This fall, the STPP graduate certificate program admitted its first group of students. Five students, who represent departments throughout the university, joined the program: Arthur Feldman (Materials Science and Engineering); Christine Kirchhoff (SNRE); Nathan Palpant (Molecular and Integrative Physiology); Brian Tremblay (Ford School); and Salena Whitfield (Chemistry).

Students in the certificate program will learn about the politics of the science and technology, as well as science and technology policymaking, and they will learn tools to conduct science and technology policy analysis. They are required to take three core courses (PubPol 650: Introduction to Science and Technology Policy Analysis; PubPol 585: Political Environment of Policymaking; PubPol 759: Research Seminar in Science, Technology, and Public Policy) and two electives. Students can choose from 45 electives from around the university. They are also required to attend the STPP lecture series, and will have opportunities to have lunch with series speakers in order to learn more about the world of science and technology policy.

To market the program widely, we have created a brochure (if you want a copy, just ask us!). We are holding an STPP Information Session on January 11th. The next round of graduate certificate applications are due February 15th.

We are very excited about the level of student interest in the STPP Program. We have a great inaugural cohort and the STPP core courses have very healthy enrollments.

STPP welcomes Dow Foundation postdoctoral fellows

Thanks to a generous grant from the Herbert H. and Grace A. Dow Foundation, STPP recently instituted a postdoctoral fellowship program. Fellows will spend two years at the Ford School, contributing to the intellectual life of STPP, helping to organize the STPP lecture series, and teaching STPP-related courses.

This year, we welcome our first fellows, Dan Plafcan and Paul Erickson. Dan recently received a PhD in Science & Technology Studies (with a minor in government) from Cornell University. He studies interdependencies among technological development, international affairs, and the creation of knowledge, examining in particular intergovernmental collaborations and their implications for national security and foreign policy. His dissertation, which he is turning into a book, focuses on inter... (continued on page 7)
The STPP lecture series is sponsored by the Herbert H. and Grace A. Dow Foundation.

Events are held on Mondays, 4:00-5:30pm in the Betty Ford Classroom (1110 Weill Hall) at the Gerald R. Ford School of Public Policy, unless otherwise noted.

29 January 2007
Kathleen M. Vogel
Assistant Professor, Science & Technology Studies and Peace Studies, Cornell University
Commentary by Michael J. Imperiale, Professor of Microbiology and Immunology, University of Michigan Medical School
Co-sponsored by the Department of Microbiology and Immunology, University of Michigan Medical School

12 February 2007
“Aesthetic Democracy: Negotiating Visual Norms for Wind Energy Development”
Roopali Phadke
Assistant Professor, Environmental Studies Policy & Politics, Macalester College
Commentary by Beth Diamond, Assistant Professor, School of Natural Resources and Environment, University of Michigan
Co-sponsored by the Center for Local, State, and Urban Policy, Gerald R. Ford School of Public Policy

26 March 2007
“Radically Rethinking Climate Policy”
Steve Rayner
James Martin Professor of Science & Civilization, and the Director of the James Martin Institute, Said Business School, University of Oxford
Panel Discussion with Barry Rabe, Gerald R. Ford School of Public Policy/ School of Natural Resources and Environment and Edward Parson, Law School, University of Michigan
Co-sponsored by the International Policy Center at the Gerald R. Ford School of Public Policy and the Michigan Memorial Phoenix Energy Institute

16 April 2007
Walter and Leonore Annenberg Auditorium (1120 Weill Hall)
Shobita Parthasarathy
Assistant Professor, Gerald R. Ford School of Public Policy, University of Michigan
Co-sponsored by University of Michigan’s Science, Technology & Society Program and the Gerald R. Ford School of Public Policy
Reception after lecture

Paul recently received his PhD in History of Science (with a minor in Science & Technology Studies) from the University of Wisconsin—Madison. He does research on how the decision sciences have been developed, and how they have come to be used in and shape policymaking. His dissertation, which is he turning into a book, focuses on the history of game theory and how it came to be an important decision-making method for the policy world, starting in the Cold War era. He will be teaching Global Environmental Governance and Introduction to Science and Technology Policy Analysis.

STPP Postdoctoral fellows

James J. Duderstadt (Co-Director), U-M President Emeritus, School of Engineering, Ford School of Public Policy
Shobita Parthasarathy (Co-Director), Ford School of Public Policy
Paul Edwards, School of Information
Joel Howell, Medical School
Steven J. Jackson, School of Information
Paula M. Lantz, School of Public Health
Hamer A. Neui, Department of Physics
Edward A. Parson, Law School
Henry Pollack, Department of Geological Sciences
Barry Rabe, Public Policy/ SNRE
Carl P. Simon, Public Policy/ Complex Systems/Mathematics
Arvids Ziedonis, Ross School of Business

Dan Plafcan, STPP Postdoctoral fellow
Paul Erickson, STPP Postdoctoral fellow
Monamie Bhadra, STPP Research Assistant

©Peter Aaron/Esto

Joan and Sanford Weill Hall: the new home of the Gerald R. Ford School of Public Policy (and STPP, too)
The Politics of Counting Dead Iraqis

On October 10, 2006, at the height of the American midterm campaign season, the distinguished medical journal *Lancet* published an article on the internet that suggested a statistical estimate of the number of Iraqis who died as a result of the American invasion of their country in 2003. The estimate – 655,000 dead – was stunning because even the lower bound of its confidence interval was an order of magnitude greater than the highest estimates put forward to date. Perhaps not surprisingly given the prominence of the Iraq war as a campaign issue, the article proved an immediate sensation, maintaining a top spot in the headlines for several news cycles.

All of a sudden, everyone from local newspaper editors to the president was weighing in on the number of Iraqi dead. In a press conference held early on the morning of the 11th, a reporter asked U.S. president George W. Bush if he felt the study’s estimate of 650,000 casualties was credible. Bush’s response perfectly encapsulates the major substantive bones of contention that would emerge in subsequent media debates. First, the estimate of 650,000 was simply too high to be believed, and the president reiterated his support for an estimate of 30,000 civilian deaths that he had been citing in press conferences for over a year. Second, he stated that the study’s purportedly scientific methodology had been “pretty well discredited,” thus making it perfectly reasonable to disbelieve the estimate. And third, he hinted that the exact number of Iraqis killed is not particularly meaningful in evaluating whether the war was, on balance, a good thing. Whether 30,000 or twenty times this many had died, “I do know that a lot of innocent people have died, and that troubles me and it grieves me. And I applaud the democrats for their courage in the face of violence. I am amazed that this is a society which so wants to be free that they’re willing to – that there’s a level of violence that they tolerate.” Despite the loss of a significant (but not overwhelming) number of “innocent” lives, the fact that Iraqis were still fighting for their freedom suggested that they implicitly deemed that such casualties were justified. Thus, rather than ending a controversy by dint of scientific authority, the *Lancet* article served to begin one in which everyone might as well have been an expert. Talking heads alternately embraced the statistic as further evidence that the Iraq war has been a policy disaster and denounced it as a cheap political stunt, science gone bad, or at best, an irrelevant factoid. What went wrong? Was this yet another apparent case of “reality” dashing itself to pieces against arrogant and ignorant ideology? Or was it a case of spurious results, produced by a biased scientific elite, being politely disregarded by more commonsensical men of practical affairs? Based on the editorials and blog comments that the *Lancet* study provoked, it is not difficult to find support for these interpretations; and it is not surprising that they set the major tropes in the media coverage as the story unfolded.

However, the literature of science and technology studies suggests several other ways to think about the aftermath of the *Lancet* study. On one level, the conversation revolves around seemingly technical matters of evaluating “inferences” versus “extrapolations,” sample size and selection techniques, standard deviations and margins of error. Yet other concepts that arise – counting and accountability, objectivity, and representation – have obvious political as well as scientific ramifications. Literature in the STS tradition has addressed (continued on page 4)
these concepts in a number of ways. For instance, a number of studies have stressed the critical role of quantitative evidence in ensuring objectivity and accountability in adversarial environments. Quantitative methodologies feature prominently in the selection of projects by the Army Corps of Engineers, the approval of pharmaceuticals by the Food and Drug Administration, or the adoption of regulatory policies by the Environmental Protection Agency.²

Quantification may be necessary for objectivity and accountability, yet it is not sufficient. After all, George Bush could counter the “not credible” quantitative estimate of the Iraq war with his own quantitative estimate, which he specified in media sources. So evidently, the power of quantitative evidence lies less in the numbers per se than in the processes that create them. The use of numbers acts to constrain the expressive options of the quantifier by excluding many subjective statements—for example, judgments of aesthetics or sentiment. This is because the generation of quantitative estimates is generally governed by mechanical processes that are specifically intended to remove any discretion or subjectivity on the part of scientific observers. This is most evident in the use of strict regimens of “randomization” used to generate samples upon which statistical estimates are to be based. Scientists are not permitted to exercise their judgment in the selection of samples, but must defer to mechanized random-number generators, the physical laws governing flipped coins, and so forth. By ostensibly removing discretion and decision-making power from the scientist, the resulting estimate is perfectly determined and therefore apolitical.³

Even so, the responses to the Iraqi death count suggest that the rule-bound processes of quantification—processes that were intended to guarantee objectivity—failed to induce public assent to quantitative estimates in this particular case. Bush, like many other commentators, would suggest that the Lancet study’s statistical sampling methodology was “pretty well discredited,” although he did not offer much justification for the methodology behind his own estimate, or behind other official casualty statistics. In fact, just over a month after his comments, the report of the Baker-Hamilton Iraq Study Group criticized the way in which official American casualty estimates were generated. They noted that “there is significant underreporting of the violence in Iraq” because the criteria used to record violent incidents and casualties “acts as a filter to keep events out of reports and databases.”

Therefore, recommendation 78 of the Study Group’s report stated: “The Director of National Intelligence and the Secretary of Defense should institute immediate changes in the collection of data about violence and the sources of violence in Iraq to provide a more accurate picture of events on the ground.” So in this case, there existed multiple internally consistent, rule-bound, and “objective” methodologies that gave very different numbers of Iraqi civilian dead.

If neither quantification nor forecasting worked, how could additional concepts of counting and accountability be needed to make this debate end? Bush’s last comments in the press conference suggest what may be at stake. Death is an accepted fact of life in all human societies; and as Bush noted, while he is “amazed” at the level of violence Iraqis are willing to tolerate in their pursuit of “freedom,” he is impressed by their sense that the sacrifice is justified. In this reckoning, many of the Iraqi dead were not innocent victims of an American invasion, but active participants in a bloody but hopeful process of forging a new society.

Compare this framing with that proposed by the Lancet study’s authors, for whom war is viewed through the lens of public health. In the Lancet article from 10 October, editor Richard Horton offered this interpretation of the study’s significance:

“This quantification has changed the terms of human engagement at many levels—in trade, aid, economic development, environmental protection, and agriculture. Yet foreign policy is still governed by principles that had their origin in the 19th century, based, as they were, around notions of national sovereignty and economic and geographical self-interest. Those principles need to be radically revised. Health and wellbeing—underpinning values, their diverse array of interventions, and their goals of healing—offers several original dimensions for a renewed foreign policy that might at least be one positive legacy of our misadventure in Iraq.”

Measured according to the framework of public health, i.e., by comparing prewar baseline mortality with postwar baseline mortality—the Iraq war is surely a disaster of the first order. This is the overwhelming message of the Lancet study.”

References:

4 Iraq Study Group Report, p. 62