

Index

Pages in italics indicate an illustration.

- actor-network theory (ANT), 9
 Age of Exploration, 33–34
 Age of Revolutions, 116–17, 118
 agriculture, 74
 craft apprentices and, 51
 enclosure, 52, 74, 80, 191
 productivity, 23–24, 191
 Aire-Calder Navigation
 Canal, 53
 Allen, Robert C., 13
 Anthropocene, 17
 Anti-Corn Law leagues, 174
 See also Free Trade
 apprentices
 factory workers, 72, 77–79, 92, 115, 180, 190
 family labor and, 28, 51, 107, 109
 free labor, transition to, 109–12
 machine making and, 76, 132
 masters' workshops, 49
 See also guilds; labor, child; legislation; patriarchy; workshops
 Arkwright system, 71
 New England and, 123
 proliferation of, 74
 slave labor for cotton and, 102
 variations on, 124
 Arkwright, Richard
 biographical information, 64
 Calico Acts and, 69–70
 credit for Industrial Revolution, 64, 185
 labor force of, 110
 licensing, 60, 71–75
 myth of, 57, 64, 185
 patents, 71–75, 84
 steam engine, use of, 96
 weavers, housing for, 78
 See also factory; water-frames
 Armley Mills, 130
 See also Gott, Benjamin; wool and woolens
 Ashton Canal, 91
 Assize of Measures (1196), 31–32
 Baines, Edward, 103
 Free trade and, 165
 India, attitude toward, 165
 myth of Industrial Revolution, 165–66, 178
 Bank of England, 73
 banks, 73, 141
 Bank of England, 73
 See also credit
 Bean Ing mill, 130,
 See also Gott, Benjamin; wool and woolens
 Bengal, 107
 Bengals, 154
 Berg, Maxine, 11, 16, 140
 Blackpool, 181
 bleaching, 50
 See also cloth production
 boom and bust cycle, 141–42, 162
 See also capitalism
 Boulton & Watt, 88, 97, 121, 130
 Boulton, Matthew, 95
 Bridgewater Canal, 91, 95, 102
 Brown family of Rhode Island, 123, 128
 business organization
 corporations, defined, 125
 incorporation, 125, 171, 173
 individual ownership, 100
 joint-stock companies, 100, 171, 172
 monopolies, 28–29
 trading companies, 35–37
 See also domestic production; Dutch East India Company (VOC); East India Company (EIC); guilds; workshops

218 Index

- calico, 40
Calico Acts (1701, 1721), 51, 70, 152
 and Indian cottons, global market
 for, 108
 Manchester, rise of, 91
 repeal of, 85–86, 185
 wool and worsted protections, 86
Calico Craze, 16, 41, 51
Callico Madams, 51
canals, 53
 Aire-Calder Navigation Canal, 53
 Ashton Canal, 91
 early use of, 189
 factory location and, 97, 98
 Leeds and Liverpool Canal, 102
 Mersey and Irwell Navigation Act
 (1721), 91
 railroads and, 147, 166
 Rochdale Canal, 91
 steam engines and, 97
 See also railroads; transportation
Cannadine, David, 14
capitalism, 100, 141–42
 definition of, 7
 historiography, 10
 Middle Ages, 31–32
 See also capitalism, industrial;
 mercantilism
capitalism, industrial
 capital investments, 169, 171, 172
 examples of, 51, 188–91
 mercantilism, persistence of, 178
 preexisting economic structures
 See plantations
 workshops and, 109
capitalism, laissez-faire, myth of, 1, 175–79,
 185
 See also Free Trade; Smith, Adam
capitalism, proprietary, 127
capital-labor substitution, 79
carding, 25, 49, 64, 65–67, 77, 88, 128
 See also cloth production
Carding engines, 72, 74
Carnot, Sadi, 145
Cartwright, Edmund, 155
Chambers of Commerce, 173
Chartism, 135, 160
Chase, Malcolm, *1820* (2013), 17
china, 34, 36
chintz, 40
Church of England
 apprentices and poor laws, 69, 77
 dissent from, 118, 161
class
 consciousness, 137, 140
 elites, and luxury goods, 30
 See also sumptuary laws
 formation, 117–18, 138–40
 industrialist class, 117, 164
 middle class, 148, 189
 Peterloo and formation of, 138–40
 political activities, 137, 160
 working class, 135–37, 140, 160–62,
 181
 See also collective bargaining;
 Combination Acts (1799, 1800)
clockmaker's work, 76
cloth markets, 52–54
 Cloth Hall, Leeds, 54, 55, 182, 183
 yarns, 129
cloth production
 bleaching, 50
 carding, 25, 49, 64, 65–67, 77, 88,
 128, 133
 combing, 48, 128
 cropping, 44, 69, 129
 dyeing, 26, 50, 85–86, 216
 finishing, 25, 31, 69
 fulling, 26, 31–32
 knitting frames, 44, 134
 printing, 50, 85–86
 putting-out system, 47–50
 silk (throwing), 65, 113
 spinning, 25
 stocking frames, 44
 water-frames, 64–67, 66
 weaving (silk), persistence of han-
 dloom, 157
cloth types
 Bengals, 154
 calico, 40
 muslins, 154
 silk and silk blends, 31, 46
 See also cotton; fustian; linen; wool and
 woolens; worsteds
coal, 12, 91, 144
 cost of, 95, 97
 versus waterfalls, 144
 See also steam engines
collective bargaining, 139
 and working class, 140
Combination Acts (1799, 1800), 117, 131
 and incorporation, 171
 repeal of (1824), 139, 160, 171
combing, 48, 128
 See also cloth production
commerce, 100–2
consumer culture, 33–34, 36, 182, 183, 189
 sumptuary laws and, 30, 34, 41
 See also fashion; Paisley shawls

- consumption, separation from production, 4, 161
- contextualist analysis, 8–9, 11
- Corn Laws, 74, 137, 142
- landed gentry, benefit to, 174
 repeal of, 175, 185
See also Anti-Corn Law leagues; Free Trade
- corporations
See business organization
- cotton
 adoption of in England, 40–41
 blends, 50
 cultivation of, 104
 economic impact of, 2
 government prohibition against, 70
 importation of, 2, 102, 103, 104
 in Middle Ages, 30
 mechanization, relation to other fibers, 86–89, 128
 price of, 104
 processing of
See spinning; weaving
 profitability of, 70
 trade in, 36
 vertical integration of, 168
 weaving, 156
See also East India Company (EIC); Indian cloth; Liverpool Cotton Brokers' Association; slavery; United States
- cotton brokers
 emergence of, 101
- cotton mills
 and steam engines, 96, 97, 98
 credit, 31, 73, 141
See also banks; boom and bust cycle
- Crompton, Samuel, 81–82, 84
See also spinning mules
- cropping, 44, 69, 129
See also cloth production
- Crusades, 32–34
- Crystal Palace, 182
- custom-made goods, 54
- Darby, Abraham, 189
- demography, 22, 23–24, 191
- Derbyshire, 44, 113
 Derby silk mill, 68, 113
- domestic production, 25–26, 169, 181
 legacy of in factories, 179
See also factory; labor, industrial; patriarchy; putting-out system
- Drinkwater, Peter, 96
- drought, 142
See also water power
- Dutch East India Company (VOC), 36, 40
- dyeing, 26, 50, 85–86
 bleaching, 50
See also cloth production
- East India Company (EIC)
See also capitalism; mercantilism
 British empire and, 150
 government, functioning as, 37, 107, 150
 Indian cloth and, 36, 43
 Industrial Revolution, credit for, 40–41
 Industrial Revolution, responds to, 108
 joint-stock company, 171
 North American customers, 41, 102, 108
 shawls and, 152, 163
 slave trade and, 41–42
- Edgerton, David, 10
- efficiency
 definition of, 121
 meaning of, 146
 term, changing meaning of, 85–86
- enclosure, 52, 74, 80, 191
- energy
 comparisons between power systems, 120, 121
See also efficiency; thermodynamics
- Engels, Friedrich, 136, 179
- engineering firms, 76, 132
- factory
 Arkwright-style, 71–75, 72
 buildings, growth of, 94
 definition of, 68
 division of labor and, 169
 invention of, 64, 68–69, 190
 meaning of, 67
 plantation as precursor, 186
See also labor, industrial; mass production; putting-out system
- Factory Act (1833), 109
- Factory Act (1847), 175
- fashion, 114, 162
 as social status marker, 30, 34, 41
 mechanization and, 127, 131
 royals and, 40, 164
See also class
- financial revolution
See banks
- flying shuttle, 59, 113
 bottleneck created by, 59, 62, 155, 166
 Industrial Revolution, credit for, 57–60
See also looms; weaving

220 Index

- food prices, 134, 142, 174
See also Corn Laws
- France
 French Revolution, 73, 116–17
 Napoleonic Wars, 73, 141
 slave trade and, 42
 textile production of, 11, 37, 191
 war with, 73, 108, 117, 118
- Free Trade, 174–79, 185
See also Corn Laws
- freemen
See guilds, Middle Ages
- fuller's earth, 26
- fulling, 26
 mechanization of (Middle Ages), 31–32
See also cloth production
- fustian, 31, 40, 50, 60, 70, 87
 Industrial Revolution and, 113
 putting-out system and, 113
- Gama, Vasco da, 34
- General Chamber of Manufacturers, 117
- gig-mills, 44, 87, 129, 132, 133
- Gott, Benjamin, 130, 132
 and apprenticeship, 131
See also wool and woolens
- government, 1, 65, 66, 73
See also legislation; mercantilism;
 patents
- Great Exhibition in London (1851), 182
- Greg, Robert Hyde, 174
See also Free Trade
- Greg, Samuel, 73, 75, 77
 labor force of, 92, 110
See also Church of England, dissent from;
 Quarry Bank mill
- Griffin, Emma, 17
- guilds, 171
 Combination Acts, 117
 decline of, 132
 legacy of in factories, 179
 machine breaking, 134
 Middle Ages, 28–29, 30, 31
 transformation of, 7, 117
- Habakkuk thesis, 13
- Haft, Daryl, 11, 191
- Hargreaves, James, 74, 115
See also spinning jenny
- Helmshore Mills, 128
- heterogeneous engineers, 9
- historical materialism, 179–81
- historiography, 8–11, 105, 191
 consumption history, 16–17
 economic history, 11–14, 106
 economic history, labor, source of, 80
 economic history, wages, 79–80
 environmental history, 17
 global history, 15
 labor history, 17
 national history, 14
 science history, 14
- Hockley Mill, 63, 74
- Horsfall, William, 134
- housing, 77
 mill villages, New England, 124–27
See also domestic production; Manchester
- Hudson, Patricia, 11, 16
- Hughes, Thomas P., 8–9
- Humphries, Jane, 13, 17, 79
- Hunt, Henry, 138–39
- imperialism, 35–36, 150, 163, 175
See also East India Company (EIC);
 mercantilism
- incorporation
See under business organization
- India
 England, relationship with, 107,
 149–50, 163
- Indian cloth
 competition, 6, 85–86, 148,
 163
 demand for, 182
 designs of, 39
 division of labor, 43
 domestic production, 38
 EIC and, 36
 English language, effects on, 41
 industrialization, 149
 protection against, 70
 quality of, 43
 regional specialties, 38
 slave trade and, 41–42
 trade, 36–40, 108
 weavers using British yarn, 149
See also Calico Acts; Calico Craze
- Industrial Revolution
 coining of, 6
 contemporaries of, 5
 cost competition and product innovation,
 85–86, 92, 146, 147, 150
 description of, 2, 64
 disputed, 5–6
 mythical version, 5–6, 14, 57–58, 128,
 165–66, 178, 186–87
 spreading of, 147
See also invention; mass production;
 mechanization

- industrialization
 definition of, 4–5, 7
 Inikori, Joseph, 106
 internalist analysis, 8–9
 invention, 1, 6, 12, 20, 83–84
 economic histories of, 85–86
 Industrial Revolution, credit for, 57–58,
 165–66, 178, 180
 process of, extended, 94–95
See also patents
 investments, 125
 Iron Man headstock
See under spinning mules
 ironworking, 189
 Italy, 30
 silk industry, 65, 68, 128
- Jacobins, 117, 134
 Jacquard looms, 159, 163
 Joint Stock Companies Act (1856), 172
 joint-stock companies
See under business organization
 Joint-Stock Companies Registration Act
 (1844), 172
 journeymen, 131–32, 135, 190
See also apprentices; guilds; workshops
- Kashmiri shawls, 38, 39, 50, 152, 153, 162,
 163
See also Paisley
- Kay, John, 155, 166
See also flying shuttle
- Kennedy, John, 92, 147
See also McConnell & Kennedy
- knitting frames, 44, 134
See also cloth production
- labor, child, 80, 135
 legal restrictions on, 148
 New England mills, 123
 pauper children, 77, 109
See also apprentices
- labor, division of, 4, 60–62
 gendered, 72, 80, 81, 160, 167
 Middle Ages, 31–32
- labor, industrial
 autobiographies of workers, 137
 capital, opposition to, 138–40
 capital, overlap with, 161
 growing numbers for, 52
 Irish immigrants, 167
 job displacement, 132, 134–35, 143,
 150
 limited work hours, 175
 pauper children, apprenticeship of, 109
 payment for, 179
 political representation, fight for, 148
 reelers, 94
 resistance measures, traditional, 140
 spending power of, 110
 strikes for wages, 137–38
 United States, 124, 126
 voluntary labor, shift to, 110
See also class; domestic production;
 factory; labor, child; labor, division
 of; putting-out system
- Lancashire County, 50–54, 60, 70, 76, 91
See also Manchester
- Landes, David, 4
 Latour, Bruno, 9
 Leeds, 28, 52–54
See also cloth markets
- Leeds and Liverpool Canal, 102
- legislation
 Assize of Measures (1196), 31–32
 Combination Acts (1799, 1800), 117,
 131, 139, 160, 171
 Corn Laws, 74, 137, 142, 174, 175, 185
See also Free Trade
 Magna Carta (1215), 31
- leisure, 4, 181–82
- Lemire, Beverly, 16
- limited liability, 172
See also business organization
- linen, 87–88
 blends, 46, 50
See also fustian
 importation of, 37
 vertical integration of, 168, 170
See also Marshall, John
- Liverpool, 28, 91, 101–2
- Liverpool and Manchester Railway, 166
- Liverpool Cotton Brokers' Association,
 173, 178
- Lombe, John, 68, 113
- London Corresponding Society, 117
- Long, Pamela, 14
- looms
 draw looms, 114
 functioning and parts, 26, 27, 58, 59
 handlooms, persistence of, 130
 inventions for, 155
 labor and, 158, 160, 167
 numbers in households, 49
 powerloom adoption in Britain, 154
 powerloom patents, 155
 powerlooms, 113
 powerlooms and product quality,
 157, 167
 powerlooms and spinning mules, 167

222 Index

- looms (cont.)
 powerlooms in United States, 125
 status, 167
See also flying shuttle; weaving
- Lowell, Francis Cabot, 125–27, 154, 169, 171
- Luddites, 128, 134–35
- luxury goods, 30, 34, 36, 162, 163, 185
- Lyon, France, 191
- machine breaking, 115, 134
- Magna Carta (1215), 31
- Malm, Andreas, *Fossil Capital* (2016), 17
- Manchester
 business failures, 112
 canals, 97, 102
 celebration of industrialization, 176–78, 182
 cotton mills in, 108
 filthy, description of as, 110–12, 136
 Free Trade Hall, 176, 177
 hinterlands, specialization in, 99, 112
 Liverpool, relationship with, 101, 112
 map of 1824, 111
 population growth, 110–12
 printing industry, 91
 railways, 166
 Royal Exchange building, 178
 slavery, role in, 104, 148, 173
 tenements of, 136
 textile town, history of, 90–91
 transportation, 91
See also canals; Industrial Revolution; Lancashire County
- manufacturing
 definition of, 2
See also capitalism, industrial; class
- market towns, 28–29
See also Leeds
- Marshall, John, 87–88, 97, 168, 170
- Marx, Karl, 179, 180
 historical materialism and, 179–81
See also capitalism, industrial; class; Engels, Friedrich
- mass production, 4–5, 162–64, 166
- McConnell & Kennedy, 92–95, 186
 customer innovation and feedback, 93–94
 mills on Rochdale Canal, 97, 98
 weavers, employment of, 113, 157
 workers' strikes, 115
- McConnell, James, 92
See also McConnell & Kennedy
- mechanization
 industrialization and, 4–6
 labor and, 132, 134–35, 143, 150
 laws against, 44
 Middle Ages, 31–32
 reasons for, 158
 resistance to, 134–35
 mercantilism, 35–36, 100–1
See also capitalism; imperialism
- Merchant Adventurers of London, 29
- merchants, 60–62, 157
 manufacturing and, 112, 129–31, 178
 Middle Ages, 29
- Mersey and Irwell Navigation Act (1721), 91
- middle class
See under class
- millwrights, 75–76
- Mokyr, Joel, 11
- monopolies
See under business organization
- Murray, Matthew, 88, 97, 168
- muslins, 154
- New Draperies
See worsteds
- North America
 cotton fabric, importation of, 108
 market, 54
See also East India Company (EIC); slavery
- Oldknow, Samuel, 60–62, 68, 77, 80, 169
 and fashion, 114
 Arkwright-style mill, adoption of, 71–73, 92
 weavers, employment of, 114–15, 157
- overlookers, 77
- Owen, Robert, 77, 169
- Paine, Thomas, 116
- Paisley, 39
 name of, 152
 popularity of, 152
- Paisley shawls, 153, 159, 162
 Queen Victoria and, 164
- Paisley village, Scotland, 160
 boom and bust cycle and, 162
 weaving tradition, 154, 159
- paper-making, 190
- Parthasarathi, Prasannan, 15
- Pasold Studies in Textile History, 16
- patents, 65–67, 71–75, 83, 95
- patriarchy, 25–28, 81, 106, 117, 159, 190
 persistence of, 169

- political actions and, 160
 United States, 124
See also domestic production; plantations
- Paul, Lewis, 65
- Peel, Robert, 175–76
- Peterloo, 138–40, 176
 response to, 160
- Piccadilly Mill, 96
- plantations
 apprenticeship, comparison to, 107
 factory, precursor to, 68, 169, 186
 household production, 106, 124
 industrial manufacturing, precursor to, 42
 meaning of, 42
 rise of, 6
See also cotton; slavery
- political actions, 138–40
 Chambers of Commerce, 173
 commercial and manufacturing interests, 173
 franchise, quest for, 135, 137, 148, 160
 government protection for workers, 174–79
 manufacturers' actions, 164
 patriarchy and, 160
 physical force, use of, 160
 roots of, Age of Revolutions, 116–17
 roots of, religious radicalism, 118
See also class; Free Trade; legislation; trade unions
- poor law
See under Church of England
- pottery, 189
- powerlooms
See under looms
- printing, 50, 85–86
See also cloth production
- product innovation
 cost competition versus, 85–86, 92, 146, 147, 150, 161
 definition of, 3
 shift from, 3, 95
- profit incentives, 79–80
- proto-industrialization
See putting-out system
- putting-out system, 47–50, 51, 100
 description of, 60–61
 factory predecessor, 68
 factory production, compared to, 67
 flying shuttle and, 59
 merchants, challenges to, 61, 71, 158
 processing, phases of, 60
 proto-industrialization, 7
 transformation during industrialization, 99
- worsteds and, 47, 129
See also cloth production
- Quarry Bank mill, 73, 75, 77, 92
 labor force of, 109–10
 waterwheels, continued use of, 121
See also Greg, Robert Hyde; Greg, Samuel
- Radcliffe, William, 155, 166
- railroads, 147
 leisure and, 181
 Liverpool and Manchester Railway, 166
See also canals; transportation
- Railway Act (1844), 175
- Reform Act, 148
- resistance
 Luddites and, 128, 134–35
 machine breaking, 115, 134
 mechanization cause, 116
 mechanization effect, 115
 strikes for wages, 115
 tradition of, 115–16
 reverse salient, 9
- Riello, Giorgio, 15, 107, 108
- Roberts, Richard H., 142, 155
- Rochdale Canal, 91
- Rochdale Canal Act (1794), 97
- Rosenband, Leonard, 11, 190
- Royal Opera Arcade, 182
- Royal Society, 83
- Russell, Edmund, 17
- Sagar, Henry, 128
- Salt, Titus, 169
- Saltaire, 169
- Scranton, Philip, 127
- shopping, 182, 183
 market towns and, 28–29
See also cloth markets
- silk
 blends, 31, 46
 Derby silk mill, 68
 French, 191
 Indian, 38
 Italian, 30
 Paisley village, 154
 status marker, 30, 34, 41
 throwing, 65, 113
 weaving, persistence of handloom, 157
- The Silk Road, 32–34, 36
 Crusades
 spices
- Slater, Samuel, 123

224 Index

- slavery, 41–42, 108, 148
 labor and plantations, 42, 102
See also capitalism; labor, industrial
- Smail, John, 16
- Smith, Adam, 101, 161, 171, 174, 180, 185
 Industrial Revolution, credit for, 178
See also capitalism; capitalism, laissez-faire capitalism, myth of
- Smith, Pamela, 14
- social hierarchy
 Middle Ages, 24, 30
See also shopping; sumptuary laws
- Society of Arts, 62, 83
- spices, 34, 36
- spinning, 48
 flyers, 44, 45
 gendered division of labor, 72, 144
 India, compared to England, 43
 Saxony Wheels, 44, 45, 65
 United States, 124
 water-frames and, 85–86
 weaving and, in one mill, 168
See also cloth production; spinning jenny; spinning mules; water-frames
- spinning jenny
 function of, 62, 63
 hand powered, 63
 invention of, mythical version, 57
 persistence of, 74–76
 popularity of, 84
 product, inconsistent thread, 81, 85–86
See also spinning; spinning mules; water-frames
- spinning mules, 143
 invention of, mythical version, 57
 Iron Man headstock, 142, 143, 144–45, 186
 patent, lack of, 83–84
 popularity of, 83–85
 powerlooms and, 167
 product, inconsistent thread, 82
 spindles, numbers of, 94
See also spinning; spinning jenny; water-frames
- spinning wheels, 25, 44, 45
See also spinning; spinning jenny; spinning mules; water-frames
- spinsters, 72
- stakeholders, 9
- steam engines, 130
 adoption of, slow, 97, 98
 advantages of, 120
 coal mines, proximity to, 96
 cost of operation, 97
 efficiency, 175
 iron makers, early adoption of, 189
 patents, expiration of, 120
 railroads, use of, 147
 separate condensers, 96, 120
 switch to during drought, 142
 thermodynamics, development of, 145, 146
 waterwheels, comparison to, 121, 144
 workings of, 96, 146
See also Boulton & Watt; Watt, James
- Steedman, Carolyn, 17
- stocking frames, 44
See also cloth production
- strikes, 137–38
- Strutt, Jedidiah, 123
- Styles, John, 16
- sumptuary laws, 30, 34, 41
- supply and demand
 and industrialization, 4
 systems theory, 8
- Ten Hours' movement, 175
- tenements, 136
- textile production, French, 191
- the social, 9
- thermodynamics
 development of, 145, 146
- Thomas, William, 51
- Thompson, E. P., 17
- thread, 25
See also spinning
- throwing silk, 65
- tin, 76, 88
- Toynbee, Arnold, 6
- trade unions, 117, 134, 140
 collective bargaining, 139, 140
 strikes, 137–38
See also class; Combination Acts (1799, 1800); political actions
- transportation, 91, 93
 canals, building of, 53
 railroads, 166
 steam engines, 147
 turnpikes, 91
See also canals; railroads
- United States
 cotton and, 104–5, 173
 independence, 105
 industrialization, 123–28
See also North America; plantations; slavery
- vertical integration, 169
 cotton, 168

- handiwork, continued use of, 131
 linen, 168, 170
 wool, 130, 169
 Victoria Quarter shopping arcade, 183
 Victoria, Queen of England, 150, 164, 167
- wages
 child labor, use of, 79
 gendered discrepancy, 80
 historians' debates about, 13, 79–80
 purchasing power, 137
 reduced through mechanization, 144, 147
 strikes for higher wages, 137–38
See also class; Marx, Karl
- water power, 75, 130
See also waterwheels
- water-frames, 66, 143
 Arkwright, and, 64
 cotton warp and, 70
 factory system, 65–67
 function of, 65
 invention of, 65–67
 invention of, myth version, 57
 popularity of, 84
 spinning jenny and, 85–86
- waterwheels, 31, 72
 steam engines, comparison to, 121, 144
- Watt, James, 95–96
 credit for Industrial Revolution, 178
 patents, 95, 97, 120
See also Boulton & Watt; steam engines
- weavers
 domestic, as outside control of factory, 158
 domestic, wages decline, 162
 pay for, decline, 162
- weaving, 26, 27
 fibers, variations, 156
 gendered, 129, 159, 160
 hand-powered, 51, 91, 113, 154, 155, 157–58
 household production, continued demand for, 113
 intricate patterns of, 159, 162–63
 limitations in width, 58
 Middle Ages, 25
 spinning and, in one mill, 168
 status, loss of, 159
 United States, 123–28
See also cloth production; domestic production; factory; looms; vertical integration
- weaving sheds, 168–71, 170
- Wedgwood, Josiah, 189
- Weisdorf, Jacob, 13
- whitesmiths, 88
- wool and woolens
 blends, 30, 46
 combing, 128
 cotton, relationship to, 128
 economic importance of, 25
 export of, 25, 29
 flying shuttle, adoption of, 60
 fulling, 129
 household production of, 86, 113, 129
 in Middle Ages, 29, 31–32
 mechanization of adapted to cotton, 128–30
 processing of, 25, 26, 44–46, 48, 130
See also gig-mills
 slave trade and, 42
 spinning, 25
 vertical integration, 169
 weaving, powerloom, late adopters, 156
 worsteds, comparison to, 46–47, 86, 156
See also cloth production; worsteds
- worker housing, 77, 78, 169–71
- working class
See under class
- workshops, 28, 49, 100
 factory predecessor, 68–69, 140
 persistence of, 76, 87, 109, 113, 158
See also apprentices; capitalism, industrial; factory; guilds; labor, industrial
- Worshipful Company of Drapers, 29
- Worshipful Company of Framework Knitters, 134
- worsteds
 capital, investment in raw materials, 46, 129
 flying shuttle, adoption of, 60
 processing of, 46, 48
 proto-industrialization, 47, 86, 113, 129
 weaving, powerloom, early adopters, 156
 woolens, comparison to, 46–47, 86, 156
See also cloth production; wool and woolens
- Wrigley, E. A., 12
- Wyatt, John, 65
- yarn
See spinning
- Yorkshire County
 farm size, 47
 worsteds, center for, 46
See also Leeds