in which there are goods of a very high level of taste available to the public

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and widely used, which has evidently had a great effect on their culture, is Sweden--and that happens to be the one place where the salespeople (in the cooperative stores) were very carefully trained to point out the merits and beauty of the commodities. Its effect has been profound. Sweden is a shining and solitary example. is the one place where there is enough inter- If you follow that through, you will find it very interesting and a complete answer to that question. Maybe someone can add to that. better-looking thing. It wouldn't happen under MR. BAERMANN: Yes, I can. They not only have educational facilities for their sales personnel, but they get together consumer forums in which they make comparative studies of the good object and the less good object and the bad object. MR. BOURNEAU: May I speak to that point, Dr. Rugg? First, DR. RUGG: Who does that? at clear in our minds what the fun MR. BAERMANN: The cooperatives do it. a capitalistic type of DR. RUGG: Oh, it is done through the cooperatives? and industry is to manufacture and sell goods at a profit. It MR. BAERMANN: There are regular seminar courses in the evening, at which they will have a whole series of coffee pots (let us say), ranging from a very bad one all the way up to a very good one. The different qualities are explained. First, they ask why one thing is good. The people

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are shown why, they are permitted to handle the objects. That is done in order to raise public selectivity, as, of which

education is DR. RUGG: That is very interesting, isn't it?

The cooperative, then, is a yardstick for the building of taste as well as a yardstick for the control of prices, taste

of the public MR. SAKIER: It is the one place where there is enough interest on the part of the salesman--because there is

an interchange between him and the buyer--so that he really bothers to put across the better-looking thing. It wouldn't

happen under our system at all, because they just don't care. of Sweden. DR. RUGG: Why couldn't it happen under our

system of competition? are working with General Motors as an industrial MR. NELSON: There is no incentive.

MR. BOUDREAU: May I speak to that point, Dr. Rugg? First, I think that we should get clear in our minds

what the function of industry and commerce is. In a capitalistic type of society, as I understand it, the function of

commerce and industry is to manufacture and sell goods at a profit. It is not their function to raise the esthetic level

of society; at least, it hasn't been until now.

As long as an industrial designer is employed by industry, he is a businessman who is being employed to make it possible to sell more goods and bring in more profit. It

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agree with you that the function of raising the esthetic level of America rests primarily in other areas, of which education is one--but only one. loss items, and give them more profit. DR. RUGG: Well, let me ask this: Wouldn't it increase the profits of the manufacturer to educate the taste of the public? We have it, we might as well face it.

MR. NELSON: Not necessarily. designers could be useful in MR. BOUDREAU: Let me go on. We are working on a sustained project with commerce and industry that is going to take several years to develop. It is rather on the plan of Sweden. We are working with Bamberger's as a commercial establishment, and we are working with General Motors as an industrial concern. Their function is not to raise the cultural. They are putting a lot of money on the line, a lot of interest, and a lot of direct service in terms of instruction. Both concerns give us the run of their entire organizations. However, it is clearly understood--at my insistence--that they are doing it purely with the intention of making more profit as a result of having fewer products manufactured that do not sell. It is not the function of This is called a sustained experiment in creative esthetic research--but creative esthetic research for commerce and industry. Their business is to produce and move goods at

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a profit. If they should raise the level of taste of the American public, they are perfectly willing to do it if it will sell more goods, mean fewer loss items, and give them more profit. And that is nothing to be ashamed of. That is the whole thesis of our American philosophy of government--and, as long as we have it, we might as well face it.

I can see where the industrial designers could be useful in raising the esthetic level if they wish to do so. But I think that not only must they then be very able industrial designers--and I believe you will agree with this, Dr. Rugg, and so will you, Dean Hudnut--but that they must also be able teachers. We have several industrial designers working with us at Pratt Institute. Their function is not to raise the cultural level of America; their function is to train designers. But those same people would have quite a task if they went up to Columbia University and tried to raise the cultural level of your graduate students--because they do not know pedagogy.

A cultural subject is any subject that is taught by a cultured person with cultural intent. It is not the function of commerce or industry to work in the area of culture at present.

If the industrial designers reach that level

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(which we all want, and which is a professional level), then it will be definitely a part of their assignment to help raise the cultural level of America. But they won't be doing it by designing products for this company or that company. They will probably be doing it through the area of adult education, as well as child education. When the industrial designers take upon themselves that part of their assignment, they will be one step nearer to a professional level--because they will then be serving society, rather than just serving business. I find a pretty common agreement.

MR. PLATT: It seems to me that, in all this conversation, one point has been omitted that might be clarifying: that if we are going to impose a cultural level which we preconceive as being desirable, we eliminate the supposed opportunity of every individual to seek what he considers to be happiness.

It seems to me that none of the questions raised have probed into the state of happiness of the consumer--which might very well be parallel to our own thinking, but which also might not be. If a level of taste is going to be imposed, I think it will have to be done by a broader group (or a broader concept) than just the creative designers. They are certainly an important factor, but they are not the entire

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answer. Nor is the monetary benefit of the designer in his relation to industry the answer to it. We do presuppose the privilege of every human being to make his own choice of design. the Nazis--it would at once start a bootlegging in bad design. DR. RUGG: Apropos of what has just been said, I was assuming--perhaps incorrectly--that the principles of design that you people have been reaching for (and as to which, I judge from what I know of your work, you stand in pretty fair agreement) are the principles of design that come out of other areas of creative work. I find a pretty common agreement about them; and therefore I was assuming, I guess, that it would be the larger sector of society that would come to agreement about these principles of design to which you would try to educate people. I wasn't assuming, then, that any small body of so-called industrial designers would be doing it. and completely my ideas about design. I had thought that Europe. MR. PLATT: Well, I think that agreement on design is one subject that we have all tried carefully to avoid. that the policy of this country--and the designers are unwillingly. CHAIRMAN HUDNUT: I don't think that anybody has proved that good design makes people happy, has he? DR. RUGG: No. Perhaps you would like to go into that. thing that was used was used within the country--that,

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in order to CHAIRMAN HUDNUT: I would like to hear that de-
bated sometime. I think that if you saw to it that all the
products of the shops were good design--all the Woolworths
and all the Macys--it would at once start a bootlegging in--
bad design that would sweep the country. ~~now. Designs had to~~
be thrown ~~overboard.~~ DR. RUGG: Very likely. ~~years or five years--~~
whatever ~~per~~ MR. MOHOLY-NAGY: I am most happy that we are
now coming to a very major discussion. I like being here ~~so~~
for the first time; I like to go along with the details and
analysis of one point or another. But now we are coming to
the crux of the problem: namely, that the design attitude is
dictated by the economic interests of different countries,
and that that attitude in this country is somewhat different
from what it is in Europe. ~~had to have gold. They therefore~~
~~had to make~~ When I came to this country ten years ago, I had
to relearn completely my ideas about design. I had thought
that European measures could be applied to America immediate-
ly, with the same force as was done over there. However, I
found that the policy of this country--and the designers are
unwillingly, and perhaps subconsciously, the instrument of
that policy--is a policy of artificial obsolescence. ~~never based~~
~~upon freight~~ That means that this country was so rich--and
everything that was used was used within the country--that,

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in order to create large employment, large profits, and so on, they constantly had to change the design. In other words, they made the designs in such a way that--apart from the range of the technological or technical life of the object--they created a kind of fashion obsolescence. Designs had to be thrown away in two years or three years or five years--whatever period the factory man decided was appropriate for replacement--although technically the product was still useful.

All the devices which this country could use for influencing people--advertising, education, and so on--were keyed to this concept of an autarchy, as against the European concept of export. The Europeans did not have too much raw material with which to get their economy going; they had to import it. For this, they had to have gold. They therefore had to make their exports so good that the people who bought their products could have lasting use out of them. These two concepts will suddenly come into conflict in this country, too, because everybody says that in the future we will also be an export economy.

I want to give a little illustration of this artificial obsolescence and of how the advertising power based upon fright works. The other day, I read an article written anonymously by a copywriter, with the following title: "He

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concept in the service of this idea. is the duty of the sociologist, the I could speak at much greater length about it, but I think that that is enough to start some discussion on other aspects of the problem. I think that Mr. Boudreau's statement could also open up a great controversy, and the task of the teacher could be seen from other angles, as well. I simply want to bring up this point because now we are at the crux of the problem. For the time being, this country produced for artificial obsolescence, because we were very rich. It didn't mean anything to America that we threw away a very usable product: we had affluence, the wheels were going faster, we had employment, money makes money, etcetera. But this situation has to be faced today, and I think that that is a pretty good point for making your educational plan on a larger scale.

DR. RUGG: Will you make one more point, in just a sentence or two, as to the application of what you are saying about the necessity of truly integral design--truly functional design, in other words--to the education of the consumer? What is the relation of it, as you see it?

MR. MOHOLY-NAGY: This is the whole concept of the country at present. It is not only the job of the industrial design teacher, and it is not the concept of the industrial

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trial designer today to do that. It is the duty of the sociologist, the economist, the businessman--of everyone--to rethink the problem. I wish to tell you, on the basis of my design experience, that with the many limitations that are set today (the gentleman from G.E. has mentioned them, too) the industrial designer must be a wizard if he is to get his vision across in the face of the conflicting desires of the salesman, the factory, the production department, in the face of the artificial obsolescence, etcetera, etcetera.

I say that an industrial designer cannot be any other person but a person with conviction. I agree with Mrs. Rohde; I think she has hit the nail right on the head. There is something which the G.E. people could rethink in regard to borax--if these larger-scale concepts were included in their thinking.

MR. WEBSTER: I think that this whole discussion of artificial obsolescence really applies only to a very small part of our national production. Any object that a consumer buys is obsolete when it leaves the factory; there is engineering work going on; there is further research going on; in the laboratory of a big going factory, there are products which are well beyond the product which has been sold and

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delivered on that particular day.

Obsolence, then, is constantly going on-- regardless of whether anybody wants to force it or push it or tell you that you have to buy a new car every year, instead of every three years (which would be a normal period of time). I think there is very little forcing of that artificial style obsolescence. They have tried to do it most conspicuously, perhaps, in women's clothes--and even there it doesn't work except in very high style areas where people can afford to buy new things every few weeks.

MR. MOHOLY-NAGY: What do you mean? buy one that was sold? MR. WEBSTER: Hate. one he got rid of. The one he got rid of. MR. MOHOLY-NAGY: No. What would you like to prove by that; that they are producing designs which ---

MR. WEBSTER: I think that the emphasis on artificial style obsolescence applies only to a very small area of our economy. I think that obsolescence is going on constantly; the minute you buy anything, it is obsolete, because there is something better in the laboratory waiting to be offered to the public.

CHAIRMAN HUDNUT: I am inclined to agree with you. I think that if we are going to base our programs on the assumption that the country is no longer rich, as Mr.

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Moholy-Nagy seems to suggest --- production for the next few

years. MR. MOHOLY-NAGY: I didn't say that. From Canada--

and we can't CHAIRMAN HUDNUT: We are richer than ever before
and getting richer every day, it seems to me, and that the

resources were MR. MOHOLY-NAGY: Not in raw materials. To be

saved. MR. McCONNELL: I think the word "artificial" is
what is confusing here. It is not the correct word. What is

Mr. Moholy-Nagy points out is undoubtedly true. Up until the
war dislocation, this was a country in which it was possible
for a person to buy a new automobile every year, or at least
every two years, and, each time he bought one, to buy one
that was actually better than the one he got rid of. The one
he got rid of could still have been used --- other such con-

siderations. DR. RUGG: It was used. and then it had to be

MR. McCONNELL: It probably did go into second-
hand use for a number of years. But the fact remains that,
in most cases, the new automobile he bought was genuinely
better. It was a measure of the richness of the country that
the comparatively small improvement justified calling the old
one obsolete. MR. BAKER: It's very functional.

MR. MOHOLY-NAGY: Dean Hudnut said that I sug-
gested that this country is not so rich. It is still a rich
country. But in wood, for example--in lumber--we are now

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completely out. There will be no production for the next few years. We would like to get all the wood we can from Canada-- and we can't get it. In regard to petroleum or oil, an investigation was made during the war and it was found that the resources were rather limited, so that the supply had to be saved. to prove, and I would welcome it very much if anybody else would. However, I did not wish to mention these details. The main point in my mind was that here the entire thinking is keyed to the discarding of a product which is still good, and which can still be used, and which would be used if you were not frightened into buying a new one because otherwise you will not be fashionable, or because Mr. Smith will think that you are no longer wealthy, or because of other such considerations. (perhaps a little longer), turn them in and buy new cars again. CHAIRMAN HUDNUT: How much does the element of fashion actually enter into the ---

MR. MOHOLY-NAGY: I cut that out, because that is also connected somehow with sexual or erotic problems, which I would not attempt to introduce at this point. twenty-five years. (It is MR. SAKIER: It's very functional. MR. MOHOLY-NAGY: Oh, surely. but would last, but I imagine MR. WEBSTER: I think that at this time I will toss out here (to be torn apart) the Webster theory of style

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cycles. I have often been asked by manufacturers how often a line or a product should be redesigned. It is a very hard question to answer, because you don't know whether you should redesign every year or every two years or every five years. I finally evolved a theory which I have never had an opportunity to prove, and I would welcome it very much if anybody else would contribute whatever thoughts he may have on it. I would be glad to discuss this theory: The style cycle of any product or any group of products--and this applies equally to women's hats and to houses--is approximately equal to the length of its life in the hands of the first user. If you apply that to automobiles, you will find that the buyers of new cars will hold them for about two years (or perhaps a little longer), turn them in and buy new cars again. (Cars go into the second-hand market; that doesn't apply to this particular theory.)

As to architecture, I am not certain of the figures, but I believe that a house is owned by the person who first built it for somewhere between twenty and twenty-five years. (It is not as long as you would think.) I don't know how long a woman's hat would last, but I imagine that about six months would be the limit on a hat. I think that you cannot turn off the consumer's

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MRS. RONDE: No. About three months.

MR. WEBSTER: A dress would last perhaps a year.

I want to toss this theory out for consideration, because it has a very direct connection with two things: one is the consumer subject that we are talking about, and the other is the matter of style obsolescence that is coming out once in a while. If anybody wants to tear that theory apart, I would be glad to hear it.

MR. PATTEN: Don't you think that that depends on what the object is? You speak of dresses. I know a lot of people who wear a dress only once--and then there are people who have dresses for twenty-five years.

MR. WEBSTER: I am thinking of the average life of a given product in the hands of the first user.

MR. PATTEN: Well, it depends on the type of product. Design and such things, but these are only secondary

MR. WEBSTER: Surely, it does. That is why I have advanced this theory in this way.

MR. WRIGHT: I should like to supplement Ben's argument. I think there is a tendency to belittle or to be awfully self-conscious about appearance design--to look down on it. I think that that is the stuff that makes our business or profession. I think that you cannot turn off the consumer's

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demand and need for it any more than you can turn off sex. I think that there is a chance for good appearance design or for bad appearance design--and I think that that explains what we mainly are, as a group. Moreover, I think that it is an important part of our contribution to our times.

MR. MOHOLY-NAGY: I have only one thing to add. I didn't speak about this, because I thought you had handled it yesterday; unfortunately, I didn't hear the definition of what an industrial designer is. Industrial design is due to the effort to create a standard. That means that the standard doesn't exist at the moment when we have it; it is already, to a certain extent, obsolete.

Every culture which is not confused, which has its own direction, must create certain standards. That is exactly the opposite of novelty. I have nothing against appearance design and such things, but those are only secondary considerations. The functional rightness, going to a perfect solution of the problem--as exists today in science and technology--is, of course, the first consideration. What the appearance will be is an almost automatic matter.

That is the difference which I should like to bring out. As long as the public does not understand that this is the main problem, we are going slowly into a very

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immoral and confused attitude as to our own wishes, our biological needs--natural selection--because we are overwhelmed by advertising which says that novelty is the important thing, whether it is good or bad, and that whether or not something functions better than something else functioned yesterday is not the question. that wasn't destroyed is being forced out of existence

MR. BOUDREAU: First, I want to address myself to Mr. Moholy-Nagy's statement about artificial obsolescence. I agree with him one hundred percent, but I think that unfortunately he has used the wrong term (as Mr. McConnell said). It is not artificial obsolescence. It is very real: it until they sink, as I would call it accelerated obsolescence, rather than artificial obsolescence. When society rejects a thing, it is just as obsolete as though you couldn't use it any longer. If society will not use it, it is obsolete--whether it is brand-new, like a dress that has been worn once, or whether it is an automobile that has been used for only two years.

ing the war, Mr. Moholy-Nagy, was not whether we could produce now You cannot impose upon America the European philosophy of goods, any more than we can impose our philosophy upon Europe. Our entire economy is based on accelerated obsolescence. We have a 200-to-300-year supply of oil already known We did not have a diversion during the war--

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in spite of what Mr. McConnell said. During the war, we showed how prodigal we could be with the products of nature, with our inventiveness, with our production, and with our destruction--to the extent of over three hundred billion dollars, an unheard-of prodigality of expenditure--and all the stuff we produced that wasn't destroyed is being forced out of existence because of ecological non-acceptance.

There is the greatest example in the history of man of accelerated obsolescence, in terms of these millions of trucks and cannon and these thousands of boats. You can see the boats in the Hudson River; we are going to wait until they sink, and then spend a lot of money to get them out of the way of future traffic.

Our entire economy--and I don't say it is right, but it is right for us--is built upon a prodigal use of accelerated obsolescence. We don't worry at all about the fact that our oil is going fast. Our problem in connection with oil during the war, Mr. Moholy-Nagy, was not whether we could produce enough oil; it was whether we could get it where we could use it, because the Germans were doing too good a job off the coast in destroying our oil tankers. That is why we built the Big Inch. We have a 200-to-300-year supply of oil already known to exist in the United States--and I don't know

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an American who is going to worry about our culture or civilization two or three hundred years from now. . . . The same thing. That is the basis of our economy: accelerated obsolescence. It fits us perfectly, just as our type of government seems to fit us perfectly. We can't say that our government is better or worse. It is better for us. It may not be better for Russia. . . .

DR. RUGG: Perhaps we ought to make sure that this discussion keeps coming back, now and then, to the consumer. . . .

CHAIRMAN HUDNUT: That's right. . . .

MR. BOUDREAU: That is the crux of the discussion, as Mr. Moholy-Nagy says: the prodigality of our economy. . . .

MRS. RÖHDE: I should just like to say one thing that I think is somewhat pertinent. We have talked about bad design, about borax, and about other kinds of design. Today, we still have the machine doing imitation Chippendale and imitation Louis XIV things and all sorts of other things. In all of those periods, there were thousands and thousands of things made, only a certain number of which remain to us. Mr. Chippendale made some honeys, too. The things that are reproduced today in the department stores are the things which apply to us and are scaled down to our scale, but the

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things that remain out of the things he did are those that were well constructed, beautifully made, and so forth. The same thing would hold true for any of the other past periods. There was obsolescence then, too, for those people who could afford it. In those days, the percentage of the population that could afford to go along with fashion, style, obsolescence--whatever you want to call it--was smaller than it is today. For the purpose.

We have artificial obsolescence here, or we have accelerated obsolescence--whichever term you want to use. It is true that things become obsolete. However, even in the case of the things that we have done in this country in this century (crude as our methods may be according to the standards of some other countries or according to the standards of some people in this country), the good things that we designers have done--or that the craftsmen did before us--are not obsolete. Today, they are still reproducing Ben Franklin or Paul Revere silver bowls right here at Jensen's. There were thousands of silver bowls made--perhaps by good craftsmen. But that was a good design, and it didn't become obsolete. It isn't obsolete today any more than certain Chippendale chairs are obsolete today. I am interested in the

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constructive education of the consumer. Maybe there are other things that can be said about it.

THURSDAY AFTERNOON SESSION

November 14, 1946

CHAIRMAN HUDNUT: Shall we take this up tomorrow at this point? Will you be here tomorrow, Dr. Rugg, and carry on from this point?

DR. RUGG: Well, I will be here--but I hope someone else will carry on. One thing that gives stability and authority to the older professions is the established discipline of education which they have built up over the centuries. The education of lawyers goes back to Roman times, and the education of doctors goes back nearly as long. If a man is a member of either of these professions, then, he has behind him a certain cachet of authority. Someone is said to have "gone through the mill"; he has received the approbation of an established university. That, as we know, is one of the great sources of strength of the old professions.

In a changing society like ours, we don't have to cling to these medieval formulas. A university is only one way to educate a profession. It is a fairly good way--it is established and it is known and it is experienced--but to suppose that it is the only way in which a profession can attain dignity and recognition is an illusion. Nevertheless, it seems to me that there must be

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some kind of common experience through which men go who are practicing a profession. There must be some understanding and habits of thought and wishes and ways of evaluating things which they have.

THURSDAY AFTERNOON SESSION
November 14, 1946

CHAIRMAN HUDNUT: Today, at the last of our four sessions, we are going to give some attention to the education of the industrial designer.

One of the things that give stability and authority to the older professions is the established discipline of education which they have built up over the centuries. The education of lawyers goes back to Roman times, and the education of doctors goes back nearly as long. If a man is a member of either of those professions, then, he has behind him a certain cachet of authority. Someone is said to have "gone through the mill"; he has received the approbation of an established university. That, as we know, is one of the great sources of strength of the old professions.

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some kind of common experience through which men go who are practicing a profession. There must be some understanding and habits of thought and vision and ways of evaluating things which they have in common. One way to get that is through a common educational discipline--whatever it may be. It may be something quite novel, quite fresh. ~~Nobody says to begin the discussion~~ I have often thought, for example, that it was a great mistake to put architecture in the university--and I think so today--because the architect must then conform to certain rules which are largely based upon literary and scientific precedents. He has certain courses, certain ways of examination, certain requirements in terms of time and accomplishment, which just don't fit into a good architectural discipline. If we could have, as they have in Paris, an Ecole des Beaux Arts--something that is separate from the university--we might give a better education. ~~It would be~~ ~~because~~ It is an open secret that we are constantly embarrassed. We are embarrassed in two ways: first, by the tradition of the university, which makes us conform to certain rhythms, certain patterns; and, second, by the law, which enforces upon us standards which themselves were devised from university practice. I have to train my boys in many fields in which I would not train them if I were free of that tradi-

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tion. Industrial designer's education should be a part.

Of course, it is a good thing, too. Like the Chancellorship in Iolanthe, it has its inconvenient side, but nevertheless it cannot be denied that it is a source of some legitimate pride. I now want to ask Mr. Moholy-Nagy to begin the discussion because, as you know, he is the most able and vigorous and successful pioneer in educational discipline which is based upon objective analysis of the modern scene. We imitate him at Harvard, and he is imitated all over the world, chiefly because he has been able to see a role for the architect and the designer in the kind of training which he is developing which, I think, is going to be a keystone in the education of this new profession. Without more ado, I am going to turn the meeting over to Mr. Moholy-Nagy.

MR. MOHOLY-NAGY: I am a little bit bewildered, because I didn't know that I would be given this very honorable task of giving you some ideas about our educational approach. On the other hand, I am very happy that I have the opportunity of doing that, because I think that without too much preparation we can go immediately to this concept: that the education of the industrial designer is a problem that is perhaps secondary to the problem of general education, of which the

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industrial designer's education should be a part.

I will try to make it as simple as I can: I believe that the human being has to be educated in all his capacities.

We have excellent schemes and a great tradition (as Dean Hudnut has already mentioned) in the education of the brain, of the intellect. We have rhetoric, and we have logic, and we have a great number of devices with which we can educate a person to so-called literacy. But we have very few means by which we can educate the other part of the human being: I am referring to the education of the feelings, about which Professor Rugg told us yesterday. I believe that not only do we have illiteracy as it is commonly understood, but that we also have emotional illiteracy which must be eliminated from the world.

Just as I believe that the integration of intellectual and emotional abilities should be the basis of general education, so do I believe that the industrial designer's education should be based upon that.

If I were to put it into other words, I would say that the capacities of the human being (looking at it from the biological point of view) are his ability to perceive, to have conceptual thoughts, to feel, to express himself in dif-

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ferent media, etcetera. Without an education which tries to bring out of an individual the best in these fields, we cannot go very far. Without it, we come to a cleavage of the individual's abilities--and, in the extreme and unfortunate instances, to neurotic and unbalanced individuals. ~~into situations which~~ If I may mention our education in the old Bauhaus and, perhaps more particularly, in this country, where we learned immensely to the principles and to the basic direction of the old Bauhaus--in fact, I never believed that a grown-up person could learn as much as I had to learn in this country--we have tried to emphasize an education which, we felt, our students coming from either the high schools or the colleges and universities were lacking.

At the beginning, we try to give them a very broad and very generous training. We do not cut out tradition, because I agree with Dean Hudnut that tradition is a very important part of the possessions of a human being. With tradition, we can avoid the repetition of mistakes. This is the way in which a good and healthy tradition has to be understood. Of course, we always have to re-examine the tradition in the light of present circumstances, needs and necessities, in the light of the social and biological requirements of the human being. ~~without being afraid of digestive troubles.~~

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Thus, when we try to educate our people, we do not negate tradition. We try to put the students into situations with a great number of possibilities; I would not say that they are laboratory conditions and that normal life conditions are limited, but we do put the students into situations which will allow them the use of their capacities fully (the capacities about which I have already spoken--the integration of the intellect and the feelings).
 (tent.)

By putting them, especially in their first year, into situations which allow them to use their capacities fully, we give them a basis on which they can then start to specialize in the different fields of professional or vocational training.

If I were to put into other words this whole introduction to the problem which I am trying to present, I would say, in brief, that the prerequisite for a good training of an industrial designer or an architect is the awareness--culturally, socially, biologically, and so on--of the condition of man.

That, of course, is a big task, and there is a great responsibility upon the educator--to be able in a short time to give so much to the students, or to allow them to handle so much, without being afraid of digestive troubles.

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~~should teach~~ The prerequisite that I have outlined is one that must be considered in an age of quick technological changes and surprisingly quick variations of ideas and findings and inventions, which do not allow us to teach with very great hopes that the circular saw is the only instrument with which one will cut wood in industry, because electronic equipment will be the tool with which one will cut it. (The cutting will be important, but the tool perhaps will be less important.) ~~and Mr. Boudreau; I am sure we can. I should like to~~

~~possibilities~~ We have to train people to stand up to situations with their abilities, so that they can solve problems. The process or the mechanics of designing is actually what should be taught, first of all; and, only secondarily, the skill. ~~integrate these two professions--and I should like to~~

~~speak about~~ I should like to emphasize that point very strongly, because I hope that afterward Mr. Boudreau will be able to state his case in the way in which he did yesterday. Maybe I am not one hundred percent right when I say that the cultural aspects of the training are immensely more important at the beginning--namely, the possibility of setting the individual with his full capacities in the present era, the present culture--than it is to teach only skills. If I ~~understood~~

understood you, Mr. Boudreau, you said yesterday that teachers

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should teach only skills, and should have nothing to do with the cultural aspects. For which he does not feel a special inclination. MR. BOUDREAU: That is not true. You misinterpreted it. We give the students a full year of aptitude tests, then. MR. MOHOLY-NAGY: Later, I hope, you will take the floor, because to me that is a very important point and I would be very happy if we could get some coordination and a future perspective -- fields about which he didn't even know before; and, MR. BOUDREAU: I am sure we can find himself in possession of MR. MOHOLY-NAGY: I think so. Now, let me come to a detailed explanation -- which will not be too long, either -- of our training in this school for industrial designers and architects (because we try to integrate these two professions -- and I should like to speak about that a little later). We devote a full year to a kind of aptitude testing. It is not aptitude testing in the sense of the normal psychotechnical methods of quick testing of present abilities, on the basis of which people are advised to take up a certain profession or to go into a certain vocation. On the contrary, we try to develop the latent abilities of the students, so that they do not choose only the things for which they have aptitudes and likings. We feel that the good

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teacher is the teacher who is able to bring to the student the subject matters for which he does not feel a special inclination. rather complicated problems.

We give the students a full year of aptitude tests, then. But it is self-testing. The student has to find his likes and his abilities. If we give him a great amount of material, a great number of possibilities, he will discover that he has talents in fields about which he didn't even know before; and, at the end of the year, he will find himself in possession of abilities which will enable him to proceed in different directions--to specialize in industrial design or architecture or advertising art or photography or weaving or pottery or any other subject matter. complicated machines--motors--for them. Then, having brought him to this state of mind by giving him an opportunity to work with the elementary materials of any expression--with plane, volume, space, motion, space-time problems, which have to be invoked when we are making any three-dimensional design--we give the student a wide range of experiences upon which his future work can depend. would also limit his fantasy and his imagination.

Mainly, we educate him to find solutions for problems which can be approached at the beginning rather simply--without too much book knowledge, only by his own abilities

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and ingenuity--and we increase the range and scope of this type of task more and more, so that finally he arrives at the solution of rather complicated problems.

After having worked with color and learned the elements of expression in painting (surface treatment, division of planes, etcetera), and after having learned how to handle volume in the form of modeling, sculpture, carving, etcetera, he makes space modulators, as we call them--exercises in space devices--so that he learns the nature of space and what can be done with it, which he can later apply as architect or display designer or stage designer or what-not. And he makes motion studies (mobiles), using the different simple mechanical possibilities or more complicated machines--motors--for them.

We give him free rein for his own expression, without asking him to do practical work. His fantasy, his creative imagination, can be exercised to the full in these tasks according to his own decision. We warn him not to think in practical terms first, because the limitations of practical work would also limit his fantasy and his imagination.

After that training, he comes later to the specialized training. Each semester, we limit his tasks more and more, giving him more and more elements with which he has

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to work and which he has to include in his problem solution--
until, at the end, he is able to do a useful object for mass
production for industry, for the benefit of the consumer. about
your system I think that I would like to stop here, because
that is the first part of the training on which I would like
to ask your comments. I feel that this type of training is
good for a housewife or a doctor or a lawyer or anyone at all,
because it is a general loosening-up of the capacities and
abilities of the human being, upon which any specialized func-
tion or specialized professional training can be based. But here is
When, some day, we grasp the difficulty and the
confusion which the industrial revolution has brought with
it--that, with one hand, we are giving the people an educa-
tion and making them literate, and, with the other hand, we
taking that away from them by means of advertising and radio
and other media of communication, which carry a message of
propaganda only for the profit motive--then, I think, we will
be able to build up a healthier education for everyone, and
in all likelihood we will have a more balanced economy and a
more balanced society. of his time--until recently, at any
rate--is taken. If you will allow me, I will stop at this point.
Then, afterward, we can take up the specialized training that
we have for the industrial designer, in conjunction with the

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training in architecture--and I will be able to tell you why we have united the two.

CHAIRMAN HUDNUT: One of the striking facts about your system is the way in which making things and doing things are substituted for precept and instruction. That is one of the fundamental ways in which the Bauhaus tradition breaks with the university tradition.

In the university, our methods were literary at first (we were taught facts, philosophies, histories); and then scientific (we verified scientific law by experiments). But here is a discipline which from the very start takes the boy into the workshop with the tools and materials, and his education is a process of making and doing things.

That is the fundamental difference between this type of education and any other type of education that we have in this country--except perhaps in the arts, like painting and the drama. A boy goes to a school of art, and he paints from the very start; he paints nine hours a day, for three or four years. But if he goes to an architectural school, the greater part of his time--until recently, at any rate--is taken up with instruction and reading and solving problems in calculation.

One of the things that we have tried to do at

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Harvard is to increase very markedly the proportion of doing and making, and to decrease markedly the amount of instruction we give--the amount of talking. The part that we want to discuss here Mr. Boudreau, do you want to discuss this problem now? (sitting in a design school.)

MR. BOUDREAU: Yes, I would be glad to. As I understand it, we are discussing only the first year of a program that may be three or four years long; is that right?

CHAIRMAN HUDNUT: We have limited the range for the moment. For example, we are not talking about the problems of industry--- give them so-called practical, technical training.

MR. BOUDREAU: That's right. To have them think.

CHAIRMAN HUDNUT: Or merchandising.

MR. BOUDREAU: I get it. My erroneous conception about us.

CHAIRMAN HUDNUT: We are not even talking about the problem of general education, such as philosophy and politics and history--and, surely, that is also a part of the designer's education, isn't it?

MR. BOUDREAU: I understand the field. Anything that is done Mr. Moholy-Nagy makes it appear as though Pratt's Institute were poles removed from the new school in Chicago-- in regard to the introductory first year. That is not the fact at all. I say "Amen" to everything that Mr. Moholy-Nagy

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has said. (I am thinking now of their first-year program, not the discussion of general education to which Mr. Moholy-Nagy devoted most of his time. The part that we want to discuss here relates, as I understand it, to an education or a training in a design school.)

We not only agree with Mr. Moholy-Nagy one hundred percent in theory and in philosophy--but the strange thing is that we agree with him one hundred percent in practice. Just because our students, when they graduate, are ready for the market and get jobs, people have the impression that all we do is to give them so-called practical, technical training; that we do not take any time out to have them think.

That is what the public is apt to think--and I am afraid that that is Mr. Moholy-Nagy's erroneous conception about us.

MR. MOHOLY-NAGY: No.

MR. BOUDREAU: They have the impression that, the first day the students start working with us, they start working on practical work. Of course, I think that anything that is done in any art school, if it has a right to be there, is practical--even a problem that takes four months to make--in terms of giving them direct experience, because their own product in tactile reactions is a practical problem. You

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can't go out and sell it--except to another school. It has no practical market value; that is, it has no direct practical market value, but it certainly has great practical values, all contributing to the development of the student.

All work in school, then--in any school, I would say--is practical work. Whether it has a direct or indirect economic value is another matter.

As far as the content of our first-year program is concerned, it goes through the same things that were gone through in the Bauhaus and that are gone through in Mr. Moholy-Nagy's present school in Chicago. I will say that our content is different, our technique is different--but our materials are identical.

CHAIRMAN HUDNUT: There is one point on which I was never able to take sides. One of our instructors would say, "Now, when the boy comes into the school, you must give him a functional design at once. He must make something useful--an inkwell or a shelf. Then, in the process of making that, he will encounter these ideas of harmony and rhythm and use of materials--these abstractions."

Another man would say, "No; we will give him a disciplined abstraction. We won't distract him with the use of the thing. We will make an abstract pattern in wood or

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metal or wire or glass or paper, and he will be given exercises in the making of abstract forms which have rhythm and harmony, and so forth, before he goes into the practical field."

What is your feeling about that?
 MR. BOUDREAU: To begin with, Dean Hudnut, I do not agree with you or Mr. Moholy-Nagy in your definition of, or your inference from, the word "practical."

CHAIRMAN HUDNUT: I mean "useful."
 MR. MOHOLY-NAGY: Couldn't we use the word

"utilitarian"? We should be semanticists now to some extent. If we are making our own argot or jargon or "slanguage," we should agree upon such things. I think you should say "utilitarian." If you say that everything is practical, I agree with you. But if you say that everything should be utilitarian, then I don't agree--and I think that you do not mean that, either.

MR. BOUDREAU: I can prove that you will agree with me and that our terminology is in error at present. For example, if you give paper and scissors to a youngster in your school, as you do (and I have seen some things that are quite marvelous: they can do all sorts of things out of a two-dimensional piece of paper), I say that all that experience is practical; it is utilitarian. It has no direct

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economic value--but it has tremendous indirect economic value, because you are giving them a concept of manipulation. Am I right?

MR. MOHOLY-NAGY: If you will think of another field, Mr. Boudreau, you will see that it is not too worthwhile to discuss this problem. Think of the scholastics or the Jewish Talmudists or the interpreters of the Koran or the people who interpreted the Roman law--interpreters whose interpretations were interpreted by other interpreters who came afterward.

Of course, that had an indirect practical value, because that marvelous training of the brain could afterward be applied to practical tasks. But basically, as an educational process, we always think that the human being has abilities which (to put it vulgarly) have to be sharpened or refined or what-not. That is what I meant.

Now, to come back to the paper-cuts or what-not that you mentioned: One of the basic exercises in the school is to give the student a two-dimensional sheet--paper, plexiglass, thermoplastics which can be molded by heating, flyscreen, or anything which has no great structural value in its flat state--but which, by manipulation (cutting, folding, bending, twisting, distorting, etcetera), becomes a three-

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dimensional structure. I think that an ingenious teacher, especially if I should now like to answer Dean Hudnut's question as to whether the first approach or the second approach that he mentioned is right. I believe that an ingenious teacher--a tutor--could do very well with either process. I am sure of that. The educational principle that we set up, however, is rather useful today, because our people (and everyone in the world) think too much in utilitarian terms.

A baroque craftsman who made a lighting fixture, and who hung on the candelabra a kind of prism in order to multiply the lighting effect of one candle, knew about the possibilities of the glass--how it could be made sparkling, and so forth and so on. Through long training and experimentation, almost every craftsman had this knowledge.

Now, we have very many new materials (plastics, new alloys, etcetera), and we do not yet know--especially in the industrial age, with machine handling--what these materials can give us and what kind of qualities they have. Thus, if we do not give utilitarian things which have to be solved within a certain range of necessities or functions, we give the students an opportunity to try an immense gamut of opportunities. That is what we would like to achieve, and that is why we have chosen it.

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However, I think that an ingenious teacher, especially if he has one or two students, can do the same job within the framework of the utilitarian task as it has often been applied in the past.

MR. BOUDREAU: Let me accept your definition of "utilitarian"--and of "non-utilitarian," because that would be the reverse of the first--and I will tell you that in our first-year program we do not have utilitarian problems any more than you have.

MR. MOHOLY-NAGY: Mr. Boudreau, I know all that. I think that Pratt Institute is working in a marvelous way.

MR. BOUDREAU: I thought you asked me about our first-year program.

MR. MOHOLY-NAGY: No, no. It is of no use to discuss details of our programs. I could have told a great number of things which I do not believe belong before this assembly. I merely stated that our belief is that the teacher's task is very much imbedded in the cultural and social explanation of the era in which we live, and that he is not only there to teach skills. In fact, he can teach skills twice as valuably and effectively if he solves the first problem--namely, to give the student an awareness of his time and duties and tasks.

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Professor Rugg said something yesterday--and I wanted to embrace him when he said it--about the artist being a person who has a cultural awareness; and that without such awareness (Professor Rugg did not express it in just this way), his work would be a kind of exercise in composition or arrangements.

This is the main task of the teacher; to imbue the students with the substance of the age. Tradition also belongs in that, and also the knowledge of the social scene, and also the knowledge of the esthetic scene. In that connection, I can state that our success (if we have any) is not that we are employing a certain approach which I have described. We do that, too. But the main value in our teaching is that we are choosing teachers who are artists, or a great number of whom are artists, because the artist (according to my ideas and also, as I understand it, according to Professor Rugg's ideas) is the seismograph of the times who knows what is going on and who records it. I am now going to make what is perhaps an overstatement, but I want to do so in order that you may know what I mean. I believe that no industrial design education can be given today by people who do not understand what abstract or non-objective art, and cubism, and so forth, are.

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say that we. As I say, I am overemphasizing that now. But it is my firm belief that, without knowing what is going on today in the field of art (which, subconsciously, actually forms the products which we are using--the utilitarian objects), it is not possible to teach either architecture or industrial design.

MR. NOBLE-NASH: Yes; I am happy that you
 In our school, then, the emphasis is not so much on the system which I have described--because we are constantly changing. I want to confess that we do not feel one hundred percent sure of the things that we do. We are willing to remain flexible and fluid, and to make changes when we think that certain matters are not working well. If we think that certain exercises are too well known to the students, so that those in the next semester already know by heart what they should do, we leave that out. design concept, a drawing concept (which The main virtue of our school, as I see it--and I wish that every educator would think about it and make a judgment about it--is that we are trying to employ not only creative people in the normal sense (that is, in the sense of ingenuity, and so on), but creative people in terms of esthetic sensibility on the present highest level (as, for example, is represented here in New York by the Museum of Modern Art).
 going a diff. MR. BOUDREAU: I am glad to hear that. I can say

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say that we do the same thing at Pratt Institute. We have

the American MR. MOHOLY-NAGY: I know --- the European tempo.

We need the MR. BOUDREAU: I see no quarrel, frankly--except that we do not train them just in skills. That is a misconception. ---and you come from France.

of this and MR. MOHOLY-NAGY: Yes; I am happy that you ---

country --- MR. BOUDREAU: We probably devote more time to creative design than any other art school--in terms of percentages. ---I was born in the United States, and he

knows it--and MR. MOHOLY-NAGY: I am very happy to hear you say that. ---unfair.

MR. BOUDREAU: As a result, our first year comes out with the same philosophy that you have. There are no so-called practical problems (if you wish to call them that). At the conclusion, there is a design concept, a drawing concept (which we call structural representation, and which has a deeper implication than just a drawing concept), a color concept, a historical concept of the arts, and a materials concept. In the advanced years, they get other things (but I guess that is going to be discussed later). ---toward a problem

that neither There is no quarrel between us at all. I think there are lots of ways to go to Rome. I think that you are going a different way from the way we are going. I would say

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that the Chicago school goes more slowly than we do. We have the American tempo; the Chicago school has the European tempo. We need the thoroughness of the European school.

MR. MOHOLY-NAGY: I am very proud of my American citizenship--and you come from France.

CHAIRMAN HUDNUT: I come from another foreign country ---

MR. BOUDREAU: That was an unnecessary remark of Mr. Moholy-Nagy's. I was born in the United States, and he knows it--and I come from six generations of Americans. That was very unfair.

MR. MOHOLY-NAGY: Well, picket afterward.

MR. BOUDREAU: I can't even speak French! If you and I want to discuss things, that's all right--but we shouldn't bore this group with personal things like that. That is very ungentlemanly, sir.

CHAIRMAN HUDNUT: I come from New England--another foreign country.

MR. BOUDREAU: So do I.

CHAIRMAN HUDNUT: We have at Harvard a problem that neither of you gentlemen has. When a man comes to us, he is 21 or 22 or 23 years old, and all of his education has been scientific in character. He has been trained in facts,

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in analysis. His habits of mind are very, very practical. We have the problem of trying to awaken him to these qualities of design, of expression. If you take him and suddenly stop his scientific disciplines and let him go into these abstractions--studies of form and relationship, and making things out of wire and cloth, and handling tools--he is completely lost. If, on the other hand, you give him a practical problem and say "Now we are going to make something useful," he is all for it at once. He is keen to get into his professional work; he is raring to build buildings. If he is introduced to the idea of form and expression as incidental to, or developing out of, his practical problem, we find that we get along with him much more rapidly than if we make him stop all his habits of mind and his whole training in order to try to grasp things which to him are foreign, with which he is very impatient, with which he doesn't want to bother, and which seem rather childlike to him. If he is at once given a problem, if we say to him "Here is a problem of designing a little building," and he comes across the problem of spatial relations, let us say--not only spaces that are useful, but spaces that must be made to go together into a pattern--he will, if he ever gets that

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idea, get it much more readily than by the other process. lined are ab: It is different when the boys are younger--as yours are, I suppose. They are around seventeen, aren't they? from the beg: MR. BOUDREAU: Older than that, which Professor Moholy-Nagy. CHAIRMAN HUDNUT: Anyway, they haven't been completely ruined by a college education, as ours have. Those things just can't be unlearned overnight. final question: How is the stud: MR. BOUDREAU: Fifty percent of our students have already been "ruined," as you call it, for at least two years: rest of which has been amply covered. Perhaps, when I am through v: CHAIRMAN HUDNUT: Mr. Gropius says so often that they ought to start these architects when they are about Dean five: then you could really get somewhere with them. terian one can be: Mr. Sakier, do you want to say something? of that step as a di: MR. SAKIER: As chairman of the education committee of the S.I.D., I would wish to take advantage of this extraordinary meeting of the minds to make what is really a terribly necessary step toward the crystallizing of proposed education. Some people may put the emphasis on the diversification. I think we are very fortunate today in beginning at the beginning (which hasn't happened at former conferences), and that we are also fortunate in having here Professor Moholy-Nagy, who was the founder of these principles. I think

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we will probably all agree that the first steps he has outlined are absolutely essential. Now, for the purpose of getting somewhere today, I should like to direct our discussion from the beginning (that is, from the steps which Professor Moholy-Nagy has mentioned: the development of the character, of the emotional sensibilities, of the ability to create and to manipulate and to handle) toward the final question: How is the student going to get his first job? ~~own a certain~~ ~~adaptability.~~ The problem might be divided into three steps, the first of which has been amply covered. Perhaps, when I am through with these remarks, I might ask whether we think that the first step should be carried further. Perhaps Dean Hudnut's suggestion of having the first step a utilitarian one can be combined with Professor Moholy-Nagy's idea of that step as a divertissement, because I really think it is a matter of the interplay of the developing of a useful object and the sensation of activity in a free and playful and wanton (if I may use that word) manner--that is, as a divertissement. ~~second step.~~ Some people may put the emphasis on the divertissement, some may put it on the utilitarian aspect. But whether you stress one side or use both of them, I think we all agree that it is more important to start people on the creative road and to let them discover themselves than it is

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to teach them any specific courses. when we discussed this educational The third step, as I have said, is the one that is concerned with the question: What is the student's first job? And we will leave that to the last. It is the second step, I think, which is the one with which everyone here has had some experience; and it should be clarified further, because the ideas are beginning to become concrete. That step involves the question: After a man has shown a certain adaptability, what specific courses would be more or less essential for him? Perhaps we will find that at the beginning of this second step the type of course that he takes would be suitable to architecture or engineering or industrial design or what-not; and that, in the third year, it would begin to narrow down; and that, in the fourth year, he might possibly look forward to getting his first job. Perhaps, Dean Hudnut, you would care to explore the first step. If not, we might direct questions to the second step; and then, ultimately, to the third: What is he going to do to get his first job? It is the second step, I think, which can have an immediate application with the various types of educators who are here today.

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Discipline. I know that a year ago, when we discussed this educational theme, all of us had a pretty specific curriculum in mind. We then gave a series of talks to veterans, which went on for about five nights--chiefly in the hope of steering them--and we ended up by finding out that it would be better not to have any specific ideas on our part. The problem is so vast and unexplored, and brings in so many elements which we hadn't considered, that it would be better for the Society (and I speak for the Society) to remain a source of information and help to teachers, rather than to make any attempt to tell them what the curriculum should be. apprenticeship would follow, and I want to repeat that I, personally (and also the Society, I am sure), feel that the first step--and this is true especially after the talks of the last three days--is a most terrifically important one; but that the second step is the one that is going to help to shape a specific curriculum and is what we need now. Let us give you our outline of what we propose.

CHAIRMAN HUDNUT: I think it is a good thing, in our discussion of the problem, to come down to earth in this way. I should like to give you a definite curriculum which I worked out two years ago (and which, I know, is full of errors), so that you may discuss it. What would be working with water. We proposed to have three phases of educational

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discipline woven together over a period of four years. We did not propose to take courses out of architecture and courses out of other subjects and put them together into a pile and call that industrial design. We proposed to have these three phases designed anew by men who knew what they were about--and they were to be experimental and to work toward a process of complete harmony. We also based our curriculum on the assumption that this would be only a part of the education of the designer. We assumed that he would not be a designer when he left our halls, that at least three years of apprenticeship would follow, and that we might therefore reasonably leave some of the contact with the practical problems of the profession to be learned through experience--because we would assume that any professional man who had men in his employment would have their interests at heart and would help them. With that preface, let me give you our outline of what we proposed: First of all, we proposed a discipline in design which would be based upon making and doing, as far as possible. That means shop work. It means that at the very beginning, and over a period of three years, the student would be working with materials, making things in a shop, and then reducing

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them to drawings and to specifications from the things that he had made. ~~so far as possible, based upon field observation rather than~~ Now, it isn't practical to have every kind of making and doing in a university shop. You can't pay for that many technicians, you can't get that many different kinds of machines, you can't get that many kinds of work done. We therefore must select certain basic ones, certain materials, and processes which impinge upon all of them--so far as that can be done--and which are fundamental to all. We thought that working with wood was perhaps the most fundamental.

~~faculty--will~~ However, we would not stop there. We would take the boy out from time to time into the industries around us, and obtain the cooperation of industries, to bring him into contact--visually, at least--with processes like glass and iron and wire and processes involving other materials. We would also introduce the problem of use in that instruction.

~~making and~~ Secondly, we proposed engineering courses. The basic conceptions of materials, their stresses and strains, the work they have to do with mechanisms--all those things that must be given. However, they are to be given not by engineers, but by men who have in mind the making of industrial products, so that the student would not be burdened with a vast amount of technical instruction that the engineer would give him.

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(Thus, the architect has a special course, a special discipline--again, so far as possible, based upon field observation rather than upon textbook work.)

Our third section would be devoted to the business of design. The boy would have theoretical and practical courses in industrial management (how factories are run, how they are organized), in merchandising (how things are sold), in advertising--in the general business end of the profession of design.

All three of these would be done by our own faculty--with the collaboration of other faculties, but chiefly by our own faculty--and would be woven together, so far as possible.

In the final year, there would be a course in which all three would be taught at once. All three of these would be brought into one basket and taught as a part of making and doing things for manufacturing, for merchandising, and for the market.

Our system would be based upon the principle that all the men coming to us would be college graduates. They would have had a wide survey of the humanities and the sciences (physical and social), so that we could build on that basis; we wouldn't have to teach these subjects.

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education. Nevertheless, a student would have to take every year one elective outside of his professional field (just as our architects have to). He would not be allowed to close his mind to the world, but would have to lift his nose out of the drafting board once every day to study a course in fine arts or philosophy or economics or history or one of the humanities. Now, that gives you something to criticize--and my feelings will not be wounded if you give it the works.

MR. SAKIER: You believe that industrial design should be a post-graduate course?

CHAIRMAN HUDNUT: No, I do not. I think there is room for many different kinds of discipline in this field (just as in architecture). Lots of people assume, because we are a graduate school, that we think all architects should go through college first. That is a counsel of perfection. It would be utterly impossible for every architect to spend that money and that time. We are not snooty about it. We don't think that it is a good discipline for everybody. We merely say that there are men who can afford it, either through their own resources or through scholarships (and we have a very generous fund of scholarships), and that there should be that kind of

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education obtainable, of school he went to. I am sure it is, because for some reason or other, we started out to do that kind of job. But it is a misconception to think that there couldn't be schools of architecture and design, just as efficient as ours, which would take the boy right from high school. In fact, I shouldn't be surprised if, in the field of industrial design, it might be a better discipline. I am not sure; I am entirely an amateur in that field.

MR. KOSTELLOW: I should like to answer that. I have had some of the students from your school--and it is amazing how lacking in the abstract concepts they are. I had a fellow by the name of Llewellyn Jones, who came as a graduate architect from your school many years ago--before the war--to take industrial designing. Feeling quite certain of his ground and of his knowledge, he demanded advanced standing--which my predecessor gave him.

After being there a year or two, he left school and went to the Army. When he came back, he wanted to start from the first year--fully realizing, after he had become mature, how little he was really prepared to meet the problem of designing from the abstract point of view.

MR. BOUDREAU: Before there is any misunderstanding, may I say that that may be a criticism of the student,

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rather than of the type of school he went to. I am sure it is, because I know the boy. This discussion really cannot be directed MR. KOSTELLOW; That is the third one. anything, CHAIRMAN HUDNUT; I certainly won't endorse every Harvard graduate. I would be in trouble if I attempted that. the professor MR. BOUDREAU; Well, we endorse every graduate of Pratt Institute. We don't graduate them if we don't think they're ready for the market. [Laughter] We just don't; that's a plain fact. attitude. If we take this as a guiding line, then, CHAIRMAN HUDNUT; We have some dumb bunnies. splendid MR. KOSTELLOW; I am not criticizing the school. This fellow is a very brilliant fellow; he is fully capable of evaluating what he has gotten. I got to know him very well. His name is Llewellyn Jones. I don't know whether you remember him. Dean Hudnut said that he finds it difficult in a school to CHAIRMAN HUDNUT; Yes, I do. because MR. MOHOLY-NAGY; Very discreet, Dean Hudnut is. MR. KOSTELLOW; It really touches upon a basic concept which has been discussed here. there existed an abstract notion CHAIRMAN HUDNUT; I think Llewellyn Jones had his undergraduate work at Dartmouth before he came to us. to arrive at MR. KOSTELLOW; Oh, no, that's not so--for the simple reason that he's a Bostonian. I asked him. I know him

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quite well now, and I asked him. I'm interested. ~~ing the~~
~~student to~~ MR. MOHOLY-NAGY: This discussion really cannot
be directed against any school and cannot be used to prove on
anything, one way or the other, about the validity of a
specialized training. It is just another proof that actually
the profession of the designer is something about which we do
not know too much. It is a merging of things.

In fact, I always say that designing is not a
profession; it is an attitude. If we take this as a guiding
line, then, I feel, we will find that the architects will be
splendid material for industrial designing. That, basically,
is the reason that we united the disciplines.

MR. KOSTELLOW: But, Mr. Moholy-Nagy, you are
getting off the subject, and I want to stay on it. The sub-
ject is this: Dean Hudnut said that he finds it difficult in
a school to give the students an abstract problem. When it
becomes something practical, he said, then they can do it.
~~everyone and~~ Now, that is the crux of the matter. Before
there ever existed any kind of design, there existed an ab-
stract notion. The cave man arrived at an abstraction through
his emotions, and now we are trying to reverse the process:
to arrive at an emotion through an abstraction. I say that we
are just reversing the process. There must be some direction

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in a school, right from the very beginning, enabling the student to arrive at that abstraction, to understand the nature of it. They can do things, but not express an emotion with it. That we have no units of measurement, and we therefore find it

MR. J. GORDON LIPPINCOTT: Dean Hudnut, is it permissible for someone outside of education to enter into this discussion? Although they are not precise and cannot be accurately

CHAIRMAN HUDNUT: By all means. I think it's about time. There is an analogy between teaching industrial

MR. LIPPINCOTT: Well, I am an educator who degenerated into a practicing industrial designer (which occasionally happens). I believe that the abstract arts, as taught by Mr. Moholy-Nagy

My feeling is thoroughly in accord with what Mr. Moholy-Nagy said--and I think that your curriculum at Harvard is tops. It seems to me that the difficulty we are all in is a difficulty primarily of terminology. If one is studying chemistry or engineering, there are units of measurement that everyone understands. In other words, if you are talking about weight or volume, it doesn't matter whether you are a Russian or a Frenchman or an American; when someone mentions mass or c.c.'s, that is a definite concept.

On the other hand, when someone who is an artist-- and who speaks the same language as the person to whom he is

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talking--mentions such things as texture and mass, you immediately have a tremendous argument as to just what the terms mean. It seems to me, then, that the big obstacle in teaching design is that we have no units of measurement, and we therefore find it very difficult to discuss the matter. I think, however, that there are some units of measurement. Even though they are not precise and cannot be accurately weighed, they nonetheless can be evaluated--and there, it seems to me, there is an analogy between teaching industrial design and teaching engineering, for example, or teaching medicine. I believe that the abstract arts, as taught by Mr. Moholy-Nagy, are the basic structure of design. In other words, these are the building stones. It therefore makes sense that the early years of college training should be in the basics. After all, if a person is studying medicine, he is hardly expected in his freshman year to take someone's appendix out. Yet, if you expect an industrial designer to style an automobile in his freshman year, you might say that by analogy that is what you are asking him to do. To my way of thinking, an appreciation of mass and form and color and spatial relationships on the part of an industrial designer is exactly parallel to an engineer's

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study of physics and chemistry and mathematics. In other words, it is learning the basics of his profession as far as art is concerned. I think that perhaps Mr. Moholy-Nagy will agree with that feeling. is also a merchandiser--that is, he has his finger on the pulse. If you carry the parallel to other forms of education, I think you will see that it certainly makes sense of to study the basics of art early. The only problem is that art is so intangible, and the basic arts are so intangible, that maybe it would not hurt to have those basics taught in kindergarten and from there on up. In that connection, I may say that my own seven-year-old son has far more appreciation of modern design than many older people. He can go through Gyorgy Kepes's book, "Language of Vision," and get more out of it than a college graduate. That indicates that, as we grow older, we are making progress backward--as far as esthetics are concerned.

CHAIRMAN HUDNUT: I am sure he got more out of it than I did. must go before chairman of boards and explain things--and

MR. LIPPINCOTT: He didn't read it; he only looked at the pictures. That is why a background in the humanities

As far as the curriculum is concerned, it seems to me that an industrial designer needs three facets--and, if he is weak in any one of the three, he is not a well-rounded

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individual. So far, you have been talking primarily of the arts. Now, he is primarily an artist, and therefore that is the most important phase.

However, he is also a merchandiser--that is, he has his finger on the pulse of consumer taste--and somewhere in his scholastic training he should have an appreciation of economics and mass merchandising, because he is designing for mass acceptance. That has not been gone into very far, I think, in any curriculum. If it does come in at all, however, it should be in the senior year; it is certainly nothing to give a freshman.

It seems to me that the other factor is that he must be well-grounded in the humanities. The practicing industrial designer, if he practices outside a large industrial design office, must meet the client. He must meet top management in top industry. He must talk to men who are earning \$25,000 or \$50,000 or \$100,000 a year as company presidents, he must go before chairmen of boards and explain things--and therefore, on the whole, he is talking to well-rounded, educated people. That is why a background in the humanities is essential as far as his business contacts are concerned--let alone being essential as far as an appreciation of the consumer and society is concerned.

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~~be well-rounded~~ The next thing he has to be, I am afraid, is a diplomat. Every product of mass production is a creation of many, many minds; even such a small product as a bobby-pin is never the creation of one person in an industry. You have to work with a sales manager, you have to work with a president--the thing has to be tooled, it has to be put on the assembly line--and, all the way through, there is compromise. For that reason particularly, the practicing industrial designer cannot be a one hundred percent purist.

I know I am treading on very dangerous ground there, but it seems to me that one can be a very fine artist and yet one can cooperate with industry and modify one's esthetic concepts occasionally in order to make the product go through to ultimate mass production. ~~well, I would rather~~

~~discuss it~~ To summarize, it would seem to me that the program that Dean Hudnut has mentioned is a very intelligent one: a program having no specialization whatever in the first year, but laying the groundwork for a well-balanced, well-rounded individual, and gradually tending toward specialization.

~~spending~~ I was particularly glad to hear him say that electives should be taken outside the regular curriculum. ~~That~~ That makes sense. I think that, above all, a person should

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be well-rounded and open-minded--and we cannot take every student and shove him through the same knothole. There must be some flexibility in every educational system, to meet the peculiarities and the individuality of each student. More power to that elective system! It seems to me that, by the time a student gets to be a senior, pretty nearly his entire course would be composed of electives, so that he would almost be free to wend his way more or less where he chose--within reason.

MR. BOUDREAU: Mr. Lippincott, may I ask you a question? Would you add a fourth area in which the industrial designer should be informed; namely, engineering?

MR. LIPPINCOTT: Well, I don't know. My own training is in engineering--and, as a result, I would rather minimize it. I think that the United States is so full of engineers that that isn't awfully important as compared with the other aspects.

Do you realize that the amount that industry is spending on research can be represented by a very steeply-ascending curve? It is coming to a point today where we are spending not millions, but billions, in research--and all that research is going into the science of how we can produce more faster. Granted that a good percentage is going into

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the basics, such as physics and chemistry and electronics, nevertheless a high percentage is going into more and more mass production. HIPPINOTT: If General Motors, is starting a new program. It seems to me that the percentage of research that is going into esthetics is such a miserable trickle that the surface of the thing has hardly been scratched. If industry only spent on esthetic research one percent of what they spend on industrial research, the face of the United States would be changed in a few years and the life of the country would blossom out in entirely new ways. Good designers can come from. This is entirely off the subject--but I feel that there is an opportunity for industry to sponsor industrial design. I think that industry should sponsor it. If old top industrial leaders realized the importance of industrial design to their business (I mean a selfish realization of its importance to their sales), they would underwrite industrial design in the way in which they are underwriting engineering. It is not a big amount of money that I am talking about. It would not take a colossal sum to start a nucleus of industrial design education, where the faculty is well-paid and where they have good equipment and where every student has a scholarship (so that, if he is broke, he can still study there). As far as industry is concerned, we are

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talking about peanuts.

MR. MOHOLY-NAGY: Right.

MR. LIPPINCOTT: If General Motors, in starting a new research laboratory and filling it full of draftsmen (because ninety-nine out of a hundred of them aren't designers), thinks that, just by building a building and filling it full of people, they can end up with a better-style automobile, they're crazy. They can't do it. They can't get designers by hiring them away from other automobile manufacturers, either. There is only one place that good designers can come from--and that is from American schools.

MR. MOHOLY-NAGY: Right.

MR. BOUDREAU: May I still press my point? Would you advise Dean Hudnut of Harvard, and would you advise us at Pratt Institute, to take out all of our engineering content?

MR. LIPPINCOTT: I think the best course--better than any engineering--is physics. The basis of all engineering is an appreciation ---

MR. BOUDREAU: That's still an engineering subject, brother.

MR. LIPPINCOTT: No, it isn't an engineering subject at all. Like mathematics, it is a basic that is fundamental to human knowledge.

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an an engine MR. MOHOLY-NAGY: Right. very important.

MR. LIPPINCOTT: It is the foundation of engineering, but it is also the foundation of chemistry and astronomy and a lot of other things.

MR. MOHOLY-NAGY: Right.

MR. LIPPINCOTT: I wouldn't call it an engineering subject at all.

MR. BOUDREAU: Dean Hudnut has physics in his undergraduate school.

CHAIRMAN HUDNUT: Yes, we require that for admission.

MR. BOUDREAU: Would you want to eliminate all your engineering content, Dean Hudnut?

CHAIRMAN HUDNUT: No, not by any means.

MR. LIPPINCOTT: They can learn an awful lot of engineering on field trips. It's pretty obvious how a lathe works if you stand behind one and put a piece of metal in it.

MR. KOSTELLOW: It's pretty obvious how a brush works. You dip it in a palette and you push it against the canvas. Pretty obvious! Russel Wright here designed a good many things under lathe spinning. He stood behind a lathe ---

MR. LIPPINCOTT: I think it is the least important of all the things we are bringing up. Maybe it's because I

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am an engineer--but I don't think it's very important. as
a starry-eyed CHAIRMAN HUDNUT: I never have had very much
success with these executives. You say, Mr. Lippincott, that
a man has to have an education in the humanities in order to
deal with them. Well, I must be lacking in that. Let me
tell you a little story that will illustrate that: very big-
gest engineer. I was coming down to New York on the airplane
to see whether I could get \$30,000 for some machine tools and
shop equipment. On the same airplane, there was one of my
colleagues (whom Professor Packard knows) and he said, "I'm
going down to get some money, too. I was over in Istanbul
and I noticed that the cracks in the dome of San Sofia are
getting larger--and I want to build a scaffold and go up and
have a look at them." have a feeling of social responsibility.
And this goes "My God," I said, "that's going to cost plenty!"
screamed with "Oh, yes," he said, "a hundred thousand dollars."
very much I It turned out that we were calling on the same
man. Well, my colleague came home with a hundred thousand
dollars. I came home with nothing. That's esthetics, you see.
tory said the And he did go to San Sofia, and he did measure
the cracks, and he reported that they were cracks--period--
full stop. That's art as she is taught!
total stop. Mr. Whitelaw, would you like to say something?

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than that. MR. WHITELOW: At the risk of being branded as a starry-eyed visionary, I want to say that I think somebody ought to make a plea that the education of industrial designers concern itself with producing a few more purists. The result is that I made a tour around the country, talking to industrialists and educators. I came to one of the very biggest engineering schools in the country (it is not too close to New York, so that it doesn't hit anybody here), and the president of the university asked me to say something about the training of industrial designers. I had only a very few minutes with him--he was a very busy man--and therefore I came to the basic thing quite quickly. As it is being developed at I said that I thought that industrial designers should be trained to have a feeling of social responsibility. And this great president said, "Oh, hell, I can't be concerned with the morals of my graduates." Well, there wasn't very much I could do there. I should like to do that. Then we will get A short time after that, I went to a great science laboratory in New Orleans, and the head of the laboratory said that our educational system had reached the point of specialization to such an extent that we were producing intellectual obstructionists. Now, you could have a sheet metal shop. I don't believe that I want to go on any further

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than that. I just want to say that it seems to me that the tendency has been, for so many years now, to produce specialists in this field or that field or the other field, and that they don't understand one another's language, and that the result is becoming very chaotic.

I simply want to bring out that point. Maybe somebody wants to argue it. --and a good many people seemed to think it. MR. BOUDREAU: Mr. Chairman--and I don't know now which one is Chairman --very discouraged. However, I am now inclined MR. KAUFMANN: Dean Hudnut is Chairman.

MR. BOUDREAU: May we go on with a discussion of the program which Dean Hudnut presented as it is being developed at Harvard? I think he asked for our reactions to it. Am I right? CHAIRMAN HUDNUT: Yes; I put it up as something concrete that we might talk about. MR. BOUDREAU: I should like to do that. Then we will get somewhere, I believe. I think that all this generalization is wonderful, but I don't think it is very high-gear. I should like to ask Dean Hudnut this question: If, in addition to your wood shop, you could have a sheet metal shop, wrought-iron equipment, a plastic shop, a ceramic

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shop, and a plaster shop (which is quite different)--if you could have all those, with industrial power equipment, and people qualified to handle them in terms of enlarging the horizon of students, would you incorporate them into your institution?

CHAIRMAN HUDNUT: Our wood shop is very bad. I don't want to. CHAIRMAN HUDNUT: I think not, sir. At one time, I thought they were essential--and a good many people seemed to think it was necessary to have a great many different shops--and that made us feel very discouraged. However, I am now inclined to think that if we had a good, well-equipped shop in some basic technique, with a couple of really good men in charge, we could go out into the field for the purpose of having our students acquire knowledge in other areas.

For instance, we have a glass works in Boston, and we can go there and persuade the glass people to give our older men a certain experience with making glass. Something of the same kind can be done with another firm that is working in alloys and aluminum.

I just wanted to put up this ideal program. My idea is that you wouldn't try to give the students the skills in the different fields. You would give them one skill--which is an intellectual growth, an intellectual experience--and then supplement that with this special knowledge. We are not pushing for skills in any of our

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shops. MR. BOUDREAU: Do you have a wood shop at Harvard?

CHAIRMAN HUDNUT: Yes. product he can get be-

cause of the MR. BOUDREAU: Are you after skill there, or ex-

appreciation of the skill? spinning--but we are not training

spinners. CHAIRMAN HUDNUT: Our wood shop is very bad. I

don't want to make a point of that. spinning through the so-

called Dowsy MR. BOUDREAU: At Pratt Institute, we have all

these other shops. keep away from designing on paper, as much

as possible. CHAIRMAN HUDNUT: We don't teach industrial de-

sign, you know. This is just a proposed program that I have

outlined. this, because she developed into a designer from a

school called MR. BOUDREAU: Oh, I thought you had an indus-

trial design major. had quite a lot of machines. Mrs. Rohde

used to work CHAIRMAN HUDNUT: No, don't misunderstand me;

we don't teach it. ROHDE: What Mrs. Leicester says isn't quite

true --- MR. BOUDREAU: Well, then, it's very difficult

to criticize it constructively--if you don't have it.

CHAIRMAN HUDNUT: I just wanted to put up this ideal program, to see what you thought of it.

thing called MR. BOUDREAU: I should like to discuss it--but

I think it's a personal discussion, in terms of whether one

shop is enough.

on here. (1 We are not pushing for skills in any of our

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shops. We are pushing for a creative designer's understanding of the skills of the workman and the product he can get because of the power equipment that is assisting him. For example, all our youngsters do spinning--but we are not training spinners. They do spinning of a shallow draw, at most, so that they get some understanding of spinning through the so-called Dewey method (if I may say so)--the pragmatic approach. That is, we try to keep away from designing on paper, as much as possible.

lobby to have those things changed legislatively?

MRS. LEICESTER: I think that Mrs. Rohde should speak of this, because she developed into a designer from a school called the Design Laboratory, which existed for a very short time but which had quite a lot of machines. Mrs. Rohde used to work on them--as a student, I mean.

MRS. ROHDE: What Mrs. Leicester says isn't quite true ---

CHAIRMAN HODDGE: They are very hard to change.

MR. BOUDREAU: Don't forget us!

MRS. ROHDE: Yes, I first had my training at Pratt Institute--although, in those days, there wasn't anything called industrial design being taught at Pratt. In spite of that, I am an industrial designer. I started out being an educator, and I didn't like the way education went on here. (I was teaching so-called art here in the city.)

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Before I go on to develop what I want to talk about, I should like to ask Dean Hudnut a question. You said something at the beginning of today's session, Dean Hudnut, about education not being as it should be, etcetera, etcetera, and about the fact that we must meet certain legislative requirements in our colleges, and certainly in our city school systems.

CHAIRMAN HUDNUT: That is precisely what is done. Why cannot people like this group of people (or any other group) lobby to have those things changed legislatively? In the same way, for instance, our outmoded building code in New York City should be changed--and they are trying to change it. We have certain things in the building code which no longer take care of technological processes. There are very new building problems which have arisen, and I think --

CHAIRMAN HUDNUT: They are very hard to change. Of course, they must be changed--and they are being changed.

MRS. ROHDE: Of course. But it takes an awfully long time, so that it must be started sometime if it is ever to happen.

CHAIRMAN HUDNUT: As a rule, this is what happens in architecture: The law, the requirements for practice and the examinations, are controlled by men who graduated twenty-

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five years ago (programs I have heard outlined today) is that there is a

MRS. ROHDE: That's right. the philosophical aspects of

CHAIRMAN HUDNUT: And they still look back upon their college days and write the laws to fit the boy who you graduated with them. on abstract concepts such as contextualizing how

MRS. ROHDE: Yes; we don't realize that. nobody any more than

CHAIRMAN HUDNUT: That is precisely what is done. I read the examination papers every year, and I know that they are asking questions ---ag out the problems in somewhat you realistic

MRS. ROHDE: Industry has pressure groups. Why can't the arts--why can't the designers--have pressure groups, too? that was mentioned here (the industrial management, the merchand

CHAIRMAN HUDNUT: We have pressure groups. thing. You go to

MR. BOUDREAU: We have them--but they are the wrong pressures, unfortunately. many principles of design-- that there is

MRS. ROHDE: I absolutely agree with you. (Well, that was a digression for a moment; I wanted to get that out of my system.) or the other. The next year, you begin to learn two--

dis I have to take exception to what Mrs. Leicester said--because I was in the Design Laboratory as a student all of four weeks, I think, when I was offered a job--and I learned by doing. The Design Laboratory, the school that Mrs. Leicester re

I think that the whole trouble with education

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(including the programs I have heard outlined today) is that there is a lack of correlation between the philosophical aspects of education and the practical aspects. In our present economic system, most people have to earn a living. You cannot spend one year on abstract concepts such as contemplating how many angels can dance on the point of a needle any more than you can spend one year deciding in how many ways you can twist a hunk of wire or bend a piece of plexiglass. By the educator's thinking out the problems in somewhat realistic terms, you can correlate the two aspects. ~~... these things.~~ There is no correlation between the business of design that was mentioned here (the industrial management, the merchandising, and so on) and the beginning of the thing. You go to school the first year and you learn that there are so many principles of color, so many principles of design-- that there is hue, intensity and value, that there is this and that and the other thing--and you make beautiful abstract pages, one after the other. The next year, you begin to learn two-dimensional--or you begin to learn two-dimensional in one class and three-dimensional in another, and there is no relation between the two. ~~... you had first thought~~ ~~... that one.~~ In the Design Laboratory, the school that Mrs. Leicester referred to (which, incidentally, was patterned

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after the Bauhaus methods--with slight variations to meet the conditions under which it was run), you would spend part of your time on a given day in a drafting room, learning the mechanics of pushing a pencil on paper and the language of putting your ideas on paper. But you did not learn, for instance, how to make the symbols for doors, windows, end grain of wood, lap joint versus a mortise-and-tenon joint, and such abstract problems. (That is the way in which practically every other course that I have ever heard of teaches it. You fill sheets, and you letter very beautifully underneath these things.)

In the Design Laboratory, you would take a problem in wood (let us say) to begin with, which is the simplest as far as having equipment in a school is concerned. I believe the first problem I ever did was a cigarette box--and that was true of other students, too. You made a lot of sketches of ideas you had. You then drafted the thing, and you then went into the shop that same day (or as soon as the problem was going). In the drafting department, you were always one problem ahead of where you were in the practical department. (That had to be so, because you had first thought out that one problem.)

Before you even drew your first designs for a

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cigarette box in abstract art, let's call it--abstract design-- you studied just abstract forms: a feeling for space, for shapes, for forms, and so on. But all of this was being taught at the same time, and each class had a bearing on one problem. In other words, you took one problem and carried it through in all your classes. You were not studying Egyptian architecture in your history-of-art class, and in some other class tracing Gothic rose windows from museum plates.

There was a correlated scheme there, which does not seem to apply in any other school, and it still allowed for individual differences in ability and progress. If one person finished the problem in the shop faster, he then did another problem which was slightly more complicated. You learned a little bit more about wood. You then began to-- but unless you can work with wood, with metal, with plaster, possibly (if the equipment is there) in ceramics--I happen to be able to work a wood or metal lathe, any kind of wood-working machinery and several kinds of metal machinery. I would not feel that I was a competent designer, and I would not feel that I could go into a factory and talk with the foreman in a plant, if I myself did not know what the material would do or what the machine would do.

That, however, does not mean that I must know in

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everything. I don't think that any human being can know everything about every single material and technological process that exists today. But you must have a knowledge of what it is. That.

I have students come from your school--and from Pratt, too--with portfolios containing beautiful renderings. There is one thing that all schools teach, and that is how to render --- the other a little bit larger); and then there was various final: MR. BOUDREAU: It is required by the profession.

MRS. ROHDE: Not in my office, Mr. Boudreau. They do beautiful renderings, beautiful presentations. You look at the thing and you say to the applicant, "What is this material?" They did not try to make us professionals. I "Well, that's glass"--and that's this, and get that's that.

"Then, why did you curve this in this way? Could it be curved in this way? What radius is that?" practicing design. Then they don't know. They say, "Oh, this was done in 2-D" (meaning two-dimensional design). It doesn't make sense. But if they rendered it and drafted it, made the working drawing and actually made the object, then it would never be a drawing that was beautiful but couldn't be made. ing. We like MRS. LEICESTER: How many machines were there in

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the Design Laboratory? Why train your students,

then, to do MRS. ROHDE: Very few.

MRS. LEICESTER: Mr. Sakier and I were connected with that.

MRS. ROHDE: There was a metal lathe; there was a wood lathe; there were several hand saws and a couple of jig saws; there were only two saw tables, I think (one fairly small, and the other a little bit larger); and then there was various finishing equipment, plus all sorts of hand tools.

CHAIRMAN HUDNUT: We have all those and we have some other things, but we don't try to teach more than wood techniques. I suppose we should go in a helpful way of learning about

MRS. ROHDE: They did not try to make us professionals. I could go into a wood shop or metal shop and get a job, I'm sure.

MR. LIPPINCOTT: I think Mrs. Rohde has brought up a very, very interesting point: that our concepts as practicing designers are changing so fast that, if you try to give us students who are keyed down one alley, they are going to be obsolete before we even get them.

For example, we no longer have any airbrush rendering in our office. We feel that renderings are misleading. We like to go from rough tracing-paper sketches to final

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finished models as rapidly as we can. Why train your students, then, to do a lot of fancy rendering?

CHAIRMAN HUDNUT: We don't do any renderings in our school. It is the spirit which carries the whole thing.

MR. LIPPINCOTT: I think that too much of industrial design education is in that direction. I think it is a very interesting point that Mrs. Rohde has brought up.

MR. BOUDREAU: That is not industrial design education.

MR. NELSON: I want to ask Mr. Moholy-Nagy a question. I think all designers will agree that doing things with one's hands is a fairly obvious and helpful way of learning about materials, and so on. The question I want to ask of you, Mr. Moholy-Nagy--and I know it is difficult to answer simply--is whether you at Chicago have made any observation of the point at which the acquisition of skill ceases to be of any particular value in design training. Is it possible to answer that?

MR. MOHOLY-NAGY: Yes. It is a reciprocal relationship. But let me answer your question in another way, and then you will see the point. We speak about machines, and so forth and so on. That may be relevant, and may not be. Every high school in this country, as I found out by visiting

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them, has better equipment than we have and better equipment than Harvard has. It is simply prodigious! What do they do with it? Nothing! It is the spirit which carries the whole thing. Please do not misunderstand the whole method. With machines and such things, you can make decorations--or you can make creative works. I am sorry, Mrs. Rohde, to pit my twenty or what twenty-five years of experience against your four weeks of the experience. But how can you say, on the basis of your four weeks of experience, that integration is not taking place anywhere--when we have been doing it since 1919 (when the Bauhaus was founded)? It is only that we do it differently in this country. I don't wish to be personal and to speak about our school, because it is really beside the point. And I like Dean Hudnut's scheme very much. I think we can come very quickly to agreement, with some few additional observations and additional clarification, and we will see what these schemes lead to. Within the short period of time that was at my disposal, I was not able to tell you that in our school we actually have a pretty good direction--that we would like to

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integrate the sciences, the arts and technologies. But that is a slogan, and it doesn't mean anything (just as someone spoke yesterday about sloganized design--"streamlining" and so on).

Just let me speak for a minute about engineering-- and then I will try to answer your question, Mr. Nelson. Why do we need designers when we have engineers? The engineers are wonderful; they know what the machine does, they know what the function of an object should be. Why do they not make the design? Why do we have to educate industrial designers when we have engineers whose duty it actually should be to produce these designs?

It is just at this point that there enters very clearly the question of sensibility, the creative approach (the width and breadth of the approach), the social responsibility, the esthetic awareness, and so on. What Mrs. Rohde described as the problem of how many angels can dance on the point of a needle is very important for scholastic minds. For us, it is important to make the elements clear in the minds of the students and to try to integrate them with three-dimensional work, two-dimensional work--engineering tasks which are involved in changing a flat sheet of something into a three-dimensional structure. Only we do not say that it is

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engineering. But it is someone who has had great experience?
 We teach mathematics, we teach physics. We cannot leave them out--starting with algebra and bringing them up to calculus, or starting with calculus or trigonometry or what-not. We have to have, step by step, an educational procedure in which the creative abilities and capacities of people are used. That is the point that should be understood. That is general education. Now, we come to the industrial design problem. When the industrial designer (or the lawyer or the doctor) works with his hands, whatever he does will be translated into his brain as knowledge--and the knowledge, in its turn, will react on his emotional self--and a better level will be achieved.

This level will be consciously raised, point by point, in the educational process. But it will not be consciously raised in the student: the student achieves it almost automatically, because he loves to solve problems which it is possible for him to solve. If I ask a student to solve the problem of a perfume bottle (which was usually the first design problem in the design school before our approach became known and was adopted), what can he know about glass-blowing and about the possibilities of a great number of technical processes which

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can be mastered only by someone who has had great experience?
to I found it. However, if he slowly builds up his knowledge--
tactile sensations, eye sensations, nostril sensations, ear
sensations, anything which has to be built up in order to
master a material--then afterward, with the help of the
specialist, the teacher about whom Mr. Boudreau speaks--and I
agree one hundred percent that it is right to have many work-
shops, Mr. Boudreau, because if you give them an opportunity
to dabble (if I may use that word) ---

MR. BOUDREAU: We don't dabble. That's the dif-
ference.

MR. MOHOLY-NAGY: Oh, you're always so good! We
dabble.

MR. BOUDREAU: I agree.

MR. MOHOLY-NAGY: And I dabble, too.

MR. BOUDREAU: I agree.

MR. MOHOLY-NAGY: And I love to dabble. That is
what made me what I am now. I was educated as a lawyer--
and because I dared to dabble with plastics and wood, and so
on (in which I am no expert at all), I gained a width of
experience. Almost every educator, if he is sincere, tries
to educate people so as to bring them to the things which he
himself missed in his life, in his education. I was educated

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at a university, I was educated as a so-called academicist-- so I found that I had a right to educate the senses of the people, too. --- produced, with the bags being worked out of--
 wash designs MR. BOUDREAU: No one is questioning it. the ad-
 vice of many MR. McCONNELL: I should like to hear from Mr. Lepper, who comes from still another school. He hasn't told us about Carnegie Tech at all--whether the experience there is any different from that of the schools which have been discussed. I don't mean to put him on the spot. my own opinion, very wrong. MR. ROBERT L. LEPPER: I think that perhaps in our own group we have a miniature of this meeting as regards disagreements as to point of view among three or four people involved. I can recognize the expressions of that group in the remarks of half of the people who have expressed themselves here this afternoon. I think that is good, too. I have my point of view, and I respect theirs.

I was delighted to hear Mr. Moholy-Nagy's observations in the last few minutes about the right to dabble. I think I was also interested in Mrs. Rohde's comment about beautiful rendering. (I am afraid that our youngsters are rather bad renderers.) Will not be an industrial designer unless he has been sought Then, too, there was her point about the design of a piece: Will the radii of the glass or the plastics

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(or what-not) work? Can they be made? I wonder whether, in the shop of an experienced designer, infinite numbers of designs are not produced, with the bugs being worked out of such designs very slowly and very patiently and with the advice of many people outside of the office itself. He will degenerate. I agree with Mr. Lippincott's remark to the effect that the world is full of engineers. That they produce bastard engineers under the guise of industrial designing-- as a kind of dilute form of engineering--is, in my own opinion, very wrong. things that were said today, it seemed to me that there was one I refer constantly to "across the street" as the Engineering School of Carnegie Institute of Technology-- and for us to presume to say "You should be a management engineer" (which is a four-year course), or a chemical engineer (which is another one), or a mechanical engineer, or an electrical engineer, is ridiculous nonsense. I am sure, that I regret that we do not have a course in physics, and do not require it. I believe it should be in--and I think it will be. possibly be part of an earlier educational stage than the only. Whatever happens, I believe that an industrial designer will not be an industrial designer unless he has been caught young in the sensory field. Then, I think, that he be encouraged (in so far as it can be encouraged or people

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stimulated in the classroom) to interest himself in sociology, in any branch or branches of engineering and science, in a consciousness of the world in which he lives, is of the utmost importance. MR. MOHOLY-NAGY: That's right.

Otherwise, nothing will happen to him. He will degenerate into another workman in somebody else's shop-- even though he has a B. A. degree from our institution or yours (as the case may be). MR. KAUFMANN: Mr. Chairman, in listening to a lot of the things that were said today, it seemed to me that there was one thought that lay very close to the surface and never got there. I think that perhaps the nearest it ever did get to being expressed was when Mr. Moholy-Nagy talked about the extremely good technical equipment of our high schools. It certainly has occurred to many people, I am sure, that a lot of the basic training which was developed in the Bauhaus, and which has been adopted in many schools since then, could possibly be part of an earlier educational stage than the university itself.

MR. MOHOLY-NAGY: That's right. MR. KAUFMANN: That might tend to loosen up some of the tremendous problem of how you are going to train people

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to be complete human beings--how you are going to train them to be technicians, salesmen, gentlemen and everything else--all inside of six years.

MR. MOHOLY-NAGY: That's right.

MR. KAUFMANN: That is probably much too big a subject on which to have any real discussion here today. However, it seemed to me that it was worth trying to bring it up from the position in which it was floating just under the surface, to have it actually said once, and to see whether there is anybody else who feels that way about it.

DR. ARTEMAS PACKARD: May I say a word on that point, Mr. Chairman? I am very grateful to Mr. Kaufmann for bringing that point up because, as a comparative outsider (since I come down from an old-line liberal arts college that doesn't intend to sell out to vocational training--if any of the oldtimers who are responsible for the institution have anything to say about it), I am committed to guiding young men who want to be technical experts in one or another field at the post-graduate level--in architecture or industrial designing. I am impressed with the fact that the profession is interested in trying to bridge the gap between the undergraduate and higher education and professional competence.

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I think I understand perfectly the intention there. It is a sound and necessary ambition, certainly at this stage in the development of our industrial civilization, to establish standards that will take full advantage of, and nail home, the stupendous opportunities we have at our disposal to create more perfect things out of our civilization than any civilization has ever known. with their brains. otherwise, they are not prepared Our young men who come to college are not unaware of the possibilities of this civilization. That is one of the most striking challenges, to my mind, with which the people who have to deal with college undergraduates are confronted. These boys who come to college at the present time are really excited about the possibilities of creating wonderful things out of our industrial civilization. They are not dumb and dead and dull and unaware of the possibilities. It is we oldsters who are dumb and unaware, comparatively speaking. For example, I regularly have students who have more than Furthermore, I do not think for one moment that the elementary kinds of experience that Mr. Moholy-Nagy has so well described can possibly be omitted from the educational program of our young people up to the time they come to college. Of course, that belongs in the elementary and the secondary stage. professions, such as engineering and the

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law and medicine. The young men who come to college are coming to get an adult understanding of the universe in which they live, at the adult stage of study. Their interests, esthetic and otherwise, must already have been stimulated to the extent that they know that they want to be industrial designers or want to be architects or want to do things with their hands or want to do things with their brain. Otherwise, they are not prepared to go to college to any purpose. It leads to a graduate program. We are in the position not necessarily of having to create a new education for them. That would be an outrageous insult to the whole effort of American education in the last hundred years to build up an intelligible universal education program. We are in the position of encouraging people who already have developed an interest in design of one sort or another. How are we going to give them the next step? professional planners ought to have. There is no limit. It is so rare. For example, I regularly have students who have more than ordinary natural ability and creative capacity, who have the notion that they would like to be industrial designers. (It applies to other things, too; they want to go into commercial art, for instance.) Now, architecture has graduate schools; we have a direction in which to head those people. The other professions, such as engineering and the

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law and medicine, have their formulas. . . .
But are we not being unnecessarily impressed with the need for a parallel program for people who are going to be industrial designers--just as is the case, I fear, in the realm of planning? There is a tremendous need for well-trained and intelligent human beings in the field of community and regional planning. However, when you try to organize a curriculum at the undergraduate level that will lead to a graduate program for professional participation in such fields as planning--and, I suspect, industrial designing--you are actually demanding too much of schools and systems.

What is the limit of the kind of interest and understanding that an industrial designer must have--when there isn't anything that he ought not to know? What is the lower limit of the understanding that a man who is going to be a professional planner ought to have? There is no limit. It is so rangy; it covers all of the aspects of our civilization. . . .

What I am leading up to is the proposal that you limit your ambition somewhat, in your exploration of what should be the professional training for the industrial designer at the higher level, to a demand that the schools and the universities shall act as a screen to filter out and guide

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superior talent towards you. ~~the direction of encouraging (by
hook or crook~~ I am not at all convinced that we need untold
thousands of industrial designers. In fact, we are alarmed
at the extraordinary pressure that has come upon us since the
war for training in architecture, and so forth. There are ~~that~~
thousands of people who want to be architects; there simply
isn't a need for the number of people who want to be archi-
tects now. ~~That is where your best bet lies, I think, rather
than in~~ There certainly isn't a need for the number of
young men with an interest in industrial design whom, I am ~~con-~~
sure, we could stimulate--if we tub-thumped it properly--~~to~~
to become industrial designers. I don't think that our
civilization needs any great swarm of highly-trained special-
ists at the top. However, I do think that there is some kind
of practicable assistance that can be given--by the colleges
and by industry and by the industrial design profession, which
is interested in establishing and maintaining standards--~~to~~
to encourage superior talent, when it appears, to take the
next step (whatever it may be) in accordance with the interest
and the talent of the individual. ~~going to write a program at
Cooper Union~~ If you want to thread a needle here that will
work towards a more adequate filling of the gap between general
education and professional competence, I think it is to be

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found, on the one hand, in the direction of encouraging (by hook or crook) a more intelligent instruction in art values at the lower levels (primary and secondary school); and, on the other hand, in the direction of establishing practicable contacts with the colleges and universities, to see to it that men of superior capacity do have an outlet--as short a cut as possible--into actual practice. That is where your best bet lies, I think, rather than in terms of trying to establish, all at one fell swoop, a new formula for education at the higher level--because Dean Hudnut can tell you, I think, that it is an extremely difficult thing to fit into the existent mechanisms.

MR. RAYMOND DOWDEN: I should like to say a word here, especially since the problem of industrial design is not a matter of two schools or three schools--it is a matter of two hundred or three hundred or four hundred schools in the country, and perhaps even more than that--and since the aspect of secondary education has been brought into this. Now, how can Since I did not attend the other meetings, and since we are up to our necks in trying to write a program at Cooper Union for industrial design, and since we are one of the schools that do not believe that we have found the solution for it, and since it is such a young profession, we

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should like to know what an industrial designer is. Is he all things to all men? I mean, exactly what is he? How can we train him? How can we write a curriculum for a profession that can't even define its own terms? package of a match package, or We have what we consider a program that is all right for the moment. It may not have physics in it, it may not have some of the other things that you have been talking about--but we do follow certain concepts that have been discussed here. However, I don't think that we have arrived at any solution, and I don't think we will arrive at any until we get to a point where we can tell industrial design people what they are going to be. two conferences at my own school, and several Maybe we can tell that to them now, but I am not so sure we can. If I were to speak to the industrial designers who are here today and ask them where they had their education and how they rose to the profession, I would get a different statement from every man. One is an architect, another is something else, a third is something else again. Now, how can we train that something else? (You can probably train the whole man, as has been said over and over again--and I believe in that.) industrial designers--all of whom have had specific Getting down to specific programs, however, it might be a good idea if the industrial designers--and they

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have also said over and over again that they have gotten together and have a specific program--were to tell us a little bit about what they are. I mean, what do they do? They build a house, they design a cigarette package or a match package, or they design a carpet on the floor. Exactly what is the profession? wants somebody right out of an art school who can work.

CHAIRMAN HUDNUT: Having talked four days about it, it is rather interesting to come down to the end not knowing what a designer is. I should think you would be jolly well.

MR. DOWDEN: The reason I ask that question is that I have gone through two conferences at the Metropolitan Museum, one conference here, two conferences at my own school, and several elsewhere, on the same subject--and we have arrived nowhere. This morning, before I came to this meeting, I was in session from eight o'clock until twelve o'clock with an industrial designer who tried to tell us what he thought. His specific problem was glass, you see, and therefore he was telling us how to write a curriculum in terms of that present need of his. In the past six years at Cooper Union, I have had at least two dozen industrial designers--all of whom have had specific kinds of problems in the fields in which they work--come in and try to tell us what kind of curriculum we

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should write. ~~at the same thing as what he was before the war,~~
~~what he was.~~ We want to listen, because we want to find out.
 But if I have a man come in and spend three days telling me
 that we should teach such-and-such because his immediate prob-
 lem is fancy airbrushing, and he is involved in refrigeration
 right now, and he wants somebody right out of an art school
 who can work into his shop immediately and tell him all about
 refrigeration, then we're stuck--and we're terribly stuck.

~~What would~~ CHAIRMAN HUDNUT: I should think you would be
 jolly well glad you were stuck. ~~we write it because we don't~~
~~teach airbrushing.~~ MR. SAKIER: That's no problem. We can answer
 that very easily. ~~at a specific subject? We may touch on~~
~~it and may~~ MRS. RORDE: We all seem to be forgetting what
 Mr. Sakier said we are here for; that is, all this training
 has to fit students (at whatever level they must quit their
 education and start earning a living) to be able to earn a
 living. ~~taly~~--not five years from now, or ten years from now,
 but immediate. To go back now to the question, which seems to be
 unanswered, that was just posed by the gentleman from Cooper
 Union: What is an industrial designer? It is not so much a
 question of what an industrial designer is, but what an indus-
 trial designer should be. What an industrial designer was in
 1929, let us say, when the whole concept first started in this

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country, is not the same thing as what he was before the war, what he was during the war, and what he will be after. The thing keeps changing. I don't think, then, that anyone will ever be able to give you an answer to the question: What is an industrial designer? An industrial designer is somebody who has to keep on changing as the world in which he is living, the world for which he is doing stuff, changes.

MR. DOWDEN: Then why does the industrial designer criticize our curriculum as we write it because we don't teach airbrushing as a subject or don't give spinning, or something like that, as a specific subject? We may touch on it and may treat the man as a whole man (in the way that has been discussed here), but the criticism from the industrial design field has always been "You don't give this specific subject" and "You don't teach them how to do such-and-such--immediately"--not five years from now, or ten years from now, but immediately! In other words, the question is: How are they going to be experts in your shop or in somebody else's shop? How are they going to be experts now?

MR. SAKIER: You are meeting the wrong designers.

MR. DOWDEN: Maybe we are.

CHAIRMAN HUDNUT: I wonder if you would let Mr.

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Webster have a word. He has been very anxious. ~~practical ideas?~~
~~Putting aside~~ MR. WEBSTER: I have been listening to these sessions for three days, and I have heard only once (and that was today) the one word which, to my mind, is at the heart of industrial design work. That is the word "planning." I think an industrial designer is essentially a planner.

I carry my own definition of it very far. I consider an industrial designer to be a man who plans the artificial environment of people. That might mean this ashtray, which is an artificial item, that is beside me on the chair; it might mean this chair; it might mean the whole town that I live in; it might mean a railroad train that I ride in.

Essentially, however, it is a matter of planning. What we look for, when we are hiring people in the industrial design field, are people who have been trained in planning; in other words, creative thinking. ~~question interests us a good deal, because~~ All of these other elements that are involved are part of the planning procedure. In order to do a good plan, you have to know all the various elements and factors surrounding it when you work on it. But the crux of this thing, as far as the schools are concerned, is to turn out some planners--and they will find themselves very well fitted to work into the field of industrial design. ~~deal and sustain~~

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conceptual. MRS. LEICESTER: May I suggest a practical idea? Putting aside market analysis and all the consumer angles, I think that the men who are hired in designers' offices today fall into perhaps three classes (because education has not equipped any one man to function completely). Those three classes are engineers, architects and designers. My opinion at the drop of Is it possible for us to agree that education should be based on some integration of those three elements, plus certain market analysis and over-all planning and a point of view (which is, I think, what Mr. Webster means by "planning")? Do you suppose we could all agree on some one thing like that? It would be nice. the future doctor. But esthet- ics, in spite CHAIRMAN HUDNUT: I think that, if the definition were sufficiently comprehensible, we could agree on it. still defies circum MR. KOSTELLOW: I would like to say a word-- not very much. You know, this discussion interests me a good deal, because I have devoted a good many years of my life to training people as designers--and recently I have begun to be interested in industrial design as a specific province of my efforts. was.

From what you have said, industrial design as a profession does not exist. It exists only as a concept. So far, it is a concept in which certain perceptual and certain

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conceptual beginnings which exist in every human being have been trained to a certain degree, to be applied ultimately to whatever specific field he might find himself in.

In that respect, Mr. Webster, you are right. I mean, it is planning--but with a prepared concept in that direction. And esthetics (and I will fight for my opinion at the drop of a hat--and it doesn't have to drop very far, either) is not terribly unknown. You see, you can't train a designer the way you train a doctor. There is no anatomy of esthetics. When you deal with a human being, you are dealing with something very specific; the answer is always the same. Just one anatomy is sufficient to train the future doctor. But esthetics, in spite of the fact that we all speak about it and that it is one of the oldest things that we have inherited, still defies circumscription or very minute definition. ~~and all that--which~~ However, there is no end of evaluations or criteria of evaluation which could be applied if we, as a body, were patient enough and willing to give enough time to it to come to very definite--not general, but rather specific--conclusions.

All the machinery and all the equipment and tools and materials are only good as such--as material with which this esthetic concept ultimately takes definite shape and

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expression--and inasmuch as a designer does not design for anything specific, there can therefore be no narrow channels at the beginning. **KOSTELLOW:** Then please let me finish. I am interested in what the Bauhaus did is of tremendous importance, because they started out with a state of the student rather than with a certain body of knowledge; and the research was in pure esthetics, rather than in materialism or functionalism. There wasn't much functionalism, was there?

MR. MOHOLY-NAGY: Not at the beginning, certainly. We just groped for it.

MR. KOSTELLOW: Frankly, I would like to see a discussion--adequately illustrated and demonstrated--as to the nature and quality of what we call design. I have never heard so many words at so many meetings about design, and seen so little come out of it: certain attributes--harmony and all that--which simply mean nothing, as far as I am concerned, about design.

CHAIRMAN HUDNUT: Well, I think that we ought to bring the conference to a close. We could go on for a long time with these problems ---

MR. KOSTELLOW: I would like to finish and say that I would like to see another conference. I wish you wouldn't stop me, Dean Hudnut. I am polite to you--so you

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please be polite to me.

CHAIRMAN HUDNUT: All right.

MR. KOSTELLOW: Then please let me finish. I am interested in design as a designer--and you are interested as an academician. I have spent twenty-three years teaching it, and a lot of people who are here have been with me; they were my students, and they are my friends, and now they are my teachers. What I would like to see is a real conference on design, with certain samples. We cannot write a curriculum just by naming things. We have to really bring something and discuss it, and let the designer say what he wants the young designer to bring to him when he comes to show what he has. All right; thank you.

CHAIRMAN HUDNUT: I didn't mean to stop you. I thought you had finished. Mr. Moholy-Nagy now wants to sum up. MR. MOHOLY-NAGY: Let me just summarize, because I (fortunately or unfortunately) opened up the discussion. I have learned a good deal today; that is the one very positive result for me. I have learned that we are very hazy about our terms. I have learned that many people believe in things which are called by different names, but the basis or

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content of which is perhaps the same. ~~completely finished by the engineer.~~ Every creative work is to a great extent a subconscious process. As the artist works or as the designer works, there is very much of the subconscious process in it. ~~tion was, but~~ The anomaly is that the industrial designer (the term and the function) should be defined by the industrialists--and the industrialists are always missing from this type of discussion, so that we who are designers or teachers or what-not are trying to set up a standard.

I was very much interested in what Mr. Packard said, and I think that all his statements were perfect and to the point except for the last two: namely, that he believes that we are training too many architects, and that we are training too many industrial designers.

I should like to offer this comforting thought: that none of us should be worried if he has been at four or five conferences without any definite result being arrived at. It is just a groping towards the profession, which is still mainly an adventure, mainly a kind of goal (or a concept, as Mr. Kostellow puts it).

~~designing.~~ It is fortunate enough that the needs which the industrialists tell us about can be solved by one or the other. The industrialists, in one case, would like to have

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a cloak around the product which was completely finished by the engineer; in the other case, they would like the designer to add something creative to it. And, in the other case, the industrial designer doesn't come into touch with the production man, but just with the advertising people. (You know, making something fancy which never will be executed--which is not even a cloak, which is just a badly understood Utopia.)

That is all right, then. We are groping for it, and we are a little bit nearer to it.

Mr. Webster was good yesterday, and today he was excellent. Yes, design is planning. Whether you add to that definition something about the artificial environment or something else--and there are a great number of elements which can be added to it--Mr. Webster is basically right.

That is why I say that designing is not a profession, but that it is an attitude which everyone should have; namely, the attitude of the planner--whether it is a matter of family relationships or labor relationships or the producing of an object of utilitarian character or of free art work, or whatever it may be. This is planning, organizing, designing.

But now let me come to Mr. Packard's statement. I believe that in the past (about fifteen or twenty years ago)

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American industry, as well as European industry, tried to counteract the idea of scientific industrial research--and today there is no great firm which would be without such a department. In the same way, sir, I should like to tell you not to be worried about the number of young men you will be sending to us--to the two hundred or four hundred schools which Mr. Dowden envisages--because, in fifteen years, there will not be one industrial firm which will not have its own design department.

All this discussion is misunderstood to a very great extent, because the industrial designers--without being selfish--constantly think about the fellows who come to them, into their offices, for certain purposes. But that is not the point. The point is that design is an integral part of every utilitarian object or of our artificial environment or of our family relationships or what-not. We cannot educate people in that attitude, and that attitude is the important thing.

I come now, as my last point, to Dean Hudnut's suggested plan. I think it is excellent, except for one thing. (Please don't chastise me for that. He is the head of the architectural school of the most venerable institution in this country. He is perhaps seventy-five percent an

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academician, seventy-five percent a scholar--and I am saucy enough to say that I am perhaps twenty-five percent a scholar, and that seventy-five percent I dare to be an artist or what-not.)

I think that I would add to his concept more of workshops, more doing, without neglecting the possibility of bringing into the curriculum the sciences and arts, the liberal arts and the humanities--which we try to do.

What we do is a very insufficient work. We are telescoping three schools into one; we are telescoping an engineering school, an art school, and a university or a liberal arts college. The anomaly is that this almost cannot be done, that it is too much, and therefore we have to make shortcuts in many places without losing sight of the goal before us. That is what we try to accomplish.

If, some day, the suggestion that Mr. Kaufmann made and that Mr. Packard agreed to--that in the lower levels of education (the elementary schools and the high schools) we should have a greater consciousness of these requirements--were to be realized, then we could start on a higher level.

Our whole approach now has to be directed towards giving the college graduates the same program that we give to the high school graduates, without conflicts--so that the

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people with Bachelor's degrees do not feel too good, and the others do not feel too inexperienced in solving these problems. And that is actually what we try to do. It was a great privilege to list. However, I do not wish to go into details, because that would bore you. Anyhow, that is not the point of the thing; we are trying to arrive at fundamental considerations, and I apologize if I have spoken about the Institute as such.

I think that Mr. Dowden made the best remark when he said that we are not one school or two schools or three schools, but that there must be four hundred schools. With all my heart, I hope that these discussions will clarify the possibilities some day, so that the industrialists or the people who have money to support such research (as Mr. Lippincott mentioned) will awaken. Then we will not have to fight for every penny, and Dean Hudnut will not have to go somewhere for machines and come back without them, and so forth and so on--but we will really have funds with which to make a proper approach for the benefit of the country--for the benefit of the consumer, of the people.

Thank you.

CHAIRMAN HUDNUT: Thank you very much indeed, Mr. Moholy-Nagy. And my thanks to all of you for your patience

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with me as an amateur chairman.

MR. KAUFMANN: Ladies and gentlemen, I certainly want to thank you all for coming here. It was a great privilege to listen to you, and I hope you enjoyed the meetings.

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