Mel says, “This is swell! But it’s not ideal—it’s a free, grainy PDF.”

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Bezoars, Bezoars, Bezoars

Hair, Hair, Hair

and more more more!

Special Issue!

Harry Potter and the Exploding Toads
Other Einsteins (Part 5)

by A.S. Kaswell, with Jessica Girard, AIR staff

As reported in Parts 1, 2, 3 and 4 of this series, people say “There is only one Einstein,” but of course that is not so. In this, the official, “Einstein Year,” when everyone celebrates Albert Einstein, we are giving happy nods also to some of the other Einsteins.

Einstein on Performance Appraisal

Walter O. Einstein is an authority on performance appraisal. One of his best-known studies is:


Einstein is a professor of management at Southeastern Massachusetts University (which has since become University of Massachusetts Dartmouth, thanks to a restructuring).

Einstein’s Small-Bowel Experiment

David M. Einstein of The Cleveland Clinic Foundation in Cleveland, Ohio, is immersed in knowledge of the small bowel. Einstein fans recommend especially his report:


More to Come

Previously in this series, we examined the following Einsteins.

**Part 1** -- M.E. Einstein (pork carcass composition)

**Part 2** -- Rosemarie Einstein (cannabis)

**Part 3** -- Danielle A. Einstein (magical thinking and perfectionism)

**Part 4** -- Hans E. Einstein (respiratory ailments) and H.E. Einstein (electric batteries)

In the next, and concluding installment, we will lovingly look at still other Einsteins.
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

On the Back Cover
Sign posted on the grounds of the American Academy of Arts and Sciences of the 2004 on the occasion of their induction ceremony. Photo: A.S. Kaswell.

Coming Events
(see WWW.IMPROBABLE.COM for details of these and other events)
Cascadiacon, Seattle, WA -- SEPT 1-5, 2005
Ig Nobel Prize Ceremony -- OCT 6, 2005
Ig Informal Lectures -- OCT 8, 2005
Quebec -- NOV, 2005

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

Hedgehog + Ice Cream + Rings

Six-pack rings, unproven as a hazard to animals in a recent article (“The 6-Pack Ring Fishing Experiment,” AIR 11:3), could be put in the shade by the seemingly innocuous packaging of the ‘ice cream’ (sic, to our way of thinking) concoction called a McFlurry, which is advertised in connection with the slogan “lovin’ it!”

Look at this photograph. The poor hedgehog (Erinaceus europaeus) which stumbled upon a six-pack ring was clearly NOT “lovin’ it!” before the two-stage rescue process -- which required the removal of the paper cup, then the removal (using a knife) of the rigid plastic splatter guard -- returned it to the wild.

I would, in passing, also venture that most “kills” by six-pack rings occur when the creature makes the error of using the ring as a thoroughfare (en route to a tasty snack)!

John C. Bullas & Michael O’Leary
Southampton, U.K.

Colonoscopy Celebrant

Maybe I’m unusual, I found mine fascinating. I was able to watch it all on the video monitor. The journey through the colon looked like a science fiction movie of the view from a miniature submarine. It moved through a long tunnel of white walls with strange ripples, like caverns measureless to man.

I mentioned to the physician how clean everything looked: He said ‘twas not his doing, but mine...it took me a moment to understand what he meant.

I asked for a video recording; none was available, but I was given a still photograph of my inside, signed by the physician, which I have proudly kept. My only regret was that I had not refreshed my mental picture of the geography of the intestine, for the physician told me the names of the scenic spots as we went through them.

Leonard Finegold
Physics Department
Drexel University
Philadelphia, PA

Parallel Advances: Snails and Space

A copy of the July/August 2005 issue was sent to me by a friend who is familiar with my work.

The cover picture of the snail pulling the DVDs (SNAP -- SNAil-based data transfer Protocol) was LOL funny specifically because I’d recently published a paper in Nature (the cover article in their September 2, 2004 issue) dealing with the general topic of “inscribed matter” communications. (In a nutshell it explains that the message-in-a-bottle idea of sending physical objects across space is highly energy efficient, and we should search for artifacts in the solar system now.)

Please relay to the authors my hearty applause and delight at their SNAP system and experiments.

What’s funny is that though the paper IS hilarious, it does raise the question of efficiency for those who would read past the jocularity and examine the underlying science. So in this respect, the SNAP article is a perfect example of your motto: “laugh then think.”

Prof. Christopher Rose
Associate Director, Rutgers WINLAB
Piscataway, NJ

Rorschach Test Question

I was shocked to see Arnold Bishop-Wise’s letter (AIR Vents 11:4) about the photograph he found in the study of his late wife, Arlene Bishop-Wise, the revered “Intellectual Mistress of the Rorschach Test.” He questions whether Arlene Bishop-Wise’s famous ink blot “is in fact a photograph” and says, “To me it looks like a photograph of two elderly women.” Indeed
it does. Arlene and I were lifelong friends. I still consider her my friend, even though the duration is at this point longer than her life. While I cannot be sure from the reproduction in your magazine, it appears to be a photograph with a most curious -- and until now rather secret -- history. Arlene loved that ink blot of hers, and used it with generations of her students. Many was the acquaintance who pointed out that (a) it does look like two women and that (b) one of them looks a bit like me! As a gift on Arlene’s 82nd birthday, our mutual friend Cora Bascomb and I hired the photographer Geoffrey Tenace and the stage makeup artist Devire O’Nolan, and together we created a photographic simulation of the ink blot -- with Cora and me posing as, well, blots. Arlene loved, loved, loved our gift to her. But she made us promise that we would never reveal the secret while she was still alive. She was concerned that it would “negatively impact” certain licensing arrangements she had made with a certain large publisher of psychology and therapy textbooks. Now that Arlene is gone, I take great delight in letting the world know about this. Please spread the word as much as you like!

Gillian F.W. Dixon-Malt
Hamptead, U.K.

Mel on Mel

My name is Melina, and so some of my friends call me “Mel.” Whenever a new issue of AIR arrives, I always know about it first when three of my colleagues in the hospital come through the door of my office together, each waving their own copies of the magazine turned to page 2 and 3 where there is always a letter and a photograph of your little man Mel, and all three chanting “Mel, Mel, Mel!” Our patients and our support staff love this, and so do I. We Mel must stick together, I think, for the general happiness of other people as well as our own. Viva Mel.

Melina Fotini,
MD
Kalamata
Greece
Pottering About Bezoars

by Stephen Drew, AIR staff

The new Harry Potter book has awakened an interest in bezoars. Two years ago bezoars nudged briefly into the public consciousness, but they somehow lacked staying power. This was not due to any lack of bizarreness, for this was a case of doll’s head bezoars. And they were real, not fictional.

Bezoars are tough, literally indigestible masses that, one way or another, got into the stomachs or intestines of an animal. A hairball is a bezoar. The bezoars in “Harry Potter and the Half-Blood Prince” are of a different sort -- stones taken from the stomachs of goats.

The doll’s head bezoars were, simply, dolls’ heads. These plastic crania made their first public appearance in a set of x-rays taken at the Harborview Medical Center in Seattle, Washington. Two Harborview radiologists celebrated the bezoars in print, publishing an illustrated report in the American Journal of Roentgenology.

Drs. Ken Linnau and Frederick Mann played the role of J.K. Rowling, using clear prose to describe a curious interplay of childhood themes and dark adult doings.

They tell a strangely gripping tale. It begins with a 35-year-old man who suffers from abdominal pain and distention. The doctors (who, in addition to being authors, play vital roles in the story) take an abdominal radiograph. As the x-rays develop, so does the plot.

The image is most curious. It “showed multiple rounded objects, some of which projected in the shape of a head with a pointed nose.” The hospital staff are intrigued.

At this point, we have a detective story. Someone named Clara L. Cone assists in the radiologic evaluation of the dolls’ heads. She then vanishes from the report.

The leading theory about the patient is that he is body-packing -- ingesting packets of illicit drugs for the purpose of smuggling. Through skillful questioning, the doctors tease out the real story: “The patient stated that he had ingested multiple heads of a popular children’s toy doll over the course of several days. He declared that swallowing dolls’ heads was his habit for anal autoerotic gratification.” In other words: delayed gratification. The doctors accept this explanation, or imply they do, and perform surgery for mechanical small-bowel obstruction.

The patient gets on with his life. But like the only-once-mentioned Clara L. Cone, he disappears from the story. Does he go on to partake of other dolls’ heads, or does he turn his gaze in some other direction? Drs. Linnau and Mann leave us in the dark here. They devote the rest of their report -- indeed, the bulk of it -- to certain intricacies of identifying dolls’ heads by means of radiographic equipment. “The entire head of the doll, including nose and hair, are radiodense,” they explain.

J.K. Rowling insists there will be only one more book in the Harry Potter series. It will be our last chance to see how, and perhaps why, the dashing young wizard advances in his knowledge of bezoars.

Reference

“Trauma Cases From Harborview Medical Center. Doll’s Head ‘Bezoar’: Complete Cranio-Cervical Dislocation Causing Bowel Obstruction,” Ken F. Linnau and Frederick A. Mann, American Journal of Roentgenology, vol. 180, no. 4, April 2003, p. 986. (Thanks to Scott W. Langill for bringing this to our attention.)
Selected Works of Harry Potter

Little-read literature written by a great name

Collected by Alice Shirrell Kaswell, AIR staff

 Millions of readers worldwide have read the six books that J.K. Rowling wrote about Harry Potter -- but hardly anyone has read the numerous books and articles written by Harry Potter. Here are tiny glimpses at pieces of four Potter-penned pieces. Though academic in nature, each contains elements and passages that some may find magical.

Harry Potter and the Quest for Justice


Harry Potter and the Mass/Weight Experiments

Harry Potter and the Hanging Question


Harry Potter
and the Non-Burnt Trash


Harry R. Potter
Purdue University
potter@soc.purdue.edu

Community conflicts over a variety of injustices persist as actors propose actions not perceived as equitable by everyone. We have many case studies of one or two communities, but it is rare that we have a comparative study of several communities as Walsh, Warland, and Smith provide on siting controversies.

The authors lay out the issues in the first chapter, including some description of the major
May We Recommend

Items that merit a trip to the library

compiled by Stephen Drew, AIR staff

Agricultural Nursery

“Toward a Social Geography of Baby Farming,” Shurlee Swain, History of the Family, vol. 10, no. 2, 2005, pp. 151-9. (Thanks to Tom Gill for bringing this to our attention.)

Has a Head for Data


Nuclear Family Research


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

The Ig Nobel Books!

The Ig Nobel Prizes 2, by Marc Abrahams
Dutton Books, New York


The Ig Nobel Prizes, by Marc Abrahams

And... editions in JAPANESE, POLISH, SPANISH, ITALIAN, CHINESE, and other languages

“Best of AIR” Book!

The world’s most untranslatable book has been translated into
CHINESE, GERMAN, ITALIAN, and, to some extent, the original
ENGLISH:

The Best of Annals of Improbable Research, Marc Abrahams (ed.), W.H. Freeman

...And the book-length version of the famous AIR-birthed article: A BriefER

Potter: Hairy

A review of wizardly research by people named Potter

by Stephen Drew, AIR staff

The recent publication of the sixth book in J.K. Rowling’s series of fictional books about the young wizard Harry Potter has awakened interest in all things Potter. Here are several such nonfiction things.

Potter on Pottery


Potter and the Abnormal Hair


Potter and the Nannizzia Grubyia

B. POTTER and two colleagues published a paper called “Characteristics of Alpha-Keratose Fraction of Hair Inducing Ascosporogenesis in Nannizzia Grubyia,” which graced the journal Mycopathologia et Mycologia Applicata (vol. 33, nos. 3-4, 1967, p. 345).

Potter and the Air-Displacement Plethysmography


Potter and Awgulewitsch

C.S. POTTER of the Medical University of South Carolina and several colleagues (including one named A. Awgulewitsch) published a brief report called “ Medulla-specific Pathway of Hair Follicle Differentiation Controlled by Hoxc13 Upstream of Foxq1” in the Journal of Investigative Dermatology (vol. 124, no. 4): April 2005, p. A104).

Potter: Hairy

H.D. POTTER of the University of Alabama at Birmingham and several colleagues published an article called “Leuprolide and Estrogen Versus Oral-Contraceptive Pills for the Treatment of Hirsutism -- A Prospective Randomized Study,” in the Journal of Clinical Endocrinology and Metabolism (vol. 80, no. 12, December 1995, pp. 3406-11). Potter has written elsewhere on this subject, too.
The Provocations of Biking
Discoveries made possible by person-powered wheeled vehicles
Compiled by D.L.N Travasco, AIR staff

Bicycling presents both an opportunity and a source for insights into human anatomy, physiology and, in a variety of ways, psychology. Here are several published reports on what might be called bicycle science.

Biking 1

Biking 2

Biking 3

A 24-year-old male amateur cyclist had numbness and tingling localized to a small region on the superior portion of the right buttock.... The cyclist had received chiropractic adjustments 2 days before the onset of the symptoms. One week earlier, the patient began riding a new bicycle with different gearing than his previous one... Repetitive strain of the patient’s gluteus medius muscle as a result of poor cycling technique appeared to be the cause here.

Biking 4

The authors are at University Medical Centre of Cologne, Germany.

According to this poster, Shirley Duncan was an Australian girl who took a bicycle trip throughout much of her large country. Her accomplishments, whatever they were, are now little known to scientists.
How To Write a Love Letter

An application of current communications technique

by Joshua Lederman
Special Instructor of Writing
Department of English, Emmanuel College, Boston, Massachusetts

[EDITOR’S NOTE: Professor Lederman has tried, for many years, to teach college students how to write. He got to thinking about what it would be like if his students wrote love letters in the same style as they write their essays.]

ASSIGNMENT: Write a love letter to someone you love. Make sure you include and support three specific reasons why you love him or her.

MINIMUM LENGTH: 3 typed, double-spaced pages.

Dear Kirsten,

Love. What can be said about love that hasn’t been said hundreds and hundreds, if not thousands and thousands, of times? Love may be one of the most important factors in our society today. It is a well known fact that many inspiring writer and authors have written extensively about love, whether it be a poem on the one they love, or even a novel about love and its trials and tribulations. As an inspiring writer myself, I would now like to write about love, e.g., the love I have for you. I love you. You are funny, smart, and cute.

One reason I love you so much is because you are so funny. I love funny people more than perhaps any other personality type or “archetype.” Since you are so funny, and since I love to laugh so much, I really love you because you’re so funny. And that is one of the main reasons why I love you. Because you are so funny. Ever since the dawn of time, man has sought laughter in all that he ascribed to be and to do. He sought it in his paintings on the wall of his caves; and he sought it in the palaces where kings laughed mightily at the court jesters of yore. Even to this day, laughter remains a quality that many seek in their daily lives. Webster’s Dictionary defines “humor” as, “The quality that makes
something laughable or amusing; funniness,” and that is you, to me. You are always doing laughable and/or amusing and funny things. Therefore, you are so funny.

In addition to being funny, you are also very smart. Smart people are perhaps the second most lovable type of person in our modern world, and I would like to now show you how smart you are, so that you can see that you truly do belong to this elusive type of personality, being both funny and so very, very smart. I often sit and wish sometimes that I were as smart as you. The way you just know things is something that just amazes me. I think about all those things you always know when I think about you and how smart you are, and how I love smart people only second to funny people. Will you ever cease amazing me? If they are right in Science that the human brain and its capabilities are the only thing that keep us safe from the dangerous jungle that we would live in if we weren’t smart enough to build houses and live in those, then you are definitely a great person, great because of your intelligence. And if we don’t love great people, who are we to love? I know that I love greatness, and therefore, as has been shown, I love you. I love all those things about you, like your taste in music and the way you dress. Those little things that other people take for granted, but those are the things to me that aren’t little, they are love. My love for you. This is not little, even though some may argue that it is. No, it is very large.

Finally, you are also very cute, and that is something lovable in every society known to man.* (*Since I wrote this, I actually learned about a tribe in Africa where this is not the case, but please read this letter as if these people didn’t exist.) I could go on and on all day about how cute you are, but that would be telling, not showing, and every good writer knows that it is far, far better to show than to tell.

In conclusion, you are funny, smart, and cute, and I think the past three pages have invariably proven this to you. I love you because of those things.
Puzzling Solutions

by Emil Filterbag, AIR staff

We have a large collection of puzzle solutions for which we have lost the puzzles. Here is a further selection.

SOLUTION: The blancmange will reach point d if it (the blancmange) has been boiled properly.

SOLUTION: No, because Beethoven never wrote his first drafts on the sides of buildings.
SOLUTION: Professor Geike is the one on the left.

SOLUTION: He asked them to give him a hand.

SOLUTION: Yes, but not by Beethoven.
SOLUTION: Tracy is on the 12th mule from the top. Eduardo is in the 15th mule. Kuan-Lee is next to Eduardo. The styptic pencil is in the box at Kuan-Lee’s side. Thus the answers are: (a) 41 and (b) clean-shaven.
**AIRhead Medical Review**

*Improbable diagnoses, techniques, and research*

compiled by Bertha Vanatian, AIR staff

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**An Eel Operating on Guts**

“Traumatic Rectal Perforation by an Eel,” Siu Fai Lo, Sin Hang Wong, Lok Sang Leung, In Chak Law, and Andrew Wai Chun Yip, *Surgery*, vol. 135, 2004, pp. 110-1. *(Thanks to Daniel Gagne for bringing this to our attention.)* The authors, who are at Kwong Wah Hospital, Kowloon, Hong Kong, show photographs, and explain that:

A 50-year-old man was seen at the Accident and Emergency Department because of abdominal pain. Physical examination revealed peritonitis. A shadow of an eel was noticed on the abdominal radiograph. On further questioning, the patient admitted an eel was inserted into the rectum in an attempt to relieve constipation. Emergency laparotomy found a 50-centimeter-long eel biting the splenic flexure of the colon, and a 3-centimeter perforation was found over the anterior wall of the rectum. The rectum was divided at the site of perforation, and the proximal end was brought out as colostomy. The postoperative course was uneventful. The patient was discharged home on day 7.

**Cleanliness vs. Brain Damage**


Manganese is an essential trace element but is neurotoxic at high doses. ... We systematically searched [the medical literature for reports that use these terms]: manganese, water, drinking water, shower, showering, bath, bathing and inhalation, then combined with “water or drinking water or showering or shower or bathing or inhalation.” ... [We conclude that] long-term shower exposure to manganese-laden water may pose a significant risk for Central Nervous System neurotoxicity via olfactory uptake.

**Chuckle Till You Buckle**

“Shear Hilarity Leading to Laugh Syncope in a Healthy Man,” Dennis Bloomfield and Saad Jazrawi, *Journal of the American Medical Association*, vol. 293, 2005, pp. 2863-4. *(Thanks to Larry Husten for bringing this to our attention.)*

**Epic Meeting**

“Origami in Dynamic Hip Screw Surgery,” Jeff Auyeung and Osmond Thomas, *Injury*, vol. 35, no. 10, October 2004, pp. 1039-41. *(Thanks to Leslie Lawrence for bringing this to our attention.)* The authors explain that:

The insertion of a dynamic hip screw requires assessment of the native angle of the femoral neck. The two commonly used angles of DHS insertion are 135 and 150°. We present a simple way of judging whether a 135 or 150° angle plate is more suitable in the preoperative plan by using one or two sheets of A4 or letter paper, respectively.

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

Improbable theories, experiments, and conclusions

compiled by Dirk Manley, AIR staff

For the first time in Poland, seasonal dynamics and age structures of pyroglyphid dust mite populations were investigated in three beds from two dwellings in Sosnowiec (Upper Silesia).

More Mites


Remaking the World


Here, a new case of scientific fraud, involving plagiarism of images and duplications of photos in different papers supposedly dealing with sediments and fossils from different areas and of different ages is reported. The person involved in this fraud is Mostafa M. Imam, from the Scientific Department of the College of Education for Girls in Saudi Arabia. In the last two decades, Imam has published several papers, both by himself and in collaboration with other authors, on microfacies, foraminifers and coraline red algae from Eocene, Miocene and Pliocene sediments of several areas of Egypt and Libya. During these years, this author has repeatedly been plagiarising pictures of diverse organisms previously published by other authors. Additionally, Imam has been using the same pictures in the different papers that he has published concerning different areas and rocks of different ages.²

Popcorn

More Popcorn

“Increasing the Size of a Piece of Popcorn,”
P.V. Quinn, D.C. Hong and J.A. Both, Preprint
ArXiv.org/cond-mat/04094244, 2004. (Thanks
to Roy Glauber and Andrew Gormanly for
bringing this to our attention.)

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

Scientists Now Know...

Startling discoveries by social scientists, as announced in press releases
issued by them and their proud institutions

compiled by Olph DeShaies, AIR staff

Weather Affects Workouts

Residents of cool, dry Montana are the most likely to get enough physical activity, and residents of hot, steamy Puerto Rico
the least, according to a new research study that links climate conditions with physical activity in the United States. Lead
researcher Ray Merrill, a professor at Brigham Young University, and colleagues matched data from 255 weather stations
with results from a physical activity survey of people in 355 U.S counties, in a study reported in the July/August issue of
American Journal of Health Behavior.

“It’s pretty obvious that weather influences physical activity,” Merrill says. “It’s intuitive that cooler, milder weather days
are associated with more activity -- but it’s never really been quantified before.”
Figure 1. The exploding toad news traveled worldwide. Here is a portion of a report on the Taipei Times web site. [Also note the explosive claim, at upper right, that there have been “nearly 200 million visits to the web site.”]
...The Storied Remains

A “dream team” of scientists takes on a nightmarish problem

by Mark Benecke, Forensic Biologist, International Forensic Research and Consulting, Cologne, Germany
C.W. Moeliker, Curator of Birds, Natuurmuseum Rotterdam, The Netherlands
Richard Wassersug, Professor, Department of Anatomy and Neurobiology, Dalhousie University, Halifax, Canada
Redacted by Marc Abrahams, Editor, AIR

Earlier this year, news reports described a sudden plague of exploding toads in Hamburg, Germany. The reports carried conflicting descriptions and speculation from scientists, governmental officials, passersby, and other authorities -- some said these were spontaneous explosions, some attributed them to attacks by killer crows, some to bacterial or viral action. Others advanced still more exotic theories. The public was left with a confused notion as to what exactly had happened, and how and why. To make sense of the reports, we assembled an international “dream team” -- three extraordinarily curious, determined scientists, each of whom has a deep background in one or more elements of the apparent story. Their assignment: to try to discover the truth about the exploding toads of Hamburg.

Mark Benecke is one of the world’s leading forensic biologists. Benecke is based in Cologne, Germany.

C.W. (“Kees”) Moeliker is one of the world’s leading experts on crows and many other birds. Moeliker was awarded the 2002 Ig Nobel Prize in Biology, for publishing the world’s first scientifically documented case of homosexual necrophilia in the mallard duck. Moeliker is based at the Natuurmuseum Rotterdam, in The Netherlands.

Richard Wassersug is one of the world’s leading authorities on frogs, toads, and many other amphibians. He was awarded the 2000 Ig Nobel Biology Prize for conducting a test of the comparative palatability of some dry-season tadpoles from Costa Rica. Wassersug is based at Dalhousie University, in Halifax, Nova Scotia, Canada.

All are members of the editorial board of the Annals of Improbable Research.

Their research was conducted, as much of today’s highly publicized research is, hastily and via email. Here is a concise, edited compilation of their collected reports.

* * *

From Mark Benecke (European Forensic Entomologist)

Northern American and Dutch people laugh about Germans because we drink Kefir (rotten milk; available in every German supermarket) to prolong the span of life, and use homeopathy (super-diluted substances proven to not have any effect, but available at every German medical doctor) to cure illnesses.

At the same time, most Germans laugh about Northern Americans because of them writing the numbers “1” and “7” without a dash (out of superstition?), putting month before day (i.e., not in a logical order), and also for not knowing where...
The Netherlands can be found on a map of the world. The “Exploding Toad” Problem was not noted in the German news media until after it had made it big into international newspapers. This alleged miracle united scientists -- three of us, anyway -- from three different regions of the world, in an interesting search for a quite hard-to-find truth.

Our different approaches illustrate quite nicely how each of our respective fields of work influences the course of an investigation, and therefore also the results of the quest.

The story grew as if nourished in rich ground -- there exist many legends and even modern references to exploding toads.

The original claim, which quickly spread around the world, appeared in news reports in late April, 2005. One version of it said:

Werner Smolnik, environmental movement worker, stated on April 26, 2005 that in the previous four days, at least 1,000 toads in the city of Hamburg, Germany had died by explosion. He is quoted as saying: “It could be an unknown virus, or a fungus that has infected the water, or a defense mechanism against aggressive crows which have appeared in the area recently. … But we haven’t a clue. Soon there will be no toads left!”

What differentiates the exploding-toads incidents from most other exploding-animal stories is that these toads reportedly explode while alive. Exploding whales, for example, are a result of the build-up of gases during the process of decomposition (except when the use of dynamite is involved).

From Richard Wassersug (North American Amphibian Specialist)

I can understand that people who are not concerned about disappearing wildlife from our planet might find a mysterious and lethal epidemic in frogs funny. I recognize that for our species, frogs are simply funny whether they are jumping, dying, or just sitting still. However, I am scientifically too close to the core problem to be able see it as a topic that I can explore in a strictly humorous vein.
I am not always this humorless and I can assure you that I would find it immensely funny and worthy of continual follow-up if I knew that animals other than my frogs were finding a new and explosive way of departing the planet. 

Sorry I’m such a curmudgeon.

From Mark Benecke (European Forensic Entomologist)
I did my initial research on the toad thing by straightaway calling everybody involved. This technique did work. Here are my preliminary findings.

A) People did actually observe some toads that were “bloated,” but the animals were alive! They (the toads) then died. Therefore, most likely, the toads were just fighting for their lives after an attack, and just as a reflex tried to get rid of the offender (or of the observing human beings) by bloating and looking big, fat, and ugly.

B) The very good, city-owned Institute for Hygiene in the city of Hamburg did not find any relevant amounts of chemicals, viruses or bacteria. They found nothing, not even chlamydia, either in the exploded toads or in the little water basin where the toads all died. (I got this information from the person who did the measurements, not from an “official speaker” or other politically motivated person.)

C) On May 8, 2004 a British newspaper (The Independent) reported that Frank Mutschmann, a German toad expert, had examined both dead and living Hamburg specimens at his Berlin research center. Here is a portion of that newspaper report:

[Mutschmann] found all had identical circular incisions on their backs, small enough to be the work of a bird’s beak.

“There were no bite or scratch marks, so we knew the toads weren’t being attacked by a raccoon or rat, which would have also eaten the entire toad,” he said. “It was clearly the work of crows, which are clever enough to know the toad’s skin is toxic and realise the liver is the only part worth eating. Only once the liver is gone does the toad realise it’s been attacked. It puffs itself up as a natural defence mechanism. But since it doesn’t have a diaphragm or ribs, without the liver there is nothing to hold the rest of its organs in. The lungs stretch out of all proportion and rip; the rest of the organs simply expel themselves.”

The toads’ grisly deaths are, in fact, a well-documented phenomenon. First recorded in Germany in 1968, exploding toads have been reported in the country, as well as in Belgium, Denmark and America. Hamburg’s toads started to explode during their week-long mating season.

D) It is indeed unlikely that 1,300 toads were killed by crows. Some of the news reports said, or strongly implied, that killer crows were to blame, that the crows were plucking the livers from living toads. But no German bird or toad specialist (I called the two most senior ones) ever observed such a high number of toads killed by birds. It remains possible that other animals are the reason. For example, polecats do this sometimes over here. They just rip open the nasty tasting skin to reach the nice and soft liver.

E) No toads died afterwards. The incident, to whatever extent it did or did not occur, was of very limited duration.

F) None of the dead toads are left for a forensic biology treatment in my lab. The exploded animals were stored in the refrigerator of the Institute in Hamburg (instead of in the freezer, argh!) so the smell was unbearable for the lab personnel. Sigh.

From C.W. Moeliker (European Bird Expert)
What you have discovered “cuts wood” (as we say here in Holland). It now becomes (almost) clear what might have caused the dramatic death of the frogs.

The funny side of it is the nonsense that has polluted the press-reports. There is indeed no really humorous side of the exploding frogs -- but it sure is ‘improbable.’

I hope and feel what happened in Germany is just an isolated incident, and that toads, somewhere, will reproduce and reproduce to make up for that terrible loss.

It is as with the birds that get killed in collision with windows (a subject on which I have done some improbable research). Ornithologists in Britain have figured out the numbers of birds that die that way each year. The numbers are unimaginable and beyond comprehension on a global scale. But still, there are birds everywhere.

I do my best to plead the case that, on the charge of causing toads to explode, the birds are ‘not guilty.’
Finally, for what it’s worth as a form of indirect commentary on this whole thing, here is Wikipedia’s entry on the subject of “Exploding Toad Fiction”:

In a story titled “The Frog and the Ox” of the Aesop’s Fables, a frog, seeing an ox walking by, wanted to become as large and powerful as the ox. The poor frog filled herself full of air again and again. It exploded as a result.

In the film Reflecting Skin, two boys insert a drinking straw into a toad’s cloaca and inflate it, leaving it on the side of a path. The first person to come by and see the poor suffering toad bends over to inspect it, only to have it explode all over them when the boys shoot it with a slingshot.

A widely-circulated urban legend claims that you can explode a toad by putting a cigarette in its mouth because toads inhale through their mouths but they exhale through their skin. If the air is too polluted this process cannot be completed and the gases continue to build up until they explode.

The experimental music group Coil wrote a song called “Omlagus Garfungiloops” that features a voice sample saying, “Have you been exploding frogs again?” The title of the song is based on taking the above voice sample and playing parts of it backwards to achieve a strange non-language.

Figure 4. Happy toads, as depicted in a 19th century biology book. (Image courtesy of Mark Benecke.)
Soft Is Hard

Further evidence why the “soft” sciences are the hardest to do well

compiled by Alice Shirrell Kaswell, G. Neil Martin, and Bissell Mango

Identifying Pretense


Seen for the first time, these bizarre actions with a banana could be interpreted a number of different ways...

Discovery: College Students and Beer

“A Cognitive and Behavioral Hierarchical Decision-Making Model of College Students’ Alcohol Consumption,” Soyeon Shim and Jennifer Maggs, Psychology and Marketing, vol. 22, no. 8, August 2005, pp. 649-68. The authors, who are at the University of Arizona and at Penn State University, respectively, report that:

This study examined college students’ drinking behaviors from a consumer behavioral perspective.... Results indicated that personal values can serve as significant predictors of the attitudes college students have toward alcohol use, which in turn can predict intentions to drink. Results also indicated that intentions to drink are strongly related to actual alcohol consumption.

Overlooked Cause and Effect


Consumer Poetry

“A Role for Poetry in Consumer Research,” John F. Sherry, Jr. and John W. Schouten, Journal of Consumer Research, vol. 29, no. 2, September 2002, pp. 218-34. The authors explain that:

Consumer researchers are wrestling with the crisis of representation that has challenged contiguous disciplines over the past decade. Traditional or conventional prose articles seem increasingly insufficient as vessels for representing our understandings and experiences. In this article, we demonstrate how poetry contributes to the research enterprise. We use our own experiences as researcher-poets to illustrate how the writing and close reading of poetry can take us directly to the heart of consumption.

The Handling and Shipping of Oddity

Pop-Up Medical Thermometer Woes

A follow-up look at a promising technology, ten years on

by Stephen Drew, AIR staff

The pop-up medical thermometer is still in regulatory limbo -- it has yet to see its first trials on human beings. The thermometer was touted a decade ago as an impressively simple tool that will push medical expenses down and speed patients up out of their hospital beds.

More than a decade after it was invented, the device has yet to overcome the regulatory hurdles that confront even the simplest new kinds of healing technology.

Background: The Invention, Then the Delay

The January/February issue of the Annals of Improbable Research carried a report about the invention, describing its prospects help heal the debilitated healthcare delivery landscape in the U.S. and many other countries.

The pop-up medical thermometer is inserted into the skin or into an existing body aperture of a hospitalized ill person. The inner cylinder pops up when the patient’s fever subsides, indicating that it is time for the patient to go home. continued on page 28

The pop-up medical thermometer uses technology originally developed for the poultry industry. The original version indicates when a chicken is fully cooked.

(Photo: S. Drew)
Boys Will Be Boys

Research by and for adolescent males of all ages and sexes

compiled by Katherine Lee, AIR staff

Up and Away


Brain Exercises

“Brain Activation During Human Male Ejaculation,” Gert Holstege, Janniko R. Georgiadis, Anne M.J. Paans, Linda C. Meiners, Ferdinand H.C.E. van der Graaf, and A.A.T. Simone Reinders, Journal of Neuroscience, vol. 23, no. 27, October 8, 2003 pp. 9185-93. (Thanks to Vasco Galhardo for bringing this to our attention.) The authors report that:

In the week before the experiments, the volunteers and their female partners were informed about how the experiments would be conducted, and they were asked to practice at home...

Love to Forget

“Make Love to Forget: Two Cases of Transient Global Amnesia Triggered by Sexual Intercourse” M. Bucuk et al., Collegium Antropologicum, vol. 28, no. 2, December 2004, pp. 899-905. (Thanks to Evgeny Kobrinsky for bringing this to our attention.)

Benefits Unclear to Certain Scientists


The Australian scaly cricket, Ornebius aperta, can copulate over 50 times with the same partner; the benefits of such extreme repeated copulation are unclear.
Icky Cutesy Research Review

Research reports that are icky and/or cutesy

Compiled by Alice Shirrell Kaswell, AIR staff

Cutesy

“Do Dogs Know Calculus?” Timothy J. Pennings, College Mathematics Journal, vol. 34, May 2003, pp. 178-82. (Thanks to Geoffrey A. Landis and numerous others for bringing this to our attention.)

Cutesy

“Do ‘Shufflebottoms’ Bottom Shuffle?” A.T. Fox, R.D. Palmer, and P. Davies, Archives of Disease in Childhood, vol. 87, no. 6, December 2002, pp. 552-4. (Thanks to Anna Maw and numerous others for bringing this to our attention.) The authors, who are at Luton and Dunstable Hospital, Bedfordshire, U.K., explain their work thusly:

Aims: To investigate anecdotal evidence that the name “Shufflebottom” originates from the dominantly inherited characteristic of bottom shuffling.

Methods: A questionnaire based retrospective study to determine the incidence of bottom shuffling and age of first walking among those named “Shufflebottom” and a control population, of those named “Walker”.

Results: There was no statistically significant difference in incidence of bottom shuffling or age at first walking, between the two groups. The incidence of bottom shuffling (21.4%) was generally higher than has been described previously and Walkers were more likely to walk later than Shufflebottoms.

Conclusion: Shufflebottoms are no more likely to bottom shuffle than other children. The origin of the surname as representing this physical characteristic cannot be confirmed.

Cutesy (by same authors)


Icky

“Airbag Deployment and Eye Perforation by a Tobacco Pipe,” F.H. Walz, M. Mackay, and B. Gloor, Journal of Trauma, vol. 38, no. 4, April 1995, pp. 498-501. The authors are at University of Zurich, Switzerland.
Above: John Trinkaus (Ig Nobel Literature Prize winner, 2003, for publishing more than ninety academic reports about things that annoy him) delivers the keynote address at the 2004 Ig Nobel Prize Ceremony at Sanders Theatre, Harvard University. Photo: Kees Moeliker (Ig Nobel Biology Prize winner, 2002 for writing the first scientifically documented report of homosexual necrophilia in the mallard duck) / Annals of Improbable Research.

***

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Pop Up Thermometer continued from page 24

The technology was originally developed for the poultry industry. This is its first application to biomedicine.

Long-term nursing facilities have been wanting a cheap, simple way to tell when a patient is healthy enough to be discharged. Some patients are often kept in bed for days or weeks longer than necessary. This new type of thermometer, which can be manufactured in bulk for less than two cents per unit, could save billions of dollars annually in unnecessary medical care expenses.

Early Problem Identified and Fixed

Early prototypes of the pop-up thermometer occasionally caused infections, when implanted transcutaneously in the belly. The problem did not arise when the device was used rectally.

These infections occurred in trials conducted on animal carcasses, specifically on chickens and turkeys obtained from commercial meat wholesale companies and supermarkets. In almost every case, the infection disappeared upon treatment with a simple therapy, oven roasting.

Continuing Hurdles

Because the necessary regulatory permission has not been granted by the U.S. Food and Drug Administration, the pop-up medical thermometer has yet to be tested on live human beings. Until and unless medical regulators approve the trials, prospects in-patient use appear discouragingly dim.

The thermometer has not been -- and will not be -- tested on live chickens, because of the inventor’s concern for the animals’ welfare.
Socially Scientific

Notes on the intriguing behavior of human beings

by Robin Abrahams

Information Technology

When I give exams in my college classes, I do not allow students to have anything at their desks but a writing implement and, if they wish, a bottle of water. Most of my colleagues follow this policy as well and require notebooks, cellphones, and the like to be stashed at the front of the room to reduce the likelihood of cheating. You can imagine my concern, then, when I learned from the work of the late Jacques Benveniste (Ig Nobel Prize winner in 1991 and 1998) that water can remember and transmit information. Could my students’ innocent-looking Nalgene bottles in fact be fiendishly clever cheating devices? Should I ban water during my exams? Any advice is appreciated.

Ban the Brush

Cleanliness is next to... Satan? Perhaps so. According to recent research, much of the effectiveness of toothbrushing has to do with disrupting the familial groups in which bacteria tend to live. Every stroke of the brush tears these happy microfamilies apart, scattering them into an oral diaspora in which they can less effectively rot your teeth. Does the Christian right know about this, I wonder? Surely such organizations as Focus on the Family would oppose this wholesale destruction of families. And don’t expect them to be swayed by the argument “But they are only bacteria.” Since when should size matter? If we are concerned, as Focus on the Family insists we should be, about the souls of stem cells, surely we ought to be just as concerned about keeping all families -- regardless of size -- intact.

Good-Neighbor Policy

Being in good health is important. So is being a good neighbor. That’s why I was left feeling a bit confused by a notice in my women-only health club explaining the proper procedures for preventing breast cancer. “At age 20, begin examining your own breasts monthly,” it read. This is fine enough, as far as it goes. However, I am now in my late 30’s. Whose breasts should I be examining now? One does want to do the right thing, after all.

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 AIR-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.
Bends on the Learning Curve

Improbable ideas and explanations collected from classrooms

by Richard Lederer

Here are some biological discoveries described by students in their homework and tests:

- Elephants eat roots, leaves, grasses, and sometimes bark.
- Spiders freeze in winter and thaw in spring.
- An animal or plant species can also be described as the kind of animal and plant species that it is.
- I am fascinated by the invisible world of microorgasms.
- Darwin’s book stated that all animals evolved from primeval man.

- Australopithecus was first found by leaking in Olduvai Gorge.
- Dinosaurs used to smell bad, but they don’t anymore because they are extinct.

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