Index

Page numbers in italics indicate illustrations.

Aalto, Alvar, 248n61
Abramowitz, Max, 255n21
Adorno, Theodor W., 5, 120–121, 195, 196, 215, 252n86, 261nn72–73
Aiken, Howard, 177
Alcoa Corporation headquarters, Pittsburgh (Harrison & Abramowitz), 102, 257n34
Allgemeine Elektricitäts-Gesellschaft (AEG), 258n43
  turbine factory (Behrens), 103
American Building Research Institute (ABRI), 99
American Road Builders Association, 139
American Telephone and Telegraph Company (AT&T), 41, *41*, 193
Ames, Adelbert, 65, 66, 249nn65–67
Anderson, Stanford, 253n13
Antiaircraft predictor (Wiener), 21, 22, 235–236n18
Antioch College project (Eliel Saarinen), 266n31

Apple Computer, Inc., 13
Architectural Forum, 104, 105–106, 170, 191, 211
Architectural Record, 93, 193, 255n21, 257nn32,34
Architectural Review, 99, *100*, 102
Armour Institute of Technology, 266n29
Artforum, 218
Arts and Architecture, 70, *71*, 110
Ashby, W. Ross, 222–223
Associated Architects, 87, 89
Atomic bomb, 28, 31, 37, 70, *71*
Augur, Tracy B., 237n41
Automatic Sequence Controlled Calculator (ASCC). *See* Harvard Mark I
Automobile styling, 125, 128, 130–135, 265n27

Bachelard, Gaston, 40, 234n4
Bakema, Jaap, 10
Banfi, Belgiojoso, Peressutti & Rogers (BBPR), 75, 166
Banham, Reyner, 125, 127, 128, 131, 148, 263n4
Barber, Roger G.
  Ecological Psychology, 222
Barr, Alfred H. Jr., 55, 65, 265n27
Bataille, Georges, 251n85
Bateson, Gregory, 38
Bauhaus, 46–49, 53, 133, 221, 240n5, 241n7, 245n34
Bauhaus Corporation, 103
Bayer, Herbert, 58, 246n34
Behaviorism, 62–63, 222–223, 230, 248n55
Behrens, Peter, 87, 103, 253–254n13, 258n43
Bell, Daniel, 234n3
Bell System, 41, 188, 207
Bell Telephone Company, 11, 192
Bell Telephone Laboratories, 37, 187, 189, 193–194, 206, 210, 281n25, 282n39, 283nn49,52
  Holmdel, N. J. (Eero Saarinen), 189–190, 192–193, *194*, 196–201, *198–200*, 206–211, *208–210*, 214, 281n25, 283nn52–53
  Murray Hill, N. J. (Voorhees et al.), 193–195, *194*, *195*, 196
Belluschi, Pietro, 240n4
Bemis, Albert Farwell, 258n34
Beniger, James R., 234n3
Benjamin, Walter, 231, 242n10
Bernal, J. D., 51, 243n20
Bernard, Claude, 17, 20
Bertalanffy, Ludwig von, 243–244n21
Big Blue (IBM), 164, 178, 278n59
Big science, 186, 280n11
Bill, Max, 10
Black box, 7, 188, 215, 222–223, 227, 229–230, 248n55
Bladen, Ronald, *220*
Blake, Peter, 227
Blue rooms (SAGE), 190, 208
Bois, Yve-Alain, 252n85
Bolles, John, 170
Bosworth, William Welles, 192
Braziller, George, 78
Breuer, Marcel, 78, 166
Brooks, Frederick P. Jr., 175
Brussels world's fair (1958), 276n39
Bulletin of the Atomic Scientists, *31*, 34, 238n43
Bunshaft, Gordon, 9, 101, 102, 114, 127, 166, 214, 258n46, 271n21
Burnham, Daniel, 84
Burtin, Will, 219
Bush, Donald J., 265n23
Bush, Vannevar, 185
  Science: The Endless Frontier, 185
Business Week, 102, 278n59

Cadillac La Salle, 128
Cage, John, 216–218, 231
California Arts and Architecture, 107
Campus planning, 191–192
Candilis, Josic, and Woods, 10
Canguilhem, Georges, 18, 40, 234n4
Cannon, Walter B., 20–21, 92
  Wisdom of the Body, 20–21, 67
Carnap, Rudolf, 245n27
Carson, Pirie, Scott department store, 104
Case Study Houses, 107, 111

Cassandre, A. M., 58
Century of Progress International Exposition (Chicago, 1933–1934), 58
Chandler, Alfred D. Jr., 256n27
Chase Manhattan Bank, 114–115, 116
Chase Manhattan Bank headquarters, New York (SOM), 102, 105, 114–116, *115*, *116*, 260nn62–63
Chicago lakefront project (Eliel Saarinen), 266n30
Chicago Medical Center (Bosworth), 192
Chicago School, 84–85, 103
Chicago Tribune, 85, 87, 91, 143
Chicago world's fair. *See* Century of Progress International Exposition
Cinema, 152, 227–229, 231. *See also* Film
Cité de Refuge (Le Corbusier), 257n31
Civil defense, 7, 29–34, 37, 41, 59
Civilian Defense, 59
Clay, Lucius D., 139
Cold war, 4, 7, 36–37, 70
Collins, Peter, 233n8
Columbia Broadcasting System (CBS), 223
Columbia Broadcasting System (CBS) headquarters, New York (Eero Saarinen), 223–227, *225–226*, 229
Columbia University, 187
Communication
  and civil defense, 41
  cybernetics and, 16, 21
  equipment, 223–225
  and scientific research, 186–187
  space of, 228
  and urbanism, 28–31
  visual, 61–62
Computer
  architecture, 175–176, 177, 178, 277n47
  design, 170, 171–172, 175–177, 178, 190
  science, 206
Computers, 171–173, 174–175
  at Bell Laboratories, Holmdel, 199, 200
  and control, 177–178
  at IBM, Yorktown Heights, 201–202, 206
  neurological terminology and, 174–175, 177–178, 181
  and research laboratories, 183
Comrie, Leslie J., 177, 277n54
Comte, Auguste, 17
Connecticut General Life Insurance Company headquarters, Bloomfield, Conn. (SOM), 155, 271n71
Consumer, construction of, 4–5
Container Corporation of America (CCA), 58, 63, 247n42
Control, 5, 16–17, 19, 40, 231, 273n12
  computers and, 177–178
  and corporate management, 92
  cybernetics and, 16
  through feedback, 215, 252n87
  and organization, 70, 231
  social theory and, 36
Control society (Deleuze), 5, 16–17, 19, 40, 231, 273n12
Cooper Union, 78
Corbett, Harrison & MacMurray, 87
Corning Glass Corporation, 103
Corning Glass Corporation headquarters, New York (Harrison & Abramowitz), 103, 124
Corporate architecture (general), 4, 5, 10–11, 13, 82–87, 95, 103, 120
Corporate culture, 5, 92, 140–141
  IBM, 166, 168
Corporate image, 4, 9, 13, 103–104, 227
  Bell Laboratories, 211
  General Motors, 148, 151, 155
  IBM, 164–167, 176–178, 181
  Inland Steel, 104
  Rockefeller Center, 88, 98
Corporation, as family, 93, 111, 167, 169
Cranbrook Academy of Art, Bloomfield Hills, Mich. (Eliel Saarinen), 113, 135, 143, 148, 192, 266n31, 270n66
Crary, Jonathan, 242n10
Crown Zellerbach Building, San Francisco (SOM), 105
Crowther, James J., 51
Crystals, 43, *44*, 52, 78–79
Culture industry, 5–6, 261n72
Curtain walls, 4, 6–7, 13, 82, 85, 95–97, 257nn31,34, 258n36
  Bell Laboratories, Holmdel, 207, 208–211

Chase Manhattan Bank, 116
classification, 99–101, *99*, *100*
and communication, 102–103
and entropy, 221
General Motors Technical Center, 145–148, 151, 161
IBM, Rochester, 160–164, 181
IBM, Yorktown Heights, 204–205, 208, 210
Inland Steel, 105
Lever House, 101–102
on Sixth Avenue, 227
Union Carbide Building, 117–120
United Nations Secretariat, 95
Curtain Walls of Stainless Steel Construction, 99, *99*, 258n36
Curtice, Harlowe H., 126–127, 128, 141, 143
Cuvier, Georges, 17, 82
Cybernetics, 7, 9, 15–17
and architecture, 38, 40
Cage and, 217–218
and civil defense, 28–31
Giedion and, 19–21
interdisciplinarity of, 37–38, 40
Kepes and, 38–40, 66–67
McLuhan and, 19–20
and politics, 31, 34
and space, 19, 26
and urbanism, 28–31
Cyborg, 12

Daedalus, 78
Daily News Building, New York (Hood), 89, 254n18, 255n21
Dal Co, Francesco, 233n9, 252n86
Dartmouth Eye Institute, 65, 66
Davidson, J. R., 111
Decentralization, 31, 135, 140, 152, 218, 237–238n41
General Motors and, 140–142, 263n17
IBM and, 159–160, 166, 170, 178, 181
of scientific research, 184–186
Deep Blue (IBM), 181, 227, 279n62
Deep space, 89, 196, 206
Defense Early Warning (DEW) Line, 187–188
De Kooning, Willem, 58
Deleuze, Gilles, 3, 16–19, 25–27, 35, 37, 40–41, 234n4
on cinema, 227–229, 231
on control society, 3, 5, 8, 273n12
De Santillana, Giorgio, 28
Detroit Civic Center (Eliel Saarinen), 266nn30–31
Deutsch, Karl, 28, 36, 72, 238n50
Nerves of Government, The, 36
Dewey, John, 55, 66, 245n28
Diagram of forces, 130
Dialectics, 5–6, 197
Digital Computer Laboratory (MIT), 190
Dinkeloo, John, 161
Discourse networks (Kittler), 10, 11, 233n10
Downtown-Lower Manhattan Association (DLMA), 114, 260n63
Drake University master plan (Eliel Saarinen), 266n31
Dreyfuss, Henry, 129
Drucker, Peter
Concept of the Corporation, 140–141
Duhart, E. H., 108, 110, 259n58
Dulles International Airport terminal, Washington, D.C. (Eero Saarinen), 271n71
Dymaxion Bathroom (Fuller), 107
Dymaxion Deployment Unit (Fuller), 107
Dynamic equilibrium, 12, 20, 38, 40, 92, 139, 181
Dynamic obsolescence. *See* Planned obsolescence

Eames, Charles, 108, *109–110*, 111, 124, 164, 167, 259n59
Eames, Charles and Ray
A Computer Perspective, 277n54
chairs, 75, *77*
Eames house, 113
and motion, 270n66
Powers of Ten, 93, 110
Eames, Ray, 111
Earl, Harley J., 127, 131, 132, 134, 265n25, 268n55
and General Motors Technical Center, 142, 148, 151, 153, 270n60
"longer and lower" look, 128, 152

Easterling, Keller, 268n46
Echo (NASA/Bell Laboratories), 282n28
Eckert, Presper, 276n46
Eckert, Wallace, 187
Eckhart, Carl, 55, 245n28
Edgerton, Harold, 22, 67, *69*, 70, 88, 250n72, 265n23
  Golfer Multiflash, *69*
Edwards, Paul N., 239n55, 277n46, 278n55
Ehrenkrantz, Ezra D., 257n34
Eisenhower, Dwight D., 34–35, 36, 186, 187
Eisenstein, Sergei, 66
Electronic Discrete Variable Automatic Computer (EDVAC), 175, 276n46
Electronic Numerical Integrator and Computer (ENIAC), 175, 276n45
Ellul, Jacques, 234n3
Emery Roth & Sons, 82, *83*, 84, 95, *97*, 114, 220, 221, 257n34
Enlightenment, dialectic of, 197
Entenza, John, 107, *109–110*, 111, 124, 259n59
Entenza house (Eames and Eero Saarinen), 124
Entropy, 218–221, 229, 230
  and architecture, 10, 215–216
  and control, 23
  defined, 21
  disorganization as, 139
  and information, 21
  and organization, 213–214, 231
Environment, 138, 217–218, 222–223
Environmental behaviorism. *See* Behaviorism
Episteme, 234n4
Epistemological rupture, 234n4
Evolutionary humanism (Huxley), 54
Executive Suite, 262n78

Fashion, 57–58, 128, 133
Feedback, 191
  and control, 215, 252n87
  defined, 21
  and entropy, 23
  and images, 139
  positive, 214
  and SAGE, 37
  and social theory, 35–36
Feininger, Lyonel, 46, 49
Film, 47–48. *See also* Cinema
First World War, 184
Fisk, James B., 283n49
Flavin, Dan, 219
Flexibility, 5
  at Bell Laboratories, Murray Hill, 193–194
  and communications equipment, 223
  and corporate identity, 159
  IBM design and, 167
  at IBM, Rochester, 169–170
  IBM System/360 and, 176–177, 178
  media and, 45
  in modern houses, 105–106, 108, 110–111
  in office planning, 89–90, 93–97, 104–105, 151, 215, 255n21
  in production, 141
  Eero Saarinen and, 111–114, 151, 170
  and scientific research, 186
Ford, Henry, 273n14
Fordism, 128, 269n58
Ford Motor Company, 128
  Model T, 128, 273n14
Ford Motor Company headquarters (SOM), 268n47
Forrester, Jay W., 190
Foucault, Michel, 5, 16, 18, 26, 234n4, 236n31
4D Dymaxion House (Fuller), 107, 111
Francé, Raoul, 246n35
Frankfurt School, 6
Fulbright, J. William, 186
Fuller, R. Buckminster, 75, *76*, 106–107, 111, 187–188, *188*, 260n61, 271n67
Futurama (Geddes/General Motors), 129–130, *130*, 139, 142, 151, 264n22, 268n48

Gabo, Naum, 246n35
Galison, Peter, 233n7, 235–236n18, 238n41, 248n55
Garden City movement, 135
Geddes, Norman Bel, 129, 130–134, 139, 143, 155, 264n20, 265n23, 268n48

Horizons, 130, *131*
Gemeinschaft, 9, 111, 143
General Electric Corporation, 43, 279n3
General Motors Corporation (GM), 11, 125–126, 139, 151, 155, 184, 268nn48–49, 269n56, 270n63
and automobile styling, 131–134, 153, 264n18
and decentralization, 140–142, 263n17
engineers, 148, 161
and planned obsolescence, 128, 140–141, 263n17
Styling: The Look of Things, 131–134, *132, 133*
General Motors Futurama. *See* Futurama
General Motors Pavilion, 1939–1940 World's Fair, 129–130, *129*
General Motors Technical Center, Warren, Mich. (Eero Saarinen), 123, *124*, 126–128, *126*, 131, 141, *142*, *144*, *145–147*, *149–150*, *152*, *153–154*, 170, 184, 192, 208, 269n58, 271n71
curtain wall (*see* Curtain walls)
engineering building, 145–148
and modularity, 152–153
organization and planning of, 142–145, 152, 155, 270n63
research administration building, 148–149
styling complex, 150–151
styling dome, 153–155, 172
General Semantics, 62, 247n53
Gerard, Ralph, 55, 72, 81, 245nn28,32
Gestalt psychology, 51–52, 243n19
Ghyka, Matila, 66
Gibbs, Willard, 92
Giedion, Sigfried, 19, 27, 38, 65, 72, 88, 92, 103, 111, 136, 214, 235n14, 241n6, 248n61, 250n76
Architecture, You and Me, 218
and cybernetics, 20–21
and dynamic equilibrium, 20, 61, 90
and homeostasis, 20
Mechanization Takes Command, 10, 20–22, 69–70, 103, 111
new monumentality, 218–219
and organization, 69–70
on Rockefeller Center, 88, 90
Space, Time and Architecture, 136
Gilbert, Cass, 88
Gilbreth, Frank, 92
Gilbreth, Lillian, 92
Gillespie, Richard, 255n25, 269n53
Glass architecture, 9, 49
Goldstein, Kurt, 66
Graham, Bruce, 102
Greenough, Horatio, 82–83
Greenwald, Herbert S., 84
Gropius, Walter, 38, 49, 52–53, 70–71, 72, 98, 240nn5–6, 246n34, 248n61, 250n76
Growth and Form (exhibition), 71, 250n76
Guaranty Building (Sullivan), 85

Haeckel, Ernst, 244n25
Haldane, J. B. S., 51
Hall, Edward and Mildred, 222–223
Fourth Dimension in Architecture: The Impact of Building on Man's Behavior, 222–223
Hallidie Building (Polk), 257n31
Hamilton, Richard, 250n76
Hanover Institute, 65
Haraway, Donna, 52, 233n12, 237n34, 243nn20–21, 244nn22,25
Harrison, Ross G., 244n22
Harrison, Wallace, 95
Harrison & Abramowitz, *97*, 103, 257n34
Harvard Business Review, 256n26
Harvard Mark I (ASCC), 177, 187, 278nn54,56
Harvard University, 177, 187
School of Business, 91
Hawthorne experiments, 91, 140, 255n25
Hayakawa, S. I., 62
Hays, K. Michael, 233n5, 252n86
Heims, Steve J., 239n56
Henderson, Lawrence J., 92
Henderson, Nigel, 250n76
Hertfordshire school construction program, 257n34
Hilberseimer, Ludwig, 31, *34*, 237n41
Hofmeister, Henry, 90, 93, *94*

Holabird and Root, 84
Homeostasis, 20, 36, 40, 92
Hood, Raymond, 85, 88–89, 254nn18–19, 255n21
Hood & Fouilhoux, 87
Horkheimer, Max, 5, 197, 215, 261n72
Horta, Victor, 84
Howe, George, 248n61
Howells, John Mead, 85
Hudnut, Joseph, 55
Hudson River School, 206
Huet, Bernard, 274n14
Hull, Clark L., 62, 247n54
Human relations, 5, 91–93, 120, 141, 143, 169–170, 214, 255nn25–26, 261n74
Huxley, Julian, 51, 54, 55, 57–58, 236n20, 245n30
Hvitträsk (Eliel Saarinen), 143, 266n30

IBM Business Machines, 175
Illinois Institute of Technology (IIT) campus (Mies van der Rohe), 151
Image as machine, 54
Images
  scientific, 52, 72–73, 244n22
  urban, 138
Individuality, 123–124
Industrial Design, 125
Information theory, 9, 63, 213–214, 218
Inland Steel Building, Chicago (SOM), 104–105, *104*, 124
Inland Steel Corporation, 104
Institute of Design (Chicago), 55, 58
Intellectual labor, 196–197
International Business Machines Corporation (IBM), 11, 13, 37, 120, 183, 196, 229, 272n8
  608 transistorized calculator, 275n34
  701 computer, 175, 275n31
  702 computer, 172, 175, 275n31
  705 computer, 171
  7030 computer, 175
  and corporate culture, 166, 168
  and corporate identity, 159–160, 168–170
  and corporate image, 164–167, 176–178, 181
  and decentralization, 159–160, 166, 170, 178, 181
  Deep Blue (*see* Deep Blue)
  design program, 164–167, 273n14, 276n36
  educational facility, Poughkeepsie, N.Y. (Noyes), 170
  engineering laboratory, Poughkeepsie, N.Y. (Noyes), 170
  FSQ-7 computer, 188
  logotype (Rand), *167*
  Management Committee on Pure Research, 187
  manufacturing plant, Rochester, Minn. (Eero Saarinen), 159–164, *161–164*, 169–170, 174, 176, 178–181, *180*, 191, 204, 207, 272n8
  manufacturing plant, San Jose, Calif. (Bolles), 170, *170*
  organization, *165*, 166, 168, 181, 272–273n10
  and pattern recognition, 79, 211
  punched card (*See* Punched card)
  Random Access Memory Accounting Machine (RAMAC), 170–171, *171*, 174, 178, 181, 276n39
  and research, 187
  research laboratory, Poughkeepsie, N.Y., 187, 188, 189
  Selective Sequence Electronic Calculator (SSEC), 275n31, 277n55
  showroom, New York (Noyes), 172, *173*
  System/360, 176, *176*, 178, *179*, 277n50, 278n59
  Thomas J. Watson Research Center, Yorktown Heights, N.Y. (Eero Saarinen), 181, 187, 191, *191*, *196*, 199–207, *201–205*, 208, 278n62, 282n43, 283nn44–45
  "white room," Poughkeepsie, N.Y., 172, 276n38, 278n59
Interstate Highways Act, 139, 268n46

Jackson, Kenneth T., 268n46
Jacob, François, 18–19, 234–235n6
Jacobs, Jane, 260n68
Jakobson, Roman, 38

Jansky, Karl, 281n27
Jaruszewicz, Mark, 270n60
Jenney, William Le Baron, 84
John Deere and Company headquarters, Moline, Ill. (Eero Saarinen), 222–223, *224*
Johnson, Philip, 127, 197, 219, 249n61, 265n27, 267n38, 282n37
Johnson, Robert Wood, 256n26
Johnson & Johnson Corporation, 256n26, 274n14
Jones, Cranston, 263n13, 270n65
Jordy, William, 89, 254n18
Joseph, Branden W., 252n86
Josiah R. Macy, Jr. Foundation, 38
Judd, Donald, 227

Kafka, Franz, 231
Kahn, Albert, 129, 145, 269n58
Kahn, Louis, 197
Kahn & Jacobs, 82, *83*, 95, 257n34
Kamman, Jan, 49, *50*
Kaufmann, Edgar Jr., 167
Kay, Lily E., 239n56
Keller, Evelyn Fox, 250n67
Kentgens-Craig, Margret, 248n59
Kepes, Gyorgy, 9, 11, 46–47, 110, 114, 135, 183, 190, 205, 214, 240n4
  and advertising, 58, 63, *64*, 248n57
  and Ames, 65–66, 249n66
  and architecture, 38, 65, 75, 78–79, 240n4, 243n16, 248–249n61, 251nn81,83
  on art and science, 40, 51–52, 70–72, 243nn18–19, 244nn24–25
  and automobile styling, 133–134, 266n28
  bibliographies, 66–67, 249n68
  and Cage, 216–218
  Center for Advanced Visual Studies (MIT), 54
  and cybernetics, 38–40, 66–67, 239n60
  diagrams, *60*
  and General Semantics, 62, 247n53
  and Gestalt psychology, 51–52, 234n19
  and Giedion, 22, 61, 70–71, 249n64
  and homeostasis, 40, 92
  Language of Vision, 22, 59–63, *60*, *64*, 66, 67, 70, 73, 88, 103, 134, 247n44, 266n28
  and Lukács, 249n61
  and Lynch, 138–139, 216–217, 267n40
  and MIT, 54, 63–64, 67, 138, 216, 248nn58–59
  on modularity, 98, 278n58
  on modulation, 157–159
  and Moholy-Nagy, 22, 46, 51, 59, 62, 64–65, 243n15
  and Morris, 62–63, 245n28
  and New Bauhaus, 54–55, 245n31
  New Landscape exhibition, 67, *68*, 72
  New Landscape in Art and Science, The, 38–40, *39*, 43–46, *44*, 67–79, *68*, *73–77*, 81–82, 98, 157–158, *158*, 183, 251n79, 252n87
  and organicism, 40, 59–61, 67, 79, 251n82
  on organization, 22, 45, 59–61, 79, 216
  and Panofsky, 66, 249n63
  on pattern, 59, 67, 72–73, 217
  "pattern-seeing," 40, 43, 52, 75, 98
  and Eero Saarinen, 137–138, 153, 267n38
  and School of Design (Chicago), 247n44
  Visual Arts Today, The, 78–79
  and Lancelot Whyte, 70–71, 250–251n76
  and Wiener, 38–40
Kettering, Charles F., 141, 269n56
Kiley, Dan, 199
Killian, James R., 187
Kittler, Friedrich A., 10, 230–231, 233n10, 242n13
Knoll, Florence, 225, *226*, 227
Koch, Carl, 240n4
Koffka, Kurt, 66
Koppe, Richard, *56*
Korzybski, Alfred, 247n53
Kracauer, Siegfried, 4, 233n4, 260n70
Krauss, Rosalind E., 241n7, 252nn85–86
Kresge Auditorium, MIT (Eero Saarinen), 251n81, 271n67
Kubrick, Stanley, 227, 229–230, 231
Kuhn, Arthur J., 263n17

La Due, James, 276n38, 278n59
Lake Shore Drive Apartments, Chicago (Mies van der Rohe), 102, 151

Lapp, Ralph, 31, 237n41
effects of atomic bomb explosions, *31*
Must We Hide?, *32–33*
Larkin Building (Wright), 93, 257n30
Lawrence Livermore Laboratory (Berkeley), 186
Le Corbusier, 8, 75, 84, 124–125, 167, 168, 257n31
Léger, Fernand, 58, 285n7
Leslie, Stuart W., 238nn45–46, 280n7
Lever Brothers Corporation, 101–102, 258n42, 274n14
Lever House, New York (SOM), 97, 101–102, *101*, 104, 114, 124, 258n42
Levine, Neil, 257n30
Lewin, Kurt, 66
LeWitt, Sol, 220
Life, 28, *29–30*, 36, 37
Lincoln Laboratories (MIT), 37, 186, 188
Lipps, Theodor, 66
Loewy, Raymond, 102, 129, 132, *134*
Lonsdale, Kathleen, 72
Luhmann, Niklas, 239n54
Lukács, Georg, 249n62
Lundquist, Oliver, *107*, 108, *114*, 259n57
Lynch, Kevin, 138, 139, 143, 216–217, 267nn40,42
Image of the City, The, 138
Lyotard, Jean-François, 239n54, 262n77

Machine intelligence, 172–173
Machine Made America, 99, *100*
Machines
and humans, 172–173, 177, 181, 190, 214
and images, 139
and organisms, 18, 21, 27–28, 134–135, 237n34
Macy cybernetics conferences, 38, 55, 239n56
Maldonado, Tomás, 10
Manchester University Mark I, 278n55
Manhattan Project, 185–186, 280n9
Marcuse, Herbert, 262n77
Marey, Etienne-Jules, 17, 22
Marine Midland Bank headquarters, New York (SOM), 114
Martin, Reinhold, 233n6, 251n82, 258n46, 260n63
Massachusetts Institute of Technology (MIT), 20, 22, 28, 67, 75, 270n67
Kepes and, 54, 63–64, 67, 138, 216, 248nn58–59
and SAGE, 37, 190
Matter, Herbert, 58, *71*, *109–110*, 111, 259n59
Man Dressing, *112*
Mauchly, John, 276n45
Mayo, Elton, 91–92, 255n25, 260n70
Human Problems of an Industrial Civilization, 91, 255n25, 256n28
McCarthyism, 4
McGraw-Hill Building, New York (Hood), 89
McLaughlin, Robert W., 101
McLuhan, H. Marshall, 15, 19, 22–23, 37, 40, 48, 62, 72, 79, 139, 235n12, 236n23, 247n51
Mechanical Bride, The, 22, 37, 72
Mead, Margaret, 38, 246n37
Mead, Taylor, 219
Media
architecture as, 6, 9, 15, 40, 48–49, 75, 181
and entropy, 221
and evolution, 48–49, 57, 221
exchangeability of, 231
and hallucination, 230–231
and organization, 15, 45, 62, 63
and subjectivity, 195, 231
topologies, 229
transpositions, 242n13
Mellon-U.S. Steel Building, Pittsburgh (Harrison & Abramowitz), 257n34
Mendelsohn, Erich, 129
Mertins, Detlef, 233n8, 240n6
Merton, Robert K., 36
Mies van der Rohe, Ludwig, 6–7, 84, 98, 166, 171, 233n9, 242n14, 249n61, 263n13
on General Motors Technical Center, 127–128
IIT campus, 151
organicism of, 8, 134, 233n8, 266n29
Seagram Building, 78–79, 82, 252n86
Milieu, 17

Milieu intérieur, 17
Military-industrial-academic complex, 186, 191, 206, 215
Military-industrial complex, 3–4, 34–35, 43, 184, 214, 230, 231, 238nn46,53
Mills, C. Wright, 35–36, 120
Minimal art, 7, 218, 220–221, 227
Modularity, 5, 97–101, 123, 159, 221
Modulation, 157–159, 164, 216
Modules, 5, 6–7
  Bell Laboratories, Holmdel, 207
  Bell Laboratories, Murray Hill, 194
  Chase Manhattan Bank headquarters, 116
  General Motors Technical Center, 145, 148, 152
  IBM manufacturing plant (Rochester, Minn.), 181
  IBM Thomas J. Watson Research Center, 202–205
  Inland Steel Building, 105
  planning, 93–95, 145, 148, 151
  and punched card, 159
  Seagram Building as, 6, 82
  Union Carbide Building, 120
  United Nations Secretariat, 95
Moholy, Lucia, 46–47, 241nn7–8
Moholy-Nagy, László, 51, 135, 153, 228, 241–243n14, 270n66
  Dynamic of the Metropolis, 48, *49*
  and Giedion, 21–22
  and Huxley, 54, 57–58, 236n20
  and Institute of Design (Chicago), 55, 58
  and Kepes, 22, 46, 51, 59, 62, 64–65, 243n15
  and Morris, 245n28
  and New Bauhaus, 52–54
  New Vision, The, 48–51, *50*, 55, *56*, 59, 63, *75*, 134, 242n13, 246nn34–35
  Painting, Photography, Film, 47–48, *47*, *49*, 242n13
  and photography, 22, 46–49, 241nn8–11
  and School of Design (Chicago), 55
  Space Modulator, *56*
  Vision in Motion, 55–59, *56*, 69, 70, 111, 246n37, 265n25
  Von Material zu Architektur, 48
Moholy-Nagy, Sibyl, 64
Morris, Charles W., 53, 62–63, 72, 245nn27–28
  Signs, Language, and Behavior, 62
Morris, Robert, 227
Moses, Robert, 249n61
Mumford, Lewis, 258n42
Museum of Modern Art, New York, 65, 265n27, 271n71, 273n14

National Aeronautics and Space Administration (NASA), 229
National Research Council (NRC), 280n5
National Science Foundation (NSF), 185
Naturphilosophie, 244n25
Needham, Joseph, 51–52, 66, 71, 244n22
Negentropy, 9, 21, 230
Nervi, Pier Luigi, 75
Netsch, Walter, 271n71
Networks
  architecture of, 10–11
  communication, 19, 21, 23, 25, 37, 41, 223–227
  military-industrial complex as, 184
  organism as, 40
  organizational complex as, 15, 41, 190
  as pattern, 79
  SAGE as, 37, 190
  of scientific research, 185
  spatiality of, 19, 26, 215
  transportation, 26, 28, 37
  types, 7–8
Neumeyer, Fritz, 266n29
Neutra, Richard, 38, 72, 98, 110, 239n59, 249n61
  Survival through Design, 38
New Bauhaus, 52–55, 58, 245n28, 270n66
New Brutalism, 125
New Deal, 184–185
New monumentality (Giedion), 218–219
New York World's Fair (1939–1940), 129, 139, 264n22
Noble, David F., 238n46
Noguchi, Isamu, 271n71
Noyes, Eliot, 164, 166, 167, 170–172, *173*, 174, 177, 178, 201, 230, 275nn31–32, 275–276n34, 278n59

Office buildings (general), 5, 6–7, 82, 114
Office of Naval Research (ONR), 185, 187
Office of Scientific Research and Development (OSRD), 185
Office of Strategic Services (U.S. War Department), 143
Office planning, 87, 90–91, 93–97, 254n15
  Chase Manhattan Bank, 116
  Inland Steel, 104–105
  RCA Building, 88–90, 93–94
  Union Carbide Building, 117, 120
Ogilvy, David, 148
Olivetti, Adriano, 166, 273n14
Olivetti Corporation, 166, 172, 273–274n14
  showroom, New York (BBPR), 166, 273–274n14
Organic architecture, 84
Organic design, 58
Organicism, 4, 8–9
  aesthetic, 71
  and architecture, 82–84
  biological, 17, 19, 23, 52, 243n20
  and capitalism, 90, 115–116
  and entropy, 220–221
  and functionalism, 82–84, 92–93, 134–135
  Gropius and, 46
  and images, 139, 143, 155
  and marketing, 139, 143
  Mies and, 266n29
  military-industrial complex, 43, 155, 186
  Morris and, 53
  optical, 47–48, 59–61
  and organic form, 223, 244n25
  and organization, 8, 17–19, 51–52, 206, 214
  and real estate, 84
  Rockefeller Center and, 88
  and scientific knowledge, 186, 196, 206
  social, 18–19, 23, 92, 111
  and streamlined design, 132–135
  and time, 220–221
  and urbanism, 115–116, 135–138, 143, 227
Organism
  corporation as, 140, 168
  cybernetic notion of, 24
  family as, 111
Organization, 8–9, 10
  and architecture, 8–9, 75, 78–79, 214–215
  of Bell Laboratories, 207
  biological models, 17–19, 27
  corporate, 103–104, 121, 140–141, 164–167
  and corporate image, 164–167, 181
  and curtain wall, 7
  cybernetics and, 21, 27
  and entropy, 213–214, 231
  feedback and, 21, 37
  of General Motors, 140–141, 263–264n17
  of IBM, 164–167, 206–207, 272–273n10
  and images, 9, 121, 155
  and language, 61–63
  managerial, 70
  versus mechanization, 70
  as message, 24, 62–63, 79, 213
  modular, 151, 152–153
  and moralism, 221
  and organicism, 8, 17–19, 51–52, 206, 214
  and pattern, 24–25, 37, 40, 59
  of scientific research, 184–186, 187, 206–207
  self-, 7
  social, 23–24, 27, 35–36, 65, 92–93, 121
  and subjectivity, 214
  visual, 59–61, 64–65, 152–153, 155
Organizational complex, 3–4, 15, 40, 45, 62, 183, 214, 215–216
  and architecture, 206
  and corporate image, 211
  and disciplinarity, 206–207
  and entropy, 221
  Kepes and, 67
  and media, 216, 231
  and modularity, 5
  and organic integration, 206
  and paranoia, 230
  and space, 197
Organizational cybernetics, 264n17
Organization man, 5, 12, 121, 168, 195–196, 202, 211, 223, 229, 261n74, 262n78
Owings, Nathaniel, 114–115

Paepcke, Elizabeth, 58
Paepcke, Walter, 58, 63, 247nn42–43
Panofsky, Erwin, 66

Pantin, C. F. A., 72
Papademetriou, Peter C., 264n21, 269n57
Paranoia, 3, 11–12, 230–231
Pareto, Vilfredo, 92, 256n28
Parsons, Talcott, 35–36, 92
  Social System, The, 92
Pattern, 9
  and blur, 229
  body as, 24
  and curtain wall, 161
  identity as, 159–160
  message as, 24
  and organization, 24–25, 37, 40, 59
  recognition, 79, 211
  and system, 206
  visual, 38, 40, 43–45
Peck, Gregory, 168
Pei, I. M., 108, 110, 259n58
Perception, 81
Persistence of vision, 152
Peterhans, Walter, 46, 241n7
Photography
  Bauhaus, 241nn7–8
  and human vision, 22, 47
  motion, 22, 67, 69, 88, 111
  and organicism, 47
  scientific, 22, 38, *39*, 40, 43–45, *47*, 52, 67–69, 72–73, *73–75*, 157–158
Piore, Emmanuel R., 187
Planned obsolescence, 127, 128, 140, 155, 263–264n17
Polk, Willis, 257n31
Power, 8
  and control society, 16–17, 36
  and military-industrial complex, 35
Prefabrication, 99, 105, 111, 259n59
Primitivism, 57, 246n37
Princeton University, 65
  School of Architecture, 99, 101
Progressive Architecture, 82, *83*, 84, 97–98, 161
Project Whirlwind (IBM), 190
Pugh, Emerson, 272nn7–8, 276n45, 278n55
Punched card (IBM), 158–160, *158*, 211, 218
Pynchon, Thomas
  Gravity's Rainbow, 3, 11, 230–231
Queen of Sheba Meets the Atom Man, The, 219

Rabinbach, Anson, 17, 234n4
Radome (Fuller), 187–188, *188*
Rand, Paul, 164, 167, 168, 274nn16,19
Randall, Clarence, 103
Rand Corporation, 37
RCA Building, Rockefeller Center, New York (Associated Architects), 88–90, *94*, 95, 97, 102, 215, 254n18, 255n21
Read, Herbert, 66, 251n76
Reich, Lilly, 243n14
Reinhard, L. Andrew, 90, 93, *94*
Reinhard & Hofmeister, 87
Remington Rand UNIVAC, 174
Research laboratories (general), 183–184, 192, 279n1
Riesman, David, 120–121, 262n77
  Lonely Crowd, The, 120, 261n73
Ritterbush, Philip C., 244n25
Roche, Kevin, 127–128, 151, 155, 201, 272n5
Rockefeller, David, 114
Rockefeller, John D. Jr., 87, 254n16
Rockefeller Center, New York (Associated Architects), *86*, *89*, 135, 196, 215, 219, 227, 254nn16,18
  and Chase Manhattan Bank headquarters, 114–115
  and corporate image, 88, 98
  and office planning, 86–91, 93–95, 257n34
  urbanism of, 88
Roethlisberger, Fritz, 92, *93*, 255n25, 256n26
Roosevelt, Franklin D., 268n48
Rosenblueth, Arturo, 21
Roth, Richard, 95, 257n34
Rowe, Colin, 84
Rudolph, Paul, 75
Rykwert, Joseph, 253n4

Saarinen, Eero, 9, 10–11, 84, 85–86, 176, 183, 186, 190, 216, 218, 263n11, 264n21, 266nn30–31, 269n57, 270n66, 271n71, 282n37
  Bell Telephone Laboratories, 189–190, 192–193, *194*, 196–201, *198–200*, 206–211, *208–210*, 214, 281n25, 283nn52–53

on campus planning, 192
CBS headquarters, 223–227, *225–226*, 229
Demountable Space (community center), 111, 113–114, *113*
Designs for Postwar Living (with Lundquist), *107*, 108, 111, *113*, 259n57
and Fuller, 114
General Motors Technical Center, 123, *124*, 126–128, *126*, 131, 135, 141–155, *142*, *144*, *145–147*, *149–150*, *152*, *153–154*, 170, 184, 192, 208, 269n58, 271n71
IBM manufacturing plant (Rochester, Minn.), 159–164, *161–164*, 169–170, 174, 176, 178–181, *180*, 191, 204, 207, 272n8
IBM Thomas J. Watson Research Center, 181, 187, 191, *191*, *196*, 199–207, *201–205*, 208, 278n62, 282n43, 283nn44–45
John Deere and Company headquarters, 222–223, *224*
and Kepes, 137–138, 153, 267n38
Kresge Auditorium (MIT), 75, 251n81
unfolding house, 114
and urbanism, 137–138, 139
Womb Chair, 131
Saarinen, Eliel, 127, 142, 204, 266n30
campus planning, 192, 266n31
Chicago Tribune tower, 85, *86*, 88
City, The, 135, 267nn32,34
General Motors Technical Center (first scheme), 142–143
Hvitträsk, 143, 266n30
on "organic decentralization," 135–137, 143
Search for Form in Art and Architecture, The, 135
and urbanism, 135–137, 138, 152
Saarinen, Eva-Lisa, 266n30
Saarinen, Loja, 266n30
Salk Institute, La Jolla, Calif. (Kahn), 197
Scheerbart, Paul, 46
School of Design (Chicago), 55, 58, 59, 247n44
Schreber, Daniel Paul, 10
Schrödinger, Erwin, 65, 249n67
Scully, Vincent, 282n37
Seagram, Joseph E., and Sons, 274n14
Seagram Building, New York (Mies van der Rohe), 6–7, 78–79, 82, 252n86
Second nature, 65, 249n62
Second World War, 3, 4, 12, 13, 183, 185, 231, 283n39
Semi-Automatic Ground Environment (SAGE), 37, 46, 70, 187–191, *188–189*
Semiotics, 63
Semper, Gottfried, 66
Sert, José Luis, 285n7
Servomechanisms Laboratory (MIT), 190
Shannon, Claude, 213, 284n2
Silicon Valley, 13, 170
Skidmore, Owings & Merrill (SOM), 10, 82, 95, 103, 159, 268n47
Chase Manhattan Bank headquarters, 102, 105, 114–116, *115*, *116*, 260nn62–63
Connecticut General Life Insurance headquarters, 155, 271n71
Crown Zellerbach Building, 105
and Fuller, 106–107
Inland Steel Building, 104–105, *104*, 124
Lever House, 97, 101–102, *101*, 104, 114, 124, 258n42
"New House of 194X," 105–107, *106*, 114
organization of, 105, 258n50
Union Carbide Building, 102, 117–120, *117–119*, 121, 214, 219, 220
United States Air Force Academy, *154*, 155, 184, 271n71
Sloan, Alfred P. Jr., 128, 140, 141, 142, 264n17
Smith, Terry, 269n58
Smith, Hinchman & Grylls, 144, 145
Smithson, Alison, 10, 263n4
Smithson, Peter, 10, 263n4
Smithson, Robert, 218–221, 231
Smuts, Jan Christian, 235n15
Social theory
cybernetics and, 16, 35–36
and military-industrial complex, 35
Standardization, 98–99, 105, 111, 123–125, 128, 264n18
Stanton, Frank, 223
Stephenson, E. M., 66
Stereotypes, 120–121, 202

Stored program computer, 175, 178, 278n55
Streamlined design, 58, 129–131, 142, 264n20, 265n23
Styling. *See* Automobile styling
Subjectivity
  and cold war, 70
  and communication, 174
  and computing, 159
  construction of, 4–5, 7, 9–10
  consumer, 4–5, 155
  corporate, 160, 167–169, 178, 202, 214
  cybernetics and, 26, 214
  and environment, 223
  and pattern, 10, 12
  posthuman, 12, 229
  postindustrial, 12
  scientific, 195–197, 202
  and Turing test, 172–173
Sullivan, Louis, 66, 82, 85, 87, 92, 103, 111, 223, 253n7
Sundberg-Ferar, 170, 275n34
Swanson, Robert, 142
Sypher, Wylie, 220
System, social, 92
Systems theory, 92, 239n54, 243–244n21

Tafuri, Manfredo, 85, 87, 115, 143, 233n9, 252n86
Taut, Bruno, 46
Taylor, Frederick Winslow, 92
Teague, Walter Dorwin, 129, 271n71
Team X, 10
Television, 6–7
Temko, Allan, 269n57
Teyssot, Georges, 274n14, 279n3
Theoretical Biology Club, 52, 71, 243n20
Thompson, D'Arcy Wentworth, 57, 131, 155, 265n25
  On Growth and Form, 66, 71, 130, *131*, 265n23
Time, 237n38, 269n57
Topology, 191, 195, 197–199, 208, 227–229
Total war, 185
Touraine, Alain, 234n3
Trans-World Airlines (TWA) terminal (Eero Saarinen), 223, 271n71
Truman, Harry S., 185
Trumbull, Douglas, 229–230
Turing, Alan, 172–173, 181, 278n56
Turing test, 172–174, 223
2001: A Space Odyssey, 7, 227–230, *227*, *229*

Union Carbide Building, New York (SOM), 102, 117–120, *117–119*, 121, 214, 219, 220
Union Carbide Corporation, 102, 117
United Nations Secretariat, New York (Harrison et al.), 95, *96–97*, 102
United States Air Force, 184
United States Air Force Academy, Colorado Springs, Colo. (SOM), *154*, 155, 184, 271n71
United States Gypsum Corporation, 111, *113*
United States Steel Corporation, 103
Unity of Science movement, 52–53, 245n28
Universal Automatic Computer (UNIVAC), 174
University of Chicago, 52, 55, 192, 245n28
University of Pennsylvania, 276nn45–46
U.S. Rubber Building, New York (Harrison & Abramowitz), 257n34

Van der Vlugt and Brinkman, 257n31
Van Nelle factory (Van der Vlugt and Brinkman), 49, *50*, 257n31
Vidler, Anthony, 199, 282n39
Viollet-le-Duc, Eugène-Emmanuel, 266n29
Vision
  automobile and, 139
  and evolution, 47, 54, 57
  and hallucination, 230
  and motion, 59
  and organization, 59, 64–65
  retraining of, 47, 242n10
Von Neumann, John, 38, 175, 276nn45–46
Von Neumann architecture, 175, 277n46
Voorhees, Walker, Foley & Smith, 193, 279n1

Waddington, Conrad, 51–52, 71, 244n24
Wainwright Building (Sullivan), 85
War Department, 185

Watson, Thomas J. Jr., 164–167, 168, 169, 172, 174, 177, 181, 187, 206, 272n10, 273nn11,12,14, 275n30
Watson, Thomas J. Sr., *165*, 166, 168, 172, 174, 181, 187, 206, 273n12
Watson Scientific Computing Laboratory (Columbia), 187, 190
Weaver, Warren, 213, 214, 284n2
Weber, Max, 70, 120
Weber, Samuel, 233n6
Wechsler, Judith, 240n4
Weisman, Winston, 254n18
Weiss, Paul, 52, 66, 244nn22,24
Wells, H. G., 54, 245n30
Werner, Heinz, 81
Western Electric Company, 37, 91, 188, 193
Westinghouse Corporation "tele-computing center" (Noyes), 275n31
White room (IBM), 172, 276n38
Whyte, Lancelot Law, 70, 243n20, 250n76
  Aspects of Form, 71
Whyte, William H. Jr., 5, 124, 262n77
  Organization Man, The, 121, 168, 261n74
Wiener, Norbert, 27, 37, 63, 81, 92, 139, 239n56
  antiaircraft predictor, 21, 22, 235–236n18
  Cybernetics, 15, 21–22, 66, 181, 278n61
  Giedion and, 20
  "How U.S. Cities Can Prepare for Atomic War," 28–33, *29–30*, 35–36
  Human Use of Human Beings, The, 19, 23–25, 213
  Kepes and, 38–41, 66–67, 72
  on machine intelligence, 181
  McLuhan and, 19–20
  on organisms, 23
  on organization, 23–25, 63, 213
  on pattern, 38, 114
  on politics, 31, 34
Wigley, Mark, 233n11
Wilson, Charles E., 35, 184
Wilson, Edmund O., 237n34
Wilson, Sloan, 168
Woman's World, 262n78
Womb Chair, 131
Woolworth Building, New York (Gilbert), 88
World Trade Center, New York (Yamasaki), 7, 12, 114, 115, 260n63
Wright, Frank Lloyd, 84, 93, 98, 248n61
Wurster, William, 248n61

X-ray, *49*

Yale University, 137, 192
Yamasaki, Minoru, 114