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What is “science communication” anyway?

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Cornell
Comm 694: Public Engagement in Science

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Thursday, 7:00 pm -- 10:00 pm
Location: Kennedy 211

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Office hours: Weds., 2:30-4:30 or by appointment

[What's new on this website?](#) (hint: on 8 Feb 2003, it was completely reorganized)
(The most up-to-date syllabus will be online at <http://socrates1.cit.cornell.edu/comm694.pdf>, pdf version of 8 Feb 2003 version available [here](#).)

The traditional label of “public understanding of science” has always been problematic (not least because of its acronym, PUS). In the last few years, the label of “public engagement in/with science and technology” has become more popular (though already at least [one website](#) is making fun of its acronym, PEST), while simultaneously providing some [helpful links](#). This seminar will explore some of the recent publications justifying, proposing, describing, evaluating, and seeking the meaning of various approaches to “public engagement in science.” Is the label any less problematic than PEST? What activities are contemplated under the label of public engagement? How might one measure public engagement? Some of the activities to be explored include local and national “public consultations”, deliberative polling, citizens’ juries, consensus conferences, foresight exercises, citizen science, and science shops.

- ◆ Public understanding of science (PUS)
- ◆ Public engagement in/with science and technology (PEST)
- ◆ Public Learning and Understanding of Science (PLUS)
- ◆ Learning science in informal environments (LSIE or ISLE)
- ◆ Outreach
- ◆ or...?

What the science community calls it

The screenshot shows the SciDev Net website interface. On the left is a navigation menu with categories like HOME, EDITORIALS, NEWS, FEATURES, etc. The main content area displays an editorial article titled "Public Engagement with Science" by David Dickson, dated 30 November 2004. The article discusses the relationship between science and society, mentioning the AAAS meeting and the need for public engagement. A small graphic of hands holding a globe is visible next to the article title. The bottom of the page features the Cornell University logo.

Models of PUS/PEST/PLUS/etc.

- ◆ Deficit model
 - Deficit model
 - Contextual model
- ◆ Public engagement model
 - Lay knowledge model
 - Dialogue/public engagement model

Deficit model

- ◆ Longstanding concerns about lack of public knowledge
- ◆ More knowledge is better (“fill the deficit”)
 - Measures of scientific knowledge
 - Best known: biennial NSF survey of public knowledge and attitudes
- ◆ Many excellent educational materials produced



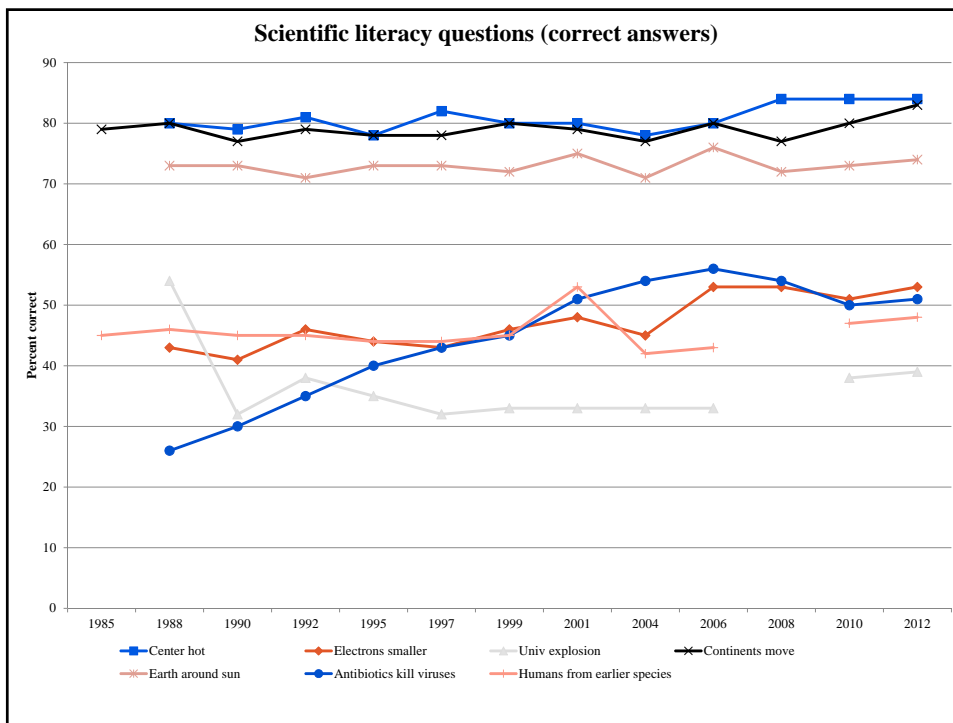
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Deficit model

The image displays three overlapping screenshots of educational websites. The top-left screenshot shows the 'TO KNOW OURSELVES' website, part of the U.S. Department of Energy and the Human Genome Project. The top-right screenshot shows the 'Nye Labs' website, featuring a navigation menu with letters H, Q, E, U, N, N, E, G, T and a 'LATEST NEWS' section. The bottom-center screenshot is a promotional page for the PBS special 'IF YOU COULD READ YOUR GENES', featuring a close-up of a person's face and text describing the program as a two-hour special on genetic testing.



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Revised Deficit: Contextual model

BLOOD IN THE FACE
 THE TROUBLING LEGACY OF THE TUSKEGEE SYPHILIS STUDY

For forty years, from 1932 to 1972, 399 African-American males were denied treatment for syphilis and deceived by officials of the United States Public Health Service. As part of a study conducted in Macon County, Alabama, paid sharecroppers were told that they were being treated for "bad blood." In fact, the physicians in charge of the study ensured that these men went untreated. In the 25 years since its details first were revealed, the study has become a powerful symbol of racism in medicine, ethical misconduct in human research, and government abuse of the vulnerable.

The 1990s has been a time of reflection upon the Tuskegee Study and its troubling implications. In February 1991, the issue was addressed in a symposium entitled "Doing Bad in the Name of Good": The Tuskegee Syphilis Study and its Legacy" convened at the Classen Moore Health Sciences Library. The discussion at this gathering led to the creation of the Tuskegee Syphilis Study Legacy Committee which met in Tuskegee in January 1996. In its final report the following May, the Committee urged President Clinton to apologize for wrongs of the Tuskegee Study. The Committee's work bore fruit on May 16, 1997 when the President apologized on behalf of the United States government to the surviving participants of the study. These men and members of the Legacy Committee were invited to the White House to witness the apology.

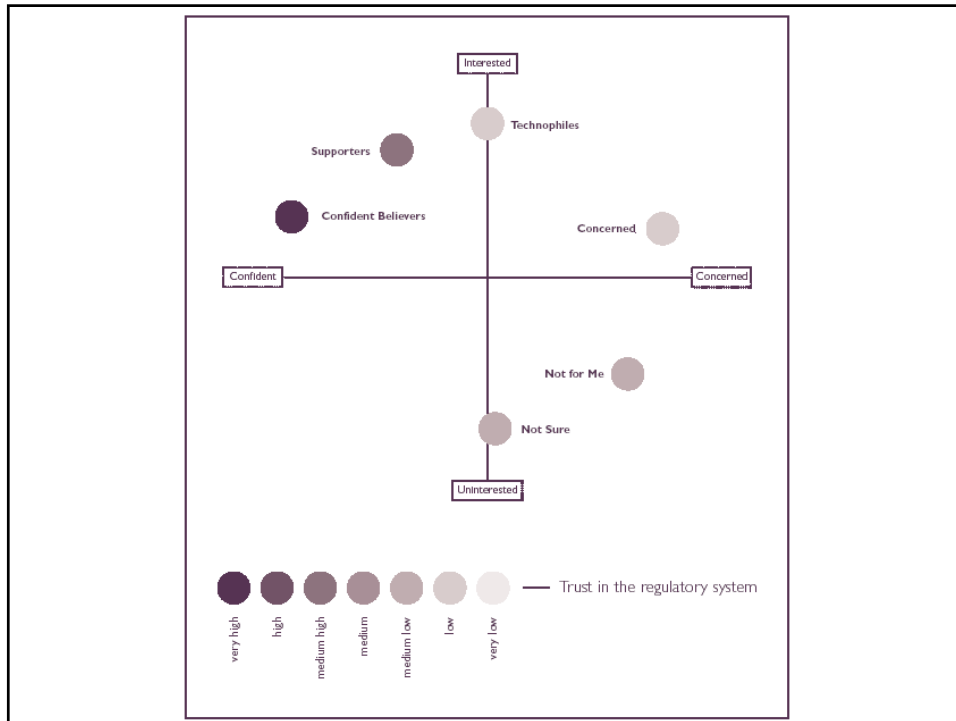
THE TUSKEGEE SYPHILIS STUDY AND ITS LEGACY

Proyecto Hispano Educativo Sobre el Genoma
 Versión en Inglés

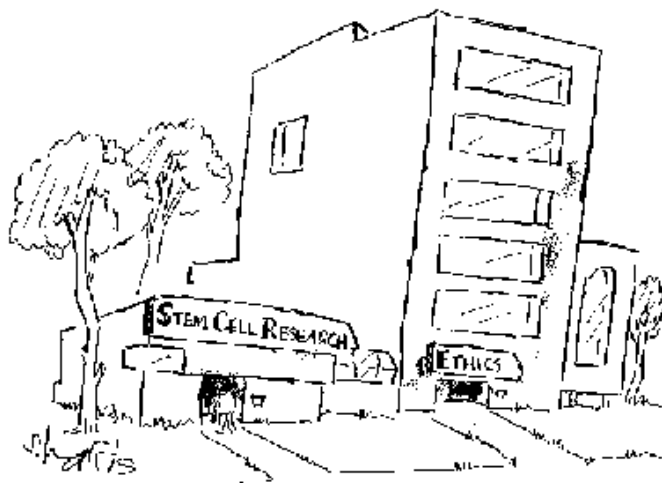
Los objetivos primarios de esta boca son desarrollar, hacer efectivo, y distribuir culturalmente competente, apropiada lingüística e pertinente plan de estudios que promueva interacción entre el estudiante hispano y su familia con respecto a la ciencia, asuntos éticos, legales, y sociales del Proyecto Genoma Humano. Atención básica, con diálogo confiable, entre padres e hijos asistiendo escuela secundaria, familias enteras pueden ser expuestas a información educacional, de salud genética, y de oportunidades. Además, se espera que una interacción exitosa entre los estudiantes e maestros y entre los padres e maestros.

El plan de estudios consiste de dos componentes mayores: (a) eso diseñado para los estudiantes (b) eso diseñado para los padres. El contenido de estudiantes consiste de materiales ya disponible (e.g., cuestionario de BCCS YCE- AELC; operativa de la Universidad de Washington centro de enseñanza secundaria Proyecto Genoma Humano, Virtual FlyLab) y materiales recién desarrollados (e.g., actividades desarrolladas por maestros en cuatro unidades mayores de biología, cuestionarios desarrollados por estudiantes). El contenido de los padres consiste de hojas informativas, escritas por estudiantes, disponible tanto en inglés como en español, y grupos enfocados los padres con traductores disponibles.

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Public Engagement Model



Public engagement in science

- ◆ Consensus conferences
- ◆ Citizen juries
- ◆ Deliberative technology assessment
- ◆ Science shops



Builds on lay knowledge/expertise

The image displays two website screenshots. The left screenshot is for PigeonWatch, an international study of feral pigeon colors, featuring a 'WELCOME' section with a 'JOIN NOW' button and a 'FEATURES' section with various articles. The right screenshot is for the AIDS Community Research Initiative of America (ACRIA), showing an 'Introduction' section with text about the initiative's mission. A map of Norwich, VT, is overlaid on the ACRIA site, showing a 'Study boundary' and 'Cancer victims' locations.



Public participation

The screenshot shows the GeneLetter website with an article titled "TO THE EDITOR" about genetic discrimination. The article discusses insurance companies and genetic testing. Overlaid on the website is a poll interface titled "What do you think?" with the question: "Would you want to undergo genetic testing to learn if you were predisposed to a disease for which there is no treatment or cure?" The poll has two buttons: "Yes, I would" and "No, I wouldn't". Below the buttons are instructions: "Click on your choice to submit -- you'll see your vote added to the current standings -- or: Show me the current standings first, Let me see what the experts say, Let me see what other viewers say, I'd like to add a comment". To the right of the poll is a sidebar with navigation links: "GENETIC TESTING: FIND OUT MORE!", "EDUCATOR RESOURCES", "WHAT DO YOU THINK?", "CAREERS IN GENETICS", "RESOURCES", "DISCUSSION FORUM", and "SURVEY". Below the sidebar is a "Instant Poll -- Current Standings" section showing a bar chart with "yes" at 71% (2564 votes) and "no" at 29% (1023 votes).



Public participation

The screenshot shows a website titled "Human Genetics, Environment, and Communities of Color: Ethical & Social Implications". The main heading is "Citizens' Conference on Food Biotechnology: A Public Discussion on the Future of Food." Below this is a section titled "designer genes at the dinner table" with a list of links: "calgary conference", "citizen panel report", "about citizen conferences", "food biotechnology FAQ", "education material", and "regulation & ...". To the left of the website is a newspaper clipping titled "Facts flow at citizens' jury" with a photo of a woman. The clipping discusses a citizens' jury on genetic testing and insurance. To the right of the website is a sidebar with navigation links: "Home Page", "Please Bookmark This Site - Information Will be Moved Periodically", "Background Paper", "Register Participation", "Schedular Registration", "Directions", and "Post Card".



