

## NORTH-HOLLAND

## Author Index—Volume 56

Chiang, J.-T., 77

Glenn, J.C., 203 Gordon, T.J., 203

Haxholdt, C., 119 Hora, S.C., 155, 171

Islam, T., 49

Larsen, E.R., 119 Linstone, H.A., 201 Lomberg, J., 171

Majumdar, S.K., 61 Meade, N., 49 Modis, T., 107

Payson, S., 131 Porter, A.L., 25

von Tunzelmann, G.N., 1 von Winterfeldt, D., 155

Watts, R.J., 25

## **Book Review Index—Volume 56**

| Dator, J., Paths of Fire: An<br>Anthropologist's Inquiry into   | <i>Readings</i> (Michael L. Tushman and Philip Anderson), 189  |
|---|--|
| Western Technology (Robert<br>McCormick Adams), 87<br>Dator, J., Technological Trajectories and<br>the Human Environment (Jesse | Rogers, L., <i>The Road Ahead</i> (Bill Gates), 95   |
| H. Ausubel and H. Dale<br>Langsford, eds.), 297   | Sharif, N., <i>Technology and Creativity</i><br>(Subrata Dasgupta), 197  |
| Linstone, H.A., War by Other Means:<br>Economic Espionage in America<br>(John J. Fialka), 99                                    | <ul> <li>Sharma, K., Competing in the Information<br/>Age (Jerry N. Luftman, ed.), 103</li> <li>Sharma, K., Intelligent Information<br/>Systems: Meeting the Challenge of</li> </ul> |
| Pelc, K.I., Managing Strategic Innovation<br>and Change: A Collection of  | the Knowledge Era (Alan J. Rowe and Sue Anne Davis), 193   |

## Subject Index—Volume 56

| Acres of utilized land, difficulty    | Aircraft industry, and defense conversion |
|---------------------------------------|---|
| of measuring capital                  | into global system of proprietary         |
| and, 131                              | technologies, 77                          |
| Adoption, and long-term comparison of | Anthropological inquiry, into Western     |
| innovation and                        | technology, 87                            |
| industrialization, 1                  | Arnol'd waves, mode-locking in forced     |
| Advertising strategies, genetic re-   | business cycle and, 119                   |
| engineering of corporations           | Austria, diffusion of successive          |
| and, 107                              | generations of a technology in, 53        |

Technological Forecasting and Social Change 56, 303–308 (1997) © 1997 Elsevier Science Inc. 655 Avenue of the Americas, New York, NY 10010

0040-1625/97/\$17.00 PII \$0040-1625(97)00142-X Bass model, diffusion of successive generations of a technology and, 49 Bibliometric measures, innovation forecasting and, 25 Capital, difficulty of measuring, 131 Categories, difficulty of measuring capital and, 131 Causality, difficulty of measuring capital and, 131 Ceramic engine technologies, innovation forecasting and, 25 Change, strategic, 189 Civilian needs, and defense conversion into global system of proprietary technologies, 77 Coefficients, diffusion of successive generations of a technology and, 49 Cognitive intelligibility, markers for nuclear waste sites and, 171 Combat aircraft, and defense conversion into global system of proprietary technologies, 77 Commercial buildings, difficulty of measuring capital and, 131 Commercial jets, and defense conversion into global system of proprietary technologies, 77 Competition genetic re-engineering of corporations and. 107 Information Age and, 103 Computer technology difficulty of measuring capital and, 131 future of, 95 Consistent patterns, difficulty of measuring capital and, 131 Constant coefficients, diffusion of successive generations of a technology and, 49 Contract manufacturing, and defense conversion into global system of proprietary technologies, 77 Convergence, and long-term comparison of innovation and industrialization, 1

Core competence, and defense conversion into global system of proprietary technologies, 77 Corporations, genetic re-engineering of, 107 Creativity, technology and, 197 Deep future, nuclear waste and, 155, 171 Defense conversion, into global system of proprietary technologies, 77 Design, and defense conversion into global system of proprietary technologies, 77 Development performance, and long-

term comparison of innovation and industrialization, 1 Devils's staircase, mode-locking in forced business cycle and, 119 Diffusion digital technology in U.S. telecommunications industry and, 61 innovation forecasting and, 25 of successive generations of a technology, 49 Dual-use strategy, and defense conversion into global system of

proprietary technologies, 77

Economic espionage, in America, 99 **Economics** and defense conversion into global system of proprietary technologies, 77 and long-term comparison of innovation and industrialization, 1 mode-locking in forced business cycle and, 119 Efficiency and defense conversion into global system of proprietary technologies, 77 diffusion of successive generations of a technology and, 49 digital technology in U.S. telecommunications industry and, 61

**Empirical measures** digital technology in U.S. telecommunications industry and, 61 innovation forecasting and, 25 Energy consumption capacity, difficulty of measuring capital and, 131 Engineering capability, and defense conversion into global system of proprietary technologies, 77 Environment, technological trajectories and. 297 Equipment, difficulty of measuring capital and, 131 Espionage, economic, 99 Evolution, diffusion of successive generations of a technology and, 49 Experience curve, and defense conversion into global system of proprietary technologies, 77 Experts, nuclear waste and, 155, 171 Finland, diffusion of successive generations of a technology in, 53 Firms and defense conversion into global system of proprietary technologies, 77 digital technology in U.S. telecommunications industry and, 61 and long-term comparison of innovation and industrialization, 1 Flexibility, and long-term comparison of innovation and industrialization. 1 Floor space, difficulty of measuring capital and, 131 Forced business cycle, mode locking and, 119 Formal expert elicitation process, nuclear waste and, 155 France, diffusion of successive generations of a technology in, 53 Full information maximum likelihood procedure, diffusion of successive generations of a technology and, 49

Functional specifications, and defense conversion into global system of proprietary technologies, 77 Gates, Bill, 95 Generalization, and long-term comparison of innovation and industrialization, 1 Genetic re-engineering, corporations and, 107 Germany, diffusion of successive generations of a technology in, 53 Global Look-Out Panel, Millenium Project and, 203 Global system, of proprietary technologies, 77 Goodwin business cycle, mode-locking in. 119 Government and defense conversion into global system of proprietary technologies, 77 nuclear waste and, 155 Guidance, genetic re-engineering of corporations and, 107 Hedonic price studies, difficulty of

measuring capital and, 131 Heterogeneity, and long-term comparison of innovation and industrialization, 1 Hungary, diffusion of successive generations of a technology in, 53

generations of a technology in, 55
IBM mainframes, diffusion of successive generations of a technology and, 49
Ideology, and long-term comparison of innovation and industrialization, 1
Image-building strategies, genetic recipineering of corporations and, 107
Imitation, diffusion of successive generations of a technology and, 49
Inadvertent human intrusion, nuclear waste and, 155, 171

Industrial equipment, difficulty of measuring capital and, 131 Industrial revolutions, and long-term comparison of innovation and industrialization, 1 Industry and defense conversion into global system of proprietary technologies, 77 genetic re-engineering of corporations and, 107 long-term comparison with innovation, 1 Information Age, competing in, 103 Information processing, difficulty of measuring capital and, 131 Information superhighway, digital technology in U.S. telecommunications industry and, 61 Information systems, intelligent, 193 Inhibition, and long-term comparison of innovation and industrialization, 1 Innovation forecasting overview, 25 long-term comparison with industrialization, 1 strategic, 189 Intelligent information systems, challenge of knowledge era and, 193 Interaction, mode-locking in forced business cycle and, 119 Interdependences, innovation forecasting and, 25 Interdisciplinary teams, nuclear waste and, 155, 171 Internal logic, and long-term comparison of innovation and industrialization, 1 International standardization, markers for nuclear waste sites and, 171 Isolation, and defense conversion into global system of proprietary technologies, 77 Italy, diffusion of successive generations of a technology in, 53

Knowledge era, intelligent information systems and, 193 Limitations, and long-term comparison of innovation and industrialization. 1 Linear systems, mode-locking in forced business cycle and, 119 Line digitalization, digital technology in U.S. telecommunications industry and, 61 Linguistic approaches, markers for nuclear waste sites and, 171 Linkage, and long-term comparison of innovation and industrialization, 1 Local industry, and defense conversion into global system of proprietary technologies, 77 Local operating sector, digital technology in U.S. telecommunications industry and, 61 Long-term comparison, of innovation and industrialization. 1 Management, of strategic innovation and change, 189 Manufacturing equipment, difficulty of measuring capital and, 131 Mapping, innovation forecasting and, 25 Market niche, genetic re-engineering of corporations and, 107 Market reaction, diffusion of successive generations of a technology and, 49 Materials, markers for nuclear waste sites and, 171 Measuring capital, difficulty of, 131 Memory, nuclear waste and, 155 Meso-level changes, and long-term comparison of innovation and industrialization, 1 Messages, markers for nuclear waste sites and, 171 Micro-level changes, and long-term comparison of innovation and industrialization, 1 Military needs, and defense conversion into global system of proprietary technologies, 77

**Millenium Project** 1997 state of the future, 203 introduction to, 201 Mismatches, and long-term comparison of innovation and industrialization. 1 Mobile telephone technology, diffusion of successive generations of a technology and, 49 Mode-locking, in forced business cycle, 119 Modularity, digital technology in U.S. telecommunications industry and. 61 National accounts, difficulty of measuring capital and, 131 National systems of production, and longterm comparison of innovation and industrialization. 1 Natural units, difficulty of measuring capital and, 131 Networks, digital technology in U.S. telecommunications industry and, 61 New Mexico, nuclear waste in, 155, 171 Nodes, Millenium Project and, 201 Nonlinear dynamics, mode-locking in forced business cycle and, 119 Nuclear waste sites future societies and, 155 very long term communication intelligence and, 171 Operationalization, innovation forecasting and, 25 Optimization, genetic re-engineering of corporations and, 107 Orderliness, innovation forecasting and, 25 Oscillatory processes, mode-locking in forced business cycle and, 119 Partitioning, difficulty of measuring capital and, 131 p cycles, mode-locking in forced business cvcle and, 119 Physical capital, difficulty of measuring, 131

Physical durability, markers for nuclear waste sites and, 171 Physically meaningful units, difficulty of measuring capital and, 131 Pictographic approaches, markers for nuclear waste sites and, 171 Political phenomena, and long-term comparison of innovation and industrialization. 1 Portugal, diffusion of successive generations of a technology in, 53 Potential threats, nuclear waste and, 155 Predecessors diffusion of successive generations of a technology and, 49 and long-term comparison of innovation and industrialization, 1 Preliminary design criteria, markers for nuclear waste sites and, 171 Productivity and defense conversion into global system of proprietary technologies, 77 digital technology in U.S. telecommunications industry and, 61 and long-term comparison of innovation and industrialization, 1 Proprietary technologies, defense conversion into global system of. 77 q cycles mode-locking in forced business cycle and, 119 Radioactivity, nuclear waste and, 155 Raw materials, difficulty of measuring capital and, 131 Repositories, for nuclear waste, 155, 171 Residential housing difficulty of measuring capital and, 131 and long-term comparison of innovation and

industrialization, 1

Resource exploration, nuclear waste and, 155

Revolutions, industrial, 1

Scale economies, and defense conversion into global system of proprietary technologies, 77

Scope economies, and defense conversion into global system of proprietary technologies, 77

Shapes, markers for nuclear waste sites and, 171

Simultaneous estimation, diffusion of successive generations of a technology and, 49

Sine wave perturbation, mode-locking in forced business cycle and, 119

Sizes, markers for nuclear waste sites and, 171

Speed of calculations, difficulty of measuring capital and, 131

Spin-off strategy, and defense conversion into global system of proprietary technologies, 77

Strains, and long-term comparison of innovation and industrialization, 1

Strategic innovation and change, managing, 189

Substitution, innovation forecasting and, 25

Successive generations of a technology, diffusion of, 49

Successors, and long-term comparison of innovation and industrialization, 1

Superposition principle, mode-locking in forced business cycle and, 119

Sweden, diffusion of successive generations of a technology in, 53

Switzerland, diffusion of successive generations of a technology in, 53

Symbolic approaches, markers for nuclear waste sites and, 171

Taiwan, aircraft industry in, 77
Technological change, difficulty of measuring capital and, 131
Technological development rate, nuclear waste and, 155 Telecommunications industry, digital technology and, 61 Trajectories, technological, 297 Transfer, innovation forecasting and, 25 Trends, innovation forecasting and, 25 Turkey, diffusion of successive generations of a technology in, 53

Uncertainty, conquering, 107 Unemployment, and long-term comparison of innovation and industrialization, 1 United Kingdom, diffusion of successive generations of a technology in, 53 United Nations University, Millenium Project and, 201 United States

difficulty of measuring capital in, 131 economic espionage in, 99 nuclear waste in, 155, 171 telecommunications industry in, 61

Very long term communication intelligence, markers for nuclear waste sites and, 171

Virtual think tank capability, Millenium Project and, 201

"Virtual war", economic espionage and, 99

Voltera-Lotka equations, genetic reengineering of corporations and, 107

Volume of structures, difficulty of measuring capital and, 131

War, by other means, 99

Warning markers, for nuclear waste sites, 171

Waste Isolation Pilot Plant, nuclear waste and, 155

Weighting, difficulty of measuring capital and, 131

Western technology, anthropologist's inquiry into, 87

World leading integrators, and defense conversion into global system of proprietary technologies, 77