Lower Klamath Lake shrank. Waterfowl crowded together as farmers lashed out at bureaucrats, environmentalists and Indians. In the wake of multiple lawsuits, Interior Secretary Gale Norton convened a panel of experts to study the crisis. To date, the situation in the Klamath remains acrimonious and litigious.

Seeking Refuge does not provide policy recommendations. This concise, understated, well-crafted work allows readers to reach their own conclusions. Despite its narrow focus on the unpleasant revelation that ocean acidification was a very serious problem, Kleypas’ story, recounted in Nancy Baron’s Escape from the Ivory Tower, illustrates the resolve required for investigators to leave their comfort zones in the lab, the field and scientific journals in order to deliver bottom-line, jargon-free information to lay audiences. The book summarizes Baron’s decade of experience leading workshops for environmental scientists through the Communication Partnership for Science and the Sea. Her curriculum includes such topics as formulating (and sticking to) a clear message, talking with journalists and policymakers, and promoting a scientific paper. Like her workshops, Baron’s authoritative writing is studded with cameo appearances by researchers who have taken the plunge into the public sphere and have sound advice to offer. Some of America’s best-known science journalists weigh in as well.

The book is supplemented by an attractive, user-friendly website (http://www.escapefromtheivorytower.com/) that provides, among other things, exercises to help scientists decide how much advocacy they’d like to do, videos of scientists offering advice, and links to effective research-lab websites. Unfortunately, although the book was published in August 2010, three months later many of the online resources mentioned in the text still could not be found on the site.

Like it or not, when we try to save nature we inevitably change it. This is true on the planetary scale and the local scale. By looking to the past, Wilson helps us peer into the future, as we try to imagine the consequences of our efforts and proposals to engineer our way out of the latest environmental crisis.

Jared Farmer, a member of the history department at Stony Brook University, is the author of, among other books, Trees in Paradise: A California History (forthcoming from W. W. Norton).

Speaking for the Data

Elsa Youngstead


As a child, Joanie Kleypas was drawn to the television programs of Jacques Cousteau, and they played a role in inspiring her to become a marine ecologist when she grew up. But she never dreamed that she herself would get involved in communicating science to the public. Decades later, however, she was forced into that role when her research uncovered important information. Working at the National Center for Atmospheric Research, she was one of a handful of scientists investigating the effects of rising levels of atmospheric carbon dioxide on ocean acidity. When the first model results came in, showing that ocean acidity would increase greatly, the realization hit her that this would pose a huge threat to marine life. She had to excuse herself from a meeting to go throw up.

Kleypas had always shied away from promoting her own work, but the unpleasant revelation that ocean acidification was a very serious problem launched her reluctantly into the public sphere, as she resolved to help policymakers understand and address the matter. Her efforts have paid off: Public awareness of the problem has increased, and federal funds for research have been authorized by the Federal Ocean Acidification Research and Monitoring Act passed by the U.S. Congress in 2009.
search, Baron and Meredith offer largely concordant advice, but Meredith suggests for his broader audience a wider array of skills and media to pursue. Understandably, he emphasizes the value of working with one’s public information officer and crafting successful press releases—not only in the main text but also in the supplemental booklet “Working With PIOs,” which can be read online at the book’s website (http://explainingresearch.com/).

Explaining Research includes some astonishing and useful minutiae: When writing for print or the Web, one should revise sentences that contain too many “short” letters such as a, c and n, because it’s easier to read text that combines short letters with tall ones. Readers are reminded to go to the bathroom before participating in Web conferences, and to wear tall socks for television interviews, lest their calves peek out below their pant legs.

Unfortunately, preoccupation with so many details sometimes obscures the big picture. This is particularly evident in Chapter 15, titled “Create E-Newsletters, Wikis, Blogs, Podcasts, Social Networks, and Webinars.” Despite Meredith’s general emphasis on defining and understanding one’s audience, here it’s not entirely obvious for whom and in what context these things should be done—and his examples, such as Science magazine’s respected podcast, do not clarify how an individual researcher might use similar tools. That makes Meredith’s advice no less valid, but it means that parts of his book will be most useful to scientists who already know that they want to pursue a specific means of outreach and just need instructions.

Baron and Meredith have each made admirable efforts to incorporate anecdotes, quotes and humor, but their books are undeniably instruction manuals. Most readers won’t cozy up to these volumes in an armchair with hot chocolate, but they’ll be grateful for the investment when they can pull either book off the shelf in times of need. Aspiring journalists and public information officers will also find valuable insights into scientific culture and the way their own work is perceived. Even the more narrowly targeted Escape from the Ivory Tower should be embraced by a broad scientific audience; it’s impossible to predict when, like Kleypas and many others, you may be jolted out of your comfort zone and forced to convince the world that your data matter.  

Elsa Youngsteadt is a programs manager at Sigma Xi, where she coedits the Science in the News Daily e-newsletter and contributes to Public Radio International’s The World Science podcast. She is also a freelance science writer and holds a Ph.D. in entomology from North Carolina State University.

GAME THEORY

Honor Among Thieves

Cosma Shalizi


Since the 1970s, a loose community of theoretical biologists, economists, political scientists, mathematicians and philosophers has been using the tools of evolutionary game theory to try to understand how purely selfish agents can come to cooperate, follow norms and even behave altruistically—to understand when honesty is the best policy. Karl Sigmund has been a leading figure in these efforts, and The Calculus of Selfishness is his latest attempt at an introduction to the field. In its exposition, the book focuses on reciprocity between self-interested individuals in certain elementary types of interactions.

Game theory (as laid out in chapter 1) models agents interacting with each other, in pairs or in larger groups, with a fixed set of moves available to them. (Sigmund mostly deals with two-player games, but this is just for simplicity.) An agent—Alice, say—has a “strategy” that tells her what move to make at each step in the game, in response to another agent’s moves and to the state of the external world (if the model admits that the latter exists). Alice’s coplayer—Bob, say—also has a strategy, and together the two strategies determine the outcome of the game. At its end, Alice and Bob each get a payoff, according to a function that depends on the moves both have made. Their strategies are in equilibrium if neither of them could increase their payoff by changing their moves unilaterally.

Basic economics courses lead one to expect that there will be only one equilibrium and that it will be optimal for everyone. The games of relevance to the evolution of cooperation, however, are social dilemmas, where this expectation fails. Sometimes the problem is that the equilibrium is optimal for no one. Imagine that Alice and Bob are two bandits, who can either cooperate in robbing villages and caravans, or defect by turning on each other. If they both cooperate, each will take $1,000; if they both defect, neither can steal effectively and they’ll get $0. But suppose that if Alice cooperates and Bob defects by turning on her, he will get $2,000 and she will lose $500—and vice versa. Then regardless of what Alice does, Bob will be better off defecting. So by symmetry, the only way to achieve equilibrium is for both of them to defect—even though they’d both be better off, in purely selfish terms, if they both cooperated.

When this type of problem was first posed at the RAND Corporation in the early 1950s, it was framed as prisoners being offered the chance to turn state’s witness, so it is still called the prisoner’s dilemma, and it is the archetype of many cooperation problems. A multiperson version of it is the public goods game, in which something like an open park is shared equally among all participants, no matter how much each of them has contributed to its creation or upkeep.

In other social dilemmas, there are many equilibria, some more favorable to one player than to another. If Alice and Bob can agree to cooperate as bandits, how should they
Public Speaking for Successâ€”Dale Carnegie. 5. Whatâ€™s the best number of messages to try to communicate when Iâ€™m giving a speech? Before I answer that, I want you to think for a minute of the best speaker youâ€™ve heard in the last year or the last five years. Now, tell me how many messages do you remember from that presentation? I donâ€™t mean that you like the personâ€™s style, they are funny or they walked around the room, etc. And if you start with a story even better. Do that and you will hook them and they will stay with you for the rest of your presentation. Now, if you want to thank the person who invited you or introduced you during the middle of the speech, do it near the end. Useful articles. The IELTS speaking test is mostly scheduled up to 07 days prior to until 07 days after your main examination [L/R/W Tests]. Wherein, you get the notification for the listening, reading and writing section venue, time and date via email... Wherein, you get the notification for the listening, reading and writing section venue, time and date via email the instant you register for the examination, notifications for the speaking section are rolled out by the test taking bodies, on your registered email and mobile number, nearly 03 days before the scheduled speaking test date for you. Also note that if your speaking is scheduled anytime after your main examination, you will be provided with the test dat. Continue Reading. Hi there !!!