



President-elect to take pro-active role

Gonzales to first follow footsteps of Gingrich

BY: MARISSA CEVALLOS

Though ASCIT president-elect Chris Gonzales still has two weeks before officially grabbing the reigns of the presidency, he is already filling in the role of former president Todd Gingrich just days after winning elections last week.

Gonzales' first duty was to pick up Friday morning donuts.

"Todd's trying to hand the reigns over as soon as possible," said Gonzales, who also attended an alumni board meeting on Friday afternoon in Gingrich's stead.

"So I'm slowly inheriting bit by bit."

Gonzales' campaign encouraged students to feel empowered in dealing with the administration, proposing a grievance board to hold administrators accountable for actions that transgress the honor code.

But Gonzales claims his actions with the administration won't be a far cry from Gingrich's presidency.

"It's just the magnitude that will be the main change," said

Gonzales.

"I think the students would be best served by a proactive government, which is one where we schedule regular meetings with the administration. Because it's not because they try to hide these things from us, it's that they for-

"I'm going to start my presidency as close to Todd's as possible until I am comfortable with the way of doing things. But I'm not going to force myself to stick to the way things were done in the past."

get to ask the students for input."

As Social Director of ASCIT, Gonzales has organized two formals, one concert, and Caltech's first Interhouse party in nearly two decades. After one year of working with Gingrich on the

BOD, Gonzales has the thumbs-up of the outgoing president.

"I think he's going to do a good job. I think he knows what he's doing," said Gingrich. "I think he's going to be a lot more tied into house concerns and be more active trying to work with Tim Chang and some of the administrators that students might complain about frequently."

Gonzales already has a few immediate goals in mind for the BOD to be elected next week, including finding space for the ASCIT video library after over a year of delays.

"What we didn't do last year was work as a BOD," said Gonzales.

"They worked together great, but didn't get a lot accomplished."

But Gonzales' loftiest goal of a grievance board, in which he says administrators would be held to the same standards of the Honor Code as the students, is one he says is "not even in the planning stage yet."

"It's going to be a multi-year effort to get it to happen," said Gonzales.

"Right now the admin is trying



Photo by Jonathan Tsai

Chris Gonzales will officially assume ASCIT presidency next week.

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Women's frisbee braves elements in Santa Barbara

Snatch works its way to the championship bracket by beating UC Santa Cruz



Photo by Laura Fishman

BY: NATALYA KOSTANDOVA

The women's Ultimate team experienced Murphy's Law to its fullest at Santa Barbara's Invitational this weekend. Not only did the weather turn from the sunshine inherent to SoCal to freezing rain, but the tournament turned into an injury-packed, mud-flinging, and logistically challenging enterprise.

Nevertheless, the Snatches succeeded in beating all expectations – instead of finishing 13th, as seeded, they defeated UC Santa Cruz and finished in the championship bracket.

The weather caused the biggest challenge to the players.

Coach Minh Huynh said, "In the rain and mud, every single throw and catch is so much harder than in dry conditions. There were times when it was so muddy that blobs of it would stick to the underside of the disc."

This, however, brought difficulties not only to the women but to the coach herself.

"It was challenging trying to say the right words to fire the girls up when I myself was feeling as cold and wet as them from trawling the sidelines," wrote Huynh.

If the weather weren't enough

of a setback, the women also suffered a series of injuries. Taiala Carvalho left the tournament with a broken nose as a result of a powerful huck by a girl on the Santa Cruz team.

Lizzy Trower hurt her knee, while Carolyn Brinkworth had to sit out because of a troublesome hip. Mary Dunlop was blind-sided by a Santa Cruz girl while making a bid on the disc, and Michelle Farkas had to sit out a game after her hands had turned an unnatural color resembling that of a gloomy sky.

Ultimately, the team was down from 12 players to 8 by the end of Saturday, which meant that there was only one sub by the end of Saturday's Santa Cruz game.

But that didn't stop Snatch from beating its seed, going from 13th place to anywhere between 5th and 8th place.

The uncertainty related to the final placement of the team stems from the logistical problem that arose from the destruction that the rain caused to the field on which the battles between the teams took place. The administration refused to allow the teams to play on the wet zones of the field on Sunday, threatening them with a \$1 million fine in case of refusal, so most of the field was closed

Sarah Payne looks upfield for a huck against UCLA's B team during Saturday's tournament.

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The Outside World

BY: NATALYA KOSTANDOVA

The World

Massive fighting breaks on streets of Beirut

On Thursday, four people died and 152 were injured as a result of violence that erupted in Beirut, Lebanon.

The riots, which escalated into fights, started on campus of Beirut Arab University and spread onto the streets of the city, elevating from confrontation with sticks and stones into gunfire.

Troops with armored personnel carriers were deployed to break up the fighting, which resulted in thirteen army soldiers being injured. The army was able to set up an overnight curfew in the city.

The violence stemmed from the rivalry between the youths loyal to the Western-backed government of Lebanon and the opposition, which is led by Hezbollah.

The opposition demands veto power in the government and calls for early parliamentary elections. The current prime minister has refused this demands. It is not clear which side started the fighting on Thursday.

Lebanon is still recovering from the 1975-1990 civil wars and often experiences such clashes.

The Nation

Bush delivers State of the Union address

Carrying out the tradition, Bush discussed some aspects of the American politics in the annual State of the Union address, delivered past Tuesday.

Bush emphasized the need to tighten federal spending and announced a plan to eliminate deficit within five years. He further called for strengthening and reform of Social Security, Medicare, and Medicaid, as well as a standard tax deduction for health insurance, and medical liability laws to discourage medical lawsuits.

Bush commented on the No Child Left Behind Act, citing it as a source of much improvement in the American educational system. He also proposed reevaluation of the current immigration laws and demanded enforcement of the laws at the work sites.

Bush discussed the development of alternative sources of energy and emphasized the current dependence of America on foreign resources.

Bush pointed out the developments in his war on terror, proclaiming the Shia and Sunni extremists as "different faces of the same totalitarian threat" and accusing Iran of funding terrorism. At the same time, he pronounced his support for the democratic movements in the Middle East, including Lebanon's Cedar Revolution, Afghanistan's elections, and the changes in Iraq.

Bush called the war "a gen-

erational struggle that will continue long after you and I have turned our duties over to others" and asked for support from the public as well as the politicians.

While discussing Iraq, Bush promised to send reinforcements of 20,000 troops to the area, with majority going to Baghdad. He also called for an increase in the size of active Army and Marine corps by 92,000 in the next five years as well as for an establishment of a volunteer Civilian Reserve Corps to mimic the military reserve.

Bush said that he is pleased with the international support in some issues that affect the United States, such as the nuclear weapon proliferation and fight against AIDS in Africa.

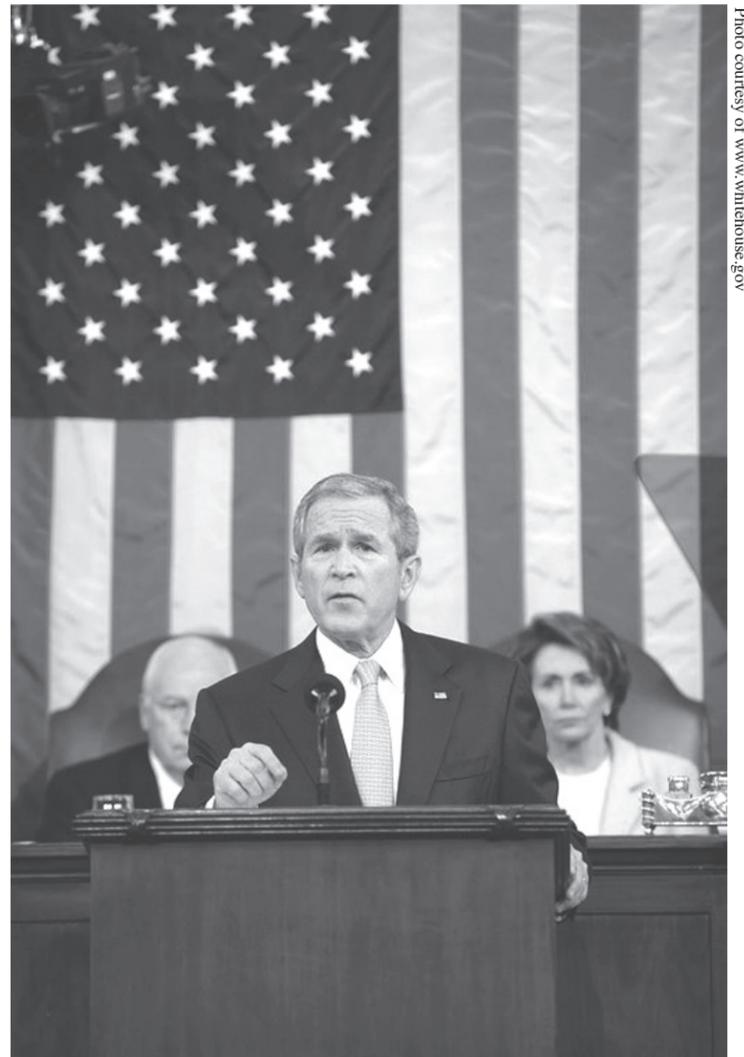
The complete transcription of the State of the Union can be found on <http://www.cnn.com/2007/POLITICS/01/23/sotu.bush.transcript/index.html>.

Technology

New breakthrough in chips: size does matter

Intel has recently announced that it will start manufacturing of processors using transistors only 45 nm wide, which will allow for significant improvement in speed and efficiency of microchips. IBM also plans to start production of chips using the new transistors.

With the microchip industry always striving to make transistors smaller, this advance-



President Bush delivered his address to the nation last Tuesday.

ment has been much anticipated. It has been increasingly difficult to reduce transistors in size, as the layer of silicone, from which the old transistors were made, was already only 5 atoms thick.

Not only did this pose a problem of scaling transistors down, but it also allowed some electricity to leak out, which reduced battery life and wast-

ed power.

The new transistors are to use silvery metal hafnium as their main material. This is a first time in 40 years that the material from which transistors are made is undergoing a change.

Sources: <http://today.reuters.com/>, www.CNN.com, www.news.bbc.co.uk

Snatch Beats Seed



Lizzy Trower, Mary Dunlop, and Veronica Anderson run to prevent an upfield huck.

CONTINUED FROM PAGE 1 down. As a result, all consolation games were canceled, leaving majority of the teams, including Caltech's, wondering over their actual standings.

Snatch's finish above expected is actually not that surprising, given the team's performance in the past.

Said Laura Fishman, "Almost all the tournaments that we've

been to, we keep improving and we keep beating our seed. We've never gone down in our ranking and it says a lot about our team - we just keep improving and we always exceed expectations."

The uncomfortable playing conditions also brought out some impressive performances. Marissa Cevallos said, "One cool thing was watching a rookie, Veronica

Anderson, do so well. She probably ran the most out of the whole team and laid out for the disk." This was Anderson's second frisbee tournament.

The team will travel to UCLA for another invitational next weekend, and will drive to Las Vegas the following weekend for the four-day Trouble in Vegas tournament.

ASCIT Board of Directors Minutes from the Olive Walk Jan. 24, 2007

Present: Chris Gonzales, Mike Gringolds, Todd Gingrich, Craig Montuori, RJ Krom, Vickie Pon

Items discussed:

* Congrats to Chris and Mike on their elections. Sign ups for

the other ASCIT positions are now up.

* The Provost Search Committee needs undergrads. A list of new and old BoD members will be suggested.

* The DVD library needs to be taken care of.

* The Donut wiki is ready to go, so let's get it running, somehow.

Respectfully submitted,
Vickie Pon
ASCIT Secretary

Announcements Counseling Center Begins Lecture Series

BY: HELENA KOPECKY, PHD
COUNSELING CENTER

This academic year, the Counseling Center is sponsoring its annual 2006-2007 Work, Sleep, Play—Finding Balance Lecture Series. As part of the series, the Counseling Center has invited experienced clinicians from the community, many of whom are familiar with Caltech students and the challenges they face in this academically rigorous environment.

The clinicians and several psychologists from the Counseling Center will be giving talks on a range of topics, such as stress reduction techniques, time management, understanding ADHD, and healthy relationships. While most of the workshops are intended to provide information and tips, a couple of them will involve a group discussion. For the complete list of workshops, please visit the Counseling Center's website at www.counseling.caltech.edu.

Students Line Up for Free Pancakes Last Saturday

BY: JOHN SHEN

The Olive Walk is quiet on a late Saturday morning, with nearly all the undergrads soundly asleep, but a commotion can be heard in the Lloyd kitchen bordering the Olive Walk. Inside, there is the sizzle of batter onto skillets and the rustle of chocolate chip bags, peppered with the conversation of a busy kitchen. These people aren't cooking just for Lloyd, but for the whole student campus.

Even their chatter revolves around the food that they cook. Carolyn Valdez, a Fleming frosh, proudly states her food of choice. "Chocolate chip banana pancakes, because CCF makes pancakes, and they're awesome," Valdez says while flipping a chocolate-chip pancake.

On the Olive Walk last Saturday, Caltech's Christian Fellowship (CCF) served up a pancake breakfast for our school's early risers. The event supplements CCF's tradition of serving free blue-slip milkshakes after the midterms grading period.

CCF President Jonathan Gardner, a senior from Blacker, sees the pancake event as fulfilling a need for the undergrad community. "Saturday morning, a lot of people go off campus to eat or skip breakfast," Gardner explains.

In order to serve the whole cam-

pus, CCF stocked a hefty amount of food. According to Lauren Savage, a junior in Blacker and the CCF Outreach Coordinator, the hungry crowd of undergrads went through three ten-pound bags of pancake mix, two bunches of bananas, six apples, two large bottles of syrup, and one sixteen-ounce bag of chocolate chips. In addition, CCF provided twelve gallons of juice and milk, as well as plastic silverware, bringing the event budget to about \$100.

The students were up to the task of consuming all the pancakes. According to estimates, more than 120 undergrads stopped by to enjoy pancakes and chat. Most came mainly to eat. "I just ate the king of pancakes," says Iliia Shadrin, a Ruddock sophomore, after finishing a thick 8" pancake. "It filled up my system with one pancake."

Behind the table of food, CCF members volunteered for the morning to cook and serve. The students chopped fruit, mixed batter, grilled and served pancakes in a buzz of activity. At the table, a queue of students lined up to take a

Gardner explained that the event meshed with his faith as a Christian. "It helps us to follow [the command of] giving things unconditionally or loving unconditionally," he said.

Savage also mentioned that



Students line up on Saturday morning for free pancakes in the RF courtyard.

simple enjoyment was another motivation for getting up early to cook some pancakes. "We're all happy to be out there, feeding hungry people," she said. "It seems to lift up the spirits of people when they get food."

While Savage did not specify

any future food events for the term, she did plug the blue-slip milkshakes as a stress reliever and as a reversal of fortune, redeeming a blue slip into a tasty drink. "It adds a bit of humor to a depressing situation," she says.

However, Savage expressed

a desire to incorporate more freefood into CCF traditions, not only to serve the students at large, but also to open up the CCF community. "It's easy for CCF to get insular, but part of being a Christian is serving the community you're in," she says.

Goals for New President

CONTINUED FROM PAGE 1

its hardest to do the fairest thing. But if they tell us we have to do things a certain way, there's no body on campus that can get that overruled."

Gonzales sees the board as a group of individuals that would act like the BOC or CRC.

"The group would be solely guided by the Honor Code and would have fairly broad powers to rectify any situations that came up."

But Gonzales is not planning on anything larger than baby steps in the next few weeks.

"I'm going to start my presidency as close to Todd's as possible until I am comfortable with the way of doing things. But I'm not going to force myself to stick to the way things were done in the past."



The recently elected ASCIT President peers out.

Photo by Jonathan Tsai

Students Search for Jobs



The Spring Career Fair last Wednesday offered students job opportunities.

Photo by Matthew Glassman

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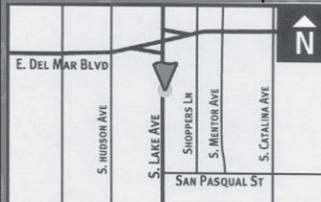
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Mark's Prattle

Global Warming: A Hot Topic

BY: MARK EICHENLAUB

"Where it is a duty to worship the sun it is pretty sure to be a crime to examine the laws of heat." – John Morley, Voltaire

On the evening of January 10, the editors of The Tech, being among the more sapient and foresightful students of this institute, assigned their ace sports reporter (hey, that's me!) to cover a talk entitled "Climate Change: Human-Caused or Natural?"

Now, after having read my killer "lead," (as we highly-professional journalists like to call our introductions) there are several points which I anticipate to have flown from that fecund fount which is your formidable mental faculties. I shall address them seriatim.

First: "Wow, the ace sports reporter has a really great vocabulary!" Not really. I use the thesaurus to mask my innate insecurities, which stem principally from my lack of substantial content to write about and imperfectly-formed left ring finger. (For example, before looking it up to write this article, I had no idea what the word "sports" means. The word's more abstruse intricacies persist in eluding me.)

Third: "What happened to point number two?" I got impatient.

Fourth: "If the talk was on January 10, why is the ace sports reporter only writing about it now? Furthermore, why does he keep referring to himself in the third person?" If you please, dear reader, restrict yourself to one point at a time. The most-likely (and most true) response to the delay is a matter of the author's own negligence.

However, I prefer to paint the illusion that a deeper motivation is at play. Remember what it was like here three weeks ago? It was much colder back then. I was attending *The California Tech's* weekly organizational meeting, and as I cowered under the outdoor heat lamp at Broad Cafe, fruitlessly attempting to melt the cheese of an errant freshman pho-

grapher's ham sandwich by the gas-lit flame of the lamp towering above me, my gaze suddenly met the steely gray-blue impassiveness of Jon Senn's frigid, unremitting stare.

only with the mind-clearing breath of an aestival breeze on an unseasonably-clement day some weeks later.

Fifth: "This isn't really going to be an article about global warming is it?" Right now I'm not completely sure on this final point, because with about 400 words of the column written I'm only two fifths of the way there. As yet, no one knows quite what will happen with this article - a condition which brings me, naturally and serendipitously, back to global warming.

The talk in question, given by Dr. Fred Goldberg of the Royal School of Technology in Stockholm, Sweden, was sponsored by the Caltech Y.

"I'm afraid and excited to bring in such a controversial speaker, it can either be wildly successful or horribly disastrous," wrote sophomore Ilia Shadrin in reference to the choice of a speaker who denies human impact on global warming.

Fred Goldberg, a mechanical engineer whose PhD research specialized in welding technology, began studying global warming in 2004. In an hour-long talk, he claimed, among other accusations, that all climate scientists deliberately miscommunicate their findings to advance personal or political agendas, that they falsify their data, that they deliberately obfuscate the details of their research to prevent outside review of their work, and that "all models [of climate change] are useless."

"Keep up the good work," my editor John Malmaud told me with a sardonic smile as I frantically recorded the details of Dr. Goldberg's theories, such as how the oceans of the Earth are just like a soda can, and therefore will suck up all the carbon dioxide ever emitted by human beings in twelve days.

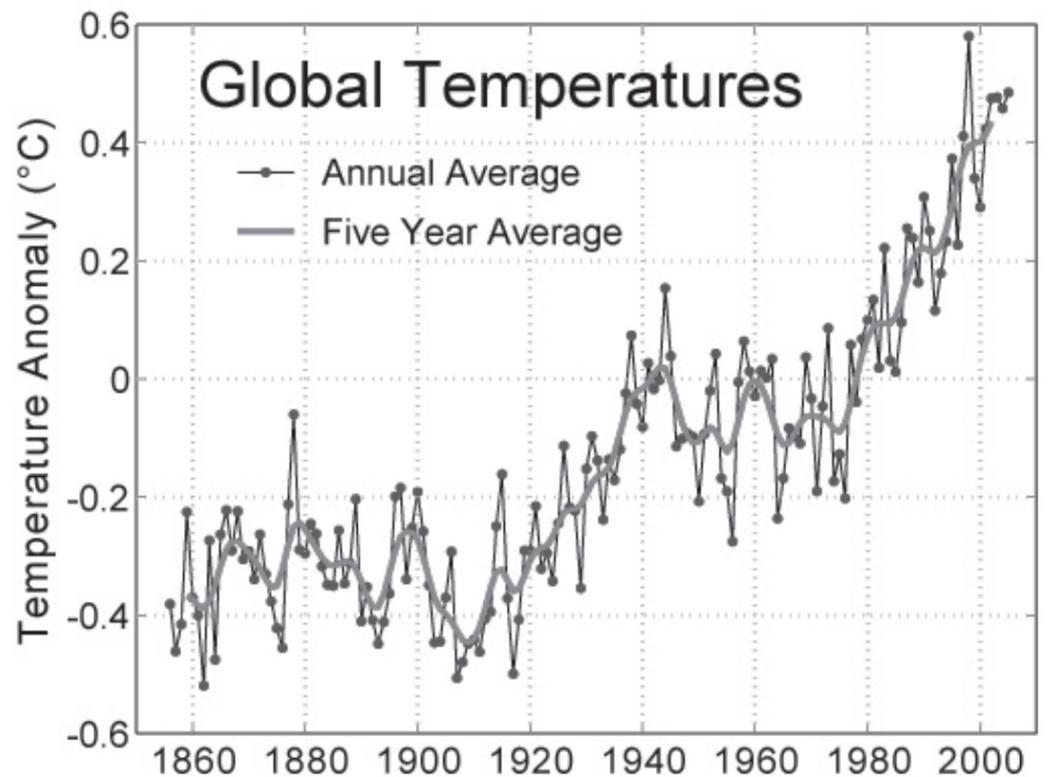
"If I had the right data, it would be a perfect match," Goldberg declared with a fatuous grin as he displayed yet another fabricated plot, this one showing his personal predictions for the effects of increasing carbon dioxide concentrations on global temperature.

The effect of carbon dioxide on global temperature increase is already known to be logarithmic, but Goldberg's claim that a doubling of the carbon dioxide concentration in the atmosphere would cause exactly a 0.22C increase in global temperature was baseless.

Goldberg continued to parade forth a series of arguments alternating between superficial and irrelevant, puerile and hollow, and finally despicably injurious to the cause of science.

"There can never be a curve like that," Dr. Goldberg declared in reference to the projections for global warming from the U.N. Intergovernmental Panel on Climate Change's (IPCC) Third Assessment Report in 2001. In the process he summarily dismissed the collaborative efforts of thousands of climate scientists over decades of research, preferring the theories supported largely by unduplicated research from his personal friends.

Goldberg's refute of anthropogenic global warming was so misinformed, not only in its facts, but in its assumptions on the



This graph shows an increase in surface temperatures.

methods of scientifically analyzing a problem, that Ralph Kahn, a JPL Research Scientist focusing his studies on Earth observations of tropospheric aerosols, and who has previously lectured on global climate change at Caltech, hardly seemed to know where to begin in rebutting such a presentation.

"In order to understand the consequences of putting something in the atmosphere, you need to take into account all the interactions," Kahn began. "It's not as though it's a simple calculation... everything reacts to everything else. Water vapor, for example, responds to changes in temperature, distribution of ice, albedo changes, changes in ocean circulation..." Kahn began, describing factors overlooked by Goldberg's single-equation models of climate change.

"Any single measurement can be wrong for a lot of local reasons," Kahn said in reply to Goldberg's use of certain data sets from Sweden, and Goldberg's attack of other data sets he perceived to be incorrect. The way to gather data on climate change, according to Kahn, is to look at thousands of locations, and deal with the data collected at all of them in a statistical manner. "You can't short-circuit that. You have to go through all the steps," he explained.

Rather than address Dr. Kahn's objections to his arguments, Dr. Goldberg retaliated by attacking the integrity of the scientific community, claiming that scientists only claim there is global warming because these claims give them funding from politicians. "No climate model is worth the paper it's printed on," declared Goldberg, perhaps forgetting that climate models consist of numerical computations performed on computers.

Scientists are "reversing the scientific process," according to Goldberg, and "know the answer ahead of time." Then, they simply fiddle with their data or their models until they get the results they want.

I continued to sit in the auditorium for an hour after the presentation, listening as Goldberg and Kahn went back and forth, each refusing to acknowledge any validity to the other's view. Goldberg continued to maintain that

the science and data in support of global warming were dishonest and manipulative, while Kahn described the scientific peer-review process saying, "the community is large enough and diverse enough and confident enough that a very honest and vigorous debate ensues in many forms, and the IPCC is one of those. The executive summary is reviewed about 4 times... No it's not perfect, but it's a pretty honest process over all."

The IPCC will release a Fourth Assessment Report on February 2, which will be available on its website, <http://www.ipcc.ch/>. Among other results, the study will narrow its range on the predicted average global warming by 2100 to 2.0-4.5C, from 1.4-5.8C in the 2001 report. It is expected to reduce the worst-case scenario for global sea rise this century to 50cm, from 88cm in 2001. The IPCC report is a created by a collaboration of about 2500 scientists.

It doesn't bother me that people like Fred Goldberg tout their personal iconoclast theories, nor that occasionally they get a public forum to deliver their ideas. What concerned me, and finally got me writing this article, was when several days later, a fellow student mentioned in passing how much he had enjoyed the talk, because he learned so much about climate change.

I was shocked. In talking to him for about a half an hour, I learned that he believed what Goldberg had to say mostly because it was simple. "He had some pretty understandable ideas, that made a lot of sense," I was told in reference to arguments centered on a single calculation derived from Henry's Law, which relates gas dissolution in a liquid to the partial pressure of the gas in equilibrium with the liquid.

I wasn't sure if Dr. Goldberg's neophyte disciple was pulling my leg, or simply failed to realize that climate scientists understand things like Henry's Law very well, and they look at a wide variety of factors when modeling the dissolution of carbon dioxide in the oceans.

When I pressed further, I learned that the skeptic didn't believe what climate scientists have to say because he was unconvinced by the few explanations

of global warming he had read. Further, having taken Ec11, this student knew that people respond to incentives, and because he could concoct a fictitious incentive for climate scientists to lie about their findings, he concluded that undoubtedly all of them were doing it.

There are uncertainties in the predictions climate scientists make about global warming. Scientists will be the first to admit not to understand everything. The impact of water vapor, the most important greenhouse gas, is a particularly intractable problem due to the difficulties involved with modeling the effects of clouds. Still, the evidence that global warming is influenced by human activity is so strong that a rigid denial of it is completely backwards. The forthcoming IPCC review will report that it is 90% sure that global warming over the past 50 years can be pinned on human activities.

It is our responsibility, then, to explain the meanings of the findings as clearly and effectively as possible, and to as many people as possible. Very few people persist in believing the stars are fixed on celestial spheres, even though this explanation may be simpler to understand than the esoteric mathematical formulation of general relativity. Einstein himself is well-known for stating that everything should be made as simple as possible, but no simpler. (Actually, he is well-known for many other things than that quotation.) But if a Caltech student does not understand how simple we can make the problem of climate science, will a politician have any hope of doing so?

The problem with communicating scientific research, such as climate research, is that non-scientists have very little idea of where the knowledge comes from, how it is derived, and how accurately it can be trusted. It is the job of scientists not only to relay their results, but also to communicate the uncertainties, as well as the potential places they may have gone wrong. We want people to understand not only what we know, but also what we do not know, and why we do not know it.

Movie Review

B-/C+

Pan's Labyrinth Fails to Live Up to Expectations

BY: CINDY KO

Pan's Labyrinth- Guillermo del Toro, 2006

After watching the movie trailer for *Pan's Labyrinth* on the Apple website, I was pretty stoked to watch it because it seemed like a movie with a lot of things going for it. Although I wasn't familiar with the director, Guillermo del Toro, the short snippet of the movie looked polished, well-crafted, and slightly off the beaten trail.

Despite the fact that the movie is about a little girl and her adventures in a fantasy world, it was clear that this was not a children's movie. That in itself appealed to me. Also, the movie wasn't about what you would think it would be about. Aside from that, *Pan's Labyrinth* looked like a movie that would get everyone talking, which turned out to be true.

It's already been nominated for several Academy Awards, including Best Foreign Language Film and Best Screenplay. The reviews from various newspapers call it, "a fairytale for adults", which comically sounds like it could have a second meaning.

The Picturehouse/ Time-Warner website describes the film as a, "fantasy-thriller." Mostly what I had heard from people who saw *Pan's Labyrinth* was that it was "gruesome" and "violent," which surprised me at first.

As one who doesn't stand up to even the cheesiest of horror films, I was a little apprehensive to watch it, but my curiosity about the film

was enough to keep me interested, especially now with the Oscar hoopla. Above all, I was attracted to the storyline, which seemed to have the most potential to make it a great and memorable film.

Young protagonist Ofelia travels with her pregnant mother to live with her mother's new husband, a Captain of Franco's forces during the wake of the Spanish Civil War.

Against the backdrop of a military fort fighting rebels in the Spanish countryside, Ofelia discovers signs and clues that lead her to a magical kingdom awaiting her arrival—or rather, her return. As Ofelia later discovers, she is purported to be a member of the missing royalty of the underground kingdom, and their world has been put on hold until she appeared to them again.

The movie is in Spanish, so you probably have to read subtitles for two hours. (However, if you have some Spanish under your belt, it's a good movie to practice listening because the characters don't talk very fast or use any slang.) I thought it was interesting that some of the creatures spoke variants of Old Spanish, which was a fun detail that I noticed from my mediocre Spanish skills.

I found the movie to be lower than my expectations. It's true: I probably built it up for myself, but *Pan's Labyrinth* seemed to have a lot of promise that it just didn't live up to.

The storyline was fine, but not magical enough for me. I expected a heavier focus on the fantasy

world, and less on the things going on in Ofelia's harsh reality.

This touches on the fact that the director adds seemingly gratuitous scenes of torture and violence to the film. It's hard to say what the purpose was for doing so, but one can only guess that it was to bring the movie into a more visceral arena, and emphasize that this is not a film for children, like *Harry Potter*.

However, if it's clear that *Pan's Labyrinth* is meant for the older audience, this contradicts the fact that every figure in the movie was flat and caricatured. The "bad guys" were horrible and had scars on their faces; the "good guys" were really good and looked handsome --the protagonist was especially pretty.

The only issue of ambiguity was the creatures that came from the underworld: those that were ugly and strange, and yet were ready to welcome Ofelia back to her kingdom by cruelly giving her tasks to prove her worth. The movie is strange, confusing, and surprisingly superficial.

The only thing really worth watching in *Pan's Labyrinth* is the brilliant performance by the young Ivana Baquero, who plays the role of Ofelia. Although she is not on the map in terms of big-name stars, she more than makes up for it with talent, exuding the endless grace and poise of a royal princess for the entirety of the film. Surely Baquero's performance in *Pan's Labyrinth* will open new roles for her in the future.



Photo by Picturehouse

Ofelia can't remember if it's a left followed by two rights, or a right and then two lefts

Overall, *Pan's Labyrinth* earns a disappointing B-/C+ from me. The cinematography was beautiful and rich, and the art direction was really lovely, but it wasn't enough to save the film altogether.

I came out of the movie feeling un-moved and awkward, which is

definitely not what I expected at all. If you think that *Pan's Labyrinth* is a good date movie, or a movie to take your little sister to, you'd be way off track. Actually, I don't even know if I would recommend it under any circumstances—it wasn't terrible, it was just terribly disappointing.

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Who do you REALLY Want to Work For?

BY: JERRY HOUSER,
DIRECTOR, CALTECH
CAREER DEVELOPMENT
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Dr. Ralph Siu, a Caltech alumnus who was famous for integrating Western and Eastern thoughts, provided an interesting observation about career decision-making based on his knowledge of ancient Oriental wisdom.

"Observe the cormorant in the fishing fleet. You know how cormorants are used for fishing. The technique involves a man in a rowboat with about half a dozen or so cormorants, each with a ring around the neck.

As the bird spots a fish, it would dive into the water and unerringly come up with it. Because of the ring, the larger fish are not swal-



Photo by Rodney Key

The Double-crested Cormorant

lowed but held in the throat. The fisherman picks up the bird and squeezes out the fish through the mouth. The bird then dives for another, and the cycle repeats itself.

Why is it that of all the different animals, the cormorant has been chosen to slave away day and night for the fisherman?

Were the bird not greedy for fish, or not efficient in catching it, or not readily trained, would society have created an industry to exploit the bird? Would the ingenious device of a ring around its neck, and the simple procedure of squeezing the bird's neck to force it to regurgitate the fish have been devised? Of course not.

Greed, talent, and capacity for learning, then, are the basis of exploitation. The more you are able to moderate and/or hide them from society, the greater will be your chances of escaping the fate of the cormorant.

It is necessary to remember that the institutions of society are geared to make society prosper, not necessarily to minimize suffering on your part. It is for this reason, among others, that the schools tend to drum into your mind the high desirability of those characteristics that tend to make society prosper - namely,

ambition, progress and success. These in turn are to be valued in terms of society's objectives. All of them gradually but surely increase your greed and make a cormorant out of you."

I recently spoke to an employer in a financial industry and asked him why they prefer to hire Caltech recent undergraduates rather than people with more experience. He replied, "I like to hire younger students so I can teach them how I want them to work. People with experience are less pliable and more resistant to doing things my way." This sounds a lot like he is looking for Caltech cormorants.

Herb Shepherd, one of my doctoral thesis advisors, once wrote; "We have been brought up to live by rules that mostly have nothing to do with making our lives worth living; some of them in fact are guaranteed not to.

Many of our institutions and

traditions introduce cultural distortions into our vision, provide us with beliefs and definitions that don't work, distract us from the task of building lives that are fully worth living and persuade us that other things are more important."

This is some food for thought when exploring career decisions.

Write for The Tech

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If we print your material, we will pay you up to the amounts listed below (at our discretion). Email submissions to tech@caltech.edu.

Supersize U.S.

BY: EVANS BONEY

The topic I am going to discuss this week is certainly a touchy one, and I want to make it clear from the very beginning that I do not think anybody should have a negative self image. Keeping positive is very important, but not to the extent some activists are taking it on college campuses today. I read an article in the International Herald-Tribune that was entitled "Fat pride: On U.S. campuses, an emerging field makes no apologies".

That's right, "fat studies" is trying to take its self-proclaimed place alongside women's studies, queer studies, disability studies and ethnic studies. The difference between these legitimate studies and "fat studies" is clear: none of the other studies encourages pride in potentially unhealthy behavior.

The question of the legitimacy of fat studies is tied to the meaning of the word fat. Today's culture tends to put the ideal man or woman at the other unhealthy end of the weight spectrum, and, as such, people weighing more than



Photo courtesy Wikipedia

These obese creatures are no longer physically attractive.

that ideal are occasionally labeled as fat.

This is NOT the definition I am using. I am defining fat as having enough fatty tissue to threaten one's wellbeing (coincidentally the first definition in the dictionary). According to recent Journal of the American Medical Association articles, people with body mass indices (BMIs) of greater than 40 are at higher risk for type-2 diabetes, gallbladder disease, hypertension, and heart disease amongst others. This is the definition of fat I am using.

First, encouraging people to be proud of their size seems to be leading down a perilous road, analogous to encouraging people to be proud of their smoking habit. Some people can't help their size for one reason or another, but they are still living with a higher risk of disease in most cases. Regular trips to the doctor can help counteract risks brought on by excess weight, but the fact remains that the doctor is more likely to find a health problem.

Secondly, while it certainly acts

as a much-needed countermeasure to the skinny American ideal, we do not want unhealthy role models for children. One common part of other _____ studies groups is to show famous _____ people as heroes (for overcoming the adversity of being _____). One such hero for fat studies could be our extremely overweight president (Taft). However, while he was quite successful, he also suffered from obstructive sleep apnea as a consequence of excess fat around the face and neck.

Finally, fat studies is not truly needed, because so much of the US is already overweight. According to the American Obesity Association, 42.3% of Americans are overweight, 20% are obese, and a full 3% are severely obese (BMI greater than 40). There's really no need for a special study group about something so many Americans have experienced first hand, and we shouldn't encourage more people to become unhealthy.

However, after all this, I think we all understand and respect the point the fat studies community is trying to make: Quit the fat jokes, we're doing out best.

Career Fair? More Like CS Fair.

BY: DAVID CHEN

If you wanted to ensure a high salary after finishing four years of Caltech, the best plan is to major in Computer Science. All it takes is 200 units (on top of the Core requirements) and you don't even need to take the famed ACM 95. Once you can write down Computer Science on your resume, you can walk into any booth at Caltech's career fair and be fairly confident of finding a job.

Contrast this to Chemical Engineering (chemE), which is generally regarded as our most painful major, requiring at least 272 units after Core. According to the registrar's site, the next most unit-intensive major requires 231 units although most majors fall below 200 units. At the career fair last week, a sophomore chemE asked me what companies were looking for chemE interns. I mentioned one guy from Goldman Sachs that apparently liked the experience that chemical engineers obtained in solving differential equations and modeling phenomena.

On the other hand, junior Jon Malmaud, who only recently switched to Computer Science, knows the difference the major makes. He explains that when he

had CNS on his resume in the career fair last year, the companies gave him a "chilly reception" since they weren't sure what his major meant.

This time, with the right major on his resume, most companies clamored for him. A few days before the career fair, Oracle already sent him an email stating that he was accepted into its internship program. Upon reviewing his resume, Earthlink jokingly told him, "Go home. We'll hire you." Malmaud also handed his resume to QVT, a financial firm that liked him enough to invite him to a four-star dinner that night.

After running out of his dozen resumes to hand out, Jon left the fair confident that he would have multiple opportunities for an internship. He received multiple callbacks that very day and two banks invited him to New York City on their dime after a brief preliminary interview.

Three years ago, I chose to attend this school as the best training ground for graduate school, and I still think that Caltech provides the ultimate boot camp for aspiring scientists. But if I did want to buy a Lamborghini in ten years, I know what major to put on my resume.



Photo by Matt Glassman

Oracle Corporation at last Wednesday's career fair.

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VOLUME CVIII, NUMBER 14

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Superbowl Showdown

Bear Down: Chicago Will Shuffle to the Title

BY: HARRISON STEIN

Two years ago, in this very space, my colleague Hamilton and I debated about which team would win a tightly contested Super Bowl. He claimed that the team of his youth, the scrappy underdog Philadelphia Eagles, had just enough to clear the hurdle known as the defending champion New England Patriots. While he couldn't turn his back on his favorite team, there were a number of signs that New England was the superior team, and I used this to my advantage as I correctly predicted the Patriots would successfully defend their title.

Now, in 2007, the tables have turned. My hometown team, the Chicago Bears, has stumbled into the Super Bowl against the heavily favored Colts of Indianapolis, and there a million reasons why the Colts ought to dominate just like New England did two years ago. However, don't fall into the trap. These Bears are a defensive juggernaut far more explosive than the 2005 Eagles, and face it, these Colts are no Patriots. Consequently, here five reasons why the Bears will be dancing all over South Beach come Sunday night.

1. Defense Wins Championships

Much has been made of the remarkable improvement of Indianapolis's defense since the start of the playoffs, but don't buy it. The Colts looked great, on the surface, in comfortable victories over Kansas City and Baltimore, but anemic offenses will always make a defense look fantastic.

The Chiefs' offense was completely one-dimensional as the team couldn't complete a pass longer than ten yards, and with Steve McNair performing at a college level, the Ravens were zero-dimensional. When the Colts finally played a team with a reasonably balanced offense, the Patriots, they allowed 34 points and escaped by the skin of their teeth. Also, during a brutal mid-season stretch, the Colts allowed 219 yards rushing to Tennessee, 375 to Jacksonville and 191 to the anemic Texans.

While the Bears' vaunted defense has regressed from the dominating unit that punished its first eight opponents, it has recovered by adapting a bend-but-don't-break philosophy. While the Bears often allow opponents to drive at will, they are staunch near the goal-line, allowing very few touchdowns. In addition, in the late minutes of close games, the defense performs at a higher level, evidenced by the effort against Seattle where the Seahawks had five potentially winning drives rebuffed. Last week, against the top offense in the league, the Bears imposed their will against the Saints allowing just one sustained scoring drive.

2. Rex Isn't Making Mistakes...

During the regular season, the play of young quarterback Rex Grossman was a sore subject throughout Chicago. The golden boy with a cannon arm single-handedly won games with his beautiful deep ball, and single-handedly lost games with his putrid decision making. If you use quarterback rating as the primary measure of quarterback performance, Rex had the best (148.0 vs. Detroit) and worst (0.0 against Green Bay) games in the NFL this season. However, in the playoffs, a new Rex has emerged from the wreckage. The new Rex doesn't force heinous passes, attempts

a couple deep balls a game, and leaves everything to the vaunted running backs Thomas Jones and Cedric Benson. While Rex won't do anything to win the Super Bowl, it appears he won't do anything to lose it.

3. ...But Peyton Is

On the other hand, Colts QB Peyton Manning has had an abnormally poor playoffs. With six interceptions in three games, Manning has been playing with fire, and ultimately he will get burnt. While Peyton is capable of winning the Super Bowl by himself, his play has been inconsistent. He must be at the absolute peak of his game to tame the wild Bears defense.

4. The Colts Don't Function After a Bye

The Colts offense is a beauty to watch, predicated on speed and, most importantly, timing. They are an incredibly streaky team, as evidenced by their 13 game winning-streak last year and 9 game streak this year. Last year, after rumbling through the season, the Colts received a bye for the first week of the playoffs. However, in their first game, against the Steelers, the Colts looked completely out of synch as Manning missed open receivers and the offensive line missed crucial blocks. In the emotional victory over New England last week, Indianapolis was clicking on all cylinders and probably could have ridden the emotional high into the Super Bowl. Unfortunately, with the extra week, the excitement of the big win will wear off, and the Colts offense will once again be a step slow.

5. It's Easier Being the Underdog

Think of each of the major sporting championships in the last year: Ohio State was heavily favored over Florida after an emotional victory over Michigan, but after a long delay, the Buckeyes came out flat and the Gators chomped to victory. The Detroit Tigers were universally expected to beat the Cardinals after blasting through the AL playoffs and getting a week's rest, but had no answer.

The Miami Heat was supposed to be one last hurdle in the Dallas Mavericks' coronation, but the Heat showed up to play and Dallas didn't. These situations are no different than what face the Colts and Bears. The Colts are expected to win and the Bears are universally disrespected. The writers all picked Chicago to lose to New Orleans, and looked what happened. The Bears will have that extra fire needed to get their hands on the Lombardi Trophy.

Why the Indianapolis Colts Will Win the Super Bowl

BY: TONY FALK

There obviously lots of factors that go into why one team or another is more likely to win a game, and even more that are involved in what team actually does the eventual winning, such as the skill of the players, coaching, weather and even luck. I don't have the time and you probably don't have the interest to analyze all of these factors, so I'll focus on a few important portions of the game. The quarterback quality of the two teams is considered one of the most lopsided in super bowl history. The bears defense and the colts offense are both among the best in the league and what happens when they play each other will likely control the outcome of the game. Finally, teams that are on a run tend to win big games, while teams that are coasting tend to lose them.

The quarterback is the position that will probably win the game for the Colts, by some combination of brilliance by Peyton Manning and ineptitude by Rex Grossman. Manning is a two time NFL MVP who has decent physical skills, a good pocket presence and a brilliant offensive mind. He controls the Colts high powered offense with audibles at the line of scrimmage and rarely throws interceptions.

He's been labeled a playoff "choker" due to repeated losses to the Patriots, but having beaten them last week is unlikely to have the psychological burden upon him. Rex Grossman on the other hand is finishing his first season starting more than three games and has been inconsistent over the course of the season. Grossman has put up big numbers against teams such as the Detroit Lions and San Francisco Forty Niners, but has posted passer ratings of 36.8, 23.6, 10.2, 1.3 and 0.0, all below the 39.6 given to a passer who throws every pass into the dirt. His hot and cold tendencies could doom his team just as Manning's offensive production could lead the Colts to a victory. In the NFL the quarterback is the most important player on the team, and the team with the future Hall of Fame player has a huge advantage.

Many pundits supporting Chicago have suggested that the Colt's potent offense will be blunted by the Bear's defense, and a weaker Bear's offense will be able to beat a weaker Colt's defense. Unfortunately for fans from the windy city, each teams recent playoff performances suggest that this will not be the case. While the Bear's defense was number three in the league in preventing



Photo courtesy: Alles Internet

Last year's Super Bowl XL was a 21-10 game of the Pittsburgh Steelers vs the Seattle Seahawks.

scoring, the Colt's previous two opponents were the Baltimore Ravens (the number one scoring defense) and the New England Patriots (the number two scoring defense), suggesting the Colts can beat a good defense in the post season.

The Bears on the other hand have been hurt by injuries, and without key players on the defensive line and in the secondary are not the potent defense that was so dominating early in the season. It seems that even if Grossman can put up some points on the Colts defense, the Colt offense will be able to return the favor.

The final reason I will give you to explain why the Colt's will win the Super Bowl this year is to consider how each team got to the big game. The Bears earned the number one seed in the NFC and played a Seattle team that was only one game over .500 at home, and still needed overtime to defeat them. They then beat a team that plays in a Dome in the South, the New Orleans Saints at home in the snow on the strength of a large number of fumbles and fumble recoveries, a dangerously

inconsistent way to beat a team.

They now are forced to travel to Miami to play the Colts in front of a neutral crowd. The Colts on the other hand beat the Chiefs at home with a newly potent defense that completely shut down one of the leagues better offenses. The Indianapolis team then traveled to Baltimore, a city with no love for the Colts team that left town in the middle of the night before the Ravens moved in from Cleveland, and beat a team with a former MVP quarterback and the best defense in the NFL. They finished their run to the Super Bowl by defeating their arch-rivals the Patriots in the final minutes, coming up more clutch than the most clutch team of the past decade.

Given the quarterback advantage, the ability of the Colt's offense to perform against top defenses and the difference in momentum between the two teams, there seems little doubt that the Colt's will win the Super Bowl, leaving Bears fans to echo Cubs fans, holding out hope for next year.

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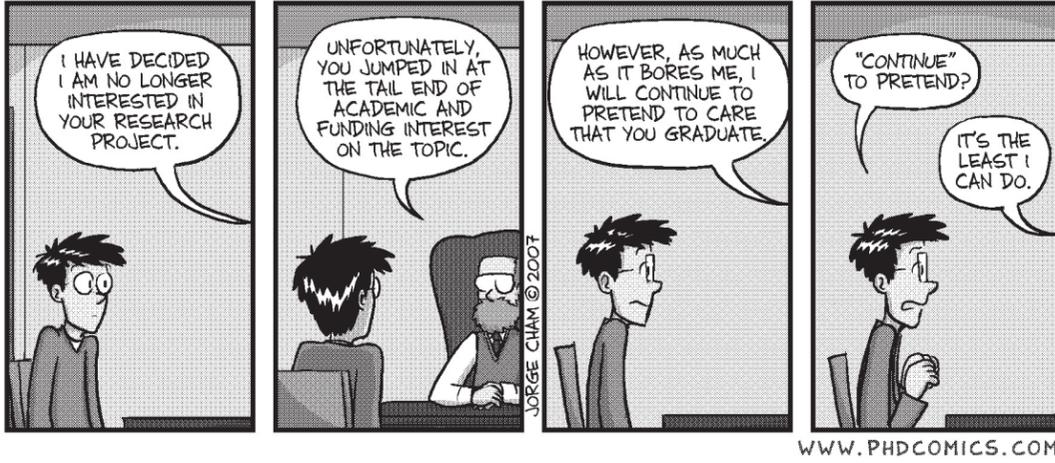
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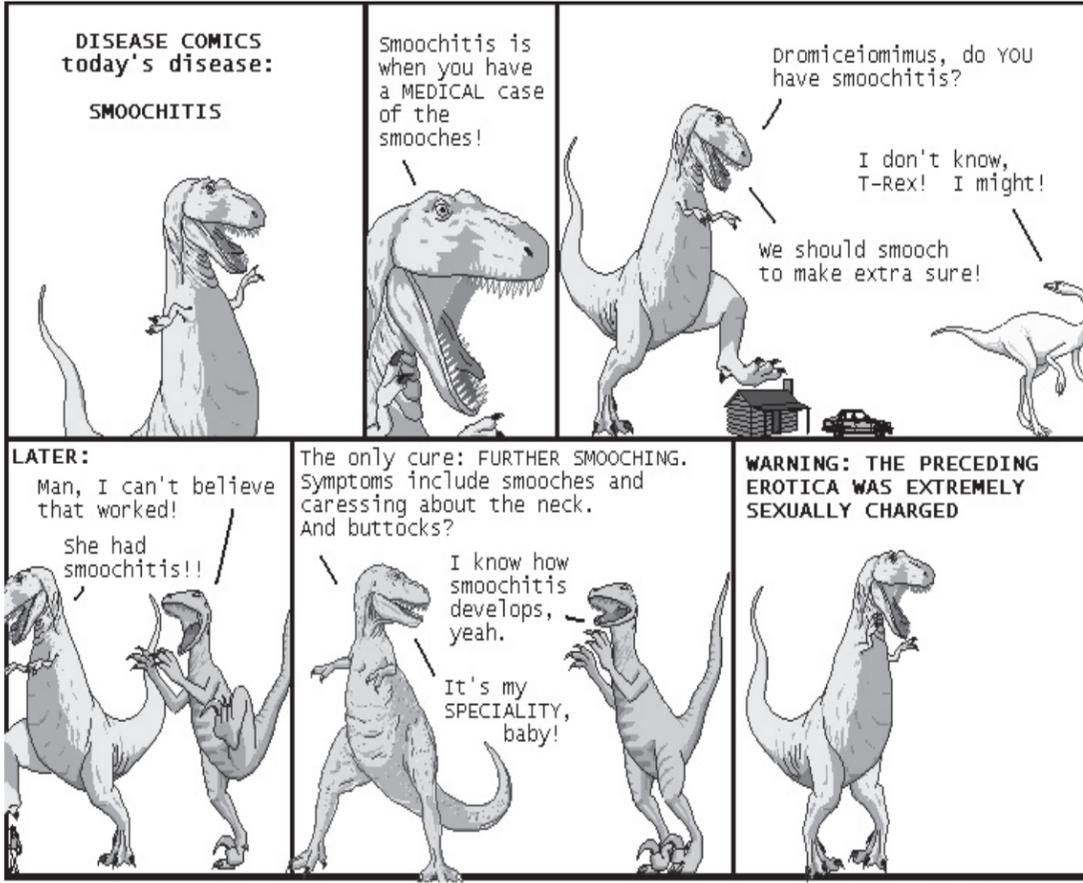
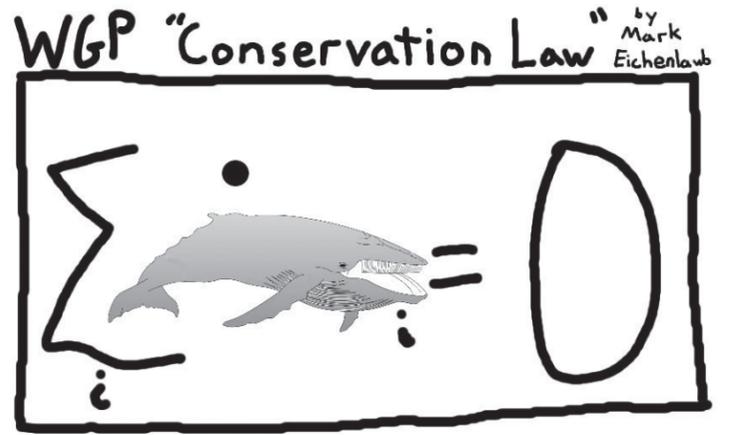
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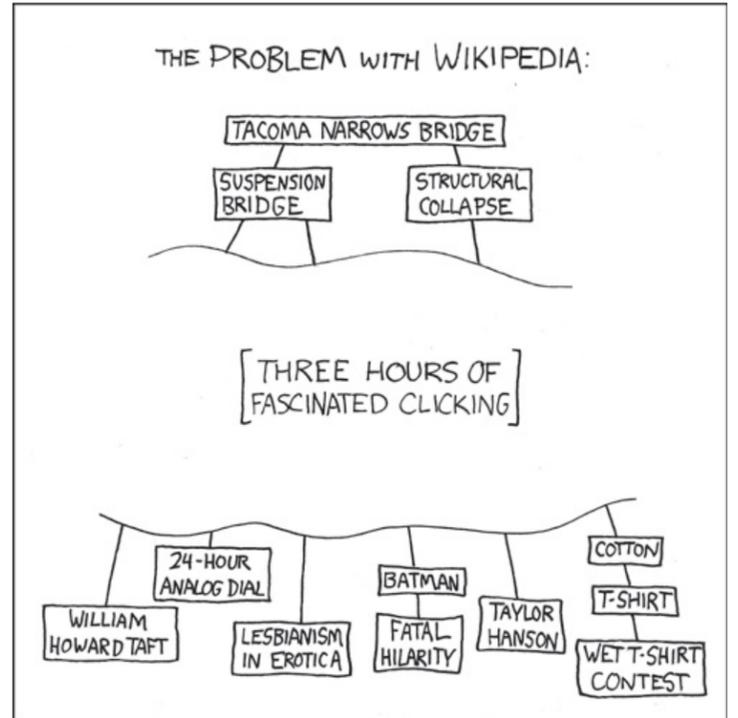
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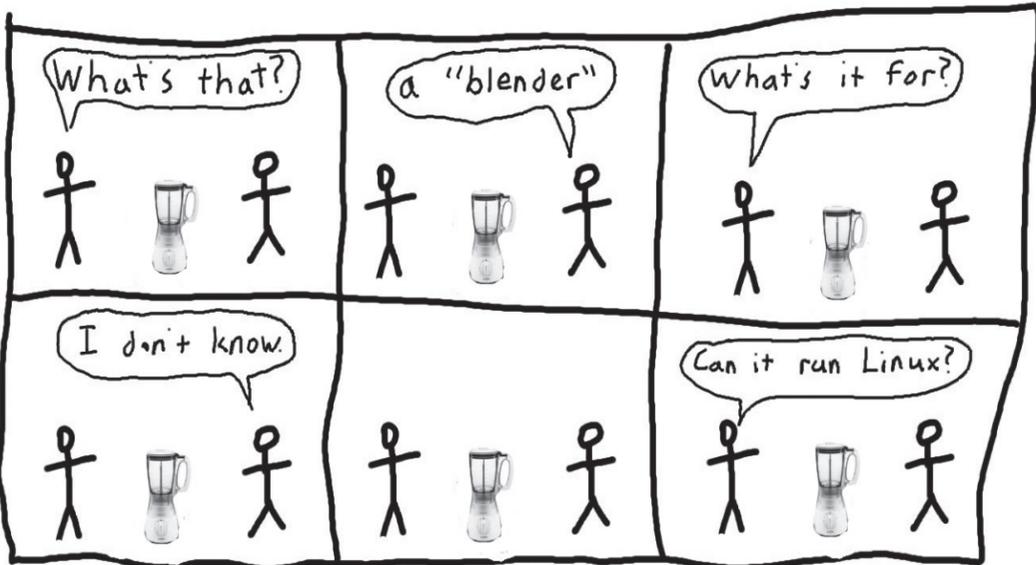
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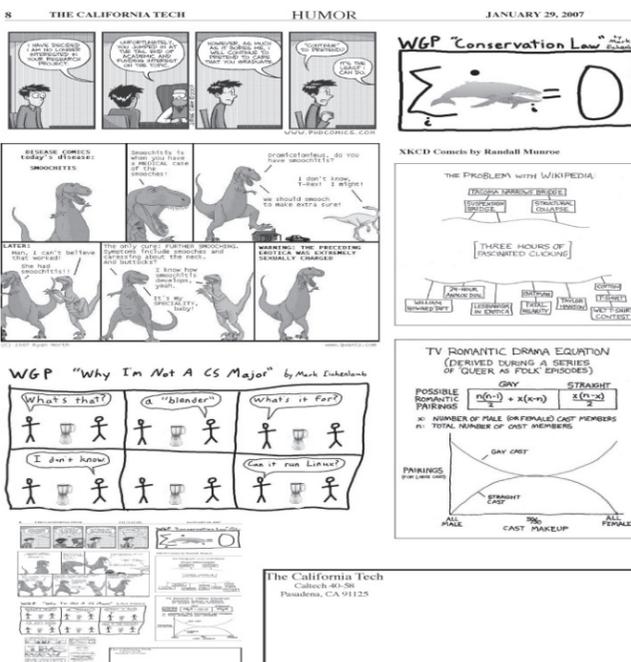
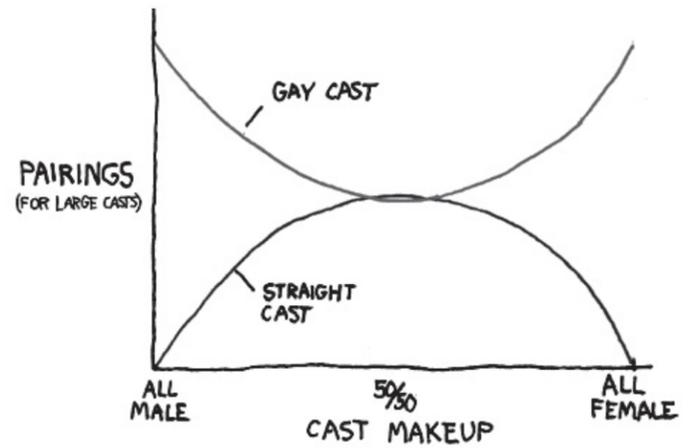
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