

INDEX

- Accenture, 157, 177
accounting activities. *See* back-office operations
ACM, 34
Adams, Ansel, 135
Afghanistan, 96
Africa, 27
 outsourcing, author's
 predictions, 191
 physical work locations, 11
 potential competitive force, 25
agriculture, past offshore
 outsourcing, 4
Airborne Express, 217
airline travel, 67
Alta Vista, 123
Amazon.com, 123, 158
 book delivery to outsourcing
 companies, 153
 e-commerce factor, 26
American Airlines, 161
American Express, 73
Andersen Consulting, 177
Andreessen, Marc, 28, 58, 140
Apple Computers, 46, 157
 interest in low-cost
 marketplace, 59
 iPod, 58
 Macintosh
 help desk expectations, 43
 PowerBook, 58
 word processing, 57
Arendt, Hannah, 85
Argentina
 emigration of Europeans, 225
 outsourcing expansion, 90
Arkwright, Richard, 224
Asia
 advanced economies in urban
 areas, 216
 H-1B visas, 206
 outsourcing, market research
 analysis, 77
 physical work locations, 11
AskJeeves, 123
Australia, 225
 outsourcing, current attitudes, 56
 visiting knowledge workers, 213
automation, data entry work
 easily outsourced, 63-64
 not easily replaceable, 63
 replacing data entry work, 62-63
automobile industry, 3
availability, outsourcing
 factor, 21-24
back-office operations and
 outsourcing, 66-67
 airline travel, 67
 laboratories, 68-69
 medical analysis, 68
 test analysis and diagnosis, 68

- backlash
 - by U.S. workers, 212
 - potential disruptive factors, 95
- Bangalore, 92
 - article on Bangalore's airport, 218
 - help desks, 44
 - high-speed Internet connection, 216
 - IT offshore trends, 87
 - lack of high-quality telecommunications in 1970, 64
 - lack of reliable Internet access in hotels, 217
 - maintenance/enhancement work, 50
 - Motorola, 162
 - outsourcing
 - keypunch operations, 38
 - locations of project managers/teams, 56
 - Motorola, 22-23
 - panel, 162
 - training workers, 170
 - physical work locations, 10
 - Seychelles Island disaster centers, 97
 - workers
 - availability, 12
 - quality of work, 12
- Bangladesh and outsourcing
 - keypunch operations, 38
 - physical work locations, 10
 - reasons for U.S. outsourcing, 22
- Barbados and outsourcing, 44
 - help desks, 44
 - keypunch operations, 38
- Barrett, Craig, Intel CEO, 91
- BearingPoint, China labor costs, 92
- Beijing
 - English communication, 93
 - R&D centers built by U.S., 20
- Bell, Daniel, 85
- Berners-Lee, Tim, 58
- Bezos, Jeff, 140
- bin Laden, Osama, 104
 - recipient of U.S. tax payers' information, 75
- Birmingham, 44
- Black & Decker tools, 13
- Blackberry devices, 77
- Bladelogic, 14
- Bombay
 - outsourcing
 - privacy issues, 210
 - salaries affecting U.S. salaries, 190
 - SLAs, 175
 - potential for attack, 96
 - purchasing software products, 59
 - telecommunications infrastructure, 24
- Bonds, Barry, 46
- Boston
 - costs of prestigious addresses, 159
 - current telecommunications infrastructure, 24
 - help desks, 44
 - outsourcing
 - SLAs, 175
 - Wipro IT outsourcing firm interpreting hospital X-rays, 154
 - worker availability, 12
- Boston College, 188
- Botanical Gardens
 - New York City, 227
- BPR (business process reengineering), 17-18, 107, 152, 155
 - backfiring on employer, 109
 - current popularity, 153
 - cycles, 152
 - help desks, 46
 - not overnight miracle, 153
 - sorting out core competencies, 170-171

- utilization by outsourcing
 - companies, 153
- Brazil
 - outsourcing, current attitudes, 56
 - potential economic upheaval, 97
- British Parliament, 225
- British Treasury's Enterprise Conference, 188
- Brooklyn, help desk staffs, 45
- Bulgaria and outsourcing
 - importance ratings in U.S., 222
 - reasons for U.S. outsourcing, 22
- Burger King, 50
 - only work choice, 163
 - workers safe from outsourcing, 62
 - salary versus computer programmer salary in India, 1989, 8
- Bush, President George W., 104
 - election campaign speeches, 192
 - importance of digital infrastructure, 216
 - no proposals affecting workers and outsourcing, 186
- business process reengineering (BPR), 17-18, 107, 152, 155
 - backfiring on employer, 109
 - current popularity, 153
 - cycles, 152
 - help desks, 46
 - not overnight miracle, 153
 - sorting out core competencies, 170-171
 - utilization by outsourcing companies, 153
- Business Process Resource Centre Web site, 153
- Business Week*, 92-93
 - outsourcing topic of coverage, 4
- Business Week Online*, 107
- Butterball, 45
- Byron, Lord, 221, 225
- C++
 - competency, learning new programming languages, 56
 - help desk offshore staffs, 46
 - importance of business rules and customs, 54
- Cajun delicacies, 158
- California
 - Infosys Technologies job creation, 101
 - insurance claim processing, 72
 - potential economic upheaval, 97
 - quality versus price on products, 187
- call centers/help desks, 41
 - cost considerations, U.S. cities, 43-44
 - current status, 42
 - evolvment, 41-42
 - outsourcing, 44, 64
 - consumer-products industry, 45-46
 - follow-up activity, 65-66
 - future product benefits, 65
 - inbound and outbound activity, 65
 - Internet-based communication, 46-47
 - offshore trends, 87-88
 - outlook, 47-48
 - programming, 46
 - record-keeping technology with workflow automation, 64
 - technicians' product knowledge level, 64
 - training required, 44-45
- Camus, Albert, 103

- Canada
 - emigration of Europeans, 225
 - high-wage countries, 185
 - Maritime Provinces disaster centers, 97
 - medical training of foreigners, 70
 - salary expectations of knowledge workers, 9
 - visiting knowledge workers, 213
 - world's attitude about benevolent fairness, 223
- Canadian Culture 101, 46
- career change strategies, 135-136
- Carter, President Jimmy (speech), 194-201
- Cartwright, Edmund, 224
- Charles Schwab (company), 158
- Chennai
 - lack of reliable Internet access in hotels, 217
 - telecommunications infrastructure, 1989 weaknesses, 24
- Chicago
 - wages
 - help desks, 44
 - industrial wages lowered by European immigration, 226
 - workers, availability, 12
- Chile, 90
- China
 - BPR, 18
 - building infrastructure and services, 218
 - clinical trials, 71
 - computer programmer salaries
 - 1989, 8
 - 2004, 10
 - current telecommunications infrastructure, 24
- Dell technical and customer support operations, 61
- experience, 113
- illegal aliens, 212
- India symbolic relationships, 92
- investment in education, 214
- iPod not facing competition, 157
- IT offshore trends, 87
- keypunch operations, 38
- Linux operating systems, 94
- lower-paid knowledge workers, 168
- maintenance/enhancement work, 49
- outsourcing
 - author's predictions, 191
 - clinical trials, management/administration, 70
 - education and experience levels, 54
 - expansion, 90-94
 - final corporate measures, 160
 - from U.S., goal, 51
 - IT jobs, 2
 - knowledge-based work, 62
 - knowledge-based workers, 166
 - market research analysis, 77
 - potential, 21
 - satellite and Internet links, 6
 - targeting all knowledge-based industries, 154
 - technology factors, 152
 - U.S. attitudes, 223
- potential economic upheaval, 97
- productivity, 17
- R&D centers built by U.S., 20
- relocating U.S. workers, 162
- salaries
 - affecting U.S. salaries, 191
 - expectations of knowledge workers, 9
 - knowledge workers, 207

- software outsourcing, 93
- software
 - products developed, 58
 - purchasing products, 59
- source of low-cost products, 4
- Taiwan nuclear conflict, 96
- workers
 - education, 20
 - quality of work, 12
- Chrysler
 - implications of drop of market share, 3
 - owned by German company, 3
 - physical location, research analysts, 77
- Chute, La, 103
- CIA security risks, 210
- Citibank, offshore trends, 87
- Clark, Jim, 58
- Cleveland and outsourcing
 - help desks, 43
 - locations of project managers/teams, 56
- clinical trials,
 - management/administration, 69-71
- Clue Train Manifesto, The*, 47
- COBOL, 126-127
 - programmers, 100
 - shifts in hot technologies, 55
- Colombia, 90
- Coming of the Post-Industrial Society, The*, 82
- commodity skills, 114-115
- Commodore PET, 127
- Computer Horizons BPR
 - Web site, 153
- Congress
 - Department of Energy proposal, 199, 201
 - employment laws, 82
- outsourcing legislation, 85
 - backlash legislation, 95
 - dealing with outsourcing, 104
 - H-1B visas, 206
 - H-1B visas, lobbies for restrictions, 34
 - passing laws against outsourcing, 202
- presidential energy proposals, 194-195
- presidential speeches, 194
- speech by President Jimmy Carter, 199
- ConnectITChina, 93
- Cooney, David, 102
- core competencies, 169-171
- corporate strategies against outsourcing
 - being proactive, 154-155
 - considering career change, 161-162
 - finding specialized niches, 157-158
 - quantifying cost-benefit value proposition, 155-157
 - relocating workers to offshore sites, 162-164
 - relocating willingly, 159-160
 - starting new businesses, 160-161
 - working harder, 159
- Costa Rica, 69
- court reporters, 63
- Covey, Stephen
- CP/M, 127
- credit-card security, 26
- Crises of the Republic*, 81
- critical infrastructure, 184
- CRM (Customer Relationship Management) systems, 66, 73
- Cuba, 210
- Cutter Consortium, 84, 185
 - outsourcing

- affected workers, 178-179
 - government policy
 - recommendations, 186
 - IT, 174
 - predicted success, 82-83
 - outsourcing survey
 - extent of outsourcing survey, 2-3, 8, 83-84, 107, 117
 - individual proactive strategies, 118
 - negative impacts, 106
 - objectives of productivity and quality, 8
- Dan, Wang, 94
- data entry, outsourcing
 - automation, 62-63
 - back-office operations, 77
 - current status, 40-41
 - early examples, 62
 - individuals using Internet, 39
 - keypunch operations, 35-37
 - current outsourcing status, 38-39
 - lack of programming
 - outsourcing, 37-38
 - outsourced by other knowledge-based groups, 38
 - work easily outsourced, 63-64
 - physical locations
 - lack of importance, 51
 - travel agents, 39
- Datamation*, 87
- Davis, Bob, 225
- DEC (Digital Equipment Corp.), 41
- Decline and Fall of the American Programmer*, 2, 6, 30, 85
- computer programmer salaries, 8
- predictions on outsourcing, 191
- premature dodo bird forecasts, 89
- warnings about India,
 - productivity, 24
- Delhi
 - high-speed Internet connection, 216
 - personal outsourcing, 101
- Dell, Inc., 61
 - market research analysis, 77
 - outsourcing
 - offshore trends, 87
 - technology factors, 152
 - technical/customer support operations, 61
- Deloitte Research, 110
- DeMarco, Tom, 219
- Department of Veteran Affairs, 127
- Derbyshire, England, 224
- Detroit
 - local offices for outsourcers, 157
 - physical location, research analysts, 77
- DHL, 217
- Digital Equipment Corp. (DEC), 41
- Dilbert cartoons, 181
 - outsourcing trends, 146
- Domberger, Simon, 89
- Dubos, Rene, 103
- Dust-Bowl, 130
- e-commerce, 26
- East Berlin, 25
- Eastern Europe and outsourcing
 - expansion, 90-92, 94
 - H-1B visas, 206
 - physical work locations, 11
 - targeting all knowledge-based industries, 154
 - U.S. attitude currently, 25
- economic environments, frictionless, 11, 14
- eBay, 58, 158

- EDS, 157
- education
- finding work, 33
 - giving workers competitive edge, 184
 - global equalization, 190
 - India, 201
 - outsourcing
 - countering, 213-215
 - partial solutions, 6
 - preventing, 227
 - poll on important U.S. issues, 222
- Ellison, Larry, 51
- Emerson, Ralph Waldo, 165
- energy proposals speech, President Jimmy Carter, 194-201
- England, 224
- high-wage countries, 185
 - medical training of foreigners, 70
 - outsourcing
 - religious services/prayers, 79
 - textile work to U.S., 224
 - salary expectations of knowledge workers, 9
 - versus New England, population and salaries, 7
 - world's attitude about benevolent fairness of advanced countries, 223
- Ericsson, 58
- ethics of individuals, 136-140
- Ethiopia, clinical trials, 71
- Eudora, 123
- Europe and outsourcing, 191
- See also* Western Europe
- European Common Market, 217
- Excel, 57
- Expedia, 39
- FAA (Federal Aviation Administration), Y2K security risks, 209
- Fanning, Shawn, 28
- FBI security risks, 210
- FDA (Food and Drug Administration), 69-70
- Federal Reserve, 188, 211
- computer shutdown, 204
 - Y2K security risks, 209
- FedEx
- e-commerce factor, 26
 - part of traditional infrastructure, 217
- Filofax, 124
- finance activities. *See* back-office operations
- Finnish Nokia, 58
- Fiorina, Carly, 183
- First Things First, 124
- Flint, Michigan, 87
- Florida
- Nigerian scam ring, 73
 - potential economic upheaval, 97
- Food and Drug Administration (FDA), 69-70
- Ford (company), 48
- implications of drop of market share, 3
 - operations all over world, 3
 - physical location, research analysts, 77
- Ford, Henry, 43
- Forrester Research, 87
- Forster, E.M., 33
- Fortran II, 127
- France
- knowledge-based products and services, 90

- outsourcing of U.S. government programming, 210
- protection of British inventions, 224
- freelancers, individual strategies, 132-134
- frictionless economic environments, 11, 14
- Friedman, Thomas, 91, 218
 - New York Times*, 91
- G.I. Bill, 184
- Gardner, John W, 145
- Gartner Group
 - China software outsourcing predictions, 93
 - IT offshore trends, 87
 - outsourcing prediction, 110
- Gates, Bill
 - China concerns, 94
 - non-Microsoft developed software, 57
 - outsourcing, factor in fortune, 51
- Gateway, 77
- GE (General Electric), 45
 - instant help, 43
 - IT offshore trends, 87
 - outsourcing, 15
 - companies with experience, 177
 - current attitudes, 56
 - six-Sigma quality initiative, 147
- General Mills
 - instant help, 43
 - outsourcing, current attitudes, 56
- General Motors
 - implications of drop of market share, 3
 - instant help, 43
 - operations all over world, 3
 - outsourcing, current attitudes, 56
- physical location, research analysts, 77
- German Siemens, 58
- Germany
 - automobiles, 59
 - high-wage countries, 185
 - knowledge-based products and services, 90
 - outsourcing of U.S. government programming, 210
 - potential economic upheaval, 97
 - relocation to outsourcers' countries, 162
 - versus U.S. use of energy, 196
 - world's attitude about benevolent fairness of advanced countries, 223
- Gettysburg Address, 194
- Gold Rush, 227
- Google, 47, 58, 123, 158
 - searches for political leaders' contact information, 204
- Gordon, Gil
 - Grapes of Wrath*, 130
- Great Depression, 105, 130, 187
- Guangzhou, labor costs, 92
- Guatemala
 - illegal aliens, 212
 - maintenance/enhancement work, 49
- H-1B visas, 34, 206
 - on-shore outsourcing, 5
 - Asia, 206
- Hammer, Michael, 18, 152
- Hard Ball's Chris Matthews, 95
- Harley-Davidson®, 46-47
 - impact on foreign industry, 84
- Harvard
 - commodity skills, 115
 - lectures on BPR, 153

- Hawthorne Effect, 109
- Health Insurance Portability and Accountability Act (HIPAA), 72
- healthcare poll, U.S. issues, 222
- Hebert, Marc, 20
- Heichler, Elizabeth, 98
- help desks. *See* call centers/help desks
- Hewlett-Packard. *See* HP
- HIPAA (Health Insurance Portability and Accountability Act), 72
- Homeland Security Department, 210
 - poll on important U.S. issues, 223
- Honda automobiles, 48, 87, 155
- Hong Kong and outsourcing
 - labor costs, 92
 - U.S. attitude in 1989, 25
- House of Lords, 221
- HP (Hewlett-Packard), 94
 - computer sales and service, 41
 - outsourcing
 - China Linux lab, 94
 - corporate strategy, 158
 - current attitudes, 56
- hula hoop, 123
- Hungary and outsourcing
 - goal, from U.S., 51
 - U.S. government programming, 210
- Hyderabad, 217
- Hyundai automobiles, 155
- IBM
 - computer sales and service, 41
 - interest in low-cost marketplace, 59
 - introduction of PCs, 152
 - market research analysis, 77
 - no strikes by IT workers, 34
 - outsourcing, 15
 - China labor costs, 92
 - corporate strategy concerning, 158
 - current attitudes, 56
 - factor in leader's fortune, 51
 - offshore trends, 87
- Palmisano, Sam (CEO), 98
- PCs, help desk expectations, 43
- systems engineers with mainframe
 - computer sales, 41
- IEEE, 34
- immigration, 212-213
- India, 216
 - BPR, 18
 - call-center technicians' product knowledge level, 64
 - China symbolic relationship, 92
 - clinical trials, 71
 - competition factors, 14
 - computer programmer salaries
 - 1989, 8
 - 1989 versus 2004, 9
 - 2004, 9
 - Dell technical and customer support operations, 61
 - growth of computer technology, 29
 - H-1B visas, 206
 - help desks, 48
 - cultural differences, 45
 - offshore outsourcing, 44
 - insurance claim processing, 72
 - investment in education, 214
 - iPod not facing competition, 157
 - IT offshore trends, 87-88
 - keypunch operations, 38
 - lack of high-quality telecommunications in 1970, 64
 - lack of high-speed Internet access in hotels, 217
 - low labor costs, 90
 - lower-paid knowledge workers, 168
 - maintenance/enhancement work, 49
 - outsourcing

- author's predictions, 191
- clinical trials, 70
- companies with experience, 177
- current attitudes, 56
- dominance, 85
- education and experience levels, 54-55
- example, 90-91
- final corporate measures, 160
- IT jobs, 2
- knowledge-based work, 62
- maintenance/enhancement work, 50
- market research analysis, 77
- Motorola, 22-23
- personal outsourcing, 102
- potential, 21
- primary source, 85
- processing IRS forms, 189
- quality and productivity, 51
- religious services/prayers, 79
- role of larders, 202
- satellite and Internet links, 6
- security and privacy issues, 211
- targeting all knowledge-based industries, 154
- technology factors, 152
- U.S. attitude currently, 25
- U.S. attitude in 1989, 25
- U.S. attitudes, 223
- U.S. government
 - programming, 210
 - U.S. role once played, 221
- Pakistan nuclear conflict, 96
- physical work locations, 10
- political status in 1989, 25
- productivity, 13-14, 17
- purchasing software products, 59
- relocating workers, 162
- resources versus U.S., 14
- salaries affecting U.S. salaries, 191
- software products developed, 58
- telecommunications infrastructure
 - current status, 24
 - weaknesses in 1989, 24
- workers
 - availability, 12
 - education, 20
 - quality of work, 12-13
- Indiana, 10
- individuals, outsourcing implications
 - company variations, 111-112
 - commodity skills, 114-115
 - experience, 112-113
 - flexibility, 115-116
 - salary, 114
- ethics, 136, 138-140
- isolated event, 110-111
- next generation, 140-143
- outsourcing temporary or permanent threat, 105-109
- political protection, 111
- strategies, 116-117
 - career changes, 135-136
 - freelance consultant, 132-134
 - long work hours, 128-130
 - niches, 125-128
 - proactive, 118
 - relocation, 130-132
 - value added calculation, 119-125
- Indonesia and outsourcing, 4
 - disregard of nationality of manufacturers, 189
 - manufactured products, 169
 - goal, 51
- industrial union, British, 79
- inertia, 40, 155
- Information Technology Association of America (ITAA), 86
- information technology. *See* IT

- Infosys Technologies, 59
 - California job creation, 101
 - Shanghai office, 93
- insourcing, 101, 167
- insurance claim processing, 71-72
- Integrated Technology Solutions at Bellcore, 209
- Intel Corp., 91
 - building of R&D centers in Asian countries, 20
 - market research analysis, 77
 - technology, imagined need versus real need, 152
- Internal Revenue Service. *See* IRS
- interpreters, United Nations and automation, 63
- iPod, 157
- Iran, 210
- Iraq, 96
 - terrorism, 192
 - war's importance to U.S. citizens, 223
- Ireland and offshore outsourcing
 - help desks, 44
 - insurance claim processing, 72
- IRS (Internal Revenue Service)
 - back-office operations, 67
 - corporate tax benefits, 161
 - outsourcing
 - privacy issues, 203
 - core competencies, 169
- ISO-9000 certification, 16, 146-147, 156
- Israeli war, 96
- IT jobs. *See also* programmers
 - lack of unions, 34-35
 - offshore trends, 87-88
 - percentage sent offshore, 174
- ITAA (Information Technology Association of America), 34, 86
- Ittycheria, Dev, 13
- Ivy League, 115
- Jamaican keypunch operations, 38
- Japan
 - impact on automobile industry, 84
 - imported automobile reaction, 87-88
 - Linux operating systems, 94
 - potential economic upheaval, 97
 - product manufacturing sites, 206
 - reading English, 93
 - Sony, 58
 - versus U.S. use of energy, 196
- Java
 - China concerns, 94
 - outsourcing
 - education and experience levels, 55
 - help desk staffs, 46
- Jerusalem's potential for attack, 96
- Jobs, Steve, 51
- Johnson, Maryfran, 91
- K-Mart, 189. *See also* Wal-Mart
- Kernan, Governor Joe, 131
- Kerry, John, 104
 - election campaign speeches, 192
 - proposals affecting workers and outsourcing, 185
- key process activities (KPAs), 23
- keypunch operations, 35-37
 - current outsourcing status, 38-39
 - lack of programming outsourcing, 37-38
 - outsourced by other knowledge-based groups, 38
 - replacement by individuals using Internet, 39
 - replacement by travel agents, 39
- King, Julia, 87

- Klein, Dr. Lawrence, 86
- knowledge-based workers/services, 62
 - companies' cost-cutting measures, 150-153
 - outsourcing, 166-168
 - affected workers, 178-179
 - core competencies, 169-171
 - debate over quality, 52-54
 - initial pilot projects, 173-175
 - learning from veterans, 177-178
 - looming possibilities worrying U.S. CEOs, 147
 - measuring expectations with SLAs, 175-177
 - offshore trends, 88, 90
 - productivity, 149
 - proposals from outsourcing company, 146-147
 - quality issue, 148-149
 - reality, 147-148
 - respect/honesty for workers being displaced, 180-182
 - unmanageable workers, 171-173
 - workers competing for jobs, 179-180
 - strategies against outsourcing corporations, 154-164
 - individual workers, 154
- Konopacki, Mike, 188
- Korea
 - competition factors, 14
 - impact on automobile industry, 84
 - product manufacturing sites, 206
 - Samsung, 58
- KPAs (key process activities), 23
- KPMG Consulting, China
 - labor costs, 92
- Kurande, Hemant, 13
- laboratories, outsourcing back-office operations, 68-69
- Lacy, Alan, 91
- Lay, Ken, 137
- Lebowitz, Fran, 33
- legal work, 78
- Libya, 210
- Lincoln, Abraham, 194
- Linux and outsourcing
 - China
 - HP lab, 94
 - moving to, 94
 - education and experience levels, 55
- Logo programming language, 52
- London
 - British Treasury's Enterprise Conference, 188
 - potential for attack, 96
- Lord Byron, 221, 225
- Los Angeles
 - costs of prestigious addresses, 159
 - help desks, salaries, 44
 - industrial wages lowered by European immigration, 226
 - intangibility of knowledge-based work, 206
- Lotus Notes, 124
- Luddite machine wreckers, 221, 225
- Lynch, Ian, 94
- m-commerce
 - credit-card security, 27
 - good roads/highways as factors, 26
- Macaulay, Thomas Babington, 7
- Macintosh
 - help desk expectations, 43
 - PowerBook, 58
 - word processing, 57
- Madras
 - personal outsourcing, 101

- telecommunications infrastructure,
 - 1989 weaknesses, 24
- Madrid bombings, 96
- maintenance/enhancement
 - work, 49-51
- management
 - individual outsource
 - strategies, 116-117
 - carrier changes, 135-136
 - freelance consultant, 132-134
 - long work hours, 128-130
 - niches, 125-128
 - proactive, 118
 - relocation, 130-132
 - value added calculation, 119-125
 - manageability as outsourcing factor, 21-24
- Manhattan, 77
 - costs of prestigious addresses, 159
 - personal outsourcing, 101
- Manila and outsourcing
 - call centers, 65
 - core competencies, 169
 - offshore tax preparers, 75
 - salaries affecting U.S. salaries, 190
 - personal outsourcing, 101
- Mankiw, Greg, 187
- Maritime Provinces, 97
- Massachusetts General Hospital, 127
- MasterCard, 73
 - credit-risk analysis service, 149
- Matthews, Chris, 95
- MBA degrees
 - BPR awareness, 153
 - commodity skills, 115
 - education level for competitiveness, 54
 - pilot-project experimentation
 - programs, 174
- McDonald's
 - personal outsourcing, 102
 - salary versus programmer's in India
 - in 1989, 8
 - workers safe from outsourcing, 62
- McLees, Jim, 69
- McNealy, Scott, 94
- mean time to repair (MTTR), 176
- measurement/quality initiatives, 16
- medical analysis, 68
- Medicare, 222
- Merrill Lynch, 158
- Metropolitan Museum of Art, 227
- Mexico
 - disregard of nationality of manufacturers, 189
 - illegal aliens, 212
 - outsourcing
 - laboratories, 69
 - maintenance/enhancement
 - work, 49
 - U.S. attitudes, 223
 - quality versus price on products, 187
 - source of low-cost products, 4
- Microsoft Corp.
 - China
 - move away from, 93
 - Windows.NET lab, 94
 - interest in low-cost marketplace, 59
 - no strikes by IT workers, 34
 - non-Microsoft developed
 - software, 57
 - offshore trends, 87
 - outsourcing
 - corporate strategy, 158
 - current attitudes, 56
 - education and experience
 - levels, 55
 - versus Indian programmers, 57

- technology, imagined need versus real need, 152
 - building of R&D centers in Asian countries, 20
- Microsoft Office
 - technology, 152
- Microsoft Outlook, 123-125
- Microsoft Visual Basic, 46
- Microsoft Windows, 152
- Middle East
 - high-tech potential level, 27
 - potential economic boom, 97
 - war, 96
- Mills, Darius Ogden, 227
- Minneapolis
 - insurance claim processing, 72
 - personal outsourcing, 101
- MIT
 - commodity skills, 115
 - lectures on BPR, 153
 - OpenCourseWare, 215
 - shifts in technical education, 52
- Model-T Ford, 43, 158
- Morocco, 61
- mortgage/loan processing, 72-74
- Moscow and outsourcing, 119
 - fair treatment to outsourced worker, 180
 - IT offshore trends, 87
 - salaries affecting U.S. salaries, 190
 - U.S. attitude in 1989, 25
- Motorola, 58, 162
 - outsourcing, 15
 - in India, 23
 - SEI-CMM award, 22-23
 - six-Sigma quality initiative, 147
- MTTR (mean time to repair), 176
- Mumbai, telecommunications
 - infrastructure
 - high-speed Internet connection, 216
 - lack of reliable Internet access in hotels, 217
 - 1989 weaknesses, 24
- MUMPS, 127
- Nader, Ralph, 95
- NAFTA (North American Free Trade Agreement), 95, 189
- NASA (National Aeronautics and Space Administration), 184
- NASSCOM (National Association of Software and Service Companies), 85-86
- NATO's lack of communications
 - infrastructure, 217
- Nebraska and outsourcing
 - help desks, 44
 - problems from outsourcing, 203
 - salaries, 44
 - staff education level, 45
- Netscape, 58, 123
- New Delhi and outsourcing
 - BPR, 18
 - legal work, 78
- New England, 7
- New Orleans, 158
- New York
 - credit-card security, 27
 - help desks, 43-44
 - insurance claim processing, 72
 - intangibility of knowledge-based work, 206
 - potential for attack, 96
 - telephone call from India
 - in 1989, 24
 - worker availability, 12

- New York City
 - Botanical Gardens, 227
 - industrial wages lowered by
 - European immigration, 226
- New York Times* articles, 91
 - Bangalore's airport, 218
 - comments on education, 33
 - Motorola's Bangalore-based division, 162
 - Wipro IT outsourcing firm, 154
 - Motorola and CMM award, 22
- Newman, Paul, 171
- Nigerian scam ring, 73
- Nobel prize, 155
- Nokia, 58, 161
- North Africa, 27
- North America
 - advanced economies, 216
 - clinical trials, 70
 - education of Asian workers, 20
 - entrepreneurial business culture, 25
 - growth of computer technology, 29
 - lack of awareness of Eastern-bloc potential, 25
 - marketing software products, 58
 - outsourcing, 30
 - by satellite and Internet links, 6
 - information-handling services, 161
 - offshore production capabilities, 158
 - post-dot-com recession as factor, 27
 - reviews of bank/credit-card applications, 73
 - role of leaders, 193
 - to developing nations, 157
 - trend analysis, 85
 - physical work locations, 11
 - purchasing software products, 59
 - relocating U.S. workers, 162
 - workers
 - availability, 20
 - quality of work, 12
- North American Free Trade Agreement. *See* NAFTA
- North Korea
 - outsourcing of U.S. government programming, 210
 - South Korea nuclear conflict, 96
- nuclear conflicts, 96
- OECD (Organization for Economic Cooperation and Development), 214
- offshore outsourcing, 2
 - as business tactic, 79
 - clinical trials, management/administration, 69-71
 - cost-reduction success, 82-83
 - economic impact, 82
 - factors
 - availability, 21-23
 - lower-cost workers, 8-11
 - manageability, 21-24
 - political changes, 25-27
 - post-dot-com recession, 27-31
 - productivity and quality, 12-20, 30
 - telecommunications infrastructure, 24
 - future, 226
 - gain of familiarity and acceptance in U.S., 10
 - growth, 85
 - impact on industries, 84
 - issues of importance besides outsourcing, 222-223
 - looming possibilities worrying U.S. CEOs, 147

- morale problems, 2-3
- not new phenomenon, 225-226
- objectives, 8
- other area targeted besides
 - IT industry, 4
- possible merits, 185
- possible solutions, 184-185
- predicted success, 82
- proposals from outsourcing
 - company, 146-147
- protectionist legislation, 205-208
 - government policy recommendations, 5, 186
 - security and privacy issues, 209-212
- reality, 147-148
- regarded with sense of inevitability, 5
- role of U.S. leaders, 192-205
- solutions not simple, 5
- survey, 2
- temporary or permanent threat, 105-109
- Wal-Mart Factor, 187-192
- Omaha, 72
- Omaha Chamber of Commerce, 188
- OpenCourseWare, MIT, 215
- Oracle
 - databases, 54
 - no strikes by IT workers, 34
 - offshore trends, 87
- Organization for Economic Cooperation and Development (OECD), 214
- Orwell, George, 103
- Osama Bin Laden, 104
 - recipient of U.S. tax payers' information, 75
- outsourcing. *See* offshore outsourcing
- Pakistan
 - India nuclear conflict, 96
 - outsourcing of U.S. government programming, 210
 - political situation with India, 25
- Palmisano, Sam, 19, 98
- Panama, 61
- Paris
 - credit-card security, 27
 - potential for attack, 96
- Pater, Walter, 33
- Pawtucket, Rhode Island, 224
- Peace Corps, 135
- pension funds, 167
- Perot, Ross, 95
- Peru's outsourcing expansion, 90
- Philippines and outsourcing
 - clinical trials, management/administration, 70
 - companies with experience, 177
 - expansion, 90
 - from U.S., goal, 51
 - IT jobs, 2
 - knowledge-based work, 62
 - market research analysis, 77
 - U.S. attitude in 1989, 25
- Piney, Thomas, 7
- PL/I, 127
- Pogo, 104, 220
- Poland
 - challenges of e-commerce, 26-27
 - communications infrastructure, 217
 - growing competitive force, 25-26
 - outsourcing
 - from U.S., goal, 51
 - of U.S. government programming, 210
 - technology factors, 152
 - political cartoon, 188

- politics
 - backlash, 95
 - changes, outsourcing factor, 25-27
 - outsourcing protection, 111
- Porter, Eduardo, 86
- post-dot-com recession, 27-31
- Poughkeepsie. New York, 203
- Premji, Azim, 154
- privacy
 - issue for IRS outsourcing, 203
 - offshore tax preparers, 75
 - privacy laws, 72
 - protectionist legislation, 209-212
 - scrutinizing knowledge-based work, 184
- productivity, 149
 - acceptance of new policies/ procedures, 163
 - strategies
 - BPR, 152, 155
 - corporate businesses, 158
 - employee value, 120
 - estimating, 119
 - experience, 112
 - global equalization, 190
 - Hawthorne Effect, 109
 - higher salaries, 114
 - improvements, 108
 - to remain competitive, 151
 - machinery investments, 151
 - maintenance/enhancement work, 50
 - management leadership characteristics, 145
- outsourcing
 - debate over quality and productivity, 53-54
 - education and experience levels, 54
 - measuring expectations with SLAs, 176-177
 - objectives, 8
 - outsourcing factor, 12-20, 30
 - outsourcing success, 83
 - reasons, 175
 - workers' education and experience, 54-57
- programming techniques, 38
- resistance to BPR measures, 163
- tax/accounting rule changes, 218-220
- workers competing for jobs, 179
- professional societies and outsourcing, 34
- programmers/programming. *See also* IT jobs
 - fate of dodo birds, 85
 - keypunch machines/ operations, 35-37
 - maintenance/enhancement work, 49-51
 - outsourcing
 - help desk challenges, 46
 - quality debate, 52-54
 - shifts to outsourcing, 51-52
 - workers' education and experience, 54-57
- protectionist legislation, 95, 97, 101, 163, 192, 205-208, 227
- foreigners in undergraduate or graduate college programs, 214
- prediction of success/failure of policies, 188
- reducing outsourcing, 184
- security and privacy issues, 209-212
- quality
 - auto industry, 4
 - BPR strategies, 152, 155
 - costs, 156
 - best price and quality, 148

- finding lowest-cost, highest-quality providers, 4
- higher salaries, 114
- estimations, 119
- global equalization, 190
- importance of customer relationships, 156
- India's lack of telecommunications in 1970, 64
- management leadership characteristics, 145
- market research analysis, 77
- newly regarded issue, 149
- outsourcing
 - advantages, 156
 - debate over quality, 52-54
 - disregard of nationality of manufacturers, 189
 - education and experience levels, 54
 - factors, 12-20, 30
 - goal of outsourcing company, 150
 - measuring expectations with SLAs, 176-177
 - objectives, 8
 - pilot projects, 173
 - quantifiable details from outsourcing company, 149
 - reasons, 175
 - successes, 84
 - unmanageable tasks, 172
 - workers' education and experience, 54-57
- resistance to BPR measures, 163
- services support high-quality products, 157
- six-Sigma quality initiative, 147
- software products developed, 58
- varying definition, 148
- Wal-Mart, 187
- quality/measurement initiatives, 16
- Radio Shack, 127, 187
- Randall, Henry Stephens, 7
- RCA, 130
- recessions as outsourcing factor, 27-31
- Red Queen Principle, 1
- Redmond, Washington's outsourcing problems, 203
- Reengineering the Corporation, 152
- Ribeiro, John, 87, 92
- Rise and Resurrection of the American Programmer*, 21
- risks
 - credit-card security, 27
 - employee values, 120
 - outsourcing, 148
 - credit-risk analysis service, 73, 149
 - effects of, 163
 - effects on individual rather than corporate workers, 6
 - employer outsourcing recommendations, 117
 - knowledge workers in advanced countries, 11
 - worker replacement, 16
 - re-hiring laid off employees, 106
 - using cost-cutting measures too late, 151
- Robb, Drew
- Rochester, 157
- Romania as competitive force, 25
- Rongji, Premier Zhu, 92
- Roosevelt, Franklin Delano, 194
- Rotary Club, 47
- Round Rock, Texas, 61
- Rubin, Dr. Howard, 21

- Russia. *See also* Soviet Union
- computer programmer salaries after Soviet Union fall, 8
 - current telecommunications infrastructure, 24
 - growing competitive force, 25
 - investment in education, 214
 - IT offshore trends, 87
 - outsourcing
 - call-centers, 64
 - clinical trials, management/administration, 70-71
 - expansion, 90
 - final corporate measures, 160
 - from U.S., goal, 51
 - IT jobs, 2
 - knowledge-based work, 62
 - U.S. government programming, 210
 - salary expectations of knowledge workers, 9
 - Russian roulette, 110
 - Rust-Bowl, 130
- SABRE, 162
- salaries
- help desk staff, 44
 - outsourcing vulnerability, 114
 - computer programmers
 - China, 1989, 8
 - China, 2004, 10
 - India, 1989, 8
 - India, 2004, 9
 - knowledge workers, expectations, 9
 - physical work locations, 10-11
 - predictions concerning outsourcing, 190-192
 - U.S.
 - 1989, 8
 - 1989 versus 2004, 9
 - 2000, 9
- Samsung, 58
- Satyam, 93
- scam ring, 73
- Scheiber, Noam, 92
- SEC (Securities and Exchange Commission)
- back-office operations, 67
 - filings, 219
 - outsourcing core competencies, 169
- secretaries and automation, 62
- security, 185
- credit cards, 26
 - government clearances for vendors, 154
 - issue for IRS outsourcing, 203
 - job, 106
 - maintenance/enhancement work, 50
 - offshore tax preparers, 75
 - poll on important U.S. issues, 223
 - protectionist legislation, 209-212
 - scrutinizing knowledge-based work, 184
- SEI-CMM award, 16
- Motorola, 23
- SEI-CMM, level 5
- Motorola, 162
- Seinfeld*, 100
- September 11, 2001 attacks, 77, 96
- disaster's effect on federal government, 203
 - important U.S. issues, 223
 - security risks, 210
- Service Level Agreements (SLAs), 175-177
- Sex and the City*, 46, 100
- Seychelles Islands, 97

- Shanghai
- ConnectITChina, 93
 - English communication, 93
 - Infosys Technologies office, 93
 - physical work locations, 10
 - purchasing software products, 59
- Siemens, 58
- Sierra Atlantic Inc., 20
- Silicon Valley, 24, 125, 218
- Singapore, 90
- six-Sigma quality initiative, 16, 147
- SLAs (Service Level Agreements), 175-177
- Slater, Samuel, 224
- Slovakia, 61
- Social Security
- goals for workers, 187
 - poll on important U.S. issues, 222
- Software Engineering Institute. *See* SEI
- Sony, 58
- Walkman, 59
- South Africa, 46
- South America
- advanced economies in urban areas, 216
 - growing competitive force, 25
 - outsourcing
 - author's predictions, 191
 - market research analysis, 77
- South Korea
- Linux operating systems, 94
 - North Korea nuclear conflict, 96
- Soviet Union. *See also* Russia
- computer programmer salaries after fall of Soviet Union, 8
 - political status in 1989, 25
- Spain
- national elections, 96
 - protection of British inventions, 224
- Spears, Brittany, 95
- Sputnik, 184
- Stanford's lectures on BPR, 153
- steel industry's implications for
- computer industry, 3
- Steinbeck, John, 130
- Stewart, Martha, 45, 137
- stickiness, 155
- in location movement of knowledge-work, 11
- stock market research analysis, 76-77
- strategies for individuals, 116-117
- career changes, 135-136
 - freelance consultant, 132-134
 - long work hours, 128-130
 - niches, 125-128
 - proactive, 118
 - relocation, 130-132
 - value added calculation, 119-125
- Strutt, Jedediah, 224
- Sun Microsystems, 94
- no strikes by IT workers, 34
- Super Bowl, 45
- Suthan, Prathap, 201
- sweatshops, 104
- Sweden versus U.S. use of energy, 196
- Swedish Ericsson, 58
- sysadmin (systems administration),
- physical locations, 50-51
- sysop (systems operator), 50-51
- Taiwan
- China nuclear conflict, 96
 - competition factors, 14

- economic incentives to attract U.S. companies, 20
- outsourcing
 - Dell technical and customer support operations, 61
 - manufactured products, 169
 - product manufacturing sites, 206
- Takahashi, Dean, 94
- Tata, 93
- Tatas, 59
- tax filing, 74-75
- tax/accounting rule changes, 218-220
- telecommunications infrastructure, 24-25
- Teoma, 123
- terrorism
 - Iraq, 192
 - poll on important U.S. issues, 222
 - potential disruptive factors, 96-97
- textile industries
 - foreign industry impact, 84
 - implications for fate of computer industry, 3
- Thanksgiving, 45
 - call centers/help desks, 65
- Thibodeau, Patrick, 95
 - Computerworld*, 87
- Thomson SA, 130-131
- 3M, corporate outsourcing strategy, 158
- Tokyo
 - credit-card security, 27
 - potential for attack, 96
- TORAW, 34
- Toyota, 48, 155
- Travelocity, 39, 67
- trends
 - call centers offshore, 87-88
 - expansion to other countries, 90-94
 - industry models, 98-100
 - IT services offshore, 87-88
 - knowledge-based industries, 88-90
 - potential disruptive factors, 94-95
 - economic upheavals, 97-98
 - political backlash, 95
 - terrorism, 96-97
 - war, 96-97
 - twists, 100-101
 - insourcing, 101
 - personal outsourcing, 101-102
- Triple-Whammy econometric forecasting model, 155
- TRS-80, the IBM, 127
- Turn It Off*, 129
- Ulfelder, Steve, 91
- unions
 - employment protection, 106
 - lack of for IT, 34
 - rules supporting workers, 172
- Unisys, 87
- United Nations, 27
 - interpreters, 63
- United States
 - Congress
 - presidential energy proposals, 194-195
 - presidential speeches, 194
 - current telecommunications infrastructure, 24
 - emigration of Europeans, 225
 - high-wage countries, 185
 - medical training of foreigners, 70
 - recipient of outsourcing of British textile work, 224
 - role of leaders concerning outsourcing, 192-202
 - top down or bottom up strategies, 202-205
 - visiting knowledge workers, 213

- United States Postal Service, 217
- unmanageable workers, 171-173
- UPS (United Parcel Service)
 - e-commerce factor, 26
 - part of traditional infrastructure, 217
- Van Valen, Leigh, 1
- VB (Visual Basic), 55
- Visa credit cards, 73, 149
- VisiCalc, 57
- Visual Studio (Microsoft), 46

- Wal-Mart, 100, 189, 222
- Wal-Mart Factor, 187-192, 207
- Walkman by Sony, 59
- Wall Street, 163
 - back-office operations, 77
 - education and experience levels, 54
 - insourcing, 167
 - interests of senior management, 166
 - outsourcing
 - back-office operations, 67
 - insurance claim processing, 72
 - market research analysis, 76-77
 - pilot projects, 175
 - reasons, 175
 - positive market assessments, 168
 - reports to customers, 76
- Wall Street Journal*
 - article on European emigration, 225
 - outsourcing topic of coverage, 4
- Warsaw and outsourcing
 - offshore tax preparers, 75
 - proposals, 146
 - U.S. attitude in 1989, 25
- Washington, D.C.
 - impact of speech by President Jimmy Carter, 200
 - outsourcing
 - actions of individuals, 204
 - citizens protesting
 - outsourcing, 202
 - role of politicians, 191-192
 - potential for attack, 96
- Western Europe
 - advanced economies, 216
 - education of Asian workers, 20
 - growth of computer technology, 29
 - knowledge-based products and services, 90
 - market research analysis, 77
 - marketing/purchasing software products, 58-59
 - medical training of foreigners, 70
 - outsourcing
 - information-handling services, 161
 - production capabilities, 158
 - reviews bank/credit-card applications, 73
 - role of leaders concerning, 193
 - to developing nations, 157
 - trend analysis, 85
 - physical work locations, 11
 - relocating U.S. workers, 162
 - salary expectations of knowledge workers, 9
 - workers
 - availability, 20
 - quality of work, 12
- Wharton's lectures on BPR, 153
- Windows, China's move
 - away from, 93
- Windows.Net, China Microsoft agreement, 94
- Wipro, IT outsourcing firm, 59, 154
 - company's origin, 161
- WordStar, 127
- World Trade Center attacks, 96

Y2K, 30, 94, 205, 209

 maintenance/enhancement work, 50

 security risks, 209-210

 Senate committees, 209

Yahoo, 123

Zhongwen, Gou, 94

Zone Technologies, 69

