

J. Scott Armstrong

ANNUAL SUMMARY OF ACTIVITIES

Jan. 1 to Dec. 31, 2002
Feb. 13, 2003 (corrected June 21)

The latest copy of my resume is available at <http://jscottarmstrong.com>.

1. PUBLICATIONS AND RESEARCH REPORTS

(Copies are provided in full-text at <http://jscottarmstrong.com>)

a. Scholarly Refereed Journal Articles published in Calendar Year

“Assessing Game Theory, Role Playing, and Unaided Judgment,” *International Journal of Forecasting*, 18 (2002), 345-352.

b. Books

None

c. Other Articles Published in Calendar Year:

Review of “How Useful are the Forecasts of Intergovernmental Agencies? The IMF and OECD versus the Consensus,” *International Journal of Forecasting*, 18, 482-3.

“The Rowe and Wright Paper on Delphi: An Important Contribution to Forecasting,” *International Journal of Forecasting*, 18, 316.

“Judgemental Bootstrapping,” in H. Dallenback, *Informed Student Guide to Management Science*. Thomson Publications, p. 158.

d. Manuscripts Under Review as of December 2002

“Discovery and Communication of Important Marketing Findings, Evidence, and Proposals,” *Journal of Business Research*, forthcoming with commentaries by Rossiter and Lehmann.

“The Value of Surprising Findings for Research on Marketing,” *Journal of Business Research*, forthcoming.

“Reaping Benefits from Management Research: Lessons from the Forecasting Principles Project,” (with Ruth Pagell), *Interfaces*, (forthcoming). Commentary to follow.

“Incentives for Developing and Communicating Principles: A Reply,” *Interfaces* (forthcoming).

“How to be Less Persuaded or More Persuasive- Review of *Age of Propoganda: The Everyday Use and Abuse of Persuasion*, by Pratkanis and Aronson,” *Journal of Marketing* (forthcoming).

2. ACADEMIC ACTIVITIES

a. Reviewing and Editing

I organized and helped edit papers for the special section “Forecasting Decisions in Conflict Situations: Game Theory, Role-Playing, and Unaided Judgement,” *International Journal of Forecasting*, 18, pp. 319-395.

Asian Journal of Marketing

Decision Sciences

European Journal of Operational Research

Interfaces

International Journal of Forecasting

International Journal of Operations & Production Management

International Journal of Research in Marketing

OBHDP

Public Opinion Quarterly

b. Academic Presentations made in Calendar Year

“The Value of a Beautiful Mind: Predicting Decisions in Conflicts with Game Theory, Role-Playing, and Unaided Judgment”

- Leeds University, April 23
- Lancaster University, April 24

“How to Chose the Best Forecasting Methods,” Pharmaceutical Management Science Association. New Orleans, April 29.

“Decomposition by Causal Forces: Applications to Transportation Safety Data,” International Symposium on Forecasting. June, Dublin, Ireland, June.

Panel: “How to Improve the Practice of Business Forecasting,” International Symposium on Forecasting. Dublin, Ireland, June.

Keynote Address, “Forecasting Methods: How to Apply Cumulative Knowledge,” Forecasting Summit 2002, Boston, September 23.

c. Service to the Department, School and Academic Community

Forecasting Principles Web Site (<http://forecastingprinciples.com>).

The development of the Forecasting Principles Site is one of my major activities. The purpose of the site is to summarize all useful knowledge in forecasting. At year's end, the site's size was 130 megabytes (up from 100 last year at this time). Annual traffic was 58,000 visits, an increase of 16% over the previous year. The site is listed #2 under the term "forecasting" on Google and other search engines. In the past year, there were 1,900 visits to the "forecasting audit" program (counter at 2,900); this implies that organizations are using this audit in their forecasting.

Marketing Department Homepage (<http://jscottarmstrong.com>)

My homepage now contains nearly all my papers in full text. There were 10,500 visits to my homepage this past year, an increase of about 60% over the previous year.

ELMAR contributions

I view ELMAR as an important way to contribute to the field. I wrote 25 essays for ELMAR in 2002. These are provided in full text near the bottom of my homepage (<http://jscottarmstrong.com>). Some of these, such as the ones on SWOT, game theory, and the evaluation of research have led to much follow-up discussion.

Advisory Committee for Population Health Forecasting Project (California)

A voluntary board.

Media coverage of my research

Forecasting: General

- *Catalyst* (Spring, Issue 6), "How to Chose the Right Forecaster" by Schwartz, Karen,
- *Catalyst* (Spring, Issue 6), "The Forecaster's Toolkit" by Erik Sherman,
- *CFO*, "Forecasting (omitted from last year's report: August 1, 2001)– "Its a Vision Thing" by Scott Leibs
- *Insight Magazine*, Feb 16, "Crystal Ball Logic" at insight-mag.com
- *Barron's* (Dec. 2), "Now Hear This," Cover story by Bill Alpert

Game Theory

- *Financial Times*, March 26, 2002, Forecasting: "Games or Serious Business"

Simulated Interaction (role playing)

- *Business 2.0.*, (July) “Rehearsing for Success,” by Dylan Tweney,
- *Entrepreneur Magazine*, (Sept) “Role-playing can Help You See the Future Through Someone Else’s Eyes,” by Mark Henricks.
- *Repertoire* (March)- www.medicaldistribution.com
- *The Challenge Forum*- (March).
www.chforum.org/library/gaming.html

Corporate Governance

- “Money Matters” on CNN Channel 8. December 12 TV interview on corporate scandals.

Knowledge at Wharton

“Forecasting in Conflicts: How to Predict What your Opponent Will Do,” (Feb 13). Led the list for downloads with 5,000 in first two days.

“Corporate Boards Should Represent a Broader Community of Interests,” Sept. 11.

Talks

Harvard Business School Club of Philadelphia (May 7): “Some Surprising Findings About Forecasting,” Philadelphia, PA.

Center for Citizen Initiatives (June 7): Presented a talk on “Grounded Principles of Advertising” to Russian Advertising Executives in Allentown, PA.

Committees

- Served on Vice Provost's Library Select Faculty Advisory Committee

3. RESEARCH CONTENT

The most important finding was that simulated interaction provides the most effective way to forecast for conflict situations. It was tested against game theory, and game theory was found to have no predictive value. These findings were drawn from the combination of my research along with research by Kesten Green. (see the section on “Predicting Decisions in Conflict Situations” at <http://jscottarmstrong.com>)

Most of my effort this past year has been devoted to my forthcoming book, *Advertising and the Science of Persuasion*. I expect that the book will continue to be my major activity for the next two years. Drafts of the book are available upon request. In fact, I would love to receive your suggestions. The book aims to summarize all useful

knowledge about persuasion through advertising. It puts the knowledge in the form of principles.

“Automatic Identification of Time-series Features for Rule-based Forecasting,” Adya, Collopy, Armstrong, & Kennedy was the fourth most frequently downloaded paper from the *International Journal of Forecasting* for the year 2001.

Long-Range Forecasting (1985) continues to have an impact. I received royalties of about \$4,200 from reprinting sections, and there were 4,400 visits to the full-text version at forecastingprinciples.com

Another way to assess impact is through “web site cites.” On January 25, 2003, I conducted a Google analysis using “j scott Armstrong” (with key words to omit a professor in the physical sciences who has the same name, and to omit mentions related to running). There were 341 unique cites (out of 1,200 total), an increase of 44% over the start of 2002.

I conducted Google searches for the areas in which I do research. Although my forecasting sites fell to #2, there were 20 areas in which my research was the top-rated site (up from 16 from last year). The areas are described in Exhibit 2.

I counted journal citations of first-authored papers through ISI (Institute for Scientific Information). This was my best year for citations; using all spellings of my name, with self-citations excluded, I had 154 citations. This underestimates citations, as the final count is not complete until long after February. For example, when I reported last year, there were 123 citations; when I now examine the final count, there were 137 citations (11% more). In any event, using comparable time periods, my citation rate increased by 25%, largely due to the publication of *Principles of Forecasting* in 2001. My average for each of the previous five years (1997-2001) was approximately 120, and the rate grew over this time.

4. TEACHING

I am working to improve my teaching materials, and also to make them more readily accessible to my students. They are also available for use by other faculty and I have received e-mails from other faculty members thanking me for making the materials available. I have been working especially hard on the advertising course, so I review here what I have been doing. I am doing some of this in other courses also.

Advertising Course

I have been developing <http://advertisingprinciples.com> for about three years as a resource to my advertising students and to others. It contains a decision-support system based on expertise and prior research; this is designed to aid in the evaluation and improvement of advertising copy. One of the objectives is to

organize research on persuasion so as to aid further research. Traffic for the year was 5,500 and cumulative traffic since May 2001 has been about 7,000.

The site is only part of the picture. I have been developing a detailed and linked syllabus to aid students.

To improve communication beyond e-mail, I encourage students to visit, ask each group to schedule at least one meeting, suggest that the class pick an ombudsman, and recommend that the contact person for each group to act as ombudsman to resolve any problems that might arise.

Finally, My book *Advertising and the Science of Persuasion* includes most of the materials from my course, thus providing another approach for students.

JDM Newsletter March 2002, “The Teachers Corner”

Published “Planning Heuristics can be Harmful to the Health of Firms.” This described my laboratory experiment on portfolio matrices and showed how to use it as a teaching exercise.

Educational Materials (See “Educational materials at <http://jscottarmstrong.com>)

As a service to students, I have been putting descriptions of management techniques on my home page. In addition, I have been providing cases for use by other faculty. This page had over 2,000 visits during the year (cumulative traffic was about at 4,000 at the end of 2002).

Letters

I occasionally get “thank-you letters” and e-mails from former students (about ten this past year). I enclose two of my favorite passages from letters received last year:

“My background is accounting so your classes were particularly challenging for me. It wasn't that I had to study terribly hard but you constantly challenged my beliefs and that was physically stressful. I very much appreciate the opportunity.”

“Aside from the fact that I think your courses at Wharton had, by far, more lasting value than any others, recent events brought their relevance home once again. . . .”

Exhibit 1

2002 Reviews of *Principles of Forecasting* (Full-text reviews at forecastingprinciples.com)

Six reviews were published in 2002. All reviews have been highly positive except for the one in *Technological Forecasting and Social Change*. All reviews are available in full text at <http://forecastingprinciples.com>

[*Journal of Marketing Research*](#), November 2002, pp. 498-499. "Armstrong's book goes beyond its stated goal of presenting the state of the art of forecasting research in the form of concrete principles; it sets the tone and direction for all future work in this area. The book has earned its place as the bible for forecasters and is a "must have" in every forecaster's library."

[*Interfaces*](#), November-December 2002, 21 (6), 91-92, by Benito Flores, says " The last section [my summary chapter] is a tour de force. It provides a complete set of the principles. A forecaster (practitioner or academic) can use the principles that apply to his or her circumstances. The principles can provide a process path to elaborating excellent forecasts. If you follow them, will you have guaranteed better accuracy? I guess that nobody can provide a warranty, but the probability of accuracy will be improved."

[*Business Economics*](#), April 2002, 37 (2), 70-72, by Brandon Dupont, who says, "Overall, ... [the book] is a useful text for those business economists who are responsible for preparing forecasts on a regular basis."

[*Financial Engineering News*](#), April 2002, Issue 25: A lengthy review by John Aitchison recognizes "It is not a mathematically oriented text-book, not specifically focused on finance nor for that matter only on time-series forecasting. ...So why would a hard-nosed, empirical, finance person be interested in *Principles of Forecasting*? Precisely because of its broad scope. It takes a step back, reviews ALL the evidence about a diverse set of forecasting methodologies and provides a framework against which you can assess your own approaches and tools."

[*The Journal of Business Forecasting*](#), Spring, 2002, p. 30: "The authors intended this book to be a handbook containing detailed references to the forecasting literature. The principles are excellent starting points for developing expert systems for forecasting."

[*Technological Forecasting & Social Change*](#), 2002 (60), 313-316: The book's "value lies not only in the fact that it is a valuable addition to a manager's or decision-maker's library, but that it deals with a hitherto neglected scientific field—that of treating the future as a consequence of human decisions in the present."

[*International Journal of Forecasting*](#), 18 (3), 468-478, by Paul Goodwin, with contributed reviews on quantitative non-causal methods (Keith Ord), econometric methods (Lars-Erik Öller), judgmental forecasting (Janet A. Sniezek), and diffusion of principles (Mike Leonard). "Scott Armstrong and his fellow authors have written an excellent handbook on forecasting. The book, together with its companion Web site and *Forecasting Dictionary*, provides the professional forecasting community with a centralized reference on sound forecasting principles."

Exhibit 2

“Web Site Rankings” as of December 31, 2001

Using Google and entering the exact phrase plus [with all the words], my research was #1 for 20 areas. The total number of category hits is approximate, with no adjustments for repeats. The number of “total sites” has grown on all sites over the past year. Most of the analysis was done around January 26, 2003, but some are more recent.

Areas Where my Research Was First	Total Sites
bootstrapping [forecasting]	3,360
causal forces	1,560
combining forecasts	1,010
competitor-oriented objectives	21
error measures [forecasting]	740
extrapolation [forecasting]	12,500
forecasting audit	131
forecasting conflicts	47,000
forecasting dictionary	121
formal planning [value]	5,680
game theory [forecasting]	13,200
intentions to purchase	827
judgmental bootstrapping	98
judgmental adjustments [forecasts]	141
long-range forecasting	3,900
monetary incentives [surveys]	2,970
multiple hypotheses [management]	960
role playing [forecasting]	3,930
rule-based forecasting	215
social irresponsibility [business]	741

I also rank high in the following areas:

- Advertising principles (#2 of 1,190,000)
- Business school prestige (#2 of 49)
- Consumer behavior [prediction] (#4 of 4,150)
- Controversial findings (#5 of 1,750)
- Decomposition [judgment] (#5 of 25,100)
- Escalation bias (#3 of 77)
- Forecasting (#2 of 1,250,000)
- Intentions [forecasting] (#2 of 20,000)
- Learner responsibility (#3 of 764)
- Marketing principles (#19 of 30,300)
- Non-response bias [surveys] (#17 of 3,400)
- Relative absolute error (#5 of 490)
- Replication [marketing] (#11 of 132,000)
- Return postage [surveys] (#8 of 1,280)

