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The Designers go to the Fair, I: Walter Dorwin Teague and the Professionalization of Corporate Industrial Exhibits, 1933-1940

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The organizers of the 1933 Century of Progress Exposition in Chicago, recalling the tremendous attention that Henry Ford's operating assembly-line exhibit had commanded at the 1915 Panama Pacific Exposition, counted heavily on Ford's participation. And Ford fully intended to rejuvenate his assembly line for a triumphant 1933 encore. But Ford was preoccupied with other things in 1930 and 1931, including his own programs to end the depression and to enable industrial workers to regain the security of partial subsistence on the land. By the time he made up his mind to submit a proposal to the exposition board, General Motors had stolen a march on him and had gained approval for its own assembly-line exhibit. "Ford was furious," reports David Lewis, historian of Ford's public relations. In a fit of moral outrage at the theft of his idea, Ford walked out on the fair and launched his own, highly successful "Ford Exposition of Progress" in Detroit and New York City.¹

When Chicago's Century of Progress reopened in 1934, however, the Ford Motor Company contributed the fair's biggest news stories. With an expenditure of over \$2.5 million, the largest sum ever invested in a fair exhibit, Ford turned his delayed entrance into a grand gesture. The critics agreed that he "stole the show" in 1934, attracting 76.9 percent of all fair visitors to his exhibit and outdrawing the previous attendance leader, General Motors, by a two-to-one margin.²

Ford's grand entrance at Chicago marked a significant moment in the transformation of the corporate industrial exhibit. In place of an operating assembly line, Ford offered a massive "fair within a fair" of diverse features. That such an unlikely approach should have gained such media acclaim and made so striking an impact on observers was widely attributed to the man who had infused dramatic showmanship and a stylistic unity into this eclectic display—the industrial designer Walter Dorwin Teague. The Ford exhibit in 1934 ushered in a period of striking convergence between an increasing corporate sensitivity to public relations and the application of designers' expertise to display strategies. More than ever before, the great fairs became arenas for the public dramatization of corporate identities. By the time of the 1939 World's Fair in New York City, the advanced "production qualities" of the indus-

David L. Lewis, *The Public Image of Henry Ford* (Detroit: Wayne State University Press, 1976), 297; "The Reminiscences of Fred L. Black," 197 typescript of interview, 1954, Oral History Section, Ford Motor Company Archives, Edison Institute Dearborn, Michigan. Lewis, *Public Image*, 298-301; F. L. Black to Fred Campsall, June 30, 1934, Acc. 285, Box 1540, Ford Archives.

trial exhibits of the major corporations enabled them to overshadow both the amusement zone and the thematic exhibits as the "hit shows" of the fair.³

The expression "hit shows," liberally employed by Teague and his design firm as well as by the media, alerts us to an infrequently noted aspect of the convergence between designers and corporate executives in the 1930s and 1940s. Studies of the incorporation of high art and modern design into corporate identity campaigns and accounts of the enthusiastic corporate adoption of industrial design during this era often focus on three central issues in this merger: (1) the motives behind, and the extent of authenticity in, the aspirations of corporate leaders toward esthetic uplift; (2) the appropriateness of artistic modernism to corporate imagery; and (3) the threats to the artistic integrity of designers created by corporate imperatives.⁴

A focus on the rapid expansion of the designer's role in corporate industrial exhibits in the 1930s, however, reveals that their advocacy of esthetic modernism was not the only influence that they exerted upon big business. In their emergence as the producers of "hit shows" for industrial corporations, designers often promoted an orientation toward the cultural tastes of the masses as much as they did an adoption of the esthetic standards of high art. In this respect, they were already beginning to assert a role within the corporation that would later emerge as a central theme in the promotion of corporate design: the claim to having expertise on the "expectations and sensibilities" of ultimate consumers.⁵ A very modest suggestion of such a claim had appeared in the late 1920s and early 1930s as designers exhorted manufacturers to overcome saturated markets through new designs that would stimulate consumer desires.⁶ But the significant emergence of designers as experts on, and avowed spokespersons for, the needs and tastes of the masses stemmed from their involvement in the profusion of regional, national, and world's fairs that ensued between 1933 and 1940.

The starring role in fair design, ever since the mid-nineteenth-century origins of the great world's fairs, had been enjoyed by the architects. And even with the entrance of the professional designer in Chicago in 1933–34, it was the architect Albert Kahn, long noted for his modern, functional factory architecture, who designed and reaped the credit for the symbolic, gear-shaped Ford building (figure 1). But Walter Dorwin Teague, with full responsibility for the building's interior and the design of the exhibits, stepped forward to promote himself and his emerging profession. He reaped widespread publicity for his role in bringing drama and coherence to the Ford exhibit and was soon able to boast that "the guiding hand of the industrial designer" had transformed older exhibits of a "static conventional character" into "compelling displays that drew increased thousands on whom they left indelible impressions." He insisted again and again that it was the "internal exhibits," not the

3 The corporation exhibits, by some calculations, outpulled the Amusement Zone by an astounding margin of seven to one. See Market Analysis, Inc., "Third Attendance Survey of New York World's Fair," November 13, 1939, 28–29, Box GA-2, folder 19, BF Goodrich Archives, University of Akron; "World's Fair - A Study of Circulation and Reactions," Acc. 146, Box 16, Ford Archives. For the use of the phrase "hit shows," see Martin Dodge to Edward Stettinius Jr., November 3, 1939, reel 16:30A, Walter Dorwin Teague Papers, George Arents Research Library, Syracuse University.

4 James Sloan Allen, *The Romance of Commerce and Culture: Capitalism, Modernism and the Chicago-Aspen Crusade for Cultural Reform* (Chicago: University of Chicago Press, 1983), 23–24, 268–79; Jeffrey L. Meikle, *Twentieth Century Limited Industrial Design in America, 1925–1939* (Philadelphia: Temple University Press, 1979); *passim*; Arthur J. Pulos, *American Design Ethic: A History of Industrial Design to 1940* (Cambridge, Mass.: The MIT Press, 1983), 316–33, 396–411; Neil Harris, "Designs on Demand: Art and the Modern Corporation," in National Museum for American Art, *Art, Design and the Modern Corporation* (Washington, D.C.: Smithsonian Institution, 1985), *passim*. In his conclusion to *Twentieth Century Limited* (209–10), Meikle notes how closely designers came to approach advertising agents in their orientation.

5 See John Heskett, *Philips: A Study of the Corporate Management of Design* (New York: Rizzoli, 1989), 28, 43, 155; and Jeffrey L. Meikle, *Design in the Contemporary World* (Stanford, Cal.: Pentagram Design, 1989), 17, 65.

6 Meikle, *Twentieth Century Limited*, 14–18, 68–77.

7 Walter Dorwin Teague, "Exhibit at a Century of Progress Engineering (August 1934 in Acc. 450, Box 2, Ford Archives); "Realist in Industrial Design," *Decorative Arts* 41 (October 1934); Walter Dorwin Teague, "Pont Presentation," (November n.p., reel 16:21A, Teague Papers). On the advertising comment, see BBDO Bulletin 19, 1937, BBDO House Organ Archives, New York, N.Y.

8 A.W. Page, "Memorandum 14, 1933, 'The Bell System of Progress,' 16–17; and W. Page, March 15, 1934, AT&T Archives, Warren, N.J. to Edsel Ford, June 9, 1934, 1540, Ford Archives; Robert "Twenty-Two Million Goals of the Creative Staff Meeting 1934, 1–2, J. Walter Thompson Archives, New York (now at University); Ford Motor Company Report on the Fair, *passim*, Box 4, Ford Archives; "Case Final Report, Texas Exhibit part 2, Box 51, E. I. Du Pont & Company Papers, Hagley Library.

9 For examples of these displays, see Walter Dorwin Edsel Ford, June 14, 1934, 167, Ford Archives and Teague Hart, December 3, 1935, Acc. II, Box 53, Du Pont Papers.

10 Walter Dorwin Teague, "The Future and Its Future," 3, typescript at School of Architecture and New York, N.Y., November 79, Teague Papers.

11 *Advertising Arts* 4 (July 1933).

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architectural facades, that most significantly conveyed corporate messages to fairgoers. By 1937, the ascendancy of exhibit over architecture found expression in this advertising agency description of the role of the industrial designer in corporate fair exhibits: "he first plans the exhibit and then clothes it in an appropriate building."

For corporations, several significant transformations and quandaries accompanied this distinct shift from a predominant emphasis on fair architecture to an accent on the industrial displays themselves. The expression of corporate image through architecture had largely defied any calculated assessment; virtually the only measures of the effects of architectural "statements" were the responses of art and architecture critics and the comments of the cultural peers of corporate executives. Since the effects of architecture upon the public could be theorized but not measured, only the standards of high culture critics served as a check upon the personal tastes of corporate leaders. But the impact of specific industrial displays upon the public could be subjected to rough quantitative assessments. With the expensive corporate investments in such exhibits in 1933-34, attempts at such appraisals began in earnest. Not only did companies and survey associations keep careful counts of attendance at the major corporate displays, they also began to keep statistics on the sex and age of visitors, on the length of their stay at each feature of an exhibit, and even on elements of their behavior and conversations.⁸

As a result of such changes, the industrial designers who came into prominence in the creation of corporate displays proffered their services on the promise of providing two distinct qualities which were not entirely congruent. On the one hand, they asserted their authoritative understanding of the cardinal esthetic principles of proper line, proportion, color-harmony, and stylistic unity. But at the same time, in deference to the corporations' interests in measurable results, they also cast themselves as experts on public tastes and behaviors. From their rapidly accumulating experience, they claimed to know exactly what would attract and hold the attention of the public.⁹ Whether the validity of eternal esthetic principles would find corroboration in stopwatch measures of the average attention spans of distracted fairgoers remained to be determined.

Thus, when Teague proclaimed in 1936 that a modern consciousness dictated that not merely the fair buildings, but the "industrial exhibits themselves . . . be works of art," it remained unclear what manner of "art" this would be.¹⁰ In several exhibits at Chicago in 1933 and 1934, Teague and other designers had combined elegance, monumentality, and modernistic motifs to bestow an image of high-toned technological progressiveness upon companies such as the Norge Corporation and Bausch and Lomb.¹¹ But in exhibits like those Teague created for Ford in 1934—and for Ford and Du Pont at the Texas Centennial Exposition at Dallas in 1936—designers aspiring to their own conceptions of beauty and

- 7 Walter Dorwin Teague, "Designing Ford's Exhibit at a Century of Progress," *Product Engineering* (August 1934): 282, clipping in Acc. 450, Box 2, Ford Archives; "A Realist in Industrial Design," *Arts and Decoration* 41 (October 1934): 44-48; Walter Dorwin Teague, "Memo for Du Pont Presentation," (November 1936), n.p., reel 16:21A, Teague Papers. On Teague's emphasis on internal exhibits see Teague to William A. Hart, June 11, 1936, reel 16:32A and Teague to Robert Gregg, April 5, 1937, reel 16:30A, Teague Papers. On the advertising agency comment, see BBDO Bulletin, May 19, 1937, BBDO House Organs file, BBDO Archives, New York, N.Y.
- 8 A.W. Page, "Memorandum," November 14, 1933, "The Bell System at A Century of Progress," 16-17; and S. L. Andre to A. W. Page, March 15, 1934, Box 1061, AT&T Archives, Warren, N.J.; Fred Black to Edsel Ford, June 9, 1934, Acc. 285, Box 1540, Ford Archives; Rohe Walker, "Twenty-Two Million Gold Fish," Minutes of the Creative Staff Meeting January 3, 1934, 1-2, J. Walter Thompson Company Archives, New York (now located at Duke University); Ford Motor Company, "1934 Report on the Fair," passim, Acc. 544, Box 4, Ford Archives; "Case History and Final Report, Texas Exhibit," Series II, part 2, Box 51, E. I. Du Pont de Nemours & Company Papers, Hagley Museum and Library.
- 9 For examples of these distinct claims to expertise, see Walter Dorwin Teague to Edsel Ford, June 14, 1934, Acc. 6, Box 167, Ford Archives and Teague to William Hart, December 3, 1935, Acc. 500, Series II, Box 53, Du Pont Papers.
- 10 Walter Dorwin Teague, "Industrial Art and Its Future," 3, typescript of address at School of Architecture and Allied Arts, New York, N.Y., November 18, 1936, Box 79, Teague Papers.
- 11 *Advertising Arts* 4 (July 1933): 15, 18.

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Figure 1

The gear motif of the 1934 Ford exhibit building evoked a sense of machine-age design and exemplified Teague's insistence on thematic unity. From the Collections of Henry Ford Museum and Greenfield Village Museum, Dearborn, Michigan.

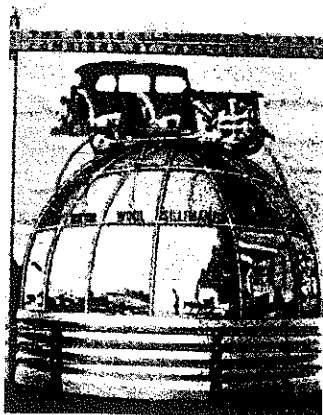
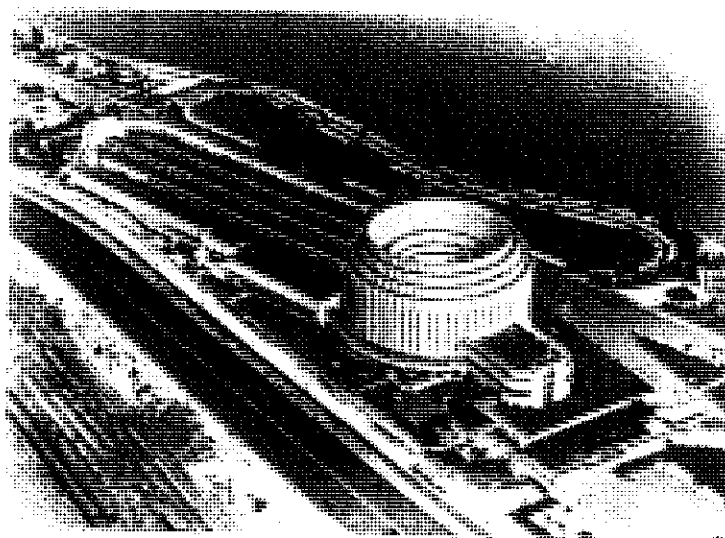


Figure 2

Teague rendered the theme of Ford's 1934 exhibit in striking pictorial form without sacrificing its didactic intent. A Century of Progress Collection, Special Collections, The University Library, University of Illinois at Chicago.



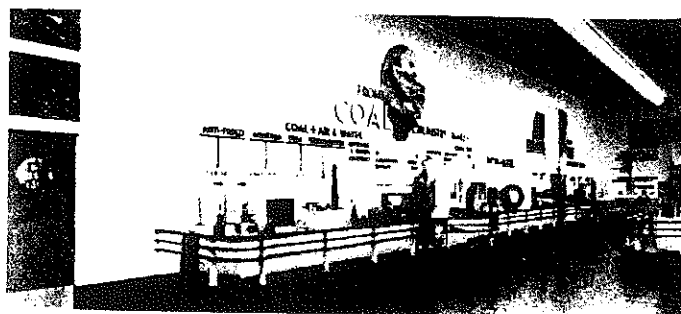
Figures 4 & 5

Close-ups in the 1934 Ford photomurals worked to visualize employee dedication and "humanize" production. Repeated images estheticized the process and connoted a modernist sensibility. From the Collections of Henry Ford Museum and Greenfield Village.



Figure 3

Henry Ford cherished his River Rouge plant and the complex and monumental production it symbolized. In 1934 Teague employed the new technique of the photomural to attempt to bring the aura of Ford's factory to the fair. From the Collections of Henry Ford Museum and Greenfield Village.



Figures 6 & 7

While Teague strove for simplification and dramatic lighting in the 1936 Du Pont display, Dallas, he was still constrained to show the factories and instruct the audience. Henry Ford Museum and Library.

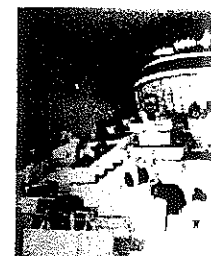
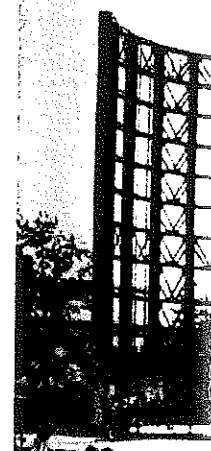


Figure 9

In Ford's 1939-40 "Cyclo" old attempt to instruct v of production was now at cartoon-like simplicity. From Collections of Henry Ford Greenfield Village.



Figure 13

Ever straining for simpli- Teague not only wanted details not famous. In 1939-40 "Wonder" added a puppet show.

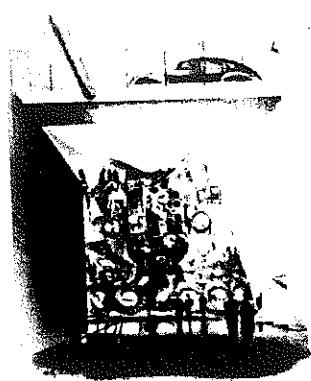


Figure 8
Ford's "animated mural" towered over visitors. Its gyrating and pulsating mechanisms and flashing lights sought to convey the aura of the factory and the dynamic power of the V-8 engine. From the Collections of Henry Ford Museum and Greenfield Village.

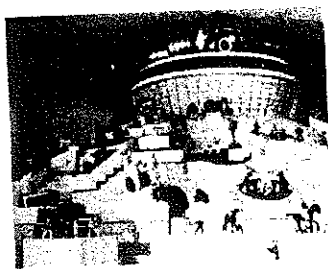


Figure 9
In Ford's 1939-40 "Cycle of Production" the old attempt to instruct visitors in the wonders of production was now animated in cartoon-like simplicity (top figure 2). From the Collections of Henry Ford Museum and Greenfield Village.



Figures 10 & 11
Teague sought to retain the didactic impulse behind Ford exhibits while reaching the lowest common denominator of the audience with animated, Disney-like figures. From the Collections of Henry Ford Museum and Greenfield Village.



Figure 12
"Miss Florida" and star "Dobbin" from the "hot shows" of Ford's 1939-40 World's Fair exhibit. Teague's design firm did not hesitate to claim new expertise in developing musical and fashion shows. From the Collections of Henry Ford Museum and Greenfield Village.



Figure 13
Ever straining for explicit and audience attention, Teague not only sought to eliminate "all technical details not necessary to the public" from the 1939-40 "A Modern World of Chemistry" exhibit, but added a puppet show, library, museum and library.

effectiveness in industrial displays had to contend with the limits placed on them by a variety of internal company tensions and by the powerful but prosaic notions of educational service held by some corporate leaders. It would offer a tidy conclusion to say that through successive adaptations between 1934 and 1939, the corporations and the designers developed a unified esthetic through which corporate identities were canonized in industrial exhibits. But the reality is that by 1939 several disparate and quite incongruous modes of presentation had merged. Even the most successful of these, General Motors's Futurama, gained its impact by providing an experiential adventure that transcended its educational thrust and esthetic impulses.

To examine the diverse strategies that emerged in the efforts to disseminate corporate identities through exhibit design, it is best first to return to Ford and Teague in 1934. What was Teague's challenge? How did he proceed in his attempt to impose the values of the designer on the exhibit of a company headed by a man so little attuned to artistic modernism? Unquestionably, Teague's major challenge was to work successfully within the conditions set by two of Henry Ford's preoccupations: his enchantment with his massive River Rouge factory, with all it symbolized of the production ethic; and his conception of himself as a model for, and educator of, the mechanically minded common man.

Henry Ford attributed the inspiration underlying his development of an internal combustion engine to his experience as a young man at the Columbian World's Exposition of 1893, when he had observed several small gasoline-powered water pump motors in operation. It gratified his sense of paternalism and public service to view his company's industrial exhibits as providing similar stimulation to deserving young men of the next generations.¹² Thus Ford's guidelines for his 1934 extravaganza were simple. "I want an exhibit that is educational and will show people how we do things." He added, "Make plenty of places for people to rest."¹³

Ford's son Edsel, to whom he relegated most of the authority over exhibit planning, was far more esthetically inclined and attuned to artistic modernism than Ford. But, in his more sophisticated way, Edsel also welcomed public recognition as an educator and could not ignore the accolades that he (and, mostly, his father) received from such publications as the *Literary Digest* and the *New York Times* for playing "schoolmaster" to the millions at the 1934 fair. (One of Ford's suppliers, the Aluminum Company of America, was so taken with the education imagery that it declared the 1934 Ford exhibit a "great schoolroom where the textbooks are to be the machines, ores, and men who produce the materials for the Ford car.") Through 1939, both father and son continued to emphasize the educational qualities of all the Ford exhibits.¹⁴

The 1934 Ford exhibit contained five major elements: (1) an immense rotunda which told the "Ford drama of transportation"

12 "Young Henry Ford went to the Fair," brochure, 1939, Acc. 544, Box 21. Ford Papers; Black, "Reminiscences," 198. The conventional exclusion of young women from this vision coincided with the assumption by Ford, and nearly every other industrial exhibitor, that fair exhibits could be more "serious" than many advertisements because the industrial display was a form of "man-to-man" communication.

13 Black, "Reminiscences," 193.

14 *Literary Digest*, August 18, 1934, 6; Lewis, *Public Image*, 299; *New York Times*, May 16, 1934, 14; *New Outlook*, 164 (September 1934); 56; Fred Black to Frank Campsall, July 23, 1934, August 25, 1934, August 29, 1934, Acc. 285, Box 1543. Ford Archives; *The Alcoa News*, May 28, 1934, 4; *San Francisco Chronicle*, February 26, 1939, A4.

15 *Literary Digest*, August 18, 1934, 35; *Public Image*, 299; *Arts and Architecture*, 41 (October 1934); 35, 44.

16 Walter Dorwin Teague, "Exhibit at a Century of Progress: 'Out of the Earth,'" (pamphlet), must go to the Earth for a souvenir box for mailing, Century of Progress Paper, Illinois, Chicago.

17 Walter Dorwin Teague to : June 14, 1934, Acc. 6, Box 15. Ford Archives; *New Outlook* 15, 1934); 59.

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through a striking photomural and a display of 67 vehicles from the times of ancient Egypt to the present; (2) an Industrial Hall, with exhibits of manufacturing processes by many of Ford's suppliers; (3) an Industrial Barn, with a soybean processing display; (4) a Ford Museum, which included Ford's original Bagley Avenue workshop; and (5) the Ford Gardens, including a symphony terrace and amphitheater and a "Roads of the World" feature where visitors could be driven over replicas of 100-foot segments of nineteen famous highways of the past and present. Teague also designed a private, second-floor lounge in the building for Ford executives, winning kudos from *Arts and Decoration* magazine for developing a "(b)ackground for masculine hospitality," an atmosphere of comfort, rationality, and "workability" where Ford's managers could escape the noise and overstimulation of the "glorified factory atmosphere conveyed by the Ford exhibits below."¹⁵

Reflecting his increasing fixation on restoring the worker's links with the land as a way of preventing the ills of economic depressions and his continuing cultivation of a rural constituency for his products and ideas, Henry Ford decreed that the central precept of his exhibit must be: "Man must go to the Earth for all Materials" (figure 2). This theme not only incorporated the major lesson of the "industrial barn"—the promise of soybeans as a crop through which farmers could prosper by supplying materials for auto production—it also dictated that the displays would conform to a well-developed convention that corporations could best win public favor by impressing fair visitors with the scope, difficulty, efficiency, and almost-miraculous results of their processes of production. Although Ford had been thwarted in his intention to display again an operating assembly line, as he had at San Francisco in 1915, his new theme bolstered a penchant that he shared with many other industrial exhibitors: the instinct to use the fair exhibit as a substitute for a time-honored public relations stratagem—the visit to the factory.¹⁶

Given these directives and constraints, Teague labored to infuse dramatic impact and an aura of modernity into the displays. He lectured Edsel Ford that unity was central to "all good design" and, through patterns of spatial organization, graphic and visual consistency, and color coordination, he claimed to have brought a "great number of varied elements . . . into harmony." In the Industrial Hall, a wing of the exhibit estimated by one reporter to be "the size of two football fields," Teague organized exhibits of production processes from scores of suppliers of basic materials to Ford. He selected only those processes of each that could most dramatically be displayed through dioramas, photographic montages, miniature models, and, above all, full-scale working displays.¹⁷

For the circular wall on the inside of the immense entrance rotunda, Teague developed the world's largest photomural to depict

15. *Literary Digest*, August 18, 1934, 6; Lewis, *Public Image*, 299; *Arts and Decoration* 41 (October 1934): 35, 44, 47–48.

16. Walter Dorwin Teague, "Designing Ford's Exhibit at a Century of Progress," 282; "Out of the Earth," (pamphlet) and "Man must go to the Earth for all Materials," souvenir box for mailing, folder 16-269, Century of Progress Papers, University of Illinois, Chicago.

17. Walter Dorwin Teague to Edsel Ford, June 14, 1934, Acc. 6, Box 167, Ford Archives; *New Outlook* 164 (September 1934): 59.

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production activities at Ford's River Rouge factory plant (figure 3). *Literary Digest* characterized it as "representing a trip through a modern automobile plant." Of "astounding size and technical perfection," this two-story, 600-foot-long selective representation of the dynamism, worker dedication, and modernistic beauty of the Ford plant set the tone and established the context for all the subsidiary exhibits. Interspersed between the huge panels of the mural, in large chromium letters, appeared a series of maxims that conveyed moral and political messages. "The recovery we need is of our American spirit of independence," read one. "With one foot on the land and one in industry, America is safe," another announced reassuringly. The combined effect of the "greatest photographic panorama ever built" and these "ringing aphorisms, below which no signature appears and for which none is needed," according to observers, was "that of Gibraltar giving voice to a battery of guns."¹⁸

An emphasis on production and on the factory characterized even the most frivolous element of the Ford exhibit: a film entitled *Rhapsody in Steel*. Although Ford publicity brochures frankly characterized this cartoon movie as "an amusing fantasy" in which a whimsical "Ford imp" cast a magical spell over "a staid collection of parts," inducing them to engage in supernatural pranks and carry out a "dance of the connecting rods," the brochures also noted that the film provided viewers a clear impression of the magnitude of the company and its plans and an appreciation for the various operations in the construction of a Ford car. The imp carried out its pranks "(a)gainst the serious background of the drafting room, . . . the laboratories, foundries and shops" the company solemnly announced, and the musical score, which sought to reproduce "sound effects incident to the building of the Ford V-8 car," had actually been composed in the River Rouge plant.¹⁹

If such an appeal to the visitors' simple thirst for entertainment did not harmonize esthetically with Teague's larger unities of design, still it exemplified a different "unity" noted by observers of the Ford display. This was the absence of "selling pressure" at any point in the exhibit. Sensing, as did an increasing number of other major corporations, that exhibits at major fairs might better be employed for broad public relations purposes than as magnified selling booths, Ford created an atmosphere in which, according to *New Outlook*, "the usual ballyhoo of salesmanship is strangely and satisfyingly missing." As its representatives at the fair, the company employed neither its own plant personnel nor experienced salespeople, but college students. They were enthusiastic and personable but would not exert "selling pressure," and were therefore best for dealing with the public.²⁰

Such an approach coincided with the tone of service and high educational seriousness that characterized the "glorified factory atmosphere" of most of the Ford exhibit. Visitors were even encouraged to disseminate the exhibit's production-oriented theme

18. *Literary Digest*, August 18, 1934, 6; *New Outlook* 164 (September 1934): 59; H. D. Morrow, "The Ford Proposition," (1934), Acc. 450, Box 2, Ford Papers.

19. Ford Motor Company, "Ford at the Fair," (booklet, 1934), folder 16-269, Century of Progress Papers.

20. *New Outlook* 164 (September 1934): 56; Black, "Reminiscences," 194.

- 21 *Arts and Decorative* 35; "Man must be Materials," folder Progress Papers.
- 22 "Ford at the Fair," of Progress Papers, Ford Exposition Archives, Teague Exhibit, 282-63.
- 23 In 1937, Teague United States Steel mistake in attributing displays at the 1937 Fair to the American simply because they all the contracts to States Steel, not should take the credit. Teague advised MacDonal, August Teague Papers.

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of "going to the earth for all materials" by taking home or mailing small-sectioned boxes, covered with cellophane, in which tiny samples of a dozen of the earth's basic materials—from iron ore and bauxite to cork and soybeans—were neatly compartmentalized and labeled for the collector's edification.²¹ Ford handouts stressed the artistic beauty of the dioramas, but they also dutifully explained that wherever it had not been possible to show the actual manufacturing processes mechanically, photographs, dioramas, and lectures had been developed to bridge these gaps and provide visitors with a full explanation.²²

In such an exhibit, where selective and partial demonstrations of production processes had replaced the full assembly line, graphic artists like Teague emerged as important figures in simplifying and romanticizing the processes of manufacture (figures 4 and 5). The power and virtuosity of their designs aimed at enfolded the company image within a high-toned aura of quality and service. As consultants to the corporations, the new professional designers almost invariably found themselves on the side of the head office and its interests in a unified image as opposed to the more diffuse and insular concerns of the product and geographical divisions.²³ They also invariably lined up on the side of the public relations department, with its long-range concern for corporate reputation, as against the sales department, with its concern for quick results. The concurrent appearance at Ford of a professional design consultant and a de-emphasis on sales pressure at the fair was no mere coincidence.

A series of major regional fairs ensued in the wake of the Century of Progress Exposition: at San Diego in 1935, at Dallas in 1936, and at Cleveland in 1936. Meanwhile, preparations had begun in earnest for world's fairs in New York and San Francisco in 1939. Teague designed the Ford exhibits for all of these fairs, as well as for the Texaco exhibit at Dallas, the Du Pont exhibits at Dallas and New York, and the United States Steel, Eastman Kodak, National Cash Register, and Consolidated Edison exhibits in New York. He also served on the official Design Board for the New York World's Fair. Other designers joined the exhibit bandwagon, but Teague dominated the field and aggressively solicited new contracts on the basis of his rapidly acquired experience.

Teague's firm increasingly described the nature of its expertise with such terms as "visual dramatization" and "industrial showmanship." In soliciting the business of United States Steel, Teague proposed that he should not only specify the details of the company's exhibit, but should be engaged in "the fundamental work of determining what your exhibit should be." In this initiative, he moved energetically to establish a more responsible position for the designer than he had attained, for example, with Bausch and Lomb in 1933, when he had been appointed simply "to work out the details . . . from the artistic point of view." Teague's design firm claimed in 1936 that it had already devised methods of dramatizing a company's message

21 *Arts and Decoration* 41 (October 1934): 35; "Man must go to the Earth for all Materials," folder 16-269 Century of Progress Papers.

22 "Ford at the Fair," folder 162-69, Century of Progress Papers; H. D. Morrow, "The Ford Exposition," Acc. 450, Box 2, Ford Archives; Teague, "Designing Ford's Exhibit," 282-83.

23 In 1937, Teague called attention of United States Steel to its potential mistake in attributing one of its proposed displays at the 1939 New York World's Fair to the American Bridge Company simply because that subsidiary had made all the contracts for the display. United States Steel, not one of its subsidiaries, should take the public relations' credit, Teague advised. Teague to J. C. MacDonald, August 2, 1937, reel 16.30A, Teague Papers.

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visually in such a way "that the average visitor cannot escape its import." Like others who had carefully studied visitors' reactions at the 1933-34 fair, Teague had quickly concluded that more exhibits must include animation and some form of visitor participation. He also explored the effects of interior lighting, proposing to Edsel Ford the use of dimly lit halls for the entrance to Ford's Dallas exhibit so that the main exhibition hall and its dioramas would seem "brilliantly lighted" by comparison. Above all, Teague preached the message of greater unity and radical simplicity.²⁴

But despite his aspirations to enhance design esthetics and effectiveness through simplification, Teague often still found himself constrained by the pressures from a company's decentralized divisions. At the Texas Centennial Exposition in 1936, all of the divisions of the Du Pont Company insisted on being represented in the display. Teague reluctantly included aerial depictions of all of the Du Pont factories and found himself compelled to tell more numerous and complex stories of product development than he wished (figure 6). Teague took pride in having "systematized" the Du Pont story for the public, but urged that future Du Pont exhibits "carry the process of simplification still further" and completely abandon the idea of telling the entire story of Du Pont activities. The route toward even greater public impact, he insisted, involved the "complete elimination of technical details not familiar to the public, with the whole complex process reduced to a few dramatic steps."²⁵

Contrary to the entrenched assumptions of the production-minded executives at Du Pont, Teague implied, the central purpose of corporate fair exhibits was not the technical education of the masses. Rather, their purpose was to "educate" visitors in the beneficial social and economic services performed for them by Du Pont. Chaplin Tyler, rapidly emerging as Du Pont's in-house expert on exhibits, concurred that the 1936 experience had confirmed the idea that "the object of the exhibit is to educate the public regarding the company as an institution." For that kind of education, Teague argued, simple dramatic gestures would serve better than detailed explanations. Moreover, Teague suggested to Du Pont in 1937, emphasis on the processes on which past achievements had been based would appeal less to the average citizen's thirst for glamour and novelty than would visions of the potential marvels of chemical research.²⁶

The official theme of the 1939-40 New York World's Fair, the "World of Tomorrow," further promoted this futuristic emphasis and encouraged the promulgation of corporate identity through the dramatic, symbolic gestures that Teague favored. Initially, Teague had envisioned a "key statement" at the Du Pont exhibit entrance in the form of "a mounted Crusader, displaying the Du Pont oval as his shield . . . strikingly painted." The crucial element of motion could be injected through "flashing electric effects, the object being to create an impression of onward invincible action." Ultimately,

24 M. Poser to John Stephen Sewell, Jan. 5, 1932, folder 1-1426, Century of Progress Papers; Walter Dorwin Teague to Robert Gregg, April 5, 1937, reel 16:30A, Teague, "Memo for Du Pont Presentation," reel 16:21A, Teague Papers; Teague to Edsel Ford, December 28, 1935, November 25, 1936, Acc. 6, Box 337, Ford Archives; Oversized Scrapbook, Acc. 77.242, Du Pont Photographic Archives, Hagley Library; "Suggestions for Rebuilding 'The March of Chemistry,'" 7, Series 11, part 2, Box 51, Du Pont Papers.

25 Walter Dorwin Teague to Carl J. Hasbrouck, June 22, 1936, Teague to William A. Hart, June 22, 1936, reel 16:21A, Teague Papers; Teague Drawings, Series 11, pt. 2, Box 55 Du Pont Papers; Oversized Scrapbook, Acc. 77.242, Du Pont Photographic Archives.

26 Walter Dorwin Teague to William A. Hart, June 22, 1936, January 4, 1937, Teague to Carl J. Hasbrouck, June 22, 1936; Teague, "Memo on Du Pont Presentation," reel 16:21A, Teague Papers; Chaplin Tyler, "Visit to Texas Centennial Exposition," in Tyler to Charles K. Weston, July 1936, 2, Box 51, Series 11, part 2, Du Pont Papers.

27 *Du Pont Magazine* 11; *Life*, August 7, 1936; Walter Dorwin Teague, typeset to be submitted to NY . . . circa April 3, 1937, Teague Papers; O. . . "Wonder World of . . . Acc. 77.242, Du Pont Archives. Teague . . . tor of public relations . . . "scientific rules" . . . in the use of color . . . the opinion of the . . . public, for whom . . . and mysterious . . . Theodore Joslin, 16:21A, Teague Papers.

28 *Ayer News File*, Feb. April 12, 1939, 2, . . . Archives, New York. Whirling Gears . . . World's First Mob . . . release, May 13, 1939. Henry Billings, "Re . . . Decorations for . . . script, n.d., Acc. 5 . . . Archives.

29 *Advertising and . . . 1939*: 32.

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Teague would devise more futuristic ways for the corporation to make a dramatic gesture. Entrance murals, composed entirely of Du Pont materials, depicted the story of an "ever-expanding frontier opened up by research" while a symbolic tower of dramatic height called attention to the Du Pont building from a wide area of the fairgrounds (*figure 7*). Dubbed the "Tower of Research" by Teague, this 100-foot-high structure, composed of abstract forms representing the apparatus for chemical reduction, sought to give colossal iconic status to shapes that symbolized chemistry in action and linked research to futuristic images. Teague added the crucial element of motion through pulsing lights and rising bubbles.²⁷

The concept of a striking, symbolic entrance exhibit also governed Teague's design for the 1939 Ford exhibit. Visitors to the Ford building were greeted by what the company's advertising agency called "the crowning feature of the whole exhibit," an immense, 70-foot-high "activated" mural. Constructed in three dimensions, with pistons, crankshafts, and connecting rods protruding, this mural featured whirling gears, pumping pistons, and flashing lights (*figure 8*). Its purposes, as variously described by its creator and Ford press releases, were to give visitors a "vivid picture" of the operations of Ford factories and to symbolize the relationships between mass production, modern technology, and pure science. According to Henry Billings, the mural's creator, it was intended "not to instruct but to impress." On some visitors, at least, that was its effect. So awed was the fair's director of science and education that he hailed it as an "altarpiece of science."²⁸

For all of this impulse toward artistic abstraction and symbolic unity, however, Teague's displays for Ford and Du Pont were highly eclectic; their only significant "unity" lay in their public relations intent. Teague was quite accurate in forecasting, late in 1938, that the corporations would virtually abandon direct selling at the New York World's Fair and "throw the entire emphasis of their shows upon the social and economic services they perform for the country." But these corporate "shows," which Teague characterized as "spectacular almost to the point of solemnity," did not necessarily depend upon fundamental esthetic principles for their effect. And what Teague chose to call their "solemnity" lay less in any educational seriousness than in their efforts to evoke awe and gratitude by conveying the great efforts the companies had expended in creating them.²⁹

At Ford, for instance, Teague applied his strategy of radical simplification while ostensibly complying with the insistence of Henry and Edsel Ford on an exhibit with educational qualities. The theme of the exhibit was still the almost-miraculous processes by which Ford produced cars from diverse natural materials. But many of the earlier full-scale working models were eliminated in favor of the use of a massive, animated cyclorama to depict manufacturing processes. Dubbed the "Cycle of Production," the Ford cyclorama

27 *Du Pont Magazine* 32 (November 1938): 11; *Life*, August 7, 1939, 4; Walter Darwin Teague, typescript of essay "to be submitted to NY Times, Vogue, WHC . . .", circa April 3, 1940, reel 16:34A, Teague Papers; Outline for Extension of "Wonder World of Chemistry" (1939), Acc. 77.242, Du Pont Photographic Archives. Teague assured Du Pont's director of public relations that there were "scientific rules" that could be embodied in the use of color and form for shaping the opinion of the vast "uninitiated" public, for whom chemistry was "a subtle and mysterious science." Teague to Theodore Joslin, May 23, 1939, reel 16.21A, Teague Papers.

28 *Ayer News File*, February 10, 1939, 1-2; April 12, 1939, 2; N. W. Ayer & Son Archives, New York; "Beauty of its Whirling Gears Attracts Throngs to World's First Mobile Mural," press release, May 13, 1939, Acc. 544, Box 14; Henry Billings, "Report on Mural Decorations for Entrance Hall," typescript, n.d., Acc. 544, Box 1, Ford Archives.

29 *Advertising and Selling* 31 (October 1939): 32.

consisted of a 30-foot-high, rotating turntable (likened by one observer to a huge wedding cake) which displayed 87 groups of animated carved figures of men and animals with "humorous details . . . added through plastic noses, eyes, horns, and tails" (figure 9). While a recorded sound track intoned ponderous messages about the wonders of mass production at Ford, these figures (workers supplemented by other "amusing" human interest characters to achieve "an emotional effect") demonstrated the processes of production from raw materials through their animated motions. (Examples included "a cowboy riding a horse and throwing a lariat; cotton picking, with little pickaninnies playing among the bales . . . a miner trying to get a stubborn donkey down a steep hill" [figures 10 and 11].)³⁰ In such form did "education" and esthetic unity persist in the face of Teague's increasing sensitivity to presumed audience tastes and capacities and his drive for radical simplification and abstraction.

Even more divergent from any central esthetic harmony were the theatrical shows and movies that constituted central elements in the Ford exhibits at New York in 1939 and 1940. In a technicolor movie (*Melody in F*), the animated figures of the Ford Cycle of Production came to life and told the story of Ford production in cartoon form. Meanwhile, Teague turned to a live musical drama and ballet to recount the history of transportation, as seen through the eyes of "Dobbin," the droll, obsolescent horse (figure 12). Visitors to the Ford exhibit were thus able to place the development of auto technology in context; its history "unfolded hilariously" in a show that Teague himself described as having "a fantastic, Walt Disney quality."³¹

At Du Pont, also, Teague implemented the strategy of an eclectic variety of displays to maximize the possibilities for gaining and holding the attention of undiscerning and distracted fairgoers. Warning Du Pont executives against "(s)tuffiness in either policy or appearance," he supplemented the more "solemn" and artistic symbols of corporate identity and the demonstrations of chemical processes with such light entertainment features as a marionette show (to show off Du Pont textiles through fashions) and a magic trick in which Miss Chemistry of 1940, "clothed from head to foot in the products of chemical research," was "made to appear from an apparently empty test tube of 'Lucite' plastic, as if she herself, in addition to her costume and accessories, had been created by chemistry" (figure 13). In 1940, Teague abandoned the marionette shows in favor of a "dramatic spectacle" with "innovations in stagecraft" never before employed. He thus helped to fulfill his own 1938 forecast that the fair would be characterized by specially designed theaters for single productions to be "staged with care and imagination that should make the best of Hollywood respectful."³²

By 1940, Teague had come to describe the expertise that he offered corporations in the creation of industrial displays more in terms of showmanship than of design. He even established a new

30 Morton Eustis, "Big Show in Flushing Meadows," *Theatre Arts Monthly* 23 (August 1939), 576; Edward Mabley to Fred Black, September 23, 1938, Acc. 1109, Box 7, Ford Archives; N. W. Ayer & Son, "Ford Cycle of Production, 1940, revised," (enclosure to H. L. McClinton to Fred Black, June 18, 1940), Acc. 544, Box 21, Ford Archives.

31 W. H. Beatty to George Pierrot, April 3, 1939, Acc. 1109, Box 7, and "45 Minute Show Built for 1940 Fair," press release, Acc. 554, Box 21, Ford Archives; Edward Mabley, "Transportation Pageant," typescript, October 19, 1937, and Walter D. Teague, "Ford Exposition, 1940," reel 16.23A, Teague Papers.

32 Walter Dorwin Teague to Theodore Joslin, May 23, 1939, reel 16.21A, Teague Papers; "Du Pont Presents the Wonder World of Chemistry," Acc. 77.242, and 72.341.76, Du Pont Photographic Archives; Du Pont "The 1940 Wonder World of Chemistry," brochure, Box 1005, New York World's Fair Collection, New York Public Library; The Psychological Corporation, "A Study of Visitors' Reactions," Series 11, part 2, box 34, Du Pont Papers, *Advertising and Selling* 31 (October 1938) 32.

33 Walter Dorwin Teague, *The Technique of Oroc Age* (New York: Harcourt, 1939), vii, 5, 98-111, 162-73.

34 "What to See Today at Star Show: 60 Minute," (May 1939), Vol. 330, Scrapbooks, Ivy L. Lee University, *Chrysler Museum* (June 1940): 6; Normalized memo beginning Exhibit . . . , circa April 1941 (correspondence: Geddes Papers, University of Austin).

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"Industrial Showmanship" department in his design firm to produce commercial films and "playlets" for such occasions. Although he continued to assume the existence of an esthetic "rightness" and to stress such fundamental esthetic principles as "balance and symmetry," "unity," and "rhythm of line and form" in his 1940 volume, *Design this Day*, Teague spoke a different language in his bids to design fair displays. There, Teague merchandised himself on the basis of his sensitivity to mass audiences and his capacity to provide them with the "visual dramatizations" they would enjoy.³³

Teague was not alone in subsuming design within the category of showmanship at the 1939-40 New York World's Fair. Raymond Loewy designed Chrysler's bid for mass popularity as a "five star show" entitled "Sixty Minutes of Magic" and developed a simulated rocket trip to London as its central feature. Drawing upon his experience in stage design and his flair for theatricality, Norman Bel Geddes topped them all with his experiential "Futurama" ride for General Motors, in which visitors in moving chairs enjoyed a simulated airplane ride over an elaborate model of a superhighway system and a city of the future. And, despite the pretentiousness of his claim to have envisioned the United States of 1960 for fair visitors, Bel Geddes insisted that the Futurama was intended primarily as entertainment rather than for education.³⁴

While the designers continued to refer occasionally to the esthetic qualities of certain features of their fair exhibits and some manufacturers, especially Henry and Edsel Ford, continued to assert the primacy of education in their displays, the major effect of the participation of industrial designers in creating fair exhibits had been to imbue them with the same concerns with, and attitudes toward, mass audiences that many producers for the mass media had earlier developed. They were impressed by the short attention spans of fairgoers, their seeming inability to comprehend or take an interest in any but the most simplified explanations, and their restless search for sensation, vicarious experience, and animated displays.

As many corporations during this era looked increasingly to their research laboratories rather than their factories to impress the public with their competence to serve the public in the future, the designers saw themselves challenged by the task of conveying an ever-more-complicated corporate reality to a seemingly more heterogeneous, less comprehending public. Too ambivalent in their purposes to choose either the symbolic abstractions of esthetic modernism or the trivialities of popular showmanship as a unified strategy, many designers gravitated pragmatically toward such eclectic displays as those of Teague for Ford and Du Pont in 1939.

In this arena, what had proved to be most "modern" by 1939-40 was not so much the artistic styles of the industrial designers but the imperatives to appeal to popular tastes that underlay the public relations efforts of major corporations. Baffled by what they perceived as public scorn and distrust during this depression

33 Walter Dornin Teague, *Design This Day: The Technique of Order in the Machine Age* (New York: Harcourt Brace, 1940), vii, 5, 98-111, 162-74, 191-205.

34 "What to See Today at the Chrysler 5-Star Show: 50 Minutes of Magic," flyer (May 1939); Vol. 330, T. J. Ross Scrapbooks, Ivy L. Lee Papers, Princeton University; *Chrysler Motors Magazine* 6 (June 1940): 6; Norman Bel Geddes, untitled memo beginning "The Proposed Exhibit," circa April 7, 1938, 14, file 381 (correspondence), Norman Bel Geddes Papers, University of Texas, Austin

decade and often engaged in expanding their offerings of consumer goods, the corporations were desperately seeking both the trade and the goodwill of the "common man." If designers could contribute a little to these causes through the design of new products and packages, they were pressed to fulfill these corporate needs even more when they were commissioned to design fair exhibits.

In that respect, the most "modern" thing designers could do in the 1930s was to educate themselves in public tastes, behaviors, and capacities in order to understand them and find ways to respond to them. If they sought to attune corporate executives to esthetic modernism and cultural uplift in some aspects of their service, the designers also, in their capacity as experts on exhibits, acted to wean manufacturers away from "stuffiness," technical education, tedious didacticism, and a fixation on their factories. Thus, in his rapid adoption of the credos of the "visual dramatization," the "key statement," the dramatic gesture, and the eclectic "hit show"—as well as in the style of his specific industrial designs—Walter Dorwin Teague exemplified a certain thrust toward the modern.

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The Designers go to the Fair, II: Norman Bel Geddes, The General Motors "Futurama," and the Visit to the Factory Transformed Roland Marchand

- 1 I am indebted to the American Council of Learned Societies and the University of California-Davis Humanities Institute for fellowship support during the time when much of the research for the two essays on "The Corporation Goes to the Fair" was completed. Ms. Edith Lutyens Bel Geddes kindly granted me permission to make use of the rich and copious Norman Bel Geddes Papers at the Harry Ransom Humanities Research Center at the University of Texas, Austin, where H. K. Crain, Prentiss Moore, and Melissa Miller-Quinlan provided me with valuable assistance in exploring the collection. I wish to thank Jeffrey Meikle and Michael L. Smith for their helpful critiques of an earlier draft of this essay.
- 2 On Teague's claim to have acquired the experience to produce "hit shows," see Martin Dodge to E. Stettinius Jr., November 3, 1939, reel 16.30A, Walter Dorwin Teague Papers, George Arents Research Library, Syracuse University. The accolade "smash hit" appeared in Morton Eustis, "Big Show in Flushing Meadows," *Theatre Arts Monthly* 23 (August 1939): 568 and in the *Reynoldsburg (Ohio) Press*, August 31, 1939, clipping file, Norman Bel Geddes Papers, Theatre Arts Collection, Harry Ransom Humanities Research Center, University of Texas, Austin, by permission of Edith Lutyens Bel Geddes, executrix.
- 3 The only other major industrial designer with significant experience in the theater was Henry Dreyfuss, who had worked under Bel Geddes when the latter was primarily a stage designer. For excellent, concise reviews of the careers of the major designers, see Jeffrey L. Meikle, *Twentieth Century Limited: Industrial Design in America, 1925-1939* (Philadelphia, 1975), Chapter 3.

During the 1930s, the early flowering of the industrial design profession in the United States coincided with an intense concern with public relations on the part of many depression-chastened corporations.¹ Given this conjunction, it is not surprising that an increasingly well-funded and sophisticated corporate presence was evident at the many national and regional fairs that characterized the decade. Beginning with the depression-defying 1933-34 Century of Progress Exposition in Chicago, major corporations invested unprecedented funds in the industrial exhibits that also marked expositions in San Diego in 1935, in Dallas and Cleveland in 1936, in Miami in 1937, and in San Francisco in 1939. The decade's pattern of increasing investments in promotional display reached a climax with the 1939-40 World's Fair in New York City.

Leaders in the new field of industrial design took advantage of the escalating opportunities to devise corporate exhibits for these frequent expositions. Walter Dorwin Teague led the way with his designs for Bausch & Lomb, Eastman Kodak, and the Ford Motor Company for the 1933-34 exposition in Chicago. In 1936 he designed the Ford, Du Pont, and Texaco exhibits at Dallas and three years later claimed responsibility for seven major corporate exhibits at the New York World's Fair—those of Ford, Du Pont, United States Steel, National Cash Register, Kodak, Texaco, and Consolidated Edison. While Teague won an impressive number of design contracts for 1939 on the basis of his claim to have developed an ability to create "hit shows" for earlier fairs, the unrivaled "smash hit" among corporate displays at the 1939-40 fair was not one of Teague's creations. Rather, it was the "Futurama" of the General Motors Corporation, created by Norman Bel Geddes as his first corporate fair exhibit.²

Bel Geddes was unique among the major industrial designers of the 1930s in having entered the field from a background primarily devoted to theater design.³ In contrast to Teague, whom one journalist characterized as "self-contained," "realistic," and thus a "comforting fellow to . . . practical-minded business men," Bel Geddes was often viewed as an "impractical visionary." Although Bel Geddes claimed to be the equal of other industrial designers in appreciating the values and decision-making processes of practical

businessmen, he avowed in retrospect that "my interest in everything in life has never been as a businessman." And, privately, he dismissed Teague as derivative and unimaginative.⁴

As the 1939 New York World's Fair approached, the contrasts and rivalry between Teague and Bel Geddes were accentuated by the long-standing competitive antagonism between their leading clients, Ford and General Motors. A year before the fair's opening, Teague remarked to a Ford official that he had been "relieved" to see the early General Motors exhibit plans since Bel Geddes had conceived a grandiose scheme having such "enormous difficulties" that it would probably never materialize as planned. He might have been further reassured if he could have witnessed the anxiety of several top GM executives as they fretted over their last-minute decision to entrust their image at the fair to the visionary Bel Geddes and then watched their exhibit costs mount to double, and then triple, Bel Geddes's initial estimate.⁵

But it would ultimately be Teague and Ford who had to reconcile themselves to running a very distant second in popularity to Bel Geddes's dramatic creation.⁶ The General Motors Futurama exhibit in 1939 captured the fancy of the public and critics alike. Journalists competed to find adequate words to convey Bel Geddes's "ingenuity," "daring," "showmanship," and "genius." Each day of the fair, thousands of visitors waited for hours in lines up to a mile in length for the opportunity to experience the Futurama.⁷ At a world's fair at which the industrial exhibits (for the first time) outpulled the amusement zone attractions, GM's Futurama reigned supreme among the elaborate and popular corporate displays. One neutral survey of 1,000 departing fairgoers (perhaps the nation's first "exit poll") awarded the GM exhibit 39.4 points to only 8.5 points for second-place Ford as the most interesting exhibit. When asked which fair exhibit they would most like to visit again, 47.5 percent of these respondents picked General Motors

4 *New Yorker*, February 8, 1941, 25; *Arts and Decoration* 41 (October 1934): 44, 47-48; Norman Bel Geddes, Draft for Autobiography (hereafter cited as "Autobiog.") AJ-13, Chapter 68, Bel Geddes Papers. (Since Bel Geddes's two manuscript autobiographies were typed from dictation and often not corrected, I have inserted in quotes what I assume to be the correct names and words in instances where there have been obvious misunderstandings by the typist—i.e., "Gegges" for Geddes, "Neustein" for (William) Knudsen, "Future Ami" for Futurama, etc.). The characterization of Bel Geddes as "impractical visionary" appears in Arthur J. Pulos, "Dynamic Snowman," *Industrial Design* 17

(July-August 1970): 60. For Bel Geddes's view of Teague, see "Transcription of Interview between Mr. Geddes and Selma Robinson," January 27, 1942, file 937 (draft for Chapter 76), Bel Geddes Papers.

5 Walter D. Teague to Fred Black, April 29, 1938, Acc. 544, Box 15, Ford Motor Company Archives, Edison Institute, Dearborn, Michigan. Bel Geddes was well aware of how "scared" the GM executives were. See Bel Geddes to Francis Waite Geddes, November 9, 1938, personal correspondence, Bel Geddes Papers.

6 Having acknowledged by May 1939 that "(t)here is unfortunately no question but that the GM exhibit is decidedly more popular than ours," Ford public relations

men reconciled themselves to promoting their display as more beautiful, more dynamic and "sounder educationally." George F. Pierrot to H. G. McCoy, May 21, 1939, Pierrot to Donald H. Long, et al., May 18, 1939, Acc. 56, Box 3, Ford Archives.

7 Paul Garrett, chief of GM's public relations, explained to the president of Du Pont that arranging opportunities for the corporation's "special friends" to experience the Futurama without standing in long lines was "about the biggest headache we have." Garrett to W. S. Carpenter, Jr., August 16, 1939, Box 821, Series II, part 2, E. I. Du Pont de Nemours & Company Archives, Hagley Museum and Library.

8 *New York Journal*, 1939, 3; *Variety*, 1939, 3; *Antonio Express*, 1939, 3; (Publicity folder), Statistics on the Fair, appear in Market of Exhibits," (enclosed to C. E. O'Neil, May 3, J. Walter Thompson, Duke University and July 1, 1939, 60). Of three points for first, second, and one for Analysts, Inc. survey, 1659 for General Motors, third-place Ford. General second at 514.

9 Roland Marchand, *The Fair: Walter C. Professionalization of Industrial Exhibits*, Vol. VIII—

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as compared to 7.3 percent for second-place General Electric and only 3.8 percent for Ford.⁸

To estimate the triumph of General Motors over Ford in the popularity of their exhibits in 1939-40, and also the relative mastery of Bel Geddes over Teague and other leading designers in pleasing the crowd, is not to discount the general advance in display techniques that nearly all corporations had achieved by 1939. Teague's exhibits for Ford and Du Pont were far from failures; judged by the standards of only a few years before, they represented major breakthroughs in corporate showmanship, as did Raymond Loewy's exhibit for Chrysler. But Bel Geddes and General Motors had carried corporate public relations a significant step further than the rest.

Many corporations in the late 1930s were still only beginning to advance beyond the axiomatic notion that the way to win public understanding and respect was to (synthetically) put their factories on display through dioramas, working models, photo-murals, and actual working exhibits of segments of their production processes. The public's esteem and sympathy could best be cultivated, production-minded executives had assumed, by displays of their impressive processes of manufacture. General Motors itself had constructed an operating Chevrolet assembly line as its exhibit at Chicago in 1933-34. As they moved, often reluctantly, toward more crowd-pleasing displays during the 1930s, corporate exhibitors began to merge their factory-oriented "educational" efforts with elements of pure entertainment. Under the guidance of professional designers, many moved to simplify and enliven their stories of production, even resorting to stage comedies or cartoon-like animations.⁹

In the GM Futurama, Norman Bel Geddes fell in line with the trend toward making entertainment dominant—but with a significant difference. He discovered a way to involve visitors experientially with the corporation—not so much by urging them to witness the difficulties and triumphs of its processes of production, but rather by offering them a chance to share its wider social and technological vision. Guests at the GM Futurama found themselves thoroughly entertained even as they shared a serious look at the nation's future—through the eyes of General Motors. In the process, Bel Geddes helped revise what it would mean for fairgoers of the future to accept that time-honored invitation to "come visit our company." Bel Geddes's Futurama transformed that invitation. Corporations would henceforth entice visitors not to "tour our factory," but instead to "share our world."

Although General Motors proved adventurous enough to embrace Bel Geddes' plan, it was clearly the designer rather than GM executives who conceived this public relations breakthrough. Bel Geddes had essentially devised all the elements of the Futurama before he persuaded General Motors to adopt the scheme; in fact, as late as the beginning of 1938 he had nearly succeeded in peddling the idea to another corporation. And Bel

8 *New York Journal and American*, June 11, 1939, 3; *Variety*, April 26, 1939; *San Antonio Express*, n.d., clipping, file 381 (Publicity folder), Bel Geddes Papers. Statistics on the Futurama's popularity appear in Market Analysts, Inc. "Ratings of Exhibits," (enclosure to Sanford Griffith to C. E. O'Neil, March 14, 1940, Box 9, RG 3.3, J. Walter Thompson Company Papers, Duke University and Sales Management, July 1, 1939, 60). On a rating system of three points for first choice, two points for second, and one for third, the Market Analysts, Inc. survey arrived at a rating of 1659 for General Motors to only 347 for third-place Ford. General Electric ranked second at 514.

9 Roland Marchand, "The Designers Go to the Fair: Walter Dorwin Teague and the Professionalization of Corporate Industrial Exhibits, 1933-1940," *Design Issues*, Vol. VIII-1 (Fall 1991): 4-17.

In 1932, only a few years after announcing his transformation from stage designer to industrial designer, Bel Geddes had published a daring and prophetic book he titled *Horizons*. In addition to proclaiming the coming triumph of true streamlining in all modes of transportation, the book showcased designs for such ingenious proposals as a revolving, floating airport in New York harbor, an underwater restaurant, an expandable concentric-ring factory designed to enhance employee welfare, an auditorium for staging Dante's *Divine Comedy* with a cast of hundreds and an audience of five thousand, and an open-air cabaret with long runways that extended the stage to enable performers to "bring the entertainment into intimate contact with the audience." As he assumed a new identity as industrial designer, Bel Geddes derided what he considered the inhibiting traditions of the theater, confining his treatment of that field in *Horizons* to a single chapter which he titled, with inflammatory intent, "Industrializing the Theater." At every opportunity, Bel Geddes proclaimed the demise of the old "peep-show" relationship of the audience to the traditional proscenium stage in favor of "a sense of unity, intimacy, and audience-participation." It was precisely this zeal to remove all barriers between audience and performers that he had sought to embody in such designs as the open-air cabaret with stage runways (figure 1).¹⁶

As Bel Geddes continued to explore the potentialities of streamlining and speed in the 1930s, he began to pay attention to the limitations that the nation's antiquated highway system placed in the way of a rational, streamlined mode of transportation. The impetus for another grandiose Bel Geddes's project appeared in 1936 in the form of a commission from the J. Walter Thompson advertising agency to provide a number of sketches outlining possi-

11 Bel Geddes, *Horizons*, 282–85.

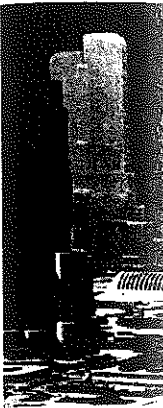


Figure 3
Norman Bel Geddes, "The
Tomorrow" for Shell C

- 12 An excellent introduction to Geddes's role in the development of the Jeffrey L. Meikle, *Model 1937* (London: Routledge, 1984).
- 13 Meikle, *City of Tomorrow*, 389, "Notes Taken at the Meeting of the Bel Geddes, November 1937," "Shell City of Tomorrow," 23, file 356, Miller Collection. See also Geddes, August 5, 1937; Geddes, "Autobiography," 74-75, all Bel Geddes Papers.
- 14 *Flash*, November 1937; *Flash*, September 1937; Thompson Co. Papers, *City of Tomorrow*, 11; "Metropolis: 1937," September 29, 1937.

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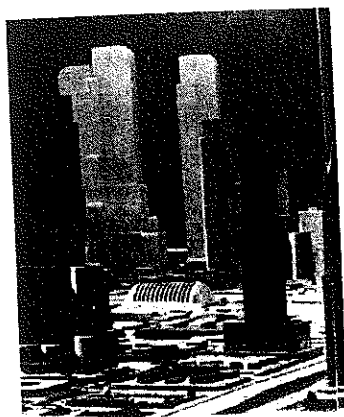


Figure 3
Norman Bel Geddes, Model "City of Tomorrow" for Shell Oil, 1937.

ble solutions for traffic congestion. The drawings would provide the basis for a Shell Oil Company advertising campaign in 1937.¹²

In his typical manner, Bel Geddes escalated the project both in scope and theatricality. He and his staff voraciously devoured data on population trends, auto registrations, highway conditions, and city planning. They consulted with Miller McClintock, director of Harvard University's Bureau of Street Traffic Research, and addressed some of the questions provoked by contemplations of the city of the future: how would water and elevator systems work for buildings of 150 floors; might skyscraper roofs be used for plane landings; would the movie houses of the future be located within the central skyscrapers; could poor people afford to exist in this transformed environment? As he took upon himself the serious task of devising a comprehensive scheme incorporating superhighways and city planning, Bel Geddes also convinced Shell and J. Walter Thompson to finance the building of an elaborate scale model of a city of the future to dramatize the grand plan. The model would introduce the public to this idealized, streamlined future through the pseudorealism of close-up photographs of his model of "transportation, architecture, [and] parkways as they could be in 1960."¹³

Bel Geddes's scale model, and the accompanying explanations in the Shell ads, adopted the super-skyscrapers plus the parks and playgrounds imagery of *Horizons* (figure 2). He linked these with a system of "metropolitan express highways" and elevated sidewalks to separate pedestrian and motor traffic. Controllers stationed in towers and atop bridges would employ radio control to monitor the flow of traffic. Bruce Bliven, who reviewed the Bel Geddes model for *New Republic*, marveled at the striking illusions of depth and distance obtained through the "masterful photography" of the model. "Vague plans," he suggested, were afoot to display Bel Geddes's alternatives to modern traffic systems at the coming New York World's Fair.¹⁴

Although much of his vision of a magnificent, rationalized, transcontinental highway system with lanes for speeds up to 100 miles per hour was not incorporated into the Shell advertising campaign, Bel Geddes had glimpsed himself as a designer and planner on a grand scale. He adopted the stance of an adversary to the irrationalities and resulting inefficiencies and dangers of present conventions in highway building and as the champion of rational engineering and mistake-proof technologies. A system of 14-lane highways, on which drivers would respond to messages from radio-control towers and find their way illuminated at night by an electric-eye controlled system of indirect lighting, would eliminate most of the accidents resulting from "human failure." A two-tiered system of city streets, with all pedestrians separated from auto traffic, would eliminate urban traffic congestion. A system of widely spaced, immense skyscrapers would allow for more health-promoting open space within the cities (figure 3) and the speed and effi-

12 An excellent interpretive study of Bel Geddes's role in this campaign appears in Jeffrey L. Meikle, *The City of Tomorrow: Model 1937* (London: Pentagram Design, 1984).

13 Meikle, *City of Tomorrow*, 7-19; "Minutes of Meeting, April 5, 1938," file 389, "Notes Taken in Meeting with Mr. Bel Geddes, November 10, 1939" and "Shell City of Future Questions," 15, 21, 23, file 356, Miller McClintock to Bel Geddes, August 9, 1937, file 951, Bel Geddes, "Autobiog.," AJ-17, Chapters 74-75, all Bel Geddes Papers.

14 *Flash*, November 5, 1937, 1, and *People*, September 1937, 1-3, both J. Walter Thompson Co. Papers; Meikle, *The City of Tomorrow*, 11, 19-22; Bruce Bliven, "Metropolis: 1960 Style," *New Republic*, September 29, 1937, 211-12.

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ciency of the highways into the city would allow more people to live in peripheral towns and suburbs, affording workers a more wholesome suburban life.¹⁵

Thus, Bel Geddes had already conceived and modeled the serious, substantive content—and much of the social-technological message—of what would become the GM Futurama well before the General Motors Corporation acquired any connection with the project. In fact, during 1937 Bel Geddes futilely attempted to interest both GM president William Knudsen and GM sales manager Richard Grant in having his scheme developed as a fair display, only to suffer repeated snubs and rejections.¹⁶ This situation reflected Knudsen's conservative satisfaction with the operating Chevrolet assembly line exhibit that had been successful for GM (and for Knudsen, then head of the Chevrolet division) at Chicago in 1933 and 1934.¹⁷

Despite GM's early disinterest, late in 1937 Bel Geddes had begun to envisage the full theatrics and technologies of a display that would not only vastly expand the Shell model but would transform the exhibit into a dramatic new experiential mode of corporate public relations. It is not clear exactly when Bel Geddes conceived the idea of moving visitors over and through a model of the highways and cities of the future rather than having them observe the model from several fixed "overlooks" (undated "preliminary sketches" for the project indicate lookout platforms from which stationary observers would look down upon the model) and when he determined that chairs mounted on a moving conveyor belt would be technically feasible. But it is clear from one set of blueprints that he had formulated the plan well before he finally gained GM's sponsorship in early 1938.¹⁸ In the wake of this conception, Bel Geddes raced forward in a rush of creative ingenuity to surround his model with the theatrics of visitor manipulation that would turn a serious, appropriate display idea for an auto manufacturer (but one distinctly lacking in potential sales effectiveness) into an entrancing corporate public relations triumph.

By the beginning of 1938 Bel Geddes had persuaded the Goodyear Rubber Company to make a tentative commitment to employ some version of the highways-of-the-future display for its exhibit in New York in 1939. Suddenly, in February 1938, Goodyear decided not to participate at all in the New York World's Fair. At this eleventh hour, Bel Geddes mounted a desperate siege of General Motors in a campaign to salvage his exhibit idea.¹⁹ It was now less than 15 months before the New York fair would open. General Motors had already decided to feature an updated model of the Chevrolet assembly line that it had used in Chicago in 1933–34. This focal exhibit would be supplemented by an expanded research display drawing upon the highly effective "Parade of Progress" road show that the GM Research Laboratories had sponsored on national tour during 1936 and 1937. These elements nicely reflected the

15 Norman Bel Geddes, *Magic Motorways* (New York, 1940), 4–5, 52, 56, 207–8, 211; "Sound Chair Script," 18, Futurama folder, file 381, Bel Geddes Papers.

16 *New Yorker*, February 22, 1941, 28–29; Bel Geddes, "Autobiog.," AJ-20, Chapters 80–83, 1, AE-84, Chapter 77, 4–5, Chapter 80, 1, Bel Geddes Papers.

17 Bel Geddes, "Autobiog.," AE-84, Chapter 80, 6, Bel Geddes Papers; Alfred P. Sloan, Jr. to F. B. Jewett, November 30, 1937, New York 1937 folder, Charles F. Kettering Papers, GMI Alumni Foundation Collection of Industrial History, Flint, Michigan.

18 "Preliminary Sketches, Highways and Horizons," Box 319, "Spectator's Transportation System," file 381 (Production Specifications folder), Bel Geddes Papers.

19 Jeffrey L. Meikle, *Twentieth Century Limited*, 207; People J. Walter Thompson Company, September 1937, inside front cover; "Notes Taken in Meeting with Mr. Geddes," November 10, 1936 and "Notes of Meeting with Mr. Geddes," November 12, 1936, file 356, Bel Geddes Papers. On the collapse of the Goodyear sponsorship, see Bel Geddes to J. W. Dineen, February 24, 1938 and March 16, 1938, file 381 (Correspondence folder) and Bel Geddes, "Autobiog.," AE-84, Chapter 80, 1–2, Bel Geddes Papers.

20 On GM's commitment to the assembly line and research—1937 see "Technical Relative to New 1939," World's Fair folder; Alfred P. Sloan, November 30, 1937; New York, 1937 folder; Alice Marquis, *The Birth of Modern 7* 20–23.

21 Bel Geddes, "Autobiog.," Chapter 76, 1–9, Chapter 80, 1–11; Alice Marquis, *Hopes and*

22 Bel Geddes, "Autobiog.," 80, 5, AMI series, Bel Geddes Papers.

23 Norman Bel Geddes to General Motors, October 25, 1938, personal correspondence; Bel Geddes, "Autobiog.," 80–83, 2 and page 1; William Knudsen to Bel Geddes, May 3, 1938, in folder 80, untitled manuscript; Intersection folder.

24 Bel Geddes, "Autobiog.," 80, 3–4, Bel Geddes

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special biases of production-minded GM president William Knudsen and of Charles Kettering, head of the GM Research Laboratories and the corporation's most heavily promoted public figure.²⁰

In his unpublished autobiographical manuscript, Bel Geddes tells the story of his ultimate triumph in a desperate "mission impossible" against an already-approved plan at General Motors. During a dramatic hours-long showdown meeting with 40 GM executives, Bel Geddes later recalled, he faced down Knudsen and Kettering through a spontaneous display of wit, bluff, and quick-thinking.²¹ Undoubtedly Bel Geddes's version of the story owes more to his extensive theatrical background and melodramatic imagination than to a realistic assessment of decision-making at GM. But what was most important was that he succeeded in persuading the corporation to commit itself to his exhibit at *so late a date* and that he did so primarily with a *negative argument*: did General Motors dare to spend \$2 million on its planned recreation of the 1933-34 assembly line exhibit only to "admit that it hasn't had a new idea in five years"?²²

In taunting and cajoling General Motors into this belated change of plans, Bel Geddes created severe time pressures for his project. But he also gained substantial autonomy in shaping the Futurama. It was already early in May of 1938 when General Motors signed a contract with Bel Geddes for a building and display that was to open in April 1939. Knudsen and Grant were so fearful that Bel Geddes's complex project would not be completed in time that they hesitated to interfere with his work. Moreover, as Bel Geddes later gloated, "the thing [the Futurama model] was so far outside their field, so foreign to their customary executive activities, that in the early stages about all they could do was stand around and hope for the best." Eventually, Bel Geddes's obsessive attention to every detail of construction seemed to win him Knudsen's empathy as a fellow "production man."²³

Above all, Bel Geddes owed the extent of his autonomy to the fact that he had ultimately gained entry into GM by first persuading Paul Garrett, GM public relations director, and Alfred P. Sloan, Jr., past president of GM and chairman of the board, of the virtues of his adventuresome concept. According to Bel Geddes's account, Sloan liked the idea of "something to catch the public's imagination beyond mere merchandising."²⁴ Both Sloan and Garrett had viewed better public relations and the effective delivery of a subtle anti-New Deal political message as a major corporate priority since the mid-1930s. Their sponsorship of the Bel Geddes project within General Motors meant that Bel Geddes, in the process of gaining GM's formal approval, had already effectively overcome the fundamental resistance to his approach by the more sales-oriented and production-oriented among GM executives. He was thus free to concentrate on an exhibit that would cultivate goodwill and appreciation rather than promote current sales. Since goodwill was, in a

20 On GM's commitment to the assembly line and research-exhibit plan in late 1937 see "Technical Suggestions Relative to New York World's Fair—1939," World's Fair, New York, 1937 folder; Alfred P. Sloan, Jr. to F. B. Jewett, November 30, 1937, General Motors, New York, 1937 folder, Kettering Papers; Alice Marquis, *Hopes and Ashes: The Birth of Modern Times* (New York, 1986), 20-23.

21 Bel Geddes, "Autobiog.," AMI Series, Chapter 76, 1-9, Chapter 77, 3-8, AE84, Chapter 80, 1-11, Bel Geddes Papers; Marquis, *Hopes and Ashes*, 203.

22 Bel Geddes, "Autobiog.," AE-84, Chapter 80, 5, AMI series, Chapter 76, 9, Bel Geddes Papers.

23 Norman Bel Geddes to Frances Waite Geddes, October 26, 1938, October 27, 1938, personal correspondence; Bel Geddes, "Autobiog.," AJ-20, Chapters 80-83, 2 and page titled "GM Officials," William Knudsen to Norman Bel Geddes, May 3, 1938, in folder for AE-84, Chapter 80, untitled manuscript, 3, file 381 (GM Intersection folder), Bel Geddes Papers.

24 Bel Geddes, "Autobiog.," AJ-17, Chapter 80, 3-4, Bel Geddes Papers.

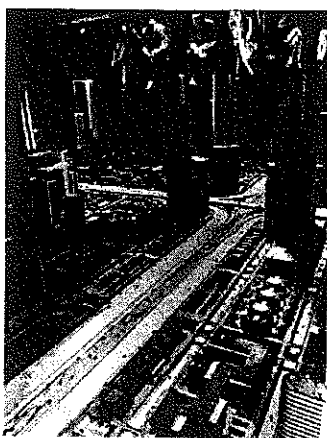


Figure 4
Norman Bel Geddes, GM Futurama exhibit,
1939

certain sense, "priceless" to a giant corporation, Bel Geddes gained an advantage in his pursuit of perfectionism in the execution of his design. The extent to which he managed to retain control and implement his own grand vision is best suggested by his success in bringing General Motors along in support of his ever-expanding budget. Originally contracted for a sum of \$2 million, Bel Geddes's Futurama eventually cost General Motors over \$7 million.

Bel Geddes easily aligned his conception for Futurama with General Motors's interests. An animated model of a scientific highway system of the future, he assured General Motors, could demonstrate the need for vastly expanded highway facilities, promote the sale of more automobiles, and display GM's concern for highway safety. It could convey the corporation's optimism about the capacity of private industry to promote prosperity and create new jobs, thus expressing, in a positive way, the bitter antagonism of GM leaders toward President Roosevelt and the New Deal. And it would suggest the modernity, benevolence, and forward-looking social vision of the corporation.²⁵

With his own vision thus comfortably fused with GM's public relations needs, Bel Geddes proceeded with the detailed design and construction of his future world. His venturesome plan called for an immense, animated model, on a scale of one inch to 200 feet, of a major segment of the nation, as of 1960. The model would cover 35,738 square feet and contain several million structures and more than a million trees. When another exhibitor sent out a promotional brochure in November 1938 forecasting its completion for the fair of the "biggest model in the world" with "1,000 individually designed buildings," Bel Geddes wrote his wife in glee, "Wait until they hear about this job, which is ten times the area." "In our principal city alone," he added, "we have more than 2,000,000 individual buildings." Not only was the model to feature attention-grabbing motion through extensive animation, but the visitors themselves would move over and through the model rather than observing it from some static vantage point. Six hundred moving chairs on a conveyor belt would transport them on a "serpentine, up-and-down route" over the vast landscape and cityscape of the model at a height and speed that would simulate a low-level airplane flight. Thus, the persistent quest of fair designers to create a feeling of participation for their audiences found a new realization in this opportunity for visitors to seemingly *enter and experience* a world created for them by the corporation (figure 4).²⁶

And it was nothing less than the experience of actually visiting a new "world" that Bel Geddes sought to create. Drawing upon the urge to immerse his audience in a total environment that had emerged during his years of theater design, he employed every stage technique of lighting, spatial organization, camouflage, surprise, and scenic trickery to induce in visitors the kind of emotional response that he had previously sought in theatrical

- 25 "Draft of Presentation," (with penciled corrections), March 30, 1938, file 381 (Specifications Buildings folder), Bel Geddes Papers; Paul Garrett, "Survey on World's Fair," typescript, December 15, 1939, Department of Public Relations Presentations, General Motors Public Relations Archives, Detroit; GM Folks 2 (March 1939): n.p.
- 26 Press Release, April 15-16, 1939, file 384 (Correspondence folder), Press Release, April 29, 1939, file 381, Press Guide, 1940, typescript, 9-10, file 381, Chart of Specifications for Preliminary Model, file 381, Norman Bel Geddes to Frances Waite Geddes, November 9, 1938, personal correspondence, all Bel Geddes Papers.



Figure 5
Norman Bel Geddes,
Pavilion, 1939

- 27 Bel Geddes, *Miracle*, 299; Bel Geddes, "Autobiog.," pp. 21, 36, 40, Bel Geddes Papers.
- 28 BBDO Bulletin, March 1939, House Organs folder, New York.
- 29 Norman Bel Geddes, "Bel Geddes, November 1938," correspondence, Bel Geddes Papers.
- 30 "Description of the Building and Exhibit," "World's Fair," typescript, 1939, 1-2, file 381 (Specifications Buildings folder), "What is Design," "Autobiog.," "AJ," Bel Geddes Papers.
- 31 "Norman Bel Geddes Horizons," *Perspectives*, Meikle, *Twentieth Century*, 1939, n.p., clipping, folder, *Christian Science Monitor*, 1939, 6, clipping, Bel Geddes Papers; Eustis, "Bel Geddes," 15-16; *Miracle*, 262.



Figure 5
Norman Bel Geddes, Model for GM Futurama
Pavilion, 1939

productions. Just as he had insisted upon completely refashioning a theater interior to convert it into a medieval cathedral for a production of the play *The Miracle* in the mid-1920s, so he carefully plotted the visitors' entrance into the 1939 Futurama so that they would feel the sense of having been transported into a different world—the America of 1960. And just as critics had recounted their awe at encountering the hush and majesty of the interior of Bel Geddes's theatrical cathedral ("I rubbed my eyes in amazement. Who was I, and where was I? . . . I was part of parcel of that triumphant medievalism"), so they were to marvel over the experience of finding themselves suddenly borne into Bel Geddes's future.²⁷

In 1937 an advertising agency newsletter seeking to comment knowingly on current trends noted that industrial designers rather than architects had suddenly gained control over the design of fair buildings. "The industrial designer," it explained, "first plans the exhibit and then clothes it in an appropriate building."²⁸ Bel Geddes proceeded exactly along that line. With the design of his central exhibit in mind, he designed the GM building with imposing, unembellished, curved surfaces that would look up to convey "a sense of power" yet conceal the actual shape of the Futurama with its massive surprise ending.²⁹ The "stark simplicity and mystery of the building" and the lure of the winding ramps leading up to it would "intrigue" visitors into entering the exhibit, Bel Geddes predicted. As one of his staff observed, there was no way of guessing from the exterior of the building what it might contain. But it reached out with a giant curved "hook" to scoop in the passing throngs who made their way up gently curved ramps to disappear into a mysteriously dark slot of an entrance (figure 5).³⁰

Once the visitors crossed from the bright outdoors through the almost-hidden entrance, they descended sloping ramps with a low level of illumination so as to accustom their eyes to darkness. Soon they found themselves immersed in the "subdued twilight" of the seemingly boundless "Map Lobby." Bel Geddes, renowned for his lighting innovations for the stage, designed this room with diverging walls and an immense, 60-by-100-foot map that curved back high over the spectator. Bel Geddes had remarked years earlier, with regard to stage design, that "lighting can produce a semihypnotic influence over an audience." In the Map Lobby he had sought to realize this effect. He surrounded the huge map with a misty "gray blue tone" of illumination that, together with the diverging walls, gave visitors the feeling of not being in a room at all but instead of simply gazing out into limitless space at a map suspended in the midst of the sky. As one reporter described the scene, the "thousands of pilgrims" descending the ramps looked "like creatures in a far-off land bound for some magic shrine." The masses of dark figures moving down these same "zig-zag luminous ramps" prompted another reporter to imagine a scene from Dante.³¹

As the visitor experienced the solemnity of the high ceilings,

27 Bel Geddes, *Miracle*, 167, 274, 282, 293, 299; Bel Geddes, *Horizons*, 182–84; Bel Geddes, "Autobiog.," AJ-16, Chapter 72, pp. 21, 36, 40, Bel Geddes Papers.

28 BBDO Bulletin, May 19, 1937, n.p., BBDO House Organs folder, BBDO Archives, New York.

29 Norman Bel Geddes to Frances Waite Geddes, November 16, 1938, personal correspondence, Bel Geddes Papers.

30 "Description of the General Motors Building and Exhibit for the New York World's Fair," typescript, September 8, 1939, 1–2, file 381 (General Motors Building folder), "Peter Schladermundt, 'What is Design,' 14, in Bel Geddes, 'Autobiog.," AJ-17, Chapters 74–75, Bel Geddes Papers; Robert Coombs, "Norman Bel Geddes' Highways and Horizons," *Perspecta* 13/14 (1971):12–13; Meikle, *Twentieth Century Limited*, 201.

31 *The Sun* (New York), April 29, 1939, n.p.; *Syracuse* (New York) *Post Standard*, May 19, 1939, n.p., clippings, file 381 (Publicity folder), *Christian Science Monitor*, July 8, 1939, 6, clipping, file 397, Bel Geddes Papers; Eustis, "Big Show," 571; Coombs, "Bel Geddes," 15–16; Bel Geddes, *Miracle*, 262.

the eerie blue-gray light, and the illusion of gazing out into limitless space beyond the great map, "a quiet, intimate voice—as though of a friend walking at his shoulder"—explained the meaning of the changing lights on the map. Superimposed over an illuminated map display of the nation's main cities and waterways, the first projection, in "red electric bands," highlighted the highway system of 1939. The lights then switched to reveal the projected traffic congestion by 1960, and then changed colors and configurations again to outline the solution—a future network of superhighways. At this point, suitably readied for the dramatic visualization of this solution, visitors were ushered into moving chairs that would carry them on a relaxed, 15-minute serpentine ride over a portion of the nation of the future. In the theory of Bel Geddes's design, they had acquired both the mood and the information that would prepare them for a dramatic opening curtain on a pageant in which they would ultimately play an active, participatory role.³²

To complete the stratagem of providing the visitor with an intense, controlled experience, Bel Geddes arranged synchronized sound equipment for each chair through which "a quiet authoritative voice at his shoulder" served as a private guide and mentor for each individual spectator. This "soft-speaking," "intimate" voice was intended to augment the visitor's sense of having been invited to share the exciting world of a friendly and benevolent sovereign.³³ As the unseen voice invited each visitor to "come tour the future with General Motors," one reporter recounted, "you glide into a black tunnel, swing miraculously around a corner, and the World of 1960 is spread before you . . . in dazzling lights."³⁴ Even the truculent critic Stuart Chase was enthralled by the spectacle that Bel Geddes had designed to greet his audience at this "opening curtain" to the Futurama:

[S]uddenly the world of 1960 opens before you, reaching over hill and dale, field and village, to a far horizon. You know that it is all a model . . . but the effect is very real. Cows are grazing in the pastures. Blossoming fruit trees in immaculate patterns cover whole hillsides. Crop lands are plowed on the contours . . . Barns and silos are streamlined.

Meanwhile, the voice of the visitor's "private guide" coached the appropriate response by intoning, "The world of tomorrow is a world of beauty."³⁵

As visitors acclimated themselves to this new world of 1960, Bel Geddes introduced a narrative plot to guide their comprehension. The audacious technique of moving the audience through the exhibit provided, in itself, a major advance in solving one of the central problems in exposition displays—how to control the flow and attention of visitors so that they could be told the corporation's story in a focused and sequential way and at a pace determined by the company. To this particular structured control, Bel Geddes added a story-line, physical "blinders," and rotation of the chairs to

32 "Description of the General Motors Building and Exhibit for the New York World's Fair," typescript, September 8, 1939, 4–5; Press Guide, 1940, 10–2, file 381, Bel Geddes Papers; Coombs, "Bel Geddes," 15–16; Eustis, "Big Show" 572.

33 Press Guide, 1940, 13, "This Exhibit . . ." (untitled typescript), 10, file 381, (Correspondence folder), Bel Geddes, Autobiography, E-84, Chapter 77, 1; *New York Sun*, April 19, 1939 (clipping), file 381 (Publicity folder), Bel Geddes Papers; "A Comprehensive Description of the General Motors Highways and Horizons Exhibit," Kettering Papers.

34 Eustis, "Big Show," 571; "A Greeting to Our Guests," n.p., pamphlet, file 408, Bel Geddes Papers.

35 Press Guide, 1940, 13, "Sound Chair Script, Futurama," 1, file 381, Bel Geddes Papers; Stuart Chase, "Pattern for a Brave New World," *Cosmopolitan* (December 1939): 39.

Figure 6
Norman Bel Geddes, 1939



Figure 7
Norman Bel Geddes, 1939

36 "Memo NG from Se and 'Technical Succ April 7, 1938, 2–5. Specifications folder Papers.

37 Press Guide, 1939, Geddes Papers.

38 Worthen Paxton to November 1, 1938 and Airplane Trip, November 12, 1938, file 381 (Production Specifications folder), typescript, file 381 (GM), Worthen Paxton to November 12, 1938, file 381 (Correspondence folder), Norman Bel Geddes, November 12, 1938, file 381 (Personal correspondence), Eustis, "Big Show," Marquis, *Hopes and*



Figure 6
Norman Bel Geddes, GM Futurama exhibit,
1939

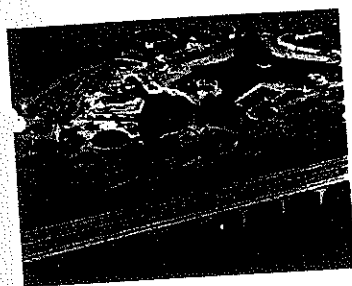


Figure 7
Norman Bel Geddes, GM Futurama exhibit,
1939

shift the spectator's line of vision—all to insure the desired pattern of audience attention. By controls on the visitors' line of sight, by the eye-catching motion of a particular vehicle in the initial rural panorama, and by promptings by the unseen voice, spectators were induced to follow the progress of a certain truck as it pulled out of a farmyard, traveled a country road, and then entered the super-highway system.³⁶

From this point, the moving chairs carried visitors over the route of the massive highway that such a truck would follow in the world of the future—on a 14-lane superhighway, with separated lanes for speeds of 100, 70, and 50 miles per hour, across valleys, mountains, and suburbs toward its destination in a spectacular city of tomorrow (figure 6). Along the way, as they experienced "the sensation of flying, now high, now low" over the panorama of the future, they spied huge airports of innovative design, futuristic farms and barns, and thousands of cars in motion on the highways. After nightfall (accomplished by lighting effects) they crossed over "a steel town with Bessemer furnaces firing and glowing in the sky" and an amusement park (with animated merry-go-round and huge Ferris wheel) from which they could hear "boys and girls shrieking with glee on a pretzel-like skyride." "There's fun and merriment in this world of tomorrow," declared the voice of the unseen guide (figure 7).³⁷

With obsessive attention to detail, Bel Geddes sought verisimilitude in every detail of the model. He even contracted with Eddie Rickenbacker, famed World War I pilot, to fly a dozen of his staff members over a portion of western Pennsylvania (where, incidentally, construction was beginning on an innovative turnpike) so that they could observe exactly how certain features appeared and what level of detail was visible from a low-flying airplane at various heights. When staff members noted that from 500 feet they could see cows "lashing and swinging their tails" and a man throwing food to chickens, Bel Geddes insisted on including animations of such "human interest" details in his Futurama design. He developed the means to simulate the spray of waterfalls (by combining tiny water jets and air jets), to include airplanes in flight with their moving shadows visible on the ground, and, by using chemical vapors, to create low clouds that would "cling to mountain sides." To insure proper execution of his subtle lighting effects, he insisted that General Motors employ "the best theatrical illumination engineers" rather than regular Westinghouse or General Electric technicians.³⁸

The success of the GM Futurama owed much to the way Bel Geddes combined a grand vision with scrupulous attention to realistic detail. But his design contribution to corporate public relations stemmed more fundamentally from his theater-derived strategies of audience manipulation. The 600 "easy chairs" on his serpentine conveyor belt were designed with wide "wings" extending forward from the back of each pair of chairs on each side to severely limit the

36 "Memo NG from Self," July 25, 1938, and "Technical Supplement," typescript, April 7, 1938, 2-5, file 381 (Production Specifications folder), Bel Geddes Papers.

37 Press Guide, 1939, 14-17, file 381, Bel Geddes Papers.

38 Worthen Paxton to Norman Bel Geddes, November 1, 1938 and Anon., "Notes on Airplane Trip, November 2, 1938," folder P, file 381, Notes on Meeting, November 1, 1938, file 381 (Production Specifications folder), untitled manuscript, file 381 (GM Intersection folder), Worthen Paxton to Richard Grant, July 12, 1938, file 381 (Correspondence folder), Norman Bel Geddes to Frances Waite Geddes, November 2, 1938, personal correspondence, all Bel Geddes Papers, Eustis, "Big Show," 571; Marquis, *Hopes and Ashes*, 210.



Figure 8
Norman Bel Geddes. GM Futurama exhibit,
1929

visitor's peripheral vision and insure that his or her attention was focused within a narrow, rectangular field directly ahead (see figure 10).³⁹ To this stringent containment of audience attention Bel Geddes added both the gentle guidance of the unseen voice and the less discernable control of lighting effects. Bel Geddes had pioneered the use of quick shifts of lighting and visual diversions to accomplish scene changes without the closing of theater curtains.⁴⁰ Now he brought the same subtle visual *legerdemain* to the service of creating a total environment for the visitors to GM's future world and to the molding of the sequence and content of their perceptions.

But, above all else, he brought his audience *into* the drama of the future, emotionally and physically. In his tirades against the restrictions of the proscenium stage, he had even gone so far as to try to envision how actors could move "through the audience" or even pass over its head.⁴¹ Eventually, he had discovered how to enable the audience to "move through the stage setting and participate in the "play" itself. Nowhere was this more dramatically accomplished than in the "surprise ending" that Bel Geddes provided as the climax to his propagandistic drama of the future, a climax that raised the entire occasion onto a whole new plane of experience.

After gliding over a massive city (modeled upon St. Louis), divided in such a way as to contrast the "old city" of 1939 with the spectacularly futuristic architecture and open space of the city of 1960, the spectators on the moving chairs were brought down closer to one small segment of the new city, a particular intersection toward which the narrator directed their attention. Here they could admire from on high, yet in full and explicit detail, a rational new mode of urban planning in which pedestrians and auto traffic were segregated onto different street levels. "On the elevated sidewalks," as Bel Geddes described the visitors' entrancing vision at this moment, "the city crowds are walking, gazing in the shop windows, lounging on the building roof gardens. Children are playing in the parks. Cars are moving in the streets" (figure 8).⁴²

Then came the climax of the ride. As Bel Geddes described it: Suddenly the spectator, in his chair, is swung about! He can scarcely believe his eyes. He is confronted with the full-sized street intersection he was just looking down on. He gets out of his chair and becomes part of the crowd.⁴³

No longer "a spectator looking at an animated scale model," the visitor viewed "the city intersection again, this time as the real thing" and became a "pedestrian projected twenty years forward into the heart of a great city." As Folke Kihlstedt has effectively described the impact of this moment, the intersection was "more than a small-scale model; it was a full-scale fragment of the new reality . . . an embryonic cell for a yet unborn world." Visitors could walk across the elevated sidewalks, look down on a plethora of GM cars and trucks simulating traffic on the streets below, gaze into the



Figure 9
Diagram of GM Futurama



Figure 10
Norman Bel Geddes. 1929

39 "Notes of Meeting, November 1, 1936," file 381 (Product Specifications folder); Worthen Paxton to Norman Bel Geddes and "BW," April 11, 1938, file 381 (GM Building folder), "Original Presentation to Sloan, Knudsen & Grant," n.p. and Press Release, April 15-16, 1939, file 384, all Bel Geddes Papers.

40 Bel Geddes, "Autobiog.," AJ-16, Chapter 72, pp. 21, 36, 43, Bel Geddes Papers.

41 Bel Geddes, *Miracle*, 147. Bel Geddes had also developed the scenario in the mid-1920s for a movie that would be filmed in such a way that "every member of the audience would be in the place of the protagonists.... Thus the audience would not merely see the events, it would experience them." Bel Geddes, *Miracle*, 324.

42 "Description of the General Motors Building and Exhibit for the New York World's Fair," typescript, September 8, 1939, 31, file 381 (General Motors Building folder), Bel Geddes Papers.

43 Norman Bel Geddes, "Description of the General Motors Building and Exhibit . . .," typescript, September 8, 1939, 31, file 381, Bel Geddes Papers.

44 Bel Geddes, "Description of the Building and Exhibit for the New York World's Fair, 1939," 31-33, file 381, Bel Geddes Papers. Kihlstedt, "Utopia Revisited," *Imagining Tomorrow: Technology and the City* (Cambridge, Mass.: MIT Press, 1984), 11. 45 Bel Geddes, *Horizon*, 11. 46 New York Herald Tribune, 28, 1940, 28; Press Release, file 381, Bel Geddes Papers.

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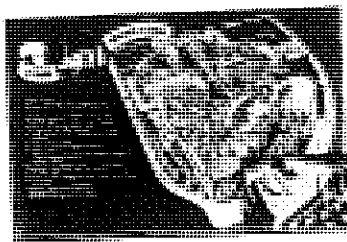


Figure 9
Diagram of GM Futurama exhibit, 1939

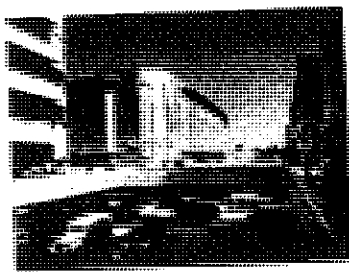


Figure 10
Norman Bel Geddes, GM Futurama exhibit, 1929

shop windows, and enter any of the large buildings on the four corners of the intersection to see additional General Motors exhibits. (GM's "A Fair Within a Fair" diagram (figure 9) cut away the roof of the building to reveal the path of the visitors through Futurama from point B, the surrealistic map lobby, to point E, where the visitor debarked from the moving chairs to enter the intersection of the future.) To commemorate this time-warp experience, all visitors received pins proclaiming "I have seen the future." The phrase was effective, but clearly it was too modest in its claim. They had not only seen GM's future, they had seen it "come to life" and had actually "walked around in it!"⁴⁴

By imbuing the industrial exhibit with all of his theatrical imagination, Bel Geddes sought to realize for General Motors the premise that he had set forth seven years before in *Horizons*: "There is no more emphatic way of bringing an idea to the attention of a mass audience and doing it with great force and conviction than in the theater."⁴⁵ In this case, the "idea" was an amalgam of precepts and associations that embodied GM's strategic planning, ideology, and desired public image. General Motors was a supremely "modern" corporation, one in which an emphasis on scientific research obviously prepared it to plan intelligently for the future. Bel Geddes retained Charles Kettering's plan for an updated repeat of a marvels-of-science show and exhibit based upon the work of the General Motors Research Laboratory, positioning this "casino of science" in one of the buildings that visitors were encouraged to enter as they walked around the full-scale intersection of 1960 (figure 10). Now that many manufacturers wanted to emphasize their research laboratories as a way of associating themselves with modernity, science, and an orientation toward the future, the 1939-40 General Motors exhibit logically employed a magnificent vision of the future to lead visitors toward the display that would demonstrate how the GM research laboratory kept the company future-oriented.*

General Motors also counted on its display of benevolence and expertise—in placing an entertaining and educational vision of the future before the public—to confirm the principle that large private firms, not the federal government, were best suited to lead the public into an ideal future. In his initial presentation, Bel Geddes promised GM executives that the exhibit would offer "direct proof to the public" of "the needs of our industrial economic system" and GM's public relations director, Paul Garrett, concluded after the first year that the Futurama had served as "an object lesson in PROGRESS." The sound track's "authoritative personal guide" reminded visitors that the exciting future they were experiencing had been enriched not only by "new concepts in science and research" but also by "a new understanding of the true function of industry as an integral part of the nation's social and economic life." If that tribute to free enterprise was vague and muted, the GM Press Guide proudly

44 Bel Geddes, "Description of General Motors Building and Exhibit . . .," September 8, 1939, 31-33, "This Exhibit . . .," 22, file 381, Bel Geddes Papers; "A Comprehensive Description," Kettering Papers; Folke Kihlstedt, "Utopia Realized: the World's Fairs of the 1930s," 108, in Joseph J. Corn, ed., *Imagining Tomorrow: History, Technology and the American Future* (Cambridge, Massachusetts, 1986).

45 Bel Geddes, *Horizons*, 156.

46 New York Herald Tribune, October 28, 1940, 28; Press Guide, 1939, 23-31, file 381, Bel Geddes Papers.

- 47 Paul Garrett, "Survey of World's Fair Exhibit," December 15, 1939, Public Relations Presentations Folders, General Motors Archives; Draft of Presentation, March 30, 1938, 29A-29B, file 381 (Specifications Buildings folder); Press Guide, 1939, 2, 17, file 381, Alfred P. Sloan Jr. to Norman Bel Geddes, March 31, 1939, file 381 (Correspondence folder), "1960 Calling!" brochure, file 381 (Publicity folder), all Bel Geddes Papers.
- 48 GM Folks 2 (March 1939): n.p.; Garrett, "Survey," loc. cit.
- 49 Walter Lippman, "A Day at the World's Fair," *New York Herald Tribune*, June 6, 1939, 25. Social critic Stuart Chase also needed General Motors in his review of the exhibit by observing: "Another major impression was that modern science and engineering had been given a free ticket to do their very best, unhampered by considerations of vested interest, property rights, dollar profit and loss." Chase, "Pattern for a Brave New World," 82. Rexford Tugwell made similar observations in his review of Bel Geddes's *Magic Motorways* in the *Saturday Review of Literature*, April 13, 1940, 3-4. Even earlier, in reviewing the Shell Oil Company model, Bruce Bliven had observed in the *New Republic* (September 29, 1937: 212) that Bel Geddes's vision would require city, regional, and national planning and advertising agency copywriter William Day, as Jeffrey Meikle recounts, had momentarily piqued Bel Geddes's interest with an idea that had to be quickly discarded as inappropriate for Shell Oil sponsorship: "the simplest method of eliminating cars in New York City or elsewhere . . . would be to pass a law prohibiting private ownership." Meikle, *City of Tomorrow*, 7.
- 50 Bel Geddes to W. Paxton, memo, November 25, 1938, file 381 (Production Specifications folder), Bel Geddes Papers.
- 51 Press Guide, typescript, 1940, 17, file 381, Norman Bel Geddes to Worthen Paxton, November 25, 1938, file 381 (Production Specifications folder), "Notes on Meeting," November 1, 1938, file 381 (Production folder), all Bel Geddes Papers; Chase, "Pattern for a Brave New World," 83.
- 52 On Bel Geddes's theory of proper design principles, see *Horizons*, 18-20 and passim.

quoted the statement of GM chairman Alfred Sloan that for industry to move forward toward this future it was necessary to "destroy the economic barriers that now prevent the essential expansion of enterprise . . . and that repress the spirit of individual initiative."⁴⁷

More concretely, the Futurama propagandized for public support of massive and expensive superhighways that would assure an expanding market for automobiles. As Garrett touted the exhibit to fellow GM executives, "It may well mark the beginning of a new era in road construction which will greatly stimulate the use and sale of cars, at a time when a saturation point may have been reached."⁴⁸ In fact, the creation of "a public enthusiasm for improved highways" was a more likely result of Futurama than the impact of its vague message about free enterprise. And the juxtaposition of these two messages, as Walter Lippman shrewdly pointed out, revealed certain ironies. Had not General Motors "spent a small fortune to convince the American public that if it wishes to enjoy the full benefit of private enterprise in motor manufacturing, it will have to rebuild its cities and highways by public enterprises"? Bel Geddes's vision of highway planning necessitated massive city planning and even regional planning. The scope of government planning and control involved in a project of this scale would undoubtedly have appalled the GM executives.⁴⁹

Smaller ironies also emerged from Bel Geddes's compromises of his design principles in the service of popular theater. He carried his vision of rational streamlined future into the design of nearly every aspect of the Futurama, from the suggestive contours of the building to the shapes of individual model automobiles. The sound track exhorted visitors to "(s)ee how the beautiful landscaping and architectural features conform to the modern engineering of the highways." At one point Bel Geddes instructed his leading assistant to add more airports to the model to suggest the "tremendous air activity" of 20 years hence and insisted upon "complete and ultimate streamlining" in the models of all transportation vehicles.⁵⁰

But the designer's principled rationale for streamlining had rested upon an esthetic and informational theory of visual candor: things should look exactly like what they were and should visually indicate the purpose they served. Trickery, camouflage, exaggeration, and visual deception seemed to have no place in such a commitment to forthrightness. Yet in Futurama, Bel Geddes concluded, the desired, emotional audience response must arise not only from the beauty of forms aligned with their purposes but also from the kinds of deception routinely justified in the theater to add to the spectators' pleasure. Bel Geddes and his staff, therefore, enthusiastically rejected "naturalism" as a standard and agreed to "increase the speed of everything" disproportionately in order to gain the effects of more strikingly visible motion.⁵¹

In a certain sense, of course, Bel Geddes was still applying the conventional modernist principle of form follows function.⁵² The

- 53 Bel Geddes, *Horizons*.
- 54 Jeffrey Meikle, *Design in the American Corporate World*, 65-66; John Heskey, *The Corporate Manager* (London, 1989), 51, E. Buchanan, "A Response to Krippendorff," *Design* 1985: 73.
- 55 Paul Garrett, "Survey of World's Fair Exhibit," loc. cit.; "Magic Motorways," typescript, file 381, "The Proposed Streamlined City," memo, April 7, 1938 (Correspondence folder); "Minutes," April 5, 1938, untitled typescript in "Intersection folder," E. Buchanan, "A Response to Krippendorff," *Design* 1985: 73.
- 56 Untitled manuscript, "Futurama Conveyor System," *The Home Newspaper*, 18, 1939, n.p., clipping, file 381, Bel Geddes Papers; *Magic Motorways*, 6. statement of his primary emphasis on entertainment in the original, appended Proposed Exhibit . . . (Correspondence folder), Bel Geddes Papers.
- 57 *Sales Management*, June 60; George F. Pierrot to W. Paxton, November 21, 1939, Acc. 56, Box 1, *New York Post*, clipping, 1939, *Sunday Mirror*, April 30, 1939, *Journal of the American Institute of Architects*, New York, clipping, circa 1938 (Publicity folder).

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"function" of the Futurama was to give pleasure (especially esthetically) and to harness the "momentous power and inspiration" possible within theater to the public relations goals of General Motors and the vision of a modern national highway system.⁵³ All of the theatrical devices of visual deception, audience control, manipulation of attention, and exaggeration might thus be considered acceptable as contributions to those ultimate purposes. In that sense, Bel Geddes's industrial exhibit designs foreshadowed a more unreserved commitment of industrial designers to the incorporation of potential consumers' anticipated (or desired) emotional responses into product designs.⁵⁴

Bel Geddes did acknowledge the costs to his ostensible ultimate goal of effective public education that his drive for maximum theatricality had incurred. From the outset, General Motors had worried about the 100 mile-per-hour lanes on Bel Geddes's highways. Wouldn't this feature open GM to charges of irresponsible disregard for highway safety? Bel Geddes was adamant in defense of his design. He counteracted the "supersensitivity" of the auto manufacturer by insisting, both privately to GM and publicly on the Futurama sound track, that his system would actually eliminate 98 percent of all accidents. Moreover, radio controllers would hold all motorists to within five miles per hour of the designated speed for their lane and the dangers created by the "Road Hog" and risky passing attempts would disappear.⁵⁵

At one point Bel Geddes bemoaned the fact that the emphasis on speed "threw somewhat out of focus the main theme of the great undertaking" and at another that the pace of flow through the exhibit had been too rapid really to satisfy serious visitor interests. He acknowledged in his *Magic Motorways* book of 1940 that the Futurama ride had been far too superficial to convey the full substance of his highways vision. ("There was much more to see, and no time to see it. There was much more to explain, and no time to explain it.") But the compromises of pace and substance to serve entertainment and theatricality had been fully intentional. As Bel Geddes had counseled GM, the exhibit "although scientific and educational" would emphasize "the entertainment aspects." The tempo of the ride conformed to Bel Geddes's primary goal—to "provide the spectator with constant thrills and entertainment and IN RESTFUL COMFORT." And some of the choices in content stemmed from their promotional potential. As he confided to one interviewer, "If I had described the new highway as accommodating three lanes of traffic at 20, 30, and 40 miles per hour, it would have caused no indignation. It also would have caused no headlines."⁵⁶

Within only a month of the fair's opening in April 1939, it was clear that Bel Geddes's Futurama qualified as the obvious "headline story" in any news about the fair. People stood in lines for hours to gain a place among the 28,000 visitors who could enter the Futurama each day.⁵⁷ Although the emphasis on speed may have

53 Bel Geddes, *Horizons*, 156.

54 Jeffrey Meikle, *Design in the Contemporary World* (Stanford, 1989), 65–66; John Heskett, *Philips: A Study of the Corporate Management of Design* (London, 1989), 51, 82–83, 137; Richard Buchanan, "A Response to Klaus Krippendorff," *Design Issues* III-1 (Fall 1985): 73.

55 Paul Garrett, "Survey of World's Fair," loc. cit.; "Magic Motorways Presentation," typescript, n.d., 10, file 384, "The Proposed Exhibit," untitled memo, April 7, 1938, 5, file 381 (Correspondence folder), "Production Minutes," April 5, 1938, as included in untitled typescript in file 381 (GM Intersection folder), Bel Geddes Papers.

56 Untitled manuscript, 33 in file 381 (Futurama Conveyor System folder), the *The Home Newspaper* (Detroit), June 18, 1939, n.p., clipping, file 381 (Publicity folder), Bel Geddes Papers; Bel Geddes, *Magic Motorways*, 6, 8. Bel Geddes's statement of his primary goal and his emphasis on entertainment, with emphasis in the original, appears in "The Proposed Exhibit . . .," 3, 14, file 381 (Correspondence folder), Bel Geddes Papers.

57 *Sales Management*, July 1, 1939, 25–26, 60; George F. Pierrot to H. G. McCoy, May 21, 1939, Acc. 56, Box 3, Ford Papers; *New York Post*, clipping, October 26, 1939, *Sunday Mirror* (New York), clipping, April 30, 1939, *Journal American* (New York), clipping, circa. June 31, 1939, file 381 (Publicity folder), Bel Geddes Papers.

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Figure 11
Norman Bel Geddes, GM Futurama exhibit,
1929

contributed marginally to the exhibit's success, its stunning popularity clearly derived from more basic elements in its design. By 1939, all of the designers for corporate fair exhibits were seeking that optimal blend of motion, simplicity, spectacularity, and visitor participation that recent observations indicated would be the key to success. Bel Geddes incorporated all of these elements in his design. But the quality that most strikingly set the Futurama apart from competing exhibits lay in its dramatic new techniques of inducing an aura of experiential visitor participation.

These techniques began with the sound system, where the individual speakers, synchronized with the progress of each chair, enabled Bel Geddes and General Motors to tell their story in a conversational tone and avoid the negative visitor reactions to "being talked at through loudspeakers" that surveyors had noted in earlier fairs. As a Bel Geddes lieutenant explained to Richard Grant of GM, it was crucial to perfect the sound system since "the speaker's voice should be very soft with excellent quality and with the sound source apparently close to each individual" to give the effect of "talking individually to each spectator." In many of his descriptions of the ride, Bel Geddes used the word "whispers" to suggest the intimate quality he believed he had achieved in the voice of his mass-produced "personal guide." The *New York World Telegram* confirmed his success by referring to the unseen voice as a "quiet, intimate voice, tensely dramatic, yet direct and almost confidential."⁵⁸

The "easy chairs" carried by conveyor belt were also crucial to the sense of participation. Significantly, in its lessons for future exhibits, the system of moving chairs also solved the problem of maintaining extensive control over the visitor's path, rate of movement, line of sight, and focus of attention. As one of Bel Geddes's staff members later emphasized, "You will remember that these were very comfortable moving chairs that not only permitted, but necessitated, the viewing of the model in the correct sequence and timings."⁵⁹ Moreover, the moving chairs did this in synchronization with the verbal guidance of the unseen voice and the controlling qualities of ingenious lighting effects. Moreover, the chairs answered one problem consistently noted at previous fair exhibits, the recurrent tiredness of visitors, by devising a means to hold their attention while affording them "restful comfort (figure 11)." And, if all of these devices did not fully create an encompassing "total environment" for the visitor/participant, the climactic emergence into the full-scale city intersection of the future represented Bel Geddes's ultimate theatrical trick to induce his audience "not merely [to] see the events, . . . [but to] experience them."⁶⁰ With theatrical imagination, he had enlisted the spectator's desire for vicarious participation and given them an opportunity, from a vantage point of comfort and safety, to involve themselves in a time-warp experience more vivid than any

- 58 "1934 Report on the Fair," 25-26, Acc. 1109, Box 7, Ford Archives; Worthen Paxton to Richard H. Grant, October 10, 1938b file 381 (Correspondence folder), Bel Geddes, "Autobiog.," AE-84, Chapter 77, 1; Press Guide, typescript, 1940, 20, file 381; "This Exhibit . . .," 10, 13, file 384 (Correspondence folder); *New York World Telegram*, July 13, 1939, n.p., clipping, file 381 (Publicity folder), Bel Geddes Papers.
- 59 Peter Schladermundt, "What is Design" typescript, November 29, 1943, 14-15, in Bel Geddes, "Autobiog.," AJ-17, Chapters 74-75, Bel Geddes Papers, emphasis mine.
- 60 "The Proposed Exhibit," 3, file 381 (Correspondence folder), Bel Geddes Papers; Bel Geddes, *Miracle*, 324.



Figure 12
Norman Bel Geddes, Plan
carry Futurama exhibit at
States, 1940

- 61 "The Proposed Exhibit," 3-4, 14 (Correspondence folder); *New York World Telegram*, 1939, clipping, file 381 (Publicity folder), Bel Geddes Papers.
- 62 *New York News*, 1939, clipping, file 381 (Publicity folder); Weiselberg to Norman Bel Geddes, October 21, 1939, and Meeting, April 26, 1940 (Correspondence folder); Various Plans for the Futurama Exhibit at the World's Fair, April 26-30, file 381, Bel Geddes Papers.
- 63 "A Presentation of the Exhibit," Continuing the Use of the Exhibit, 10-15, "Suggestive Consumer Building Center," booklet, 1949-50, 1-3, 18-19, Sloan, Jr. to Norman Bel Geddes, 19, 1950 (enclosed in Bel Geddes Collection); the exhibit was discussed in segment resurfacing city planning exhibit and the army "borrowed" to use while devising wartime camouflage Conveyor System. Bel Geddes Papers to discover whether original 1939-40 F

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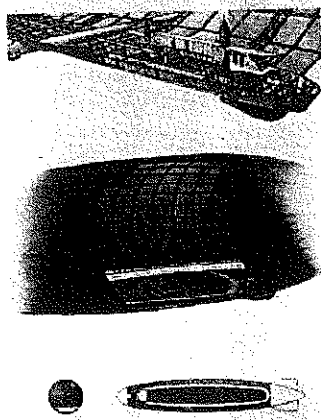


Figure 12

Norman Bel Geddes, Plan for a Zeppelin to carry Futurama exhibit around the United States, 1940

- 61 "The Proposed Exhibit," typescript (April 7, 1938), 3-4, 14, file 381 (Correspondence folder); *New York Post*, May 11, 1939, clipping, file 381 (Publicity folder), Bel Geddes Papers.
- 62 *New York News*, October 6, 1940, 80, clipping, file 381 (Publicity folder), Leo Weiselberg to Norman Bel Geddes, October 21, 1939 and Minutes of Meeting, April 26, 1940, file 384 (Correspondence folder), "A Presentation of Various Plans for Continuing the Use of the Futurama Following the Close of the World's Fair," April 24, 1940, 18-22, 26-30, file 381, all Bel Geddes Papers.
- 63 "A Presentation of Various Plans for Continuing the Use of the Futurama," 10-15, "Suggestion for a General Motors Consumer Building at Rockefeller Center," booklet, n.d. (circa. 1949-50), 1-3, 18-32, and Alfred P. Sloan, Jr. to Norman Bel Geddes, May 19, 1950 (enclosed slip in booklet), Bel Geddes Collection. Ultimately, however, the exhibit was dismembered. One segment resurfaced as the feature of a city planning exhibit in St. Louis in 1941 and the army "borrowed" a large section to use while devising schemes of wartime camouflage. "Futurama Conveyor System," typescript, file 381, Bel Geddes Papers. I have not been able to discover whether any fragments of the original 1939-40 Futurama still exist.

that Edward Bellamy or even H. G. Wells had evoked. In the words of one drama critic, he had combined for his audience "the thrills of Coney Island with the glories of Le Corbusier."⁶¹

Given such accolades, it is hardly surprising that the demise of the Futurama after the closing of the fair in 1940 was deplored by many observers and, for a time, desperately warded off by Bel Geddes through a series of schemes for preservation or reincarnation. Encouraged by the letters of "hundreds of starry-eyed visitors," including one who lamented that its loss would be comparable to that of a Shakespeare play or a Rembrandt painting, he first proposed turning it into a caravan display, in which 44 trucks would transport it to shifting display sites around the country. On second thought, he conceived a more dramatic device to insure its continuing life and influence. It could be mounted in a giant Zeppelin that would touch down at various of the nation's cities (figure 12).⁶²

Employing another approach (first in 1940 and later at the beginning of the 1950s), Bel Geddes unsuccessfully implored GM leaders to erect a "General Motors Consumer Building" (actually, in Bel Geddes's phrase, "public relations center") in downtown New York City with the Futurama preserved (or re-created) as a multi-level exhibit. Visitors could tour a version of the Futurama housed in this building by taking an elevator to the top floor and then letting the tow of downward-sloping ramps carry them through the sequential stages of the exhibit.⁶³ The actual legacy of the Futurama, however, eventually became apparent in the postwar era in the design of amusement park features and corporate industrial exhibits. It was significant that General Motors did not flinch from the implication that it had not had a new idea in 25 years when it recreated a "Futurama" for the 1964-65 World's Fair. To this day, the corporate exhibitors at Epcot have departed little from Bel Geddes's paradigm of the modern public relations exhibit, either in concept or in basic technique.

Even with all of Bel Geddes's enhanced techniques, it was the decisive shift from the concept of "tour our factory" to that of "share our vision" that represented the most significant impact of the Futurama. It is difficult to imagine, for instance, that Bel Geddes's exhibit for General Motors in 1939 would have enjoyed anything like its actual popularity had it transported visitors on an entertaining and educational tour through a model of a General Motors factory. And what of the surprise ending, which not only transported Futurama visitors into a life-sized segment of a world of the future but placed them alongside showroom windows where they could comfortably imagine themselves in the role of consumer? By contrast, a moving-chair exhibit of a model of GM production lines would have hardly gained an equivalent effect if it had suddenly deposited visitors on a

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full-scale factory floor, with no evident role for them in play in such an uncomfortably alien, albeit contemporary, world.⁶⁴

Thus the success of Bel Geddes's design lay in concept as well as technique. He had escaped the continuing legacy of the factory visit. Even for Bel Geddes, this escape may have stemmed partly from the circumstances under which he conceived the substance of the exhibit—as the answer to a problem other than that of fair displays. As late as 1935 Bel Geddes himself had proposed a production-oriented, simulated factory-tour display to publicize the contributions of the steel industry to world progress. On a “group of barges tied to a dock at Pittsburgh” this industrial theater would tell “the story of steel from the ore through the mill to the finished product.”⁶⁵ But the exercise of pondering the solutions to traffic problems oriented Bel Geddes to exploit an idea that had recently been percolating among the creators of industrial exhibits—the idea that, especially for public relations purposes, the future (rather than company history or production processes) might provide better themes for successful image-building exhibits.⁶⁶

By 1939, most of the corporate exhibits had made a substantial break with the production-oriented tradition of trying to display the processes of production. Some, like the 1939 Chrysler exhibit designed by Raymond Loewy, opted for a melange of entertainments—a “Five-Star Show”—while Ford and Du Pont, under the guidance of Walter Dorwin Teague, somewhat awkwardly tried to combine marionettes or musical comedies with stories of products and production or the history of the industry. Ford, with its animated, cartoon-like “Cycle of Production,” still tried to impress visitors with the scope and rationality of its processes of production through an entertaining, “educational” review of how cars are made.⁶⁷

In shifting from “the factory” to “the future,” Bel Geddes and General Motors managed to introduce many qualities of theatrical entertainment while retaining a prestige-enhancing aura of seriousness. It constituted a major public relations success—not so much for the effectiveness of any of its specific messages (although Studebaker president Paul Hoffman praised Bel Geddes for “blasting open the minds of men as to our highway needs”), but because the great corporation had benevolently offered the public an entrancing “free show” without crossing over the indistinct boundary to pure entertainment. Bel Geddes himself concluded from the immense popularity of the exhibit that he had discovered a new force for change in the world—the educative power of visual dramatization.⁶⁸

On many grounds Bel Geddes's display was evasive. As David Nye points out, the dwarfing and depersonalizing effects of miniaturization on the portrayal of human beings in the model reflected the Futurama's larger failure to make “any attempt to grasp future human relations” in this technological paradise.⁶⁹ In fact, Bel Geddes explicitly evaded his own earlier vision of the small town of

- 64 As GM exhibit designer Allen Orth had earlier reminded company officers, an emphasis on the factory and assembly lines might invite the audience to recall those labor issues that had been “so much in the limelight” as a result of GM's relations with unions and the sit-down strikes in recent years. Allen Orth, “Technical Suggestions Relative to New York World's Fair—1939,” July 1, 1937, 5, in World's Fair, New York, 1937 file, Kettering Papers.
- 65 Bel Geddes, “Autobiog.,” AJ-14, Chapters 69–70, Bel Geddes Papers.
- 66 Walter Dorwin Teague to William Hart, January 4, 1937, reel 16:21A, Teague Papers; “Chemical Memorandum,” Acc 1662, Box 64, Du Pont Papers; “Program for Focal Exhibit of Means of Communication,” 2, New York World's Fair, 1939 Papers, Box 57, New York Public Library.
- 67 On Chrysler, see Vols. 330 and 334, Ross Scrapbooks, Ivy L. Lee Papers, Princeton University and Knoxville (Tennessee) *Journal*, October 1, 1939, n.p. clipping, file 381 (Publicity folder), Bel Geddes Papers. On Ford and Du Pont, see Marchand, “The Designers Go to the Fair.”
- 68 Paul G. Hoffman to Norman Bel Geddes, July 2, 1940, file 384 (Correspondence folder), Bel Geddes Papers; Bel Geddes, *Magic Motorways*, 4.
- 69 David E. Nye, “Yesterday's Ritual Tomorrows: The New York World's Fair of 1939,” in *Making Exhibitions of Ourselves* (London, 1990); David E. Nye, *Electrifying America: Social Meanings of a New Technology* (Cambridge, Massachusetts, 1990), 368, 371.

- 70 “Sound Chair Screen” (Futurama folder). Norman Bel Geddes to F. S. 30, 1939, *Bicknell* October 6, 1939, (Publicity folder). Meeting with Mr. 16, 1936, file 356, a
- 71 In a similar vein, Walter Dorwin Teague observed that by 1939 “people must flow consciously come things as “machines people.” It was Bel Geddes the assembly line. tively and exacting and undertook the Twentieth Century

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the future as dominated by a single multipurpose skyscraper. In the Futurama, the small town on the periphery of the city of the future looked exactly like the traditional idealized portrait, with houses nestled around the single church with lofty steeple.

Speaking of evasions, there were no slums in Bel Geddes's Futurama. All had presumably succumbed to the bulldozers of the highway builders, never to replicate themselves elsewhere. Some admirers noted that he had prettified the future by eliminating such elements as billboards. Even Bel Geddes acknowledged that his highways might create monotony and that "much of the pleasure would be taken from motoring for most people."⁷⁰ But no one seems to have perceived the Futurama's greatest evasion of all, the ironic manner in which the fair visitors had been emancipated from the relative tediousness of the old "tour-of-the-factory" display, only to find themselves being carried along on an assembly-line (the moving-chair conveyor belt) while General Motors constructed their vision of the future.⁷¹

70 "Sound Chair Script," 18, file 381 (Futurama folder), Albert S. Bard to Norman Bel Geddes, November 14, 1939, Bel Geddes to F. S. Chase, October 30, 1939, *Bicknell (Indiana) News*, October 6, 1939, n.p., clipping, file 381 (Publicity folder), "Notes Taken in Meeting with Mr. Geddes," November 16, 1936, file 356, all Bel Geddes Papers.

71 In a similar vein, Jeffrey Meikle notes Walter Dorwin Teague's comment that "people must flow in an exhibit" and observes that by 1939 designers had consciously come to see exhibition buildings as "machines for processing people." It was Bel Geddes who installed the assembly line which most imaginatively and exactly regulated that flow and undertook that processing. Meikle, *Twentieth Century Limited*, 197.