Peopleware
Third Edition
The Great Oz has spoken.
Pay no attention to that man behind the curtain.
The Great Oz has spoken.
—The Wizard of Oz

To all our friends and colleagues who have shown us how to pay no attention to the man behind the curtain.
Contents

Preface xv
About the Authors xvii

Part I Managing the Human Resource 1
Chapter 1 Somewhere Today, a Project Is Failing 3
The Name of the Game 4
The High-Tech Illusion 5
Chapter 2 Make a Cheeseburger, Sell a Cheeseburger 7
A Quota for Errors 8
Management: The Bozo Definition 8
The People Store 9
A Project in Steady State Is Dead 10
We Haven't Got Time to Think about This Job,
Only to Do It 11
Chapter 3 Vienna Waits for You 13
Spanish Theory Management 13
And Now a Word from the Home Front 14
There Ain't No Such Thing as Overtime 15
Workaholics 15
Productivity: Winning Battles and Losing Wars 16
Reprise 17
<table>
<thead>
<tr>
<th>Chapter 10</th>
<th>Brain Time versus Body Time</th>
<th>61</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow</td>
<td></td>
<td>61</td>
</tr>
<tr>
<td>An Endless State of No-Flow</td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>Time Accounting Based on Flow</td>
<td></td>
<td>63</td>
</tr>
<tr>
<td>The E-Factor</td>
<td></td>
<td>64</td>
</tr>
<tr>
<td>A Garden of Bandannas</td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>Thinking on the Job</td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>Chapter 11</td>
<td>The Telephone</td>
<td>67</td>
</tr>
<tr>
<td>Visit to an Alternate Reality</td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>Tales from the Crypt</td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>A Modified Telephone Ethic</td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>Incompatible Multitasking</td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>Chapter 12</td>
<td>Bring Back the Door</td>
<td>73</td>
</tr>
<tr>
<td>The Show Isn't Over Till the Fat Lady Sings</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>The Issue of Glitz</td>
<td></td>
<td>74</td>
</tr>
<tr>
<td>Creative Space</td>
<td></td>
<td>75</td>
</tr>
<tr>
<td>Vital Space</td>
<td></td>
<td>76</td>
</tr>
<tr>
<td>Breaking the Corporate Mold</td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Chapter 13</td>
<td>Taking Umbrella Steps</td>
<td>79</td>
</tr>
<tr>
<td>Alexander's Concept of Organic Order</td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>Patterns</td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>The First Pattern: Tailored Work Space from a Kit</td>
<td></td>
<td>84</td>
</tr>
<tr>
<td>The Second Pattern: Windows</td>
<td></td>
<td>84</td>
</tr>
<tr>
<td>The Third Pattern: Indoor and Outdoor Space</td>
<td></td>
<td>87</td>
</tr>
<tr>
<td>The Fourth Pattern: Public Space</td>
<td></td>
<td>87</td>
</tr>
<tr>
<td>The Pattern of the Patterns</td>
<td></td>
<td>88</td>
</tr>
<tr>
<td>Return to Reality</td>
<td></td>
<td>88</td>
</tr>
<tr>
<td>Part III</td>
<td>The Right People</td>
<td>91</td>
</tr>
<tr>
<td>Chapter 14</td>
<td>The Hornblower Factor</td>
<td>93</td>
</tr>
<tr>
<td>Born versus Made</td>
<td></td>
<td>93</td>
</tr>
<tr>
<td>The Uniform Plastic Person</td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>Standard Dress</td>
<td></td>
<td>95</td>
</tr>
<tr>
<td>Code Word: <em>Professional</em></td>
<td></td>
<td>96</td>
</tr>
<tr>
<td>Corporate Entropy</td>
<td></td>
<td>96</td>
</tr>
<tr>
<td>Chapter 15</td>
<td>Let's Talk about Leadership</td>
<td>99</td>
</tr>
<tr>
<td>Leadership as a Work-Extraction Mechanism</td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>Leadership as a Service</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Leadership and Innovation</td>
<td></td>
<td>101</td>
</tr>
<tr>
<td>Leadership: The Talk and the Do</td>
<td></td>
<td>102</td>
</tr>
<tr>
<td>Chapter 16</td>
<td>Hiring a Juggler</td>
<td>103</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------</td>
<td>-----</td>
</tr>
<tr>
<td>The Portfolio</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>Aptitude Tests (Erghhhh)</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>Holding an Audition</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>Chapter 17</td>
<td>Playing Well with Others</td>
<td>109</td>
</tr>
<tr>
<td>First, the Benefits</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Food Magic</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>Yes, But . . .</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>Chapter 18</td>
<td>Childhood’s End</td>
<td>113</td>
</tr>
<tr>
<td>Technology—and Its Opposite</td>
<td>113</td>
<td></td>
</tr>
<tr>
<td>Continuous Partial Attention</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Articulate the Contract</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Yesterday’s Killer App</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>Chapter 19</td>
<td>Happy to Be Here</td>
<td>117</td>
</tr>
<tr>
<td>Turnover: The Obvious Costs</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>The Hidden Costs of Turnover</td>
<td>118</td>
<td></td>
</tr>
<tr>
<td>Why People Leave</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>A Special Pathology: The Company Move</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>The Mentality of Permanence</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td>Chapter 20</td>
<td>Human Capital</td>
<td>125</td>
</tr>
<tr>
<td>How About People?</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>So Who Cares?</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td>Assessing the Investment in Human Capital</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td>What Is the Ramp-Up Time for an Experienced Worker?</td>
<td>129</td>
<td></td>
</tr>
<tr>
<td>Playing Up to Wall Street</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Part IV</td>
<td>Growing Productive Teams</td>
<td>131</td>
</tr>
<tr>
<td>Chapter 21</td>
<td>The Whole Is Greater Than the Sum of the Parts</td>
<td>133</td>
</tr>
<tr>
<td>Concept of the Jelled Team</td>
<td>133</td>
<td></td>
</tr>
<tr>
<td>Management by Hysterical Optimism</td>
<td>134</td>
<td></td>
</tr>
<tr>
<td>The Guns of Navarone</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>Signs of a Jelled Team</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>Teams and Cliques</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>Chapter 22</td>
<td>The Black Team</td>
<td>139</td>
</tr>
<tr>
<td>The Stuff of Which Legends Are Made</td>
<td>139</td>
<td></td>
</tr>
<tr>
<td>Pitiful Earthlings, What Can Save You Now?</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>Footnote</td>
<td>141</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 23  Teamicide  143
Defensive Management  144
Bureaucracy  146
Physical Separation  146
Fragmentation of Time  147
The Quality-Reduced Product  147
Phony Deadlines  148
Clique Control  149
Once More Over the Same Depressing Ground  149

Chapter 24  Teamicide Revisited  151
Those Damn Posters and Plaques  151
Overtime: An Unanticipated Side Effect  152

Chapter 25  Competition  155
Consider an Analogy  155
Does It Matter? The Importance of Coaching  156
Teamicide Re-revisited  157
Mixing Metaphors  158

Chapter 26  A Spaghetti Dinner  159
Team Effects Beginning to Happen  159
What’s Been Going On Here?  160

Chapter 27  Open Kimono  161
Calling In Well  161
The Getaway Ploy  163
There Are Rules and We Do Break Them  164
Chickens with Lips  165
Who’s in Charge Here?  165

Chapter 28  Chemistry for Team Formation  167
The Cult of Quality  168
I Told Her I Loved Her When I Married Her  169
The Elite Team  169
On Not Breaking Up the Yankees  171
A Network Model of Team Behavior  171
Selections from a Chinese Menu  172
Putting It All Together  172
Chapter 34  Making Change Possible 203
And Now, a Few Words from Another Famous Consultant 203
That's a Swell Idea, Boss. I'll Get Right on It. 205
A Better Model of Change 206
Safety First 208

Chapter 35  Organizational Learning 211
Experience and Learning 211
A Redesign Example 212
The Key Question About Organizational Learning 213
The Management Team 214
Danger in the White Space 215

Chapter 36  The Making of Community 217
Digression on Corporate Politics 218
Why It Matters 219
Pulling Off the Magic 220

Part VI  It's Supposed to Be Fun to Work Here 221
Chapter 37  Chaos and Order 223
Progress Is Our Most Important Problem 223
Pilot Projects 224
War Games 226
Brainstorming 228
Training, Trips, Conferences, Celebrations, and Retreats 228

Chapter 38  Free Electrons 231
The Cottage-Industry Phenomenon 231
Fellows, Gurus, and Intrapreneurs 232
No Parental Guidance 233

Chapter 39  Holgar Dansk 235
But Why Me? 235
The Sleeping Giant 236
Waking Up Holgar 237

Index 239
This page intentionally left blank
Preface

What we have come to think of as the Peopleware project began for us during the course of a long night flight over the Pacific more than thirty years ago. We were flying together from L.A. to Sydney to teach our Software Engineering Lectures series. Unable to sleep, we gabbed through the night about the deep complexities we were encountering in systems projects of our own and the ones related to us by our clients. One of us—neither one can remember which it was—reflected back over what we’d been discussing and offered this summing up: “Maybe . . . the major problems of systems work are not so much technological as sociological.”

It took a while for that to sink in because it was so contrary to what had been our thinking before. We, along with nearly everyone else involved in the high-tech endeavors, were convinced that technology was all, that whatever your problems were, there had to be a better technology solution to them. But if what you were up against was inherently sociological, better technology seemed unlikely to be much help. If a group of people who had to work together didn’t trust each other, for example, no nifty software package or gizmo was going to make a difference.

Once the idea was out in the open, we began to think up examples, and it soon became clear to both of us that the social complexities on most of the projects we’d known simply dwarfed any real technological challenges that the projects had had to deal with. And then, inevitably, we needed to face up to something far more upsetting: While we had probably known in our bones for a long time that sociology mattered more than technology, neither of us had ever managed that way. Yes, we had done things from time to time that helped teams work better together or that relaxed group tensions, but those things had never seemed like the essence of our work.
How would we have managed differently if we'd realized earlier that the human side mattered much more than the tech side? We started making lists. We had blank acetates and foil pens handy, and so we put some of the lists onto overhead slides and thought giddily of actually presenting some of these ideas to our Sydney audience. What the hell! Sydney was half a globe away from the States and Europe; if we bombed in Australia, who would ever know of it back home?

Our Sydney audience the next week was immediately engaged by the peopleware material, and a bit chagrined (evidently we weren’t the only ones who had been managing as if only the technology really mattered). Best of all, people chimed in with lots of examples of their own, which we cheerfully appropriated.

What separated that early out-of-town tryout from the first edition of the book in 1987 was a ton of work conducting surveys and performing empirical studies to confirm what had been only suspicions about the effects of the environment (Part II of this third edition) and to validate some of our more radical suggestions about team dynamics and communication (most of the rest of the book).

Peopleware in its first two editions made us a kind of clearinghouse for ideas about the human side of technology projects, and so our thinking has had to expand to keep up. New sections in this third edition treat some pathologies of leadership that hadn’t been judged pathological before, an evolving culture of meetings, hybrid teams made up of people from seemingly incompatible generations, and a growing awareness that, even now, some of our most common tools are more like anchors than propellers.

For this third edition, we are indebted to Wendy Eakin of Dorset House and Peter Gordon of Addison-Wesley for editing and shaping our manuscript. Thanks, too, to our long-time colleagues at The Atlantic Systems Guild—Peter Hruschka, Steve McMenamin, and James and Suzanne Robertson—for thirty years of ideas, brainstorms, debates, meals, and friendship.

—Tom DeMarco
Camden, Maine

—Tim Lister
New York, New York

February 2013
About the Authors

Tom DeMarco and Timothy Lister are principals of The Atlantic Systems Guild (www.systemsguild.com), a consulting firm specializing in the complex processes of system building, with particular emphasis on the human dimension. Together, they have lectured, written, and consulted internationally since 1979 on management, estimating, productivity, and corporate culture.

Tom DeMarco is the author or co-author of nine books on subjects ranging from development methods to organizational function and dysfunction, as well as two novels and a book of short stories. His consulting practice focuses primarily on expert witness work, balanced against the occasional project and team consulting assignment. Currently enjoying his third year teaching Ethics at the University of Maine, he lives in nearby Camden.

Timothy Lister divides his time between consulting, teaching, and writing. Based in Manhattan, Tim is co-author with Tom of Waltzing With Bears: Managing Risk on Software Projects, and of Adrenaline Junkies & Template Zombies: Understanding Patterns of Project Behavior, written with four other principals of The Atlantic Systems Guild. He is a member of the IEEE, the ACM, and the Cutter IT Trends Council, and is a Cutter Fellow.
This page intentionally left blank
This page intentionally left blank
leadership on the job is rare, but talk about it is ubiquitous. Companies talk about it all the time.

The talk is usually about the adroit exercise of organizational power to accomplish a given end. It’s managers who lead. Managers are sent off to leadership training to enable them to better use their authority to direct those who work for them. In this view, leadership is something that happens down the hierarchy—leaders at the top, followers at the bottom. You are led by the person who is above you on the org. chart and you lead those whose boxes on the chart lie under yours with lines directly down from your box.

Leadership as a Work-Extraction Mechanism

One of those dreadful “motivational” posters tells us, “The speed of the leader sets the rate of the pack.” This kind of leadership is a work-extraction mechanism. Its purpose is to enhance not the quality of the experience but the quantity. The reason you are being led is to get you to work harder, stay longer, and stop goofing off.

During the early part of the First World War, a young Russian journalist named Lev Davidovich Bronstein wrote home from the front with some observations about leadership. His letters might have been lost, but since he later became the revolutionary Trotsky, they are preserved. In one letter he observes that unless they are given side arms, the junior officers will be completely unable to lead their men into battle. Using a gun to lead means you have to “lead” from behind. This is what work-extraction leadership is all about. The gun, in the workplace, is replaced with delegated authority and positional power.
Leadership as a Service

But the best leadership—the kind that people can mention only with evident emotion and deep respect—is most often exercised by people without positional power. It happens outside the official hierarchy of delegated authority.

When I'm on my home turf, I play tennis two or three times a week in groups organized by a charming fellow named Mike. Mike is our leader. It’s Mike who decides the matchups: who plays with whom and against whom. He’s the one who shuffles the players (16 of us on four courts) after each set so we all have different partners for all three sets. He invariably makes good pairings so that near the end of a half hour you can look across the courts and see four scores like 5 to 4, 6 to 6, 7 to 6, and 5 to 5. He has a great booming voice, easy to hear even when he is three courts away. He sets the meeting times, negotiates the schedules for court time, and makes sure there are subs for anyone who needs to be away. Nobody gave Mike the job of leading the group; he just stepped up and took it. His leadership is uncontested; the rest of us are just in awe of our good fortune that he leads us as he does. He gets nothing for it except our gratitude and esteem.

—TDM

In this example, leadership is not about extracting anything from us; it’s about service. The leadership that the Mikes of the world provide enables their endeavors to go forth. While they sometimes set explicit directions, their main role is that of a catalyst, not a director. They make it possible for the magic to happen.

In order to lead without positional authority—without anyone ever appointing you leader—you have to do what Mike does:

- Step up to the task.
- Be evidently fit for the task.
- Prepare for the task by doing the required homework ahead of time.
- Maximize value to everyone.
- Do it all with humor and obvious goodwill.

It also helps to have charisma.
Leadership and Innovation

The propensity to lead without being given the authority to do so is what, in organizations, distinguishes people that can innovate and break free of the constraints that limit their competitors. Innovation is all about leadership, and leadership is all about innovation. The rarity of the one is a direct result of the rarity of the other.

Innovation is a subject whose talk:do ratio is even more out of whack than that of leadership. Upper management in most companies talks a good game on innovation. The party line goes something like this: “We need innovation to survive. It is so important. Its importance simply cannot be overstated. No sir. Innovation is reeealy, reeealy important. And innovation is everybody’s job. In fact, it is probably the most important part of everybody’s job. Listen up, everybody: Get out there and innovate.” Oh, and by the way,

- Nobody is given any time to innovate, since everyone is 100-percent busy.

- Most innovation that happens anyway is distinctly unwelcome because it requires accommodating change.

- Real innovation is likely to spread beyond the realm of the innovator, and so he or she may be suspected of managing the organization from below, a tendency that upper management tends to view with great suspicion.

The net here is that it takes a bit of a rebel to help even the best innovation achieve its promise: rebel leadership. The innovator himself doesn’t have to be a great leader, but someone has to be. What rebel leadership supplies to this process is the time to innovate—you take a key person away from doing billable work (this may constitute constructive disobedience on your part) in order to pursue a nascent vision—and the hard push for whatever reshaping the organization has to submit to in order to take advantage of the innovation.

Since nobody ever knows how the next innovation may alter the organization, nobody knows enough to give permission to the key instigators to do what needs to be done. That’s why leadership as a service almost always operates without official permission.
Leadership: The Talk and the Do

At a recent Broadway performance of Arthur Miller's *Death of a Salesman*, I was struck by a line that comes near the end of the final act. The protagonist, Willy Loman, approaches his well-to-do neighbor, Charley, to ask for yet another small loan. The sad contrast between Charley's fortunes and Willy's own failure is reflected in their sons: Willy's son Biff has gone badly downhill, while Charley's son, Bernard, has become a successful lawyer. Charley makes the loan and tells Willy proudly that Bernard is off to Washington, D.C., to argue a case before the Supreme Court. Imagine that, the United States Supreme Court.

"The Supreme Court!" Willy says. "And he didn't even mention it!"

"He don't have to—" Charley replies, "he's gonna do it."

—TRL

If companies were more inclined to let leadership arise naturally, they wouldn't need to produce so much hot air talking about it.
Index

A
Accounts receivable projects, 3
Ad hoc meetings, 194
Ad hoc space, 89
Aesthetics in Philosophy, 218
Agendas for meetings, 189
Alexander, Christopher, 80–88
Alignment of goals, 135–136
Anti-popcorn standard, 96
Anticipated humiliation from change, 208–209
Appearance
  in hiring, 94
    office emphasis on, 75
  standards, 95, 171
Aptitude tests, 105
Aristotle, 218
Articulating work expectations, 114–115
Assertion
  for environment change, 74
    proof by, 50–51
AT&T Bell Laboratories move, 121–122
Atlantic Systems Guild, 87
Attendance at meetings, 190
Attention, continuous partial, 114
Auditions, 105–107, 165
Australia, work to rule strategy in, 179
Authority in teams, 165–166
Automation, false hope from, 34
Average defect density of software, 21
Awards as team obstacle, 157
Awareness as office environment issue, 74
B
Backlog myths, 33
Baggage handling system, 184–185
Barnes & Noble Nook reader, 183–184
Basic instincts, 19
“Believers But Questioners” in change, 205
Bell Laboratories
  organizational move, 121–122
    thinking on the job at, 65–66
Best companies, turnover in, 122
Black Team, 139–141
“Blindly Loyal” employees in change, 205
Boehm, Barry, 109
Bonham, Bill, 233
Brady, Sheila, 110
Brain time vs. body time, 61–66
Brainstorming
  guidelines, 228
    provisions for, 10–11
Branton, Richard, 233
Breaking up jelled teams, 171
Bridges, William, 206
Bronstein, Lev Davidovich, 99
Brown University, 55
Brunner, John, 50
Bureau of Labor Statistics, 123
Bureaucracies
  Parkinson’s Law in, 25–26
  as team obstacle, 146
Busy work, 29

C

Calling in well, 161–163
Capital, employees as, 125–130
Catalysts
  importance of, 10–11
  leadership as, 100
  Satir Change Model, 207
Celebrations, 228–229
Centralized thinking, 177
Ceremonies, 189–190
Challenges
  deadlines as, 148
  desired outcome as, 185–186
  importance of, 131
Change
  model for, 206–208
  resistance to, 203–206
  security in, 208–209
Chaos
  in change model, 207–208
  order from, 223–224
Chemistry in jelled teams, 167–172
*Childhood’s End* (Clarke), 113
Clarke, Arthur C., 113
Cliquettes in jelled teams
  managerial insecurity from, 137
  team breakup from, 149
Closure, 169
Coaching, 156–157
Coding War Games, 43–48
  dedicated floor space factor, 52
  formula for, 226–227
  interruptions, 62–63
Communal eating, 88
Communication demonstrations in hiring process, 105–107
Communist Party, 233
Community
  building process, 220
  corporate politics, 218–219
  importance, 219–220
  need for, 217–218
  Community gardens for employees, 123
Company moves, turnover from, 120–122
Competitions
  Coding War Games, 43–48
  jelled teams, 155–158
  Competitive windbagging at meetings, 187
Complexity, meetings for, 187
Compliance, malicious, 179
Conferences
  benefits, 228–229
  Open-Space, 191
Consent for e-mail, 201–202
Consistency, functional, 225
Constantine, Larry, 165
  “Constructive reintroduction of small amounts of disorder” policy, 224
Consultants, hiring, 106
Continuous partial attention, 114
Contracts, articulating, 114–115
Convergence of method, 179–180
Conversations in lieu of meetings, 189–190
Coordination
  mutual, 200
  self-coordination, 202
Cornell University, music tests at, 75–76
Corporate culture, 173
  change, 203–209
  community building, 217–220
  e-mail, 199–202
  flow factor, 65
  meetings, 187–191
  organizational learning, 211–215
  politics, 218–219
  risk management, 183–186
  self-healing systems, 175–181
  time wasting, 193–197
Corporate entropy, 96–97
Corporate goals vs. team goals, 134–136
Corporate mold, breaking, 77
Corporate spam, 200
Corrective actions, 235–237
Costs
  office space savings, 49–55
  on profit and loss statements, 125–130
  quality, 21–23
  turnover, 17, 117–119
Cottage-industry phenomenon, 231–232
Covert meaning of Methodology, 176–177
Creative space, 75–76
Crosby, Philip, 22
Cult of quality, 168–169
Cultural diversity of food in team building, 110
Culture, corporate. See Corporate culture

D
Danish legislature, 86
Dansk, Holgar, 235–237
Data General project, 17
Day-care center, 220
de’ Medici, Lorenzo, 204
Deadlines
        moving, 17
        as team obstacle, 148
        unreachable, 20
Death of a Salesman, 102
deBono, Edward, 144
Dedicated floor space and people density, 53–54
Defect-prone design, 8
Defects
        defect density of software, 21
        noise factor in, 53
Defensiveness
        from error management, 8
        as team obstacle, 144–145
DeMarco, Tom, 183
Deming, W. Edwards, 157
Denver International Airport Baggage Handling System, 184–185
Deterministic systems, 175–176
Digital Equipment Corporation, PDP11 development at, 164
Direct physical oversight, 163
Dirksen, Everett, 121
Disposability feelings, turnover from, 120
Disruptions and disturbances
        flow factor, 62–64
        from fragmentation, 197
        getaways for, 164
        telephones, 67–71
Diversity in teams, 109–111
Do Not Disturb signs, 65
Documentary consistency, 225
Documentation in Methodologies, 178
Doors as success symbol, 73
Downsizing, 130
Dress codes, 95–96
DuPont, standardization at, 180
Dutch East India Company, 29

E
E-Factor, 64–65
E-mail
        corporate spam, 200
        FYIs, 200–201
        open organizations, 201
        passive consent, 201–202
        self-coordinating organizations, 202
        vs. telephone calls, 70
        time spent on, 199–200
        and young workers, 115
E-publications, borrowing, 184
Eagle project at Data General, 17
Early overstaffing, meetings from, 194–196
Eating, communal, 88
Efficient production measures, 7
Efficient telephone schemes, 70–71
EG&G contractor, retraining at, 123
El Cordobes, 236
Eliteness in jelled teams, 136–137, 169–171
Emotions, 19
Employees
        as costs vs. capital, 125–130
        hiring. See Hiring
        parts view of, 9–10
        turnover. See Turnover
English Theory, 14
Enjoyment in jelled teams, 137
Entropy, corporate, 96–97
Environment. See Office environment
Environmental Factor, 64–65
Errors, dealing with, 8
Ethics in Philosophy, 218
Even Cowgirls Get the Blues (Robbins), 161
Expectations, articulating, 114–115
Expense vs. investment, 126
Experience
        as Coding War Games factor, 45
        learning from, 211–212
Experienced workers, ramp-up time for, 129
Extended overtime side effects, 152–154

F
Failed projects, 3–5
False challenges, 186
False hopes, 31–34
Family life and workaholics, 16
Fellows, 232–233
First-class flights, 170
Flexibility in office environment, 77
Flight from excellence, 20–22
Floor plans, 38–40
Flow state
  description, 61–62
  E-Factor, 64–65
  fragmentation issues, 197
  no-flow states, 62–63
  partial attention in, 114
  time accounting based on, 63–64
Food
  communal eating, 88
  for team building, 110
Foreign element in Satir Change Model, 207
Forester, C. S., 93
“Fourteen Points”, 157
Fragmentation of time
  as team obstacle, 147
  time wasting from, 196–197
Free electrons, 232–233
Frustrations from flow interruptions, 62
Fujitsu
  nonstandardization at, 181
  team veto power, 23
Fun on the job, 221
  brainstorming, 228
Coding War Games, 226–227
  corrective actions, 235–237
  cottage-industry phenomenon, 231–232
  fellows, gurus, and intrapreneurs, 232–233
  life counseling, 233–234
  order from chaos, 223–224
pilot projects, 224–225
  training, trips, conferences, celebrations, and retreats, 228–229
Functional consistency, 225
Furniture police, 37–40
FYIs
  e-mail, 200–201
  meeting, 189–190

G
Generational divide, 113–115
Getaway ploys, 163–164
Gilb, Tom, 58
  Gilb’s Law, 58
Glitz, 74–75
Goals, team vs. corporate, 133–136
“Good enough” products, 168
Group interaction space, 88
Gurus, 232–233

H
Hawthorne Effect
  nonstandard approaches for, 181
  in pilot projects, 224
Hawthorne Western Electric Company, 181
Heterogeneity in jelled teams, 172
Hewlett-Packard
  community building at, 123
  quality standards, 22–23
Hidden costs of turnover, 118–119
Hiding out, 54–55
High-Tech Illusion
  description, 5
  self-healing systems, 180–181
Hiring
  aptitude tests, 105
  auditions, 105–107, 165
  diversity in, 109–111
  introduction, 103–104
  portfolios, 104–105
  uniformity in, 94–95
Hitachi Software
  retraining at, 123
  team veto power, 23
Homogeneous work groups, 172
Hornblower factor, 93–97
INDEX

Hotels, 85
Human capital as expense, 125–127
Humiliation from change, 208–209
Hysterical optimism, management by, 134–136

IBM, Santa Teresa facility, 51–52
Ideal workplace, 79–80
indoor and outdoor space, 87
organic order, 80–82
patterns, 82–84
public space, 87–88
tailored work space, 84–85
windows, 84–86
Identity in jelled teams, 136–137, 169–171
Immersion period for flow, 62–63
Improvement from change, 206
Incompatible multitasking, 71
Inconsistent products, 225
Individual differences in Coding War Games, 44–45
Individuality of employees, 10
Indoor and outdoor space pattern, 87
Industrial Revolution, 14
Innovation, leadership for, 101
Insecurity of management, 96
Inspirational posters, 151–152
Insubordination in skunkworks projects, 164
Interchangeable view of employees, 9–10
Internal competition in teams, 155–158
Interrupt-consciousness, 64
Interruptions
flow factor, 62–64
from fragmentation, 197
getaways for, 164
telephones, 67–71
Intimacy gradient, 87
Intrapreneurs, 232–233
Inversion thinking, 144
Investment
vs. expense, 126
in human capital, 127–130
time wasting issues, 197
Iterative design, 8

J
Japanese companies
quantity and productivity, 21–22
team veto power, 23
Jeffery, Ross, 27
Jelled teams
Black Team, 139–141
breaking up, 171
chemistry, 167–172
vs. cliques, 137
competition, 155–158
concept, 133–134
cult of quality, 168–169
eliteness, 136–137, 169–171
getaways, 163–164
goals, 134–136
natural authority in, 165–166
network model of behavior, 171–172
obstacles, 143–152
reassurance in, 169
rule breaking, 164
signs, 136–137
team building, 159–160
voice in team member selection, 165
Joel, Billy, 14
Johnson, Jerry, 205
Johnson, Lyndon, 121
Joint ownership of product by teams, 137
Jones, Capers
on scheduling, 28
on systems development costs, 146
Jugglers, hiring, 103–104
Just-passing-through mentality, 120

K
Kay, Alan, 113
Kennedy, John, 121
Ketchledge, Ray, 122
Kronborg castle, 236

L
Laetrile, 31
Languages
changes, false hope from, 33
as Coding War Games factor, 45
Laptops at meetings, 188
*Lateral Thinking* (deBono), 144
Lawrence, Michael, 27
Leadership, 99
  for innovation, 101
  jelled teams, 171–172
  as service, 100
  talk:do ratio, 101–102
  as work-extraction mechanism, 99
Learning, organizational. See Organizational learning
Library borrowing of e-publications, 184
Life counseling, 233–234
Lister, Timothy, 183
Logic in Philosophy, 218
Loman, Willy (character), 102
Long-term perspective for turnover, 119
Loss of key people, productivity losses from, 17
Low turnover in jelled teams, 136
Loyalty
  free electrons, 233
  and turnover, 120

**M**

Machiavelli, Niccolò, 204
Maginot Line, 211
“Make a cheeseburger, sell a cheeseburger” mentality, 7–11
Malicious compliance, 179
Management
  corporate entropy, 96–97
  definitions, 8–9
  dress codes, 95–96
  Hornblower factor, 93–97
  by hysterical optimism, 134–136
  leadership, 99–102
Management by Objectives (MBO), 157
Management Team, learning from, 214–215
*Managing Transitions* (Bridges), 206
Mao Tse-tung, 181
Matsubara, T., 22
Mazzucchelli, Lou, 168
MBO (Management by Objectives), 157
McCue, Gerald, 51–52, 61
McMenamin, Steve, 203, 232
Mean Time Between Failures, 20–21
Measurement
  flow time, 63–66
  productivity, 57–60
Meetings
  attendance limitations, 190
  ceremonies, 189–190
  cures for, 191
  early overstaffing, 194–196
  hygiene, 189
  neuro-sclerosis from, 187
  open-space networking, 190–191
  for reassurance, 194
  stand-up, 188
  status, 194
  technologically enhanced, 188
Mentality of permanence, 122–123
Merit reviews as team obstacle, 157
Meta-plans, 81
Metaphysics in Philosophy, 218
Methodologies
  convergence of method, 179–180
  high-tech illusion, 180–181
Methodology systems
  covert meaning, 176–177
  malicious compliance, 179
  problems with, 177–179
Middle management, learning from, 214–215
“Militantly Opposed” employees in change, 205
Miller, Arthur, 102
Mills, Harlan, 46
Mistrust as team obstacle, 144–145
Mitigation planning, 185
Modular cubicles, 84
Modular methods, 1
Morgan Motorcars Limited, 69
Motivation
  Methodologies, 179
  scheduling effects on, 28
Motivational accessories, 99, 152
Moves, turnover from, 120–122
Multiple assignments, time wasting from, 197
Multitasking, incompatible, 71
Mushet, Michael L., 233
Music in workplace, 75–76
Mutual coordination, 200
INDEX  245

N
Names of teams, 136
Natural authority in teams, 165–166
Natural light, 39
Natural order, 81
Need-to-know test for e-mail, 200, 202
Negroponte, Nicholas, 213
network model of team behavior, 171–172
Networking, open-space, 190–191
Neuro-sclerosis, 187
New employee costs, 117–119
New South Wales, 27–29
New Status Quo phase in Satir Change Model, 208
Newton’s Law vs. Parkinson’s Law, 25–26
No-flow states, 62–63
Noise, 37
in creative space, 75–76
density factor, 54
flow factor, 61
quality effects, 52–53
Non-replicable pattern formulas, 88
Nondeterministic systems, 175–176
Nonperformance risks, 185–186
Nook reader, 183–184
Notes on the Synthesis of Form (Alexander), 80
Number of defects as Coding War Games factor, 45

O
Odysseus, 32
Office environment, 35
corporate mold, 77
creative space, 75–76
doors, 73
flow, 61–66
furniture, 37–40
glitz, 74–75
hiding out from, 54–55
ideal workplace, 79–89
indoor and outdoor space, 87
organic order, 80–82
patterns, 82–84
and productivity, 41–48, 57–60
public space, 87–88
quality effects, 52–53
space savings, 49–55
speaking out about, 73–74, 88–89
tailored work space, 84–85
vs. technology, 113–114
telephones, 67–71
vital space, 76–77
windows, 84–86
Open Kimono attitude, 162–164
Open organizations
e-mail, 201
fantasy of, 190
“Open-Plan DP Environment Boosts Employee Productivity” article, 50–51
Open-plan seating, 50–51
Open-space networking, 190–191
Order
from chaos, 223–224
organic, 80–82
Oregon Experiment (Alexander), 81ff.
Organizational learning, 211
and experience, 211–212
location, 213–214
Management Team, 214–215
redesign example, 212–213
white space, 215
Orr, Ken, 179
Out of the Crisis (Deming), 157
Outside forces in Satir Change Model, 207
Outward Bound schools, 229
Over-coordination, 200
Oversight, physical, 163
Overstaffing at meetings, 194–196
Overtime
disturbances as cause of, 41–42
myths, 15–16
side effects, 152–154
unpaid, 14–16

P
Pacific Bell, retraining at, 123
Paging systems, 40, 73
Pair mates as performance factor, 46
Paperwork
Methodologies, 178
as team obstacle, 146
Parkinson, C. Northcote, 25
Parkinson’s Law, 25–29
Partial attention, 114
Parts, view of employees as, 9–10
Passion, 19
Passive consent for e-mail, 201–202
Past work demonstrations in hiring process, 105–107
Pathologies, team, 161
Pattern Language (Alexander), 82–88
Patterns, 82–84
indoor and outdoor space, 87
definitions, 8–9
error handling, 8
failed projects, 3–5
false hopes, 31–34
interchangeable view of employees, 9–10
overtime, 15–16
Parkinson’s Law, 25–29
productivity and turnover, 16–18
project development, 7–8
quality, 19–23
Spanish Theory, 13–14
workaholics, 15–16
People Store attitude, 9–10
Performance problems, 26
Permanence mentality, 122–123
Philosophy, 218
Phony deadlines as team obstacle, 148
Physical oversight, 163
Physical separation as team obstacle, 146–147
Pilot projects, 224–225
Pink noise, 75–76
Planning and design, meetings for, 194
Plaques, 151–152
Plastic person in hiring, 94–95
Police mentality in office environment, 38
Politics

corporate, 218–219
project failures from, 4
window allocations, 84–85
Popcorn, 96
Portfolios, 104–105
Posters, 99, 151–152
Practice-and-Integration phase in Satir Change Model, 208
Preschool center, 220
Prescriptive methodologies as team obstacle, 145
Presentations in hiring process, 105–107, 165
The Prince (Machiavelli), 204
Priorities in people orientation, 4–5
Prisons, office design for, 40
Productivity
Coding War Games, 43–48
company differentials, 46–47
false hopes, 31–34
Hawthorne Effect, 181
office environment, 41–48, 57–60
office space savings, 49–55
overtime effects, 152–154
Parkinson’s Law myths, 25–29
and pressure, 28
and quality, 21–22
Spanish Theory management, 14
turnover effects, 16–18, 128–129
Professional standards, 96
“Professional” term, 96
Profit and loss statements, employee costs on, 125–130
Project development, 7–11
Project Tournament in Coding War Games, 226–227
Promotions and turnover, 119
Proof by assertion, 50–51
Psychological theory, 19
Public address systems, 40
Public space pattern, 87–88
Q
Quality, 19
costs, 21–23
in jelled teams, 168–169
office environment effects, 52–53
overtime for, 41
vs. quantity, 99
sacrificing, 20–22
Quality—If Time Permits policy, 22
Quality Is Free (Crosby), 22
Quality-reduced products as team obstacle, 147–148
Quotas for errors, 8

R
Ramp-up time for experienced workers, 129
Reader's Digest, community building at, 123
Reassurance
for jelled teams, 169
meetings for, 194
Rebel leadership, 101
Redesign example, 212–213
Repeated assertion for environment change, 74
Resistance to change, 203–206
Resistance-to-Change Continuum, 205
Responsibility in Methodologies, 178
Retraining and turnover, 123
Retreats, 228–229
Right-brain function music factor, 76
Risk, 183
dealing with, 183–184
nonperformance, 185–186
team failure, 184–185
Robbins, T., 161
Royalty system in e-publication borrowing, 184
Rule breaking in teams, 164

S
Sacrificing quality, 20–22
Salaries
as Coding War Games factor, 46
as expense, 126–127
Salary reviews as team obstacle, 157
Santa Teresa facility, 51–52
Satir, Virginia, 206–207
Satir Change Model, 206–208
Schools, company-provided, 220
“Seat of the skirt management”, 110
Second thermodynamic law of management, 97
Security and change, 208–209
Self-assessment, 59–60
Self-coordination, 200, 202
Self-esteem
as basic instinct, 19
and quality, 20, 148
Self-healing systems, 175
convergence of method, 179–180
deterministic and nondeterministic, 175–176
High-Tech Illusion, 180–181
malicious compliance, 179
Methodology systems, 176–179
Sense of humor in teams, 165
Sense of identity and eliteness in teams, 136–137
Separation as team obstacle, 146–147
Service, leadership as, 100
Seven Sirens of false hope, 32–34
Sheep Look Up (Brunner), 50
Short-term perspective of turnover, 118–119
Sibling competition, 155–156
Sick organizations, 162
Skunkworks projects, 164
Socialization process in hiring, 106
Sociology, project failures from, 4–5
Software Engineering Economics (Boehm), 109
Southern California Edison, 123
Soviet society, 233
Space. See Office environment
Spaghetti dinner team building example, 159–160
Spam, corporate, 200
Spanish Theory management, 13–18
Speaking out about office environment, 73–74, 88–89
Sports team metaphor, 158
Staffing plans, 194
Stages in Satir Change Model, 207–208
Stand-up meetings, 188
Standard dress, 95–96
Standardization
  for convergence of method, 180
  limitations, 180–181
Standards, professional, 96
Start-up costs of new employees, 118, 128–129
Status meetings, 194
Status-seeking as office environment issue, 75
Steady-state production thinking, 10–11
Stone, Linda, 114
Strikes in Australia, 179
Surveys
  Parkinson’s Law, 27–29
  project failures, 3–4
Swarthmore College, 86

T
Tailored work space pattern, 84–85
Tajima, D., 22
Talk:do ratio, 101–102
Task-accounting data, 63–64
Team sociology, project failures from, 4–5
Teams
  diversity in, 109–111
  jelled. See Jelled teams overview, 131
Technical laetrile, 31
Technologically enhanced meetings, 188
Technology
  vs. environment, 113–114
  focus on, 5
  High-Tech Illusion, 5, 180–181
Telephone support tasks, 197
Telephones, 67
  alternate scenario, 67–68
  etiquette, 69–70
  incompatible multitasking, 71
  modified ethic, 70–71
Testers on Black Team, 139–141
Tests, aptitude, 105
Thomis, Wendl, 65
Thomsett, Rob, 161
Time accounting based on flow, 63–64
Time fragmentation
  as team obstacle, 147
  time wasting from, 196–197
Time pressure, quality loss from, 21
Time wasting
  e-mail. See E-mail
  example, 193–194
  fragmentation, 147, 196–197
  investments considerations, 197
  meetings, 194–196
Timeless Way of Building (Alexander), 79–84
Timmerman, Doug, 158
Tools for convergence of method, 180
Totalitarian order, 81
Toumenoska, Lee, 114
Townsend, Robert, 121
Training
  benefits, 228–229
  for convergence of method, 180
  as investment, 127
  and turnover, 120
Tricks, false hope from, 32
Trips, 228–229
Trotsky, Leon, 99
Trust for teams, 144–145
Turnover
  community building for, 219
  from company moves, 120–122
  costs, 117–119
  in jelled teams, 136
  mentality of permanence, 122–123
  and organizational learning, 212
  productivity effects, 16–18, 128–129
  reasons, 120
Two-person offices, 76–77

U
Undertime, 15
Uniform plastic person in hiring, 94–95
Uniformity, dress codes for, 95–96
Uniqueness of employees
  jelled teams, 170–171
  as management annoyance, 10
University of Cambridge, 81
University of New South Wales, 27–29
Unpaid overtime, 14–16
“Unprofessional” term, 96
Unreachable deadlines, 20
Up the Organization (Townsend), 121

V
Veto power by teams, 23
Vital space, 76–77
Voice in team selection, 165
Voice-mail, 70

W
Wall Street influences, 130
Waltzing With Bears: Managing Risk on Software Projects (DeMarco and Lister), 183
Weinberg, Jerry, 154
Weinberg, Sharon, 34
Wiener, Jerry, 162
Windows, 38–40, 84–86

Women
company move effects on, 121
team benefits from, 109–110
Work modes, 61–62
Work to rule strategy, 179
Workaholics, 15–16
Working meetings, 189
Workplace. See Ideal workplace; Office environment
Workspace Enclosure pattern, 82–83

X
Xerox
first-class flights, 170
loose charter, 233

Y
Years of experience as Coding War Games factor, 45