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ANNALS OF

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Special Ig Nobel Issue

**Why Woodpeckers
Don't Get Headaches,
and much more...**



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“When all other contingencies fail, whatever remains, however improbable, must be the truth.”—*Sherlock Holmes*
Science is the belief in the ignorance of experts.”—*Richard Feynman*

Problematization

Pleasingly posed, possibly problematical publications

compiled by Sylvester S. Sylvester, Sr., Improbable Research staff

Problematization 1

“Using the Unfamiliar to Problematize the Familiar,” A. Arcavi and A.H. Schoenfeld, paper presented at the annual meeting of the American Educational Research Association, Chicago, IL, April 2003.

Problematization 2

“From Problem Solving to Problematization: Relevance Revisited,” M. Ezzamel, *Critical Perspectives on Accounting*, vol. 5, no. 3, 1994, pp. 269–80.

Problematization 3

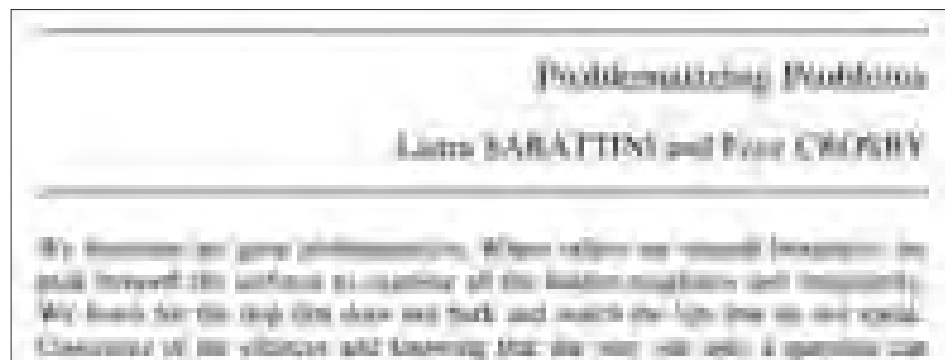
“Problems with Problematizing Mathematics: A Reply to Hiebert et al.,” J.P. Smith, *Educational Researcher*, vol. 26, no. 2, 1997, pp. 22–3.

Problematization 4

“The Problematization of Nocturnal Emissions in Early Christian Syria, Egypt, and Gaul,” David Brakke, *Journal of Early Christian Studies*, vol. 3, 1995, pp. 419–60.

Problematization 5

“Problematizing Problems,” Laura Sabattini and Faye Crosby, *Feminism and Psychology*, vol. 13, no. 2, 2003, pp. 265–73.



Contents

The features marked with a star (*) are based entirely on material taken straight from standard research (and other Official and Therefore Always Correct) literature. Many of the other articles are genuine, too, but we don't know which ones.



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On the Front Cover

Ivan Schwab, co-winner of the Ig Nobel Ornithology Prize, delivers his acceptance speech at the ceremony. Photo: Kees Moeliker.

On the Back Cover

Ig Nobel Mathematics Prize winners Nic Svenson (at the microphone) and Piers Barnes (wielding a camera) deliver their acceptance speech. They calculated how many group photos one must take to (almost) ensure that nobody's eyes are closed. Group photo: David Holzman.

Coming Events

(see WWW.IMPROBABLE.COM for details of these and other events)

Genetics Momentum, Rotterdam -- Nov. 9, 2006

"Science Friday" Ig highlights, NPR -- Nov. 24, 2006

AAAS Meeting, San Francisco -- Feb. 16, 2007

Siemens "Get Inside" event, London -- Mar. 2, 2007

Ig Nobel UK Tour - Mar 2007

Improbable Research European Tour -- May 2007

Ig Nobel Prize Ceremony - Oct. 4, 2007

Ig Informal Lectures -- Oct 6, 2007

Every Day

Read something new and improbable every weekday on the Improbable Research blog, on our web site: WWW.IMPROBABLE.COM

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AIR Vents

Exhalations from our readers

NOTE: The opinions expressed here represent the opinions of the authors and do not necessarily represent the opinions of those who hold other opinions.



Centaur Problem

I regret to have to point out that Dr. Putz's article "Anatomy of the Centaur" [AIR 12:5] incorrectly refers to "species Homo" and "species Equus," which of course are genera.

On the other hand, it is entirely appropriate that the grand and honoured tradition of mislabelled figures has been upheld. I don't recall seeing any instances of that tradition dating as far back as centaur images from ancient Greece, but this may just be a function of sample size.

*Patricia Grant
Montreal, Quebec*

[EDITOR'S NOTE: We, too, have a regret about that article. It will be obvious to any readers who are centaurs, or who provide medical services to centaurs, that the captions appeared in the wrong order. This was entirely

due to an error on our part. We have corrected the captions in the online version of the article.]

Memories of Another Mel

Who is that little man Mel whose photograph seems to appear always in your letters column (and whom your interlocutors always call "that little man Mel")? I never used to care about such things, but now I find myself brooding on the question. Mel haunts my nights and days. He reminds me—he is a "spitting image"—of a professor I had who never spoke, who always wrote things on the blackboard in very bad handwriting (hand-chalking?) that most of us could not read, and who failed to appear one day near the end of a semester, and then never came again. I will not tell you his name, but we students much later discovered that this man had been fired for refusing always to speak to his students. Strangely, the officials who ran the school never told us what had happened—so they fired this man for not talking, but then they too did not talk. Anyway, who IS that man Mel?

*T.K. Frist.
Mannheim, Germany*

Chicken Response 1

I am writing to you regarding your recently published article, "Chicken Chicken Chicken: Chicken Chicken" [AIR 12:5] by Doug Zongker. It is

clear that Dr. Zongker is unfamiliar with my work, "Pork, Pork, Pork Pork," in which I discuss the following:

Pork, pork pork pork pork pork.

Pork-pork pork pork, pork pork pork.

Pork pork pork? PORK.

I would be interested to hear the comments of Dr. Zongker in light of this new information.

*Dr. Jessica Winter
Assistant Professor
Department of
Chemical and
Biomolecular
Engineering
The Ohio State
University
Columbus, OH*

Chicken Response 2

I fail to see the logic in Doug Zongker's "Chicken Chicken Chicken: Chicken Chicken." Perhaps you had a severe typographical error? In my copy of the magazine, the entire article, all several pages of it, consisted of the word "chicken" repeated again and again. I thought you should know about this, in case you are not already aware of it.

*Dr. Jaap de Roy
Delft, The Netherlands*

Chicken Response 3

Are you aware that Doug Zongker's article "Chicken



Chicken Chicken: Chicken Chicken" got published as several pages of the words "chicken chicken chicken chicken..."? Surely someone could have brought this to your attention before it was too late.

*Theodore Robert Dix,
retired
Hay-on-Wye, Wales*

Chicken Response 4

I like chickens as well as the next man. (I mean I like chickens as well as the next man likes chickens; I do not mean that I like chickens as





much as I like the next man. I do not care for the next man very much, as a rule.) But page after consecutive page of nothing but the word "chicken" is more than I like. Don't do it again.

*Jie Wei Liu
Nanjing, China*

Chicken Response 5

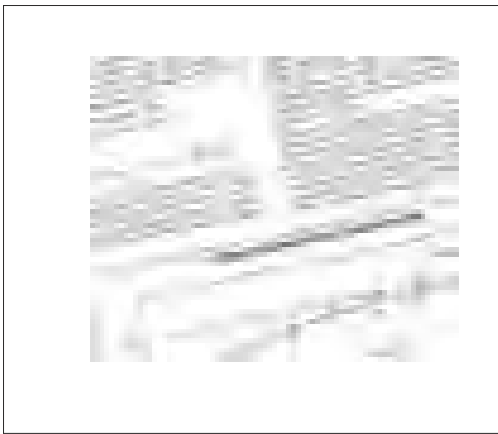
Will will will you you you please please please please stop stop stop publishing publishing publishing publishing articles articles articles about about about chickens.

*N.N. Singh and Amar
Kumar
Calcutta, India*

Chicken Response 6

More chicken chicken, please please!

*Taylor Broos
Tennessee Chicken Quality
Board
Chattanooga, TN*



Looped

Shelving back issues of *AIR*, I dutifully checked the cover date and slipped in the May/June 2005 issue (the "Security" special issue) after the March/April issue. Looking at the cover of the next one in my hand, I saw that I held the May/June 2005 issue (the "Snails and Cookies" special issue). Thinking I had erred, I removed the May/June 2005 issue and replaced it with the May/June 2005 issue. But in my hand I held the May/June 2005 issue. Thinking I had erred...

Please help. I am in a shelving loop. Please help.

*Earle E. Spamer
Asst. Reference Librarian
The American Philosophical
Society
Philadelphia, PA*

Mel in Barcelona

We have reason to believe that this photograph from our archives shows Mel during his brief visit to the city of Barcelona in 1929.

The arrow points to him. Unfortunately he is not facing directly the camera, so the identification cannot be 100 percent. A note written on the back of the original photograph is suggestive.

*Ramon Corbut
Senior Archivist
Archives of the Brothers of
Historical Institute
Barcelona, Spain*



A Guide to the Stars

- * Nobel Laureate
- ** world's highest IQ
- *** convicted felon
- **** misspelled
- ***** sibling rivalry
- ***** six stars
- ***** Ig Nobel Winner

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Andrea Dunaif, Northwestern U.
JoAnn Manson, Brigham & Women's
Hosp.



Improbable Research Review

*Improbable theories, experiments, and
conclusions*

compiled by Dirk Manley, *Improbable
Research staff*



Fudge on Slime 1

“Composition, Morphology and Mechanics of Hagfish Slime,” Douglas S. Fudge, et al., *Journal of Experimental Biology*, vol. 208, 2005, pp. 4613–25. (Thanks to Kristine Danowski for bringing this and the next item to our attention.)

Fudge on Slime 2

“Hagfish Slime Ecomechanics: Testing the Gill-Clogging Hypothesis,” Jeanette Lim, Douglas S. Fudge, Nimrod Levy and John M. Gosline, *Journal of Experimental Biology*, vol. 209, 2006, pp. 702–10. The authors explain that:

We previously demonstrated that hagfish slime does not bind water tightly, but instead behaves like a fine sieve that slows water down via viscous entrainment.... We [now] characterized the behaviour of slime release from live hagfish and the effect of convective mixing on the formation of slime in vitro. Our observations show that exudate is locally released from the slime glands as a coherent jet and that hagfish do not appear to use their slime as a protective envelope. We found that convective mixing between the exudate and seawater is necessary for proper slime formation, but excessive mixing leads to the slime’s collapse.



Arch Oration

“May Orators Find it Beneficial to Depilate Their Eyebrow? Influence of Non-Verbal Cues on Persuasion,” [article in French], S. Ciccotti, *Annee Psychologique*, vol. 104, no. 2, April 2004, pp. 227–47. (Thanks to John Bell for bringing this to our attention.)

Walk? Wait?

“Walk or Wait? An Empirical Analysis of Street Crossing Decisions,” Sanghamitra Das, Charles F. Manski and Mark D. Manuszak, Discussion Paper 03-09, November 2003, Indian Statistical Institute, India. (Thanks to Jacek J. Cianciara for bringing this to our attention.) The authors, who are, respectively, at the Indian Statistical Institute at Delhi, at Northwestern University, in Illinois, and at Carnegie Mellon University, in Pittsburgh, report that:

We model each pedestrian as making a discrete crossing choice by comparing the gaps between vehicles in traffic to an individual-specific “critical gap” that characterizes the individual’s minimal acceptable gap.



We welcome your suggestions for this column. Please enclose the full citation (no abbreviations!) and, if possible, a copy of the paper.

Improbable Medical Review

Improbable diagnoses, techniques, and research

compiled by Bertha Vanatian, Improbable Research staff



A Christmas Tree in the Larynx

“A Christmas Tree in the Larynx,” J. Philip, M. Bresnihan and N. Chambers, *Paediatric Anaesthesia*, vol. 14, no. 12, December 2004, pp. 1016–20. (Thanks to Jody Kreiman for bringing this to our attention.) The authors, who are at the Princess Margaret Children’s Hospital in Perth, Australia, report that:

A 2 year-old boy presented with acute upper airway obstruction following a 15-month history of noisy breathing and hoarseness. An urgent laryngotracheal bronchoscopy was performed following inhalational induction of anesthesia. Using a fiberoptic bronchoscope, visualization of the larynx through a laryngeal mask airway revealed a flat plastic Christmas tree embedded within granulomatous cords causing almost complete obstruction and requiring tracheostomy prior to extraction. Twelve days later, the tracheostomy was successfully decannulated with the child’s voice beginning to normalize. The family remembered the decoration from Christmas celebrations 2 years prior and recalled a coughing episode that predated the onset of hoarseness.



Candles: Look But Don’t Breathe

“Radicals in the Church,” T.M.C.M. de Kok1, J.G.F. Hogervorst, J.C.S. Kleinjans and J.J. Briedé, *European Respiratory Journal*, vol. 24, no. 6, December 2004, pp. 1069–70. The authors explain that:

It cannot be excluded that regular exposure to candle- or incense-derived particulate matter results in increased risk of lung cancer or other pulmonary diseases.

X-Rays and Lost Piercing Paraphenalia

“A Nose Stud Retainer Clip Lost Within the Nasal Cavity Discovered On Dental Radiographs,” A.J. Morris and C.N. Jennings, *Dental Update*, vol. 21, no. 2, March 1994, pp. 70–2.

The Week, Inherited in Twins

“The Week, Inherited in Neonatal Human Twins, Found Also in Geomagnetic Pulsations in Isolated Antarctica,” G. Cornelissen G, et al., *Biomedicine and Pharmacotherapy*, vol. 55, supplement 1, 2001, pp. 32s–50s. (Thanks to Dany Adams for bringing this to our attention.) The authors are at the University of Minnesota, Minneapolis, USA.



Neckties and Pop-Eyes

“Effect of a Tight Necktie on Intraocular Pressure,” C. Teng, R. Gurses-Ozden, J.M. Liebmann, C. Tello and R. Ritch, *British Journal of Ophthalmology*, vol. 87, 2003, 946–48. (Thanks to Noah Raizman for bringing this to our attention.)

Aim: To evaluate the effect of a tight necktie on intraocular pressure (IOP) measurement using Goldmann applanation tonometry...

Conclusion: A tight necktie increases IOP in both normal subjects and glaucoma patients and could affect the diagnosis and management of glaucoma.



The 16th First Annual Ig Nobel Prize Ceremony

by Stephen Drew, Improbable Research staff

NOTE: To see video of the entire ceremony, see the Improbable Research web site: www.improbable.com.

The 2006 Ig Nobel Prizes, honoring achievements that first make people LAUGH, and then make them THINK, were awarded at Harvard University's historic Sanders Theatre on October 5, before 1,200 spectators. This was the 16th First Annual Ig Nobel Prize Ceremony.

Eight of the ten new winners journeyed to Harvard—at their own expense—to accept their Prizes. The co-winners of the Chemistry Prize were unable to travel, and so delivered their speech via video. The Peace Prize winner had planned to come, but had to attend to a family medical situation; he managed to email his acceptance speech, which was then read aloud on his behalf at the ceremony.

***Photo Above:** This year seven Nobel Laureates physically handed the Ig Nobel Prizes to the new winners. Seated in the front row, they are, left to right: William Lipscomb; Richard Roberts; Dudley Herschbach; Melissa Fleming (official spokesperson for the International Atomic Energy Agency); Frank Wilczek; Richard Schrock; and Roy Glauber. Photo: Kees Moeliker.*

Ignitaries in Bulk

The Ig Nobel Prizes were physically handed to the winners by Nobel Laureates Dudley Herschbach (Chemistry 1986), Richard Roberts (Physiology or Medicine 1993), William Lipscomb (Chemistry 1976), The International Atomic Energy Agency (Peace 2005—they were represented here by official spokesperson Melissa Fleming), Richard Schrock (Chemistry 2005), Frank Wilczek (Physics 2004), and Roy Glauber (Physics 2005). Glauber was the prize in the annual Win-a-Date-With-a-Nobel-Laureate Contest (for details, see the article “Glauber’s Big Night,” elsewhere in this issue).

The event was produced by the *Annals of Improbable Research*, and co-sponsored by the Harvard-Radcliffe Science Fiction Association and the Harvard-Radcliffe Society of Physics Students.

The too-numerous Ignitaries were herded, politely yet firmly, by Ig Nobel Majordomo Gary Dryfoos and Minordomos Genevieve Reynolds, Tom Ulrich, Julia Lunetta, James Mahoney, Peaco Todd, Bailes Brown, and Natasha Rosenberg. (For a complete list of ceremony participants, see the official program, *IgBill*, a copy of which is on our web site.)

Inertia versus Franz Liszt

The evening began with a pre-ceremony music/dance event led by pianist Michael Hawley and dancer/choreographer Verena Wieloch. Hawley, a past winner of the

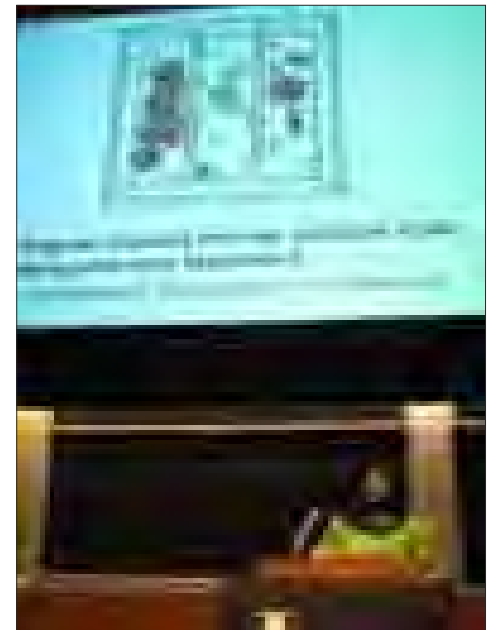
Van Cliburn International Piano Competition, played Franz Liszt’s “2nd Hungarian Rhapsody.” Wieloch paced in strict accordance with the music’s many, tempestuous tempo changes. Over the next ten minutes, a line of pacing individuals formed behind her—every 20 seconds a new person walked onto the stage and joined the end of the line. Each of those new walkers ignored the music and tried to follow exactly the pace of the person in front of

them. This resulted in a fairly spectacular demonstration of the effects of inertia.

Inertia in Bulk

The evening also featured numerous tributes to the evening’s theme of INERTIA. Foremost were the 24/7-Lectures—in which famous thinkers explained their field of research, first in twenty-four (24) seconds, and then in seven (7) words. There was also a series of (specifically: two) debates about aspects of INERTIA (see the article “The Inertia Debates” elsewhere in this issue).

The night also featured the premiere of a new mini-opera called “Inertia Makes the World Go Around” (see the libretto, elsewhere in this issue).



At the Ig Nobel ceremony, the winners get to talk longer than anyone else, but they are limited, more or less to one minute (60 seconds). Two days later, at the Ig Informal Lectures, held at MIT, each new winner gives a five-minute lecture, and answers questions from the audience. This photo shows Nutrition Prize co-winner Faten Al-Mussalem at MIT, explaining the experiment in which dung beetles were offered dung from different kinds of animals. Photo: Kees Moeliker.

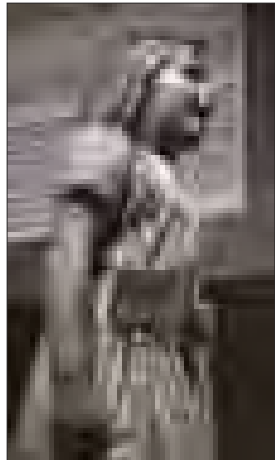
Triumphant Returns of Past Winners

Three past Ig Nobel winners also participated in the ceremony, each giving a brief, personal tribute to the concept of INERTIA.

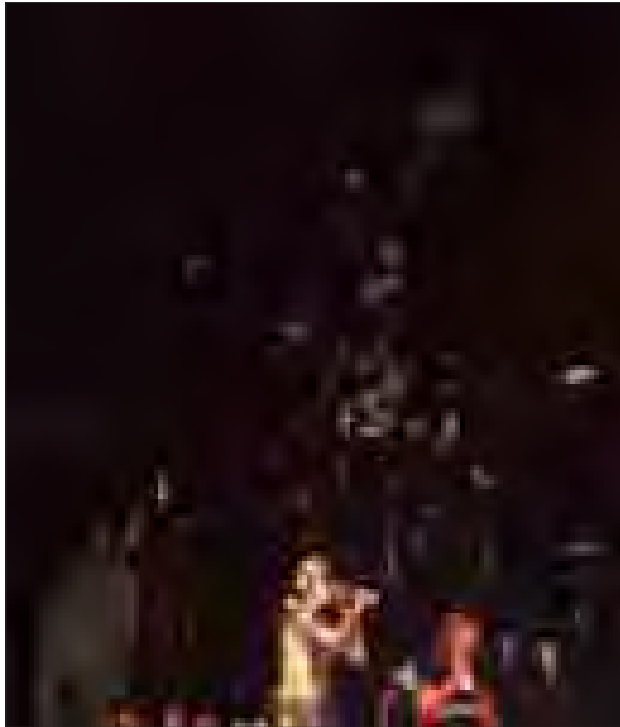
Kees Moeliker, the 2003 Ig Nobel Biology Prize winner (for writing the world’s first scientific account of homosexual necrophilia in the mallard duck) also helped translate portions of the ceremony into Dutch. He teamed with other linguists who simultaneously translated the proceedings into Spanish, Turkish, Japanese and Gibberish, all of them speaking simultaneously into the same microphone. Their translations were coordinated by Karen Hopkin, creator of the Studmuffins of



Biology Prize co-winner Bart Knols, whose research involved malaria mosquitoes, human feet, and Limburger cheese, brought some of the cheese. He served it to the distinguished scientists onstage. Photo: Kees Moeliker.



Miss Sweetie Poo helped the winners keep their speeches brief. As needed, she counseled them, “Please stop. I’m bored. Please stop. I’m bored.” She repeated this as long as necessary. By tradition, an eight-year-old girl takes on the Sweetie Poo duties. This year’s Miss Sweetie Poo, Megan Carroll, was seven—the youngest in the history of the Ig Nobel Prize Ceremony. Photo: David Holzman.



Paper airplanes are a tradition at the Ig Nobel Prize Ceremony. This year, however, new security regulations prohibited the flying of airplanes inside Sanders Theatre. A way was found to accommodate those regulations. In accordance with the evening's theme, Inertia, Sanders Theatre was declared a High Inertia Zone. Paper airplanes were permitted to be—and were—flown en masse. Photo: Robin Abrahams.

Science Calendar. Hopkin also narrated the mini-opera.

Don Featherstone, the 1996 Ig Nobel Art Prize winner (for creating the now-ubiquitous plastic pink flamingo) and his wife, Nancy, and their little dog returned to Sanders Theatre to take a bow. They were greeted with rapturous applause.

Stefano Ghirlanda, a 2003 Ig Nobel Interdisciplinary Prize winner (for the study “Chickens Prefer Beautiful Humans”) also served as one of the Keepers of the Mop, joining stalwart veteran mopsters Doug Berman and Roy Glauber.

Speeches in Bulk

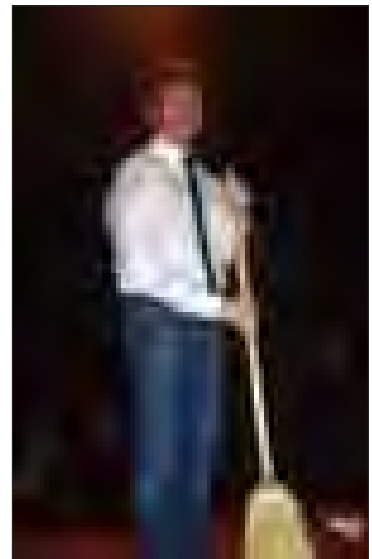
Each new winner (or team of winners) was permitted a maximum of sixty (60) seconds to deliver an acceptance speech; the time limit was enforced by Miss Sweetie Poo—a cute, undauntable little girl. (Two days later, the winners tried to explain themselves at greater length—five minutes each—in the Ig Nobel Informal Lectures at MIT.)

The ceremony began with Professor Helen Haste, of the University of Bath, delivering the traditional

Welcome Welcome speech (which consisted in its entirety of the phrase “Welcome, welcome”). It closed with the traditional salute, “If you didn’t win an Ig Nobel prize tonight—and especially if you did—better luck next year.”

NEXT YEAR’S CEREMONY: the 2007 Ig Nobel Prize Ceremony will occur on Thursday night, October 4, 2007,

at Sanders Theatre. Tickets will go on sale in August. The Ig Informal Lectures will happen two days later, on Saturday afternoon, October 6, 2007.



Past Ig Nobel Prize winner Stefano (“Chickens Prefer Beautiful Humans”) Ghirlanda came from Bologna, Italy to sweep paper airplanes from the stage. Photo: Robin Abrahams.



At the end of the ceremony, the Ig Nobel Prize winners, the Nobel Laureates, and the other distinguished people on stage line up for a pointless photo opportunity. Photo: David Holzman.

The Inertia Debates

*transcribed by Jesse Rinmond Alberts,
Improbable Research staff*

NOTE: To see video of these speeches, and of the entire ceremony, see the Improbable Research web site www.improbable.com.

To celebrate the evening's theme—Inertia—the Ig Nobel Board of Governors sanctioned two debates about aspects of Inertia. Each debater was assigned a topic. Each debate was confined to a strictly enforced, if unstated, time limit, which was enforced by Mr. John Barrett, the Ig Nobel referee.

Inertia Debate #1

FRANK WILCZEK, Nobel Laureate in Physics, 2004

Assigned Topic: FAST

vs.

MELISSA FLEMING, official spokesperson for the International Atomic Energy Agency (Nobel Laureate in Peace, 2005)

Assigned Topic: SLOW



Melissa Fleming (left and SLOW) versus Frank Wilczek (FAST). Photo: David Holzman.

Verbatim text of the debate:

WILCZEK: "Fast, fast, fast, fast."
FLEMING: "Slow."
WILCZEK: "Fast, fast, fast, fast."
FLEMING: "Slow."
WILCZEK: "Fast, fast, fast, fast."

FLEMING: "Slow."

WILCZEK: "Fast, fast, fast."

FLEMING: "Slow."

Inertia Debate #2

RICH ROBERTS, Nobel Laureate in Physiology or Medicine, 1993

Assigned Topic: YES

vs.

ROY GLAUBER, Nobel Laureate in Physics, 2005

Assigned Topic: NO



Rich Roberts (left and YES) versus Roy Glauber (NO). Photo: Robin Abrahams

Verbatim text of the debate:

ROBERTS: "Yes."
GLAUBER: "No."
ROBERTS: "Yes."
GLAUBER: "No."
ROBERTS: "Yes."
GLAUBER: "No."
ROBERTS: "Yes."
GLAUBER: "No."
ROBERTS: "Yes."
GLAUBER: "No."

The 2006 Ig Nobel Prize Winners

Here are the winners of the 2006 Ig Nobel Prizes. For further details, including links to many of the winners' web sites—and video of the entire ceremony—see the Improbable Research web site: www.improbable.com.

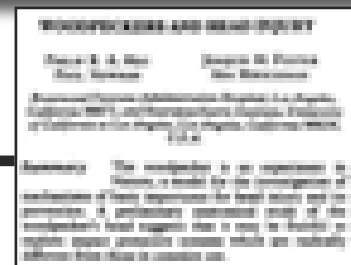
ORNITHOLOGY: Ivan R. Schwab of the University of California Davis and the late Philip R.A. May of the University of California Los Angeles, for exploring and explaining why woodpeckers don't get headaches.

REFERENCE: "Cure for a Headache," Ivan R. Schwab, *British Journal of Ophthalmology*, vol. 86, 2002, p. 843.

REFERENCE: "Woodpeckers and Head Injury," Philip R.A. May, Joaquin M. Fuster, Paul Newman and Ada Hirschman, *Lancet*, vol. 307, no. 7957, February 28, 1976, pp. 454–5.

REFERENCE: "Woodpeckers and Head Injury," Philip R.A. May, Joaquin M. Fuster, Paul Newman and Ada Hirschman, *Lancet*, vol. 307, no. 7973, June 19, 1976, pp. 1347–8.

WHO ATTENDED THE CEREMONY: Ivan Schwab



NUTRITION: Wasmia Al-Houty of Kuwait University and Faten Al-Musalam of the Kuwait Environment Public Authority, for showing that dung beetles are finicky eaters.

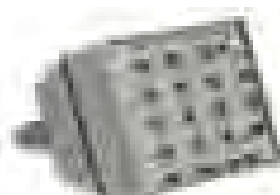
REFERENCE: "Dung Preference of the Dung Beetle *Scarabaeus cristatus* Fab (Coleoptera-Scarabaeidae) from Kuwait," Wasmia Al-Houty and Faten Al-Musalam, *Journal of Arid Environments*, vol. 35, no. 3, 1997, pp. 511–6.

WHO ATTENDED THE CEREMONY: Faten Al-Musalam

PEACE: Howard Stapleton of Merthyr Tydfil, Wales, for inventing an electromechanical teenager repellent—a device that makes annoying high-pitched noise designed to be audible to teenagers but not to adults; and for later using that same technology to make telephone ringtones that are audible to teenagers but probably not to their teachers.

REFERENCE: <http://www.compoundsecurity.co.uk>

WHO ATTENDED THE CEREMONY: Howard Stapleton planned to attend, but his plans were interrupted by a family medical situation. His acceptance speech was read onstage by a stand-in.



ACOUSTICS: D. Lynn Halpern (of Harvard Vanguard Medical Associates, and Brandeis University, and Northwestern University), Randolph Blake (of Vanderbilt University and Northwestern University) and James Hillenbrand (of Western Michigan University and Northwestern University), for conducting experiments to learn why people dislike the sound of fingernails scraping on a blackboard.

REFERENCE: “Psychoacoustics of a Chilling Sound,” D. Lynn Halpern, Randolph Blake and James Hillenbrand, *Perception and Psychophysics*, vol. 39, 1986, pp. 77–80.

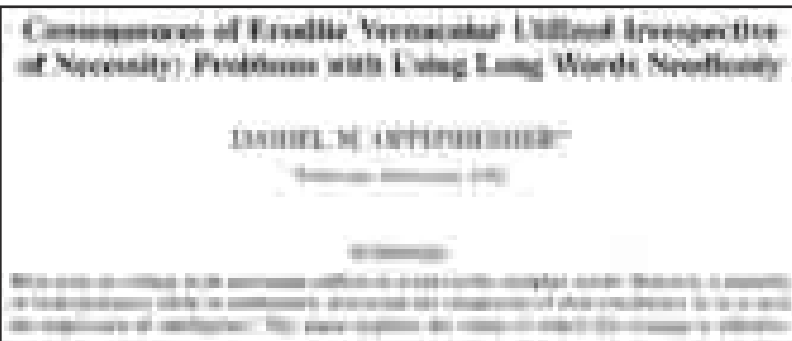
WHO ATTENDED THE CEREMONY: D. Lynn Halpern and Randolph Blake



MATHEMATICS: Nic Svenson and Piers Barnes of the Australian Commonwealth Scientific and Research Organization, for calculating the number of photographs you must take to (almost) ensure that nobody in a group photo will have their eyes closed.

REFERENCE: “Blink-Free Photos, Guaranteed,” *Velocity*, June 2006.

WHO ATTENDED THE CEREMONY: Nic Svenson and Piers Barnes



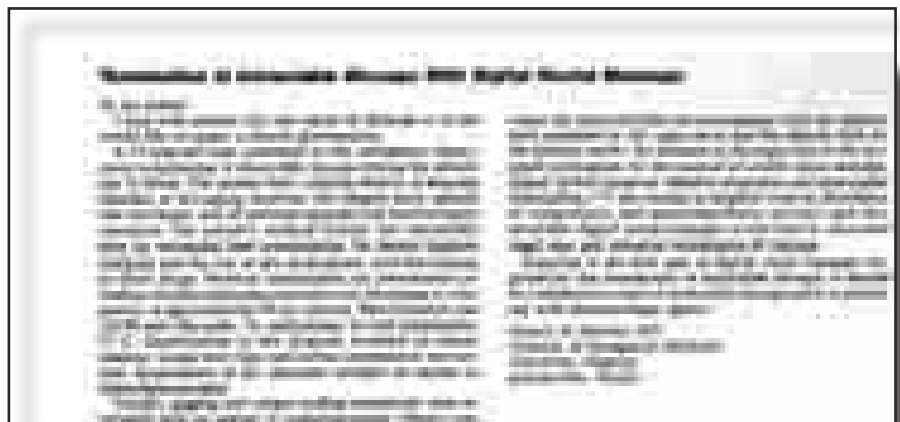
LITERATURE: Daniel Oppenheimer of Princeton University, for his report, “Consequences of Erudite Vernacular Utilized Irrespective of Necessity: Problems with Using Long Words Needlessly.”

REFERENCE: “Consequences of Erudite Vernacular Utilized Irrespective of Necessity: Problems with Using Long Words Needlessly,” Daniel M. Oppenheimer, *Applied Cognitive Psychology*, vol. 20, no. 2, March 2006, pp. 139–56.

WHO ATTENDED THE CEREMONY: Daniel Oppenheimer

MEDICINE: Francis M. Fesmire of the University of Tennessee College of Medicine, for his medical case report “Termination of Intractable Hiccups with Digital Rectal Massage”; and Majed Odeh, Harry Bassan and Arie Oliven of Bnai Zion Medical Center, Haifa, Israel, for their subsequent medical case report also titled “Termination of Intractable Hiccups with Digital Rectal Massage.”

REFERENCE: “Termination of Intractable Hiccups with Digital

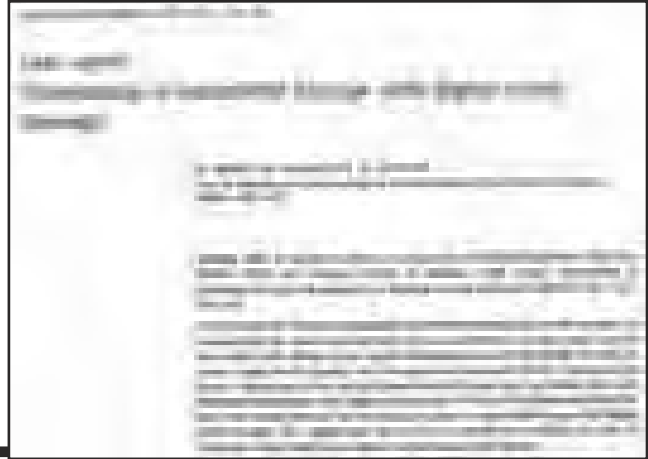


Rectal Massage,” Francis M. Fesmire, *Annals of Emergency Medicine*, vol. 17, no. 8, August 1988, p. 872.

REFERENCE: “Termination of Intractable Hiccups with Digital Rectal Massage,” Majed Odeh, Harry Bassan, and Arie Oliven, *Journal of Internal Medicine*, vol. 227, no. 2, February 1990, pp. 145–6.

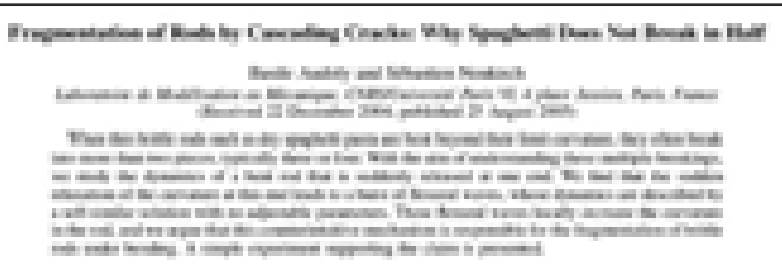
REFERENCE: “Hiccups and Digital Rectal Massage,” M. Odeh and A. Oliven, *Archives of Otolaryngology—Head and Neck Surgery*, vol. 119, 1993, p. 1383.

WHO ATTENDED THE CEREMONY: Francis Fesmire



PHYSICS: Basile Audoly and Sebastien Neukirch of the Université Pierre et Marie Curie, in Paris, for their insights into why, when you bend dry spaghetti, it often breaks into more than two pieces.

REFERENCE: “Fragmentation of Rods by Cascading Cracks: Why Spaghetti Does Not Break in Half,” Basile Audoly and Sebastien Neukirch, *Physical Review Letters*, vol. 95, no. 9, August 26, 2005, p. 95505-1.



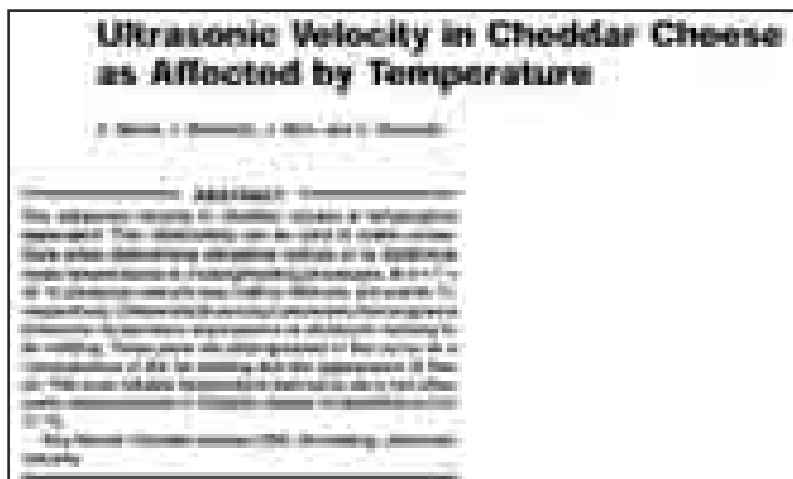
REFERENCE: video and other details at <<http://www.lmm.jussieu.fr/spaghetti/index.html>>

WHO ATTENDED THE CEREMONY: Basile Audoly and Sebastien Neukirch

CHEMISTRY: Antonio Mulet, José Javier Benedito and José Bon of the University of Valencia, Spain, and Carmen Rosselló of the University of Illes Balears, in Palma de Mallorca, Spain, for their study “Ultrasonic Velocity in Cheddar Cheese as Affected by Temperature.”

REFERENCE: “Ultrasonic Velocity in Cheddar Cheese as Affected by Temperature,” Antonio Mulet, José Javier Benedito, José Bon and Carmen Rosselló, *Journal of Food Science*, vol. 64, no. 6, 1999, pp. 1038–41.

WHO ATTENDED THE CEREMONY: The winners delivered their acceptance speech via video recording.



BIOLOGY: Bart Knols (of Wageningen Agricultural University, in Wageningen, the Netherlands, and of the National Institute for Medical Research, in Ifakara Centre, Tanzania, and of the International Atomic Energy Agency, in Vienna Austria) and Ruurd de Jong (of Wageningen Agricultural University and of Santa Maria degli Angeli, Italy) for showing that the female malaria mosquito *Anopheles gambiae* is attracted equally to the smell of limburger cheese and to the smell of human feet.

REFERENCE: "On Human Odour, Malaria Mosquitoes, and Limburger Cheese," Bart. G.J. Knols, *Lancet*, vol. 348, November 9, 1996, p. 1322.

REFERENCE: "Behavioural and electrophysiological responses of the female malaria mosquito *Anopheles gambiae* (Diptera: Culicidae) to Limburger cheese volatiles," *Bulletin of Entomological Research*, B.G.J. Knols, J.J.A. van Loon, A. Cork, R.D. Robinson et al., vol. 87, 1997, pp. 151–159.

REFERENCE: "Limburger Cheese as an Attractant for the Malaria Mosquito *Anopheles gambiae* s.s.," B.G.J. Knols and R. De Jong, *Parasitology Today*, vol. 12, no. 4, 1996, pp. 159–61.

REFERENCE: "Selection of Biting Sites on Man by Two Malaria Mosquito Species," R. De Jong and B.G.J. Knols, *Experientia*, vol. 51, 1995, pp. 80–84.

WHO ATTENDED THE CEREMONY: Bart Knols

Of bites and body odour

For anybody who has sat by a campfire on a warm summer evening wondering why he or she was selectively being eaten alive by mosquitoes and other winged creatures, the answer might lie in the body odour. Support for the idea is provided by a recent study in Tanzania in which three volunteers slept for 9 nights in separate tents outfitted with a mosquito entrance and two exit traps.

On human odour, malaria mosquitoes, and Limburger cheese

"Our tests show that these different *Anopheles* mosquito species prefer to bite different parts of a subject's torso, indicating that this preference is influenced by odours from these body regions." Africa's principal malaria vector, *Anopheles gambiae*, bit the ankles and feet, and was subsequently managed to attract them to the odour of Limburger cheese in a restaurant kitchen.

Limburger Cheese as an Attractant for the Malaria Mosquito *Anopheles gambiae* s.s.

B.G.J. Knols and R. De Jong

Parasitology Today, 12(4), 1996, pp. 159-61. © 1996 Elsevier Science B.V. All rights reserved. This article is a U.S. Government work and, as such, is in the public domain in the United States of America.

Ig Nobel and Improbable Research BOOKS!

The world's most untranslatable books have (some of them) been translated into CHINESE, GERMAN, ITALIAN, SPANISH, JAPANESE, DUTCH, POLISH, FRENCH, and other languages including, to some extent, the original ENGLISH.

The newest: "The Man Who Tried to Clone Himself."

Get them in bookstores -- or online via www.improbable.com or at other fine and even not-so-fine e-bookstores.

The Ig Nobel Acceptance Speeches

transcribed by Rose Fox, Improbable Research staff

NOTE: To see video of these speeches, and of the entire ceremony, see the Improbable Research web site: www.improbable.com.

ORNITHOLOGY

Ivan Schwab (why woodpeckers don't get headaches)

During the breeding season, the male piliated woodpecker will overcome the INERTIA of a stationary position to drum on the trunk of a tree up to 12,000 times a day for the purposes of territory delineation, feeding, and courtship. That's done with the force equivalent to you running into a brick wall at 15 miles an hour, 12,000 times a day, face first. Woodpeckers can do this because of a series of marvelous adaptations which permit them to do this without the risk of retinal detachment, spontaneous anucleation (or eyes popping out of their heads), concussions, and especially headaches. Otherwise, the male piliated woodpecker, after a successful day of courtship, might have to come home to his newfound darling and say, "Not tonight, honey, I've got a headache."



Miss Sweetie Poo encourages Dr. Ivan Schwab to finish describing his affection for the question of why woodpeckers don't get headaches. PHOTO; David Holzman.



Faten Al-Mussalem receives her Prize from Nobel Laureate Richard Schrock. Photo: Robin Abrahams.

NUTRITION

Faten Al-Mussalam (dung beetles are finicky eaters)

The dung beetle is a finicky eater although the kind of food is rubbish, but it will bury it on the soil or the sand, where it will enrich the soil with minerals and with nutrients, so it is a good biological fertilizer. Besides, it will clean the environment and protect it from harmful insects. It was sacred by the ancient Egyptian, because it was like the life after death. That is why it was sacred by the ancient Egyptians, appreciated by the ancient Egyptians. That's it. Thank you.

PEACE

Howard Stapleton (electromechanical teenager repellent)

[Mr. Stapleton planned to attend the ceremony, but a family medical emergency intervened. He emailed this



Seven Nobel Laureates and seven teenage volunteers lined up across the stage, and listened to Howard Stapleton's high-frequency noise. So, of necessity, did everyone else in Sanders Theatre. Photo: Kees Moeliker.

speech, which was read aloud at the ceremony by Ig Nobel Majordomo, Gary Dryfoos.]

Regrettably, due to family medical problems of a serious nature, I am unable to attend this wonderful ceremony tonight to accept my award in person. I am

very excited to receive this award for the Mosquito Deterrent System—trademark—and it means a great deal that such a highly respected group of people such as yourselves would recognize this achievement. As with many innovative products, the Mosquito—trademark—was created in a back shed to solve a specific problem encountered by a colleague in the middle of 2005. At that time nobody would have dreamed that the product could have been so successful and attract so much media attention worldwide. Since its launch, the Mosquito—trademark—has been totally redesigned and licensed to one of the world's largest fire and security equipment manufacturers, and is now being rolled out internationally. So far 2500 units have been sold since December 2005. In addition, the nature of the product caught children's imaginations and we are now supplying secret adult-proof ringtones for mobile phones. Also, we have released a full-length track combining regular-frequency melodies with a high-frequency melody that only kids can hear. This was done in response to the demand created by the release of the ringtone, which saw millions of hits on our website every day for several months. Thank you.

ACOUSTICS

D. Lynn Halpern and Randolph Blake (the sound of fingernails scraping on a blackboard)

We are delighted that our seminal discovery, published twenty years ago, has been selected for an Ig Nobel Prize. We asked a simple question about a universal human reaction. Why does the sound of fingernails on a chalkboard make us cringe? We imagined that the sound's shrillness could be chalked up to the high-frequency components in the acoustic signal produced by this grating action. However, that's not the case. We actually removed the high frequencies from the sound, and volunteers still found it aversive. In fact, it turns out that the mid-range frequencies are what give us the chills. These, by the way, are the same frequencies that are essential for speech

Lynn Halpern and Randolph Blake describe their fingernail/blackboard accomplishment. Photo: Kees Moeliker.





The Nobel Laureates, each equipped with a three-pronged metal garden digging tool, a piece of slate, and protective headphones, demonstrated the sound of fingernails on a blackboard. None of the other 1200 people in Sanders Theatre was wearing protective hearing apparatus. Photo: Kees Moeliker.

perception. But it was our speculation that really made people cringe. The sound waves produced by fingernails scraping on a chalkboard strongly resemble the vocalizations of non-human primate warning calls. So we reckon that it's a vestigial reaction, and when we hear that sound we get frightened.

So our paper became famous or perhaps infamous not because of what we did, but because of what we speculated. In any event, we're delighted that the Ig Nobel prize is honoring this chilling discovery. And we thank the *Annals of Improbable Research* for ensuring that this disquieting work will not be silenced.

MATHEMATICS

Nic Svenson and Piers Barnes (group photos where no one's eyes are closed)

If you've ever wielded a camera at an important family function, you know how hard it is to get a picture where no one's blinking. I'm a writer and reluctant photographer at Australia's premier scientific research organization, CSIRO, so I figured there had to be someone, somewhere, who could do the maths



Nic Svenson (left, blinking) and Piers Barnes. Photo: CSIRO.

and do me a rule of thumb. That someone was physicist Piers Barnes. After I overcame his initial INERTIA and provided some base data, he gave up a few lunch hours and did a calculation. We're very proud to have made a gross oversimplification of what is a very complex psychological and physiological problem, and we've backed it up with virtually no empirical data—until now, that is. For the record, for groups of less than twenty people, you divide the number of people by three if there's good light or you've got a flash. If it's bad light, divide the number of people by two. Now, last of all, I'd like to thank the many people who posed for our photos in the staff canteen. These include Bruce Anderson, Bruce Spelford, Sheila Carlisle, Bruce Davidson, Sheila Edwards—[Here Miss Sweetie Poo intervened.]

LITERATURE

Daniel Oppenheimer (problems with using long words needlessly)

My research shows that conciseness is interpreted as intelligence. So, thank you.

MEDICINE

Francis M. Fesmire (termination of intractable hiccups with digital rectal massage)



Daniel Oppenheimer gives his acceptance speech. The audience was quick to applaud its brevity.

PHOTO: Kees Moeliker.



Ladies and gentlemen, it is a great honor to be here at my old alma mater, class of 1981. When I first learned that I had won the Nobel Prize award for medicine, I assumed it was for my 18 years

Dr. Francis Fesmire finishes his 60-second-long acceptance speech, prompted by eight-year-old Miss Sweetie Poo. Fesmire is holding a "Termination of Intractable Hiccups with Digital Rectal Massage" kit that he and his 11-year-old son, Hunter, developed. Immediately after the ceremony, the two Fesmires handed out several hundred of the kits to curious audience members.

PHOTO: Kees Moeliker.

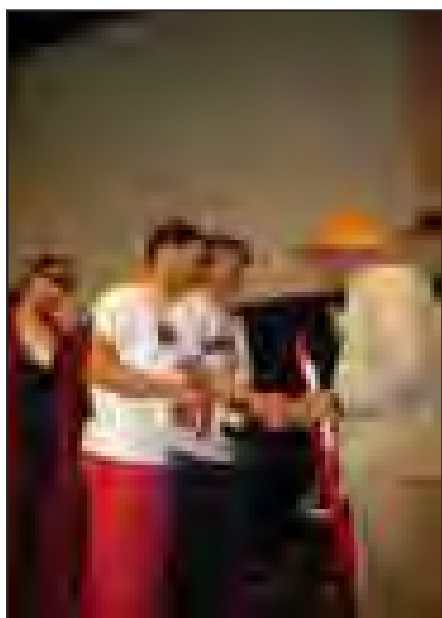
of research in cardiac patients. I immediately booked airline and hotel reservations for Stockholm. However, on the following week, Marc Abrahams explained to me that I did not win the Nobel Prize for medicine, but I won the Ig Nobel Prize for medicine. My first reaction was shock, followed by depression. But then my oldest son, Forrest Fesmire, said, "Cheer up, Dad. Just think. It's sort of like winning a Darwin award, but you don't have to actually die to get the award." On that note, I realized it is truly an honor to be recognized as being the first person ever to terminate intractable hiccups with digital rectal massage. For those of you in the audience who wish to perform this maneuver at home, you can purchase Dr. Fran's Anti-Hiccup Kit. It contains gloves, KY Jelly, and detailed instructions on proper finger technique. It is medically proven and comes with a disclaimer: the company is not responsible for spread of genital warts or other sexually transmitted diseases if one chooses not to wear the glove. My youngest son, Hunter Fesmire, and I will be passing out free samples at the end of the show. Thank you.

PHYSICS

Basile Audoly and Sebastien Neukirch (why spaghetti often breaks into more than two pieces)

So we've done everything with spaghetti. We've painted it. We've bent it and we've crushed it. We've shot a nasty video of it. But in fact we made a great discovery. When you release bent spaghetti, it bends harder. Yes, when you release curvature, you get more curvature. Now, spaghetti are pretty useless. It's time for real-world applications. Give your money to your friends, you get even more money back. Let your wife go, many women will come back to you. Well, yes, but this phenomenon can have its drawbacks. For example, you do yoga, you let the pressure go, and you get more stress. Or even, you let your wife go, but she come back with her mother.

Thank you,



Basile Audoly (left) and Sebastien Neukirch accept the Physics Prize, handed to them by Nobel Laureate Roy Glauber. Photo: Kees Moeliker.



CHEMISTRY

Antonio Mulet, José Javier Bedito, José Bon and Carmen Rosselló (ultrasonic velocity in cheddar cheese)

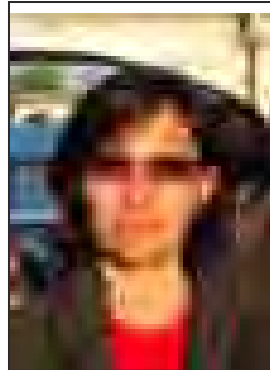
[The team was unable to travel to the ceremony. They delivered this acceptance speech via video.]

Ladies and gentlemen, in the name of the others and myself, I would like to thank you for considering that we deserve this award, and also to apologize for not being able to attend the ceremony. When we started working

with cheese and ultrasonics, many people in the university used to ask me, “What are you trying to do?” And I used to answer them that we were studying whether cheese pieces were pregnant or not. When we really found that no baby was coming and ultrasonics could be used to assess cheese texture and maturity, we got very happy, but also concerned about the influence of the temperature of the cheese samples on the ultrasonic velocity mechanism. That was the reason to carry out our work with cheddar cheese. Thank you very much and goodbye.



*Cheese velocity researcher
Antonio Mulet.*



*Cheese velocity researcher
Carmen Rossello.*



*Cheese velocity researcher
Jose Bon.*



*Cheese velocity researcher
Jose Benedito.*



BIOLOGY

Bart Knols (Malaria mosquitoes are attracted to Limburger cheese and smelly feet)

Ladies and gentlemen, as a young boy, I hated feet. Just wiggling toes at me had me running for dear life. As a teenager, I first found out that cheese smells after feet rather than the reverse. As a PhD student, I was thrilled to find out that olfaction in humans—our smell—is actually comparable to olfaction in mosquitoes. As a son, I have to thank my parents for feeding my right brain more than my left. As a parent, I don't know which half to feed in my own kids. As a husband, I have to apologize to my wife, Inge—she's not here with me—for putting her naked under a net and releasing mosquitoes into it. And as a human being, I must say that I'm appalled by the political INERTIA displayed by governments all around the world to try and defeat malaria, which kills a child in Africa every thirty seconds. Beat malaria and eat Limburger! Thank you.

Bart Knols explains, briefly, how he and Ruurd do Jong conducted their experiments with mosquitoes, limburger cheese, and human feet.

Photo: Kees Moeliker.

“Inertia Makes the World Go Around”

A mini-opera in four acts

*music by Georges Bizet
words by Marc Abrahams*

This mini-opera had its premiere as part of the 16th First Annual Ig Nobel Prize Ceremony, at Sanders Theatre, Harvard University, on Thursday evening, October 5, 2006.

Video of the entire ceremony, including “Inertia Makes the World Go Around,” can be seen at the Improbable Research web site: www.improbable.com.

Original Cast

Narrator: Karen Hopkin

The Boy: Pierre Fontaine

Eb: Margot Button

Flo: Gina Beck

The Dog: Maggie McNeil.

Pianist: Scott Nicholas

Friends: The new Ig Nobel Prize winners, the Nobel Laureates, and all the other ignitaries who were on stage.

Characters

EB and FLO, who are sisters. EB is always at rest. FLO is always in motion. Each girl has a cellular phone always held to her ear.

The BOY.

The boy’s DOG (a biting, but non-singing, part). The DOG appears in Acts 1, 3, and 4.

FRIENDS— the neighborhood children (this role is played by guest scientists). They appear in Act 4.

ACT 1: “A Natural Leader”

NARRATOR [*spoken*]: Tonight’s opera is about a boy, and his ego, and his inertia. This little boy thinks he’s the most popular boy EVER. Here in Act 1, he has JUST moved into town. Right next door live two sisters. The boy expects the two sisters to come over and play with him. But that may not happen. You see, one sister NEVER leaves the house — and the other sister is ALWAYS running around. Let me clarify that: One sister is at rest, and she tends to stay at rest — and the other sister is in motion, and she tends to stay in motion.

Now let’s meet the little boy, and his little dog. The boy explains

how he’s going to get the two sisters to come admire him. Inevitably, the boy comes to realize, as he always does, how very wonderful he is. Let’s listen.

[*The BOY sings this. His DOG is at his side, but doesn’t make a peep.*]

[*MUSIC: Toreador song from “Carmen”*]

Girls at rest — they tend to stay at rest.
And girls who move — they stay in mo-otion.
It’s legendary.
Girls do not vary.
Not until they menstruate. Then, all bets are off.

Those two girls —
One stays indoors, you know.
One’s too much on the go.
One dud, one dynamo.



Photo: Robin Abrahams.

How can I get them —
How can I get them —
Get them to come visit me, to come bask in my glow?

I must use momentum.
That’s the key: momentum.
I have got momentum on my side.
I don’t know what kind of stuff it is.
Did they mention it one day in school?
Momentum! Momentum! Momentum! Momentum!

I am a leader! People follow me!
Na-tu-ral-ly! Na-tu-ral-ly!
Me! Me me me me ! Me me me me !
Ev’ryone’s cup of tea!
It takes just one good look
For you to see
That people follow me!

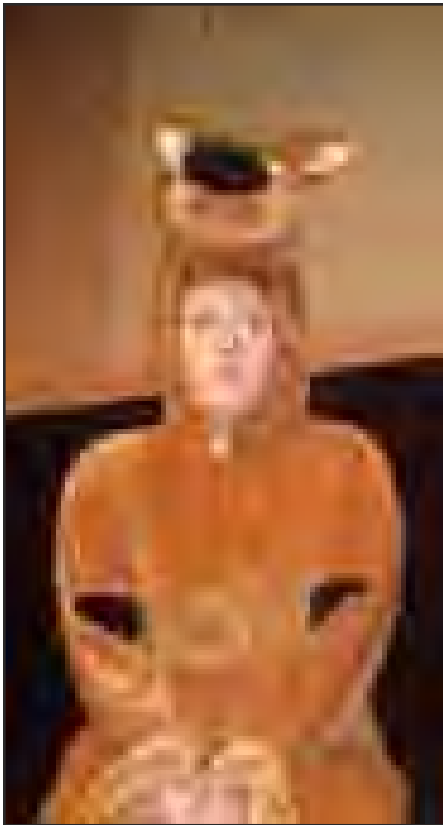


Photo: Robin Abrahams.

I am a leader! People follow me!
Na-tu-ral-ly! Na-tu-ral-ly!
People want to know all about me:
What I eat! When I pee!
It takes just one good look
For you to see
That people follow me!

[At the end, the DOG matter-of-factly bites THE BOY. The BOY walks offstage with the DOG matter-of-factly clamped to his arm.]

ACT 2: “The Two Sisters”

NARRATOR *[spoken]*: Here in Act 2, we meet the two sisters who live next door to the little boy. I’d better remind you about those two sisters. One sister NEVER leaves the house — and the other sister is ALWAYS running around. Yes, one sister is at rest,

and she tends to stay at rest. The other sister is in motion, and she tends to stay in motion. Yet the two girls enjoy each other’s company. How? Easy. They are ALWAYS conversing on their cellular telephones. Now let’s join the two sisters — one at home, one running around — as they discuss their strange new neighbor.

[MUSIC: Seguedilla from “Carmen”]

[The two sisters are conversing on mobile phones. EB sits at center stage, reading a book. She looks up — distractedly — only for as long as it takes to sing each group of thoughts — then immediately returns to reading the book. FLO is always in motion (jogging, perhaps).]

EB:
Some stupid boy has just moved into the neighborhood
He’s got some kind of fixation.
He claims that he’s got more friends than
Any kid in the nation.
He wants us to join the celebration.

FLO:
Fawn over him! He wants us to.
Fawn over him we will not do.
Fondle himself! *[SPOKEN:]* If he wants to!
I couldn’t give a flying fig. (ha, ha, ha!)

EB:
I stay at home.

That’s where I hang out.
No way I’d let him in the door.
Let him chase you, run all about.
He’s like a bull, you a matador!
FLO:
No way he could catch up to me.
No way. He isn’t very fast.
He’s proud of being fully half-assed.
That boy’s so slow *[FLO taps her head]*
I am aghast.

EB:
That boy’s a slow one. *[EB taps her head]*
But he’s aggressive.



Photo: Robin Abrahams.

I think that his genes
May be recessive.

FLO:
He’ll want to push us.
He’ll want to shove us.
And if he does, I say “Bring it on!”

EB:
That stupid boy who just moved into the neighborhood —
Could be he’ll try to attract us.
But do what he might,
The most that he can do is distract us.
Let’s just ignore him if we can!



Photo: Kees Moeliker.

ACT 3: “A Boy Uses His Charm”

NARRATOR [*spoken*]: In Act 3, the boy comes up with a clever idea. He will lure the girls into coming over to see him. His secret weapon? Music. Let’s watch as the boy plays a song on his favorite musical instrument.

[*The BOY sings this. He holds his pet DOG. He beats it like a drum during parts of this song. The SISTERS, visible at a distance, ignore him. One sits in her chair intently reading a book; the other spends this whole song walking back and forth across the stage, never looking at the BOY.*]

[*MUSIC: Les Tringles des Sistes Tintaient from “Carmen”*]

I’ll tell you what I’m gonna do.
I’ll charm those sisters with some music.
I know girls like to move to music.
I’ll tell you what I’m gonna do.

I know how funny this might sound,
But I make my own kind of music.
I doggedly compose my music.
I do the dog work on my own.
I do percussion using skin and bone.

[*He beats out the rhythm on his dog.*]

Beat out that rhythm on a dog.
Beat out that rhythm on a dog.
Beat out that rhythm on a dog.
No other instrument will do.

Beat out that rhythm on a dog.
Beat out that rhythm on a dog.
Beat out that rhythm on a dog.
I love the sound — and so do you!

[*He stops beating the dog.*]

I know you want to watch me play.
Girls like to watch kids who make music.
Well, I’m a kid who makes some music.
I know you want to watch me play.

It sounds much better right up close.
It’s intimate, my kind of music.
From far away it’s just plain music.
But it’s a very special sound.
There’s nothing like it — this boy and his hound!

[*He beats out the rhythm on his dog*]

Beat out that rhythm on a dog.
Beat out that rhythm on a dog.
Beat out that rhythm on a dog.

No other instrument will do.
Beat out that rhythm on a dog.
Beat out that rhythm on a dog.
Beat out that rhythm on a dog.
I love the sound — and so do you-ou-ou-ou!

[*At the end, the DOG matter-of-factly bites the BOY. The BOY walks offstage with the DOG matter-of-factly clamped to his arm.*]

ACT 4: “A Boy and His Inertia”

NARRATOR [*spoken*]: Despite the boy’s wishes, the girls never did visit him. But the boy canNOT stand being ignored. So now, at last — here in the concluding act of the opera — the boy does something DRASTIC, something he thought he would NEVER do. He goes over to the girls’ house and — yes — talks to them. All the neighborhood children — played tonight by the Nobel Laureates and other distinguished scientists — gather round to see what will happen. Let’s join them....

[*All the other children in the neighborhood (played by the scientists, etc.) are there. They all stand behind the SISTERS. WHENEVER THE SISTERS SING, these FRIENDS sway in time to the music. Toward the end, they join the girls in singing “IN-ER-SHEE-YA!” — these group-sing occasions are printed in all uppercase letters: “IN-ER-SHEE-YA!”*]

[*MUSIC: Habanera (including a bit of the recitative that precedes it) from “Carmen”*]

[*The BOY has the DOG is at his side. But the DOG doesn’t make*

a peep.]

BOY:
I'm a popular guy.
A real pop-ular guy.
Us pop-ular guys,
We're smart — and we're wise.
I know you agree.
Follow me.

EB:
I'm not sure I can say just why
What you say
Sounds like it's not quite sound.
You're a popular kind of guy.
Do you know what makes the world go around?

FLO:
There's a reason your plans get stalled.
A simple reason —
But it's profound.
It's inertia. That's what it's called.
Inertia makes the world go around.

BOY: Yes! Inertia! I've heard of that!
SISTERS: In-er——
BOY: Yes! Inertia! I've heard of that!
SISTERS: —shee-yaaa!
BOY: Yes! Inertia! I've heard of that!
SISTERS: In-er——
BOY: Yes! Inertia! I've heard of that!
SISTERS: —shee-yaaa!

EB:
Inertia — that's your hidden strength!
Inertia lets you go to any length.
In little things, AND on the whole,

Inertia always, always keeps control!

SISTERS & FRIENDS: IN-ER-SHEE-YA!

BOY:
Inertia gives me thrills!
Its thrillingness is unsurpassed!

SISTERS & FRIENDS: IN-ER-SHEE-YA!

[The BOY starts marching in place, as if he's about to march off and have everyone follow him. But nobody else marches at all.]

BOY:
I love in-er-shee-ya!
Oh, yes — I'm an enthusiast!

EB: You go ahead. You lead the way.
Go off to war. Go join Opus Dei.
FLO: Go off to Mars or Timbuktu.
Go hope inertia makes your DREAMS come true!

SISTERS & FRIENDS: IN-ER-SHEE-YA!

BOY:
I've got in-er-shee-ya!
Oh yes, I've got in-er-shee-ya!

SISTERS & FRIENDS: IN-ER-SHEE-YA!

BOY:
I've got in-er-shee-ya!
Oh yes, I've got in-er-shee-ya!

SISTERS & FRIENDS: IN-ER-SHEE-YA!

[At the end, the DOG matter-of-factly bites the BOY. The BOY walks offstage — in triumph — with the DOG matter-of-factly clamped to his arm.]



Photo: Robin Abrahams.

The 24-7 Lectures

transcribed by Rose Fox, Improbable Research staff

As part of the Ig Nobel Prize Ceremony, four of the world's great thinkers were invited to give 24/7 Lectures.

Each 24/7 Lecture was on an assigned topic. The lecturer was asked to explain that topic twice:

FIRST, a complete technical description in TWENTY-FOUR (24) SECONDS;

and THEN a clear summary that anyone can understand, in SEVEN (7) WORDS.

The time and word limits were enforced by the Ig Nobel referee, Mr. John Barrett, and the Ig Nobel V-Chip Monitor, prominent New York attorney William J. Maloney.

Here are the complete transcripts of this year's 24-7 Lectures.



Missy Cummings. Photo: David Holzman.

LECTURER: Missy Cummings, aviator

and pioneer of technology-human interaction.

TOPIC: Automobile Safety

Complete technical description in TWENTY-FOUR (24) SECONDS:

In-vehicle telematics can significantly load the visual channel, resulting in structural interference which can negatively impact driving performance.

Cognitive load disrupts recognition memory, resulting in longer latencies to perturbations of the driving ecology as well as trajectories that violate critical

safety boundaries. Telematic interaction

degrades the encoding and transferring of—[Here the referee intervened.]

Clear summary that anyone can understand, in SEVEN (7) WORDS:

Don't talk, don't e-mail, just drive.

LECTURER: Frank Wilczek, 2004 Nobel Laureate in Physics.

TOPIC: Dark Matter

Complete technical description in TWENTY-FOUR (24) SECONDS:

Everything we're familiar with is made up of quarks, gluons, photons, and electrons. But something else is holding galaxies together, and something else again is blowing the universe apart. The part we understand is five percent of the total. Maybe the rest is axions, maybe photinos, maybe something else. I hope to live to see the day when we find out what it is.

Clear summary that anyone can understand, in SEVEN (7) WORDS:

What you see isn't what you get.



Frank Wilczek. Photo: David Holzman.



Benoit Mandelbrot. Photo: Robin Abrahams.

equivalence. They understand concepts of bigger, smaller, same, different, and absence. We also study mutual exclusivity and conjunctive recursive tasks.

Clear summary that anyone can understand, in SEVEN (7) WORDS:

Parrots use English to demonstrate exceptional intelligence.

LECTURER: William Lipscomb,

1976 Nobel Laureate in Chemistry.

TOPIC: Inertia

Complete technical description in TWENTY-FOUR (24) SECONDS:

When I was approached, it occurred to me to talk about the Higgs mechanism, how particles get their mass, which of course gives them inertia. However, it's too complicated to present, so I come back to the

Irene Pepperberg. Photo: Robin Abrahams.

LECTURER: Benoit Mandelbrot, creator of fractal geometry.

TOPIC: Fractals

Complete technical description in TWENTY-FOUR (24) SECONDS:

Let x be a metric space, and let me define Hausdorff measure and Hausdorff dimension. No, don't, don't let me. It has very little to do with the story. In fact, how the dimension was discovered by a man named Besicovitch was a very funny—[Here the referee intervened.]

Clear summary that anyone can understand, in SEVEN (7) WORDS:

Beautiful, damn hard, increasingly useful: that's fractals.

LECTURER: Irene Pepperberg, wizard of parrot-human communications

TOPIC: Grey Parrots

Complete technical description in TWENTY-FOUR (24) SECONDS:

For thirty years I've used a modeling technique to establish communicative competence with *Psittacus erithacus*. They can identify colors, shapes, manner, and numbers. We study communicative competence, transitive inference, stimulus



physiological effects, only. I went to sleep, I woke up—[Here the referee intervened.]

Clear summary that anyone can understand, in SEVEN (7) WORDS:

Inertia makes me go back to sleep.



William Lipscomb. Photo: Robin Abrahams.

AIR Teachers' Guide

Three out of five teachers agree: curiosity is a dangerous thing, especially in students. If you are one of the other two teachers, *AIR* and *mini-AIR* can be powerful tools. Choose your favorite *hAIR*-raising article and give copies to your students. The approach is simple. The scientist thinks that he (or she, or whatever), of all people, has discovered something about how the universe behaves. So:

- Is this scientist right -- and what does "right" mean, anyway?
- Can you think of even one different explanation that works as well or better?
- Did the test really, really, truly, unquestionably, completely test what the author thought he was testing?
- Is the scientist ruthlessly honest with himself about how well his idea explains everything, or could he be suffering from wishful thinking?
- Some people might say this is foolish. Should you take their word for it?
- Other people might say this is absolutely correct and important. Should you take their word for it?

Kids are naturally good scientists. Help them stay that way.

May We Recommend

Items that merit a trip to the library

compiled by Stephen Drew, Improbable Research staff

New Fix on Hans' Fixation

"A Reassessment of Little Hans, His Parents, and His Castration Complex," J.A. Lindon, *The Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry*, vol. 20, no. 3, Fall 1992, pp. 375–94.

Llama, Shampoo, and Phage Display

"Isolation of Llama Antibody Fragments for Prevention of Dandruff by Phage Display in Shampoo," Edward Dolk, Marcel van der Vaart, David Lutje Hulsik, et al., *Applied and Environmental Microbiology*, vol. 71, no. 1, January 2005, p. 442–50. (Thanks to David Holzman for bringing this to our attention.)



We welcome your suggestions for this column. Please enclose the full citation (no abbreviations!) and, if possible, a copy of the paper.

HMO-NO News

Health care advice to pass on to your patients



Manageable Symptoms

For many medical conditions, patients are distressed by particular symptoms. Sometimes it is possible to alter those symptoms. Patients who sign up for HMO-NO's new **Manageable Symptoms™** program can choose from a range of other symptoms.* When and if possible, we will induce those symptoms as substitutes for and/or complements to the original symptoms. Distress is a matter of choice.**



* Note: Certain fees may be applicable.

** Note: Certain limitations may apply.

HMO-NO The very final word in health care

Glauber's Big Night

by Stephen Drew, *Improbable Research* staff
photos by David Holzman

Every year the Ig Nobel Prize Ceremony includes a Win-a-Date-With-a-Nobel-Laureate Contest. Each of the 1200 ticket-holders at the ceremony has a chance to win a date with one of the Nobel Laureates who are on stage. This year's Prize was Roy Glauber, a 2005 Nobel Laureate in Physics.

Glauber is a physics professor at Harvard University. He participated in ten prior Ig Nobel Prize Ceremonies as a Keeper of the Mop—one of the people who sweep paper airplanes from the stage. This was his first appearance at the Ig ceremony since becoming a Nobel Laureate. Professor Glauber insisted on keeping his mop duties, thus ensuring himself a busy night.

His night became busier when, due to a typographical error, the Win-a-Date-With-a-Nobel-Laureate Contest produced not one winner, as intended, but fifteen. These photos document what happened from the time minordomo Peaco Todd escorted Professor Glauber to center stage to the moment when he became engulfed by delirious winners.



Boys Will Be Boys


Research by and for adolescent males of all ages and sexes

compiled by Katherine Lee, Improbable Research staff



Conservation: Sheep to Dog Dung

“Changes in Food Resources and Conservation of Scarab Beetles: From Sheep to Dog Dung in a Green Urban Area of Rome (*Coleoptera, Scarabaeoidea*),” Giuseppe Maria Carpaneto, Adriano Mazziotta and Emanuele Piattella, *Biological Conservation*, vol. 123, no. 4, June 2005, pp. 547–56. (Thanks to Jelle W.F. Reumer and to Ig Nobel Prize winner C.W. Moeliker for bringing this to our attention.) The authors explain that:



In the Pineto Urban Regional Park (Rome), dog dung is the sole food resource currently available for scarab dung beetles, after the recent removal of wild and domestic herbivores. A one-year sampling was conducted to study the scarab assemblage in dog scats and to compare it with the previous assemblage associated with sheep droppings. Richness, evenness and similarity parameters were compared between the two allochronic assemblages... A comparison with other Roman scarab communities [showed that] dog dung provided a temporary

refuge for species that otherwise may encounter local extinction in urban environments.

Female Pupils’ Pupils

“Female Subjective and Pupillary Reaction to Nude Male and Female Figures,” Robert F. Hamel, *Journal of Psychology*, vol. 87, no. 2, July 1974, pp. 171–5. The author, who is at Eastern Michigan University, explains that he:

Recorded the pupillary responses for 22 female undergraduates viewing slides of 2 male and 2 female models in sequential degrees of dress and nudity. Subjective reports of sexual arousal were correlated with pupillary reactions to the male models. Dilation was found to be generally in accord with the direction and intensity of subjectively perceived sexual arousal.... Results suggest that pupillary dilation may be a sensitive index of arousal.


Long Lizard Looks

“‘Voyeurism’ Prolongs Copulation in the Dragon Lizard *Ctenophorus fordi*,” Mats Olsson, *Behavioral Ecology and Sociobiology*, vol. 50, no. 4, September 2001, pp. 378–81. (Thanks to Richard Wassersug for bringing this to our attention.)

Stepping Into The Historical Record

“Miocene Mammalian Footprints in Coprolites from Lisbon, Portugal,” Miguel Telles Antunes, Ausenda C. Balbino and Léonard Ginsburg, *Annales de Paléontologie*, vol. 92, 2006, pp. 13–30. (Thanks to Jesper Milan for bringing this to our attention.)

For the first time, at least for the Lisbon Miocene series, uncommon ichnologic evidence has been recognized, i.e. mammalian footprints in coprolites. Three coprolites were recorded in three successive stratigraphic units, IVb and Va2 from the Lower Miocene to Vb from the early Middle Miocene.... A large coprolite (IVb unit) that may have been produced by *Brachyodus onoideus* shows a few didactyl imprints. An artiodactyl trampled the dung with hoofs sliding on its surface and producing two incomplete imprints. It also trampled the dung in a more stable position, producing the best imprint, whose structure indicates it was produced by the left manus.



Bends on the Learning Curve

Improbable ideas and explanations collected from classrooms

by Richard Lederer

Medical transcriptions show us some unexpected styles of medical reasoning. Here are some examples:

- Both her old and new noses have been placed in our album.
- The patient is depressed and just stays in bed and balls.
- Patient is a 60-year-old, left-handed, mildly ambidextrous speech therapist.
- The patient is a 79-year-old widow who no longer lives with her.
- Occasional, constant, infrequent headaches.
- Three bullets were removed from the patient – one from each leg.

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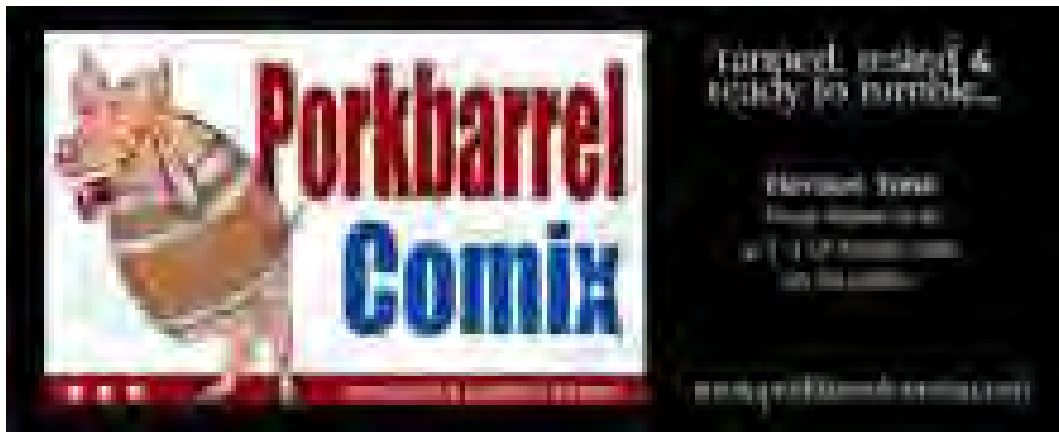
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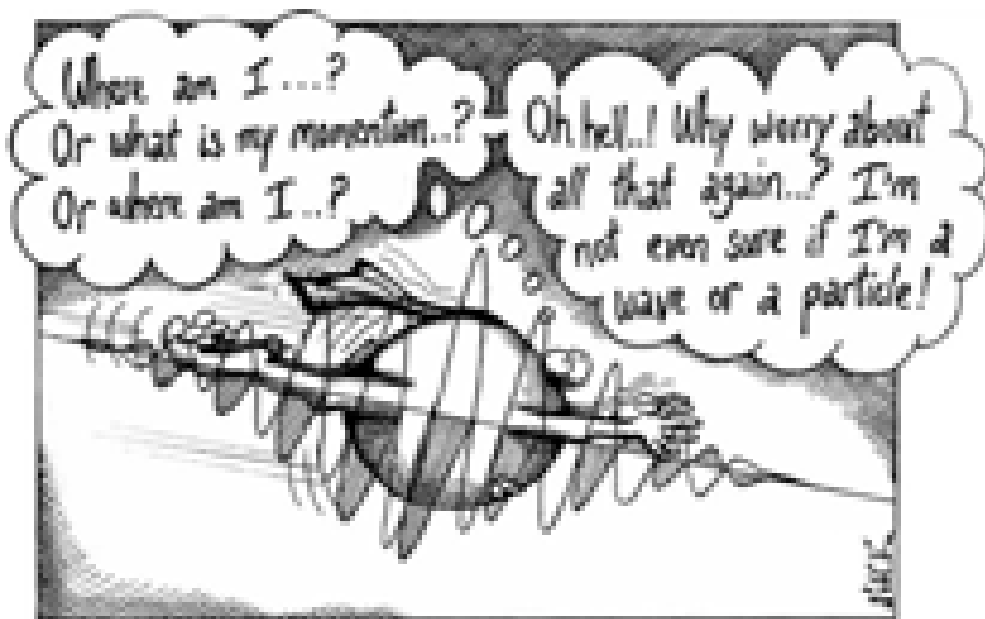
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Photon self-identity problems.

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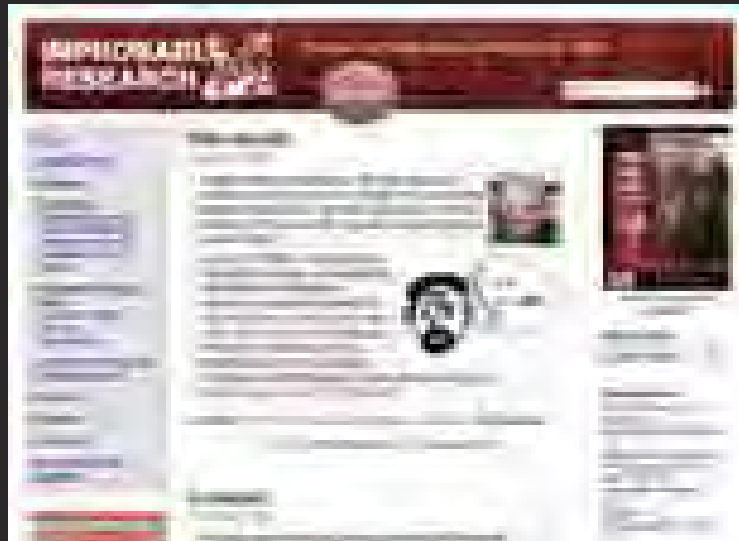
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