



D. Korta/The California Tech

Independent film director Gerard Ungerman answers a question about his film *Plan Colombia* after its screening last Wednesday. The film outlined the effort to curtail the cocaine trade in Colombia.

FILM REVEALS FAILURE OF US COCAINE PLAN

DRUGS BENEFIT BOTH SIDES

American Businesses Reap Rewards Of Continued Combat

By CHRISTINE LEE

Fields and fields of coca stretch across the District of Columbia, at the same time, on distant horizon, an US airplane zooms by, leaving a trail of herbicides in the air.

This is *Plan Colombia*, the US Government's effort to battle the 3rd largest cocaine production in the world. Produced and directed by Gerard Ungerman, the documentary on *Plan Colombia* aims to discuss and present issues concerning United States' involvement with Colombia. Including interviews of outspoken political leaders and Colombia's own civilians, the video provides perspectives on both sides.

For years the US Government has tried to stifle the production with fumigation, but with no apparent success. Instead of going down, the cocaine production has instead risen by two times as much.

The rising price of cocaine has made it even more tempting for the farmers to get more crops planted. As long as there are no suitable economic alternatives, the farmers will continue planting coca crops: "There is too little money and too little proper assistance," "We are all going to starve to death without the income from cocaine," one farmer in Colombia complains.

Indeed, with 80% of their citizens living in poverty or near absolute poverty, every bit of cash is welcome. Trading with traffickers who come to the village with cash also makes it convenient for the farmers: "There are no roads, no transportation, no machinery and no market share for crops other than cocaine."

Eradicating the cocaine fields by glyphosphate is a simplistic solution to the problem as it is ineffective and only comes with environmental damage. In addition, it is very difficult for the airplanes to

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Minority Relations Key To Diversity in Sciences

By ROBERT LI

Capping a day of talks and poster presentations at Tuesday's Graduate Science Symposium, Caltech trustee Dr. Shirley Malcom gave a keynote speech in which she urged Caltech and other universities to better promote the entry of women and underrepresented minorities into science, technology, engineering and math careers.

Currently the head of the Directorate for Education and Human Resources Programs at the American Association for the Advancement of Science as well as a Caltech trustee since 1999, Dr. Malcom has succeeded despite her beginnings at a segregated high school in the South.

After receiving her PhD in ecology from Penn State University, Dr. Malcom has been very active in the push to reform the current education system in order to better serve women and minorities. She served on the NSF's policy making body,

the National Science Board, from 1994 to 1998.

From 1994 to 2001, she also served on the President's Committee of Advisors on Science and Technology. For her nearly 30 years of work, the National Academy of Sciences gave Dr. Malcom its most prestigious award, the Public Welfare Medal, earlier this year.

Despite the efforts of the last few decades, there is still a great disparity in the percentage of women and underrepresented minorities within the science, technology, engineering and math (STEM) fields. Only 3% of the people in STEM jobs are black and only 19.0% are white females. Overrepresented are white males at 63.8% and Asians at 11%.

The situation is improving, however, as the percentage of all minorities in STEM fields has been increasing steadily (albeit at a slow rate) since the 1970s. Dr. Malcom believes that we must accelerate this trend because by 2030, there will be no majority race in the United States (already California and Texas have no racial majorities).

The reason for the underrepresentation vary widely by group. According to Dr. Malcom, women face an underlying belief that they "don't have what it takes," as well as a lack of a social network and being forced to balance a career and a life.

In high schools, girls are being turned away from the high level math and science courses that are necessary for a STEM career. Intervention programs have arisen as a response to this situation and they have been shown to be highly successful.

Regarding the underrepresentation of minorities in STEM careers, Dr. Malcom believes that this is due to teachers questioning the intellectual capacity of minority students, people having different and lower expectations and the legacy of the "separate and equal" doctrines.

To remedy these issues, Dr. Malcom wants STEM-oriented institutions such as Caltech to do a number of things. Aside from diver-

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D. Korta/The California Tech

Caltech trustee Shirley Malcom reflects on her own challenges during her lecture on increasing diversity in the sciences last Tuesday as part of the Presidential Lecture Series.

"Nat Turner" Director Raises Race Questions

By KEVIN BARTZ

Call him the virtuous vagabond, the preacher who fought slavery with savagery in an 1831 rebellion that killed 58 whites in the sleepy plantation town of Jerusalem, Virginia. Textbooks condemn his cruelty—and Gandhi Nat was not—but was the Prophet of Southampton simply a sane man lashing out against an insane system?

"In many ways Nat Turner's been a troublesome property for all of us," explained African-American filmmaker Charles Burnett, who earlier this year put the finishing touches on the controversial documentary "Nat Turner: A Troublesome Property." "When we screened it there was this need for we the filmmakers to come to some kind of conclusion as to who Nat Turner really is."

This, the question of Turner's

identity viewed in the film's eyes as a balance of idealism and direct action, underlaid debate last Tuesday night in the Broad Center's Rock Auditorium, where Burnett presented his film and took questions from a mixed crowd of students, faculty, staff and local residents.

"How people view Nat really depends on race," maintained Humanities Professor Robert Rosenstone, who coordinated the event. "And yet, we don't do much with race at Caltech." Showing the film, he said, is also part of an effort to "raise some very relevant questions" about historical interpretation and race.

The documentary opens with a recount of Turner's watershed slave rebellion and its role as a stepping stone to the Civil War. It then diverges into interpretation, inter-



D. Korta/The California Tech

Sundance Festival Award Winning Director Charles Burnett presents his film "Nat Turner: A Troublesome Property."

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Length of Gaze Important; 'Template Of Beauty' Weakened by Face Study

By ROBERT TINDOL

PASADENA, Calif.-Beauty may be in the eye of the beholder, but a new psychophysical study from the California Institute of Technology suggests that the length of the beholding is important, too.

In an article appearing in the December 2003 issue of the journal *Nature Neuroscience*, Caltech biology professor Shinsuke Shimojo and his colleagues report that human test subjects asked to choose between two faces will spend increasingly more time gazing at the face that they will eventually choose as the one more attractive.

Also, test subjects will typically choose the face that has been preferentially shown for a longer time by the experimenter. In addition, the results show that the effect of gaze duration on preference also holds true for choices between abstract geometric figures.

The findings show that human preferences may be more fundamentally tied to "feedback" between the very act of gazing and the internal, cognitive prototype of attractiveness than was formerly assumed.

Earlier work by other researchers has relied on the "attractiveness template," which assumes that an individual's ideal conception of beauty has somehow been imprinted on his or her brain due to early exposures to other people's faces, such as the mother.

In fact, Shimojo says, the new results come from experiments especially designed to minimize the influence of earlier biases and existing preferences. Even when images of faces have been computer-processed to eliminate possible biases due to ethnic origins and even such trivial factors as hairstyles, the results still show strongly that the gaze is subconsciously oriented toward the eventual choice.



Eiko Shimojo and Claudiu Simion contributed to the research that showed that length of gaze may contribute to perceived beauty.

This holds true even more strongly when a test subject is asked to choose between two abstract geometric figures, suggesting that the slightly lower tendency to fix the gaze on the eventual choice of two faces is influenced by existing selection biases that cannot be totally controlled.

The findings in *Nature Neuroscience* comprise two experiments. The first was the choice of the more attractive face, in which all the test subjects were asked to rate the faces from 1 (very unattractive) to 7 (very attractive). The average rating for each face was then calculated so that faces in pairs could be matched in different ways.

In the "face-attractiveness-easy task" the faces were paired according to gender, race and neutrality

of facial expressions, but comprised a choice of a "very unattractive" face with a "very attractive" face. Five test subjects were then shown 19 face pairs and were asked to choose the face they preferred.

A video camera recorded the movements of their eyes as they directed their attention from one face on the screen to the other. The results showed that the likelihood of gaze of the test subjects started from chance (50 percent) but rose above 70 percent of their time gazing at the face till they chose that face.

Even more striking was the difference in gaze devoted to the "face-attractiveness-difficult task," in which 30 pairs of faces were matched according to the closeness in which they had been ranked for attractiveness.

In this experiment, the test subjects spent up to 83 percent of their time gazing at the face they would choose immediately before their decision response, suggesting that the gaze is even more important when there is little difference in the features of stimuli themselves.

The test subjects were also asked to choose the least attractive face, as well as the rounder face and the results also showed that the length of the gaze was an important indicator of the eventual choice. In addition, the subjects were asked to choose between abstract geometric shapes and the length of gaze also correlated highly with the eventual choice.

The second experiment is "gaze manipulation," in which the faces are not shown simultaneously, but in sequences of varying duration on the two sides of the computer screen. In other words, one face was shown for a longer time (900 milliseconds) than the other face (300 milliseconds) and as a control, the faces were also shown to other subjects in the center of the screen in

an alternating sequence. The results show that the face shown for a longer time tends to be chosen at chance level (50 percent) with only two repetitions of the sequence, but about 59 percent of the time with 12 repetitions. This suggests that the duration of the gaze can influence the choice.

However, this manipulation did not work in the control experiment without gaze shift, as mentioned above, indicating that it is not mere exposure time, but rather active gaze shift, that made the differences.

In sum, the results indicate that active orienting by gaze shift is wired into the brain and that humans use it all the time, albeit subconsciously, Shimojo says. One example is our preference for good

eye contact with people whom we are engaging in conversation. "If I look directly into your eyes, then glance at your ears, you can immediately tell that I've broken eye contact, even if we're some distance apart," Shimojo explains. "This shows that there are subtle clues to what's in the mind."

Co-authors of the paper are Claudiu Simion, a graduate student in biology at Caltech; Christian Scheier, a former postdoctoral researcher in Shimojo's lab; and Eiko Shimojo, of the School of Human Studies/Psychology at Japan's Bunkyo Gakuin University. S. Shimojo and Simion contributed equally to the work.

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This year's Leonid meteor shower is expected to peak this Tuesday, November 18.

American Companies Receive Lion's Share of Drug-Fighting Aid Package

Continued from Page 1, Column 1

pinpoint the exact field they want to fumigate; more often than not, non-cocaine crops get destroyed.

Furthermore, not only is this an economic issue, but also a political issue as well. After the US spent millions of dollars causing the collapse of the Medellin Cartel, the former political power of Colombia, there was a redistribution of power among the different military groups in Colombia.

The paramilitary, for example, conveniently jumped right into the drug trafficking market to build their ranks and influences. By building their alliances with the traffickers and receiving support from the Colombian military, their numbers grew from 4,000 in 1995 to over 8,000 in 2001.

The mission of the paramilitary is to eliminate all "independent rebel groups." "If you are in an organization, for example, a human rights organization, you are a rebel, too," remarked the director of the Human Rights Association in Colombia.

The forces opposing the paramilitary are the guerilla groups, who also benefit from drug trafficking. The only difference is that the guerilla groups work for the welfare of the Colombian people, whereas the



A plane fumigates a coca field as part of the effort to curtail cocaine production in Colombia, while a soldier looks on.

Annual Leonid Meteor Shower Peaks Tuesday

By SCOTT KARDEL

PALOMAR MOUNTAIN, Calif. - Observers of the night skies should take delight. Arriving fresh on the heels of the recent total lunar eclipse is the annual Leonid meteor shower.

Make plans to watch the show on the night of Tuesday, November 18. To catch the outbreak of meteors, interested viewers should do their best to seek out clear dark skies away from any interfering city lights. Essential equipment for watching meteors includes good company and a lawn chair or blanket to stretch out on to enjoy the view.

The Leonid meteor shower gets

its name because the meteors appear to radiate from the constellation of Leo, the lion. Leo rises in the east around 1:00 a.m. This year the predicted maximum number of meteors is expected to occur at 11:28 p.m. PST.

For observers on the West Coast, Leo will still be below the horizon. Meteors will be visible, but be sure to look eastward to catch the shower. As the night wears on, Leo will rise, bringing meteors higher in the sky.

To understand what meteors are, it is useful to know a little bit about comets. Astronomers often describe comets as being dirty snowballs. These aren't your average snowballs. Comets orbit the sun and are miles across.

As the orbit of a comet brings it into the inner solar system, the sun's heat warms the comet's surface, releasing gas and dust. It is this gas and dust that forms the comet's tail. After several trips around the sun, the orbit of a comet begins to fill up with the comet's dusty debris.

Whenever Earth passes through such a swarm of dust, a meteor shower is produced. It is a comet known as Tempel-Tuttle that produces the dust that causes the Leonid meteor shower. Each dust grain that we encounter hits our atmosphere with enough energy to cause the familiar bright streak that many people refer to as a "shooting" or "falling" star.

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Courtesy of space.com

paramilitary works for preserving the status quo of the rich minority. One way or another, they all receive a lot of benefit from the Cocaine production, making it even harder to suppress.

But the US Government is not completely innocent either. The coca industry also provides US and multinational corporations the opportunity to make millions of dollars by exploiting the "War on Drugs."

Of the \$1.3 billion aid package to Colombia which was a result of the failure of the eradication campaign, 70% will remain in the hands of US weapons and chemical corporations, as well as the US military. A mere 1% is earmarked for the peace process.

By making helicopters for the US military stationed at Colombia, corporations such as United Tech and Sikorsky will receive millions of dollars. Rockwell, another example, will benefit from their sale of surveillance systems and MPRI will send their mercenaries.

With so much money going into the military, the US government is actually promoting warfare instead of stopping it. Other interests such as oil, cheap labor and natural resources also come into factor.

In conclusion, Plan Colombia,

instead of counteracting drug production, actually provides gateways for which the US government can better control Colombia and exploit the country and its people for all its worth. "Plan Colombia," is in reality, "the Plan of Death."

Gerard Ungerman, the producer, hopes to present the documentary as a source for further discussion. He operates as a completely independent director working to bring important messages to the public.

Plan Colombia is one of his more recent projects and he hopes to bring more to the Caltech community in the following Social Activism Speaker Series. There are also other videos on Iraq and Afghanistan, for example. Receiving funding from a family inheritance, he wishes to continue independent filming until it is no longer possible.

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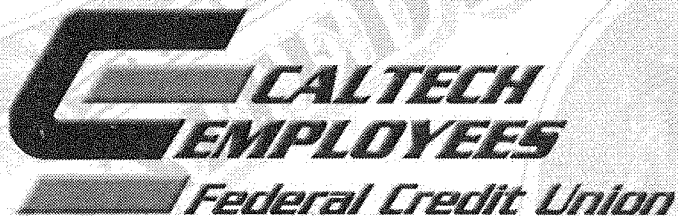
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REPORTING DELAY, RACIAL DIVIDES, REGISTRATION,

FLETCHER'S FIRESIDE CHAT

Why Nat Turner is Such An Inspiration

By TOM FLETCHER

Committee Reporting Update

At last week's Faculty Board meeting, the Board asked us to hold off on committee reporting for one month, until their next meeting, when they can discuss it in detail. They are still feeling out the territory and exploring the consequences of opening up the school's decision-making process to scrutiny.

Therefore, to all committee members, please keep taking your notes and summaries, but you do not need to submit them for at least a month. To those of you that have in the recent past, your summaries will not go up on the Donut website until the Faculty Board makes a decision on this resolution. Having talked to many faculty that were there before and after the meeting, I think they are excited about the idea and eager to find a way to make it work, so now we just need to give them time to internalize it.

Get a CLUE

You may have noticed registration for next term in your mailboxes on Friday. As you look for classes to sign up for, I encourage you to use ASCIT's database of course information, the CLUE: <http://donut.caltech.edu/clue/>. To get it updated for this week, the Donut development team has been working around the clock to get all the information as current as possible. I hope that it is useful to you in making your decisions. I also hope that, if you're interested in working on the CLUE or the Donut website, you email apply@donut.caltech.edu for more information.

Whom I Met With This Week

I already discussed my meeting with the Faculty Board. Jeremy Pitts was there too to help defend a committee being set-up to deal with issues related to renovating the student houses. He, Margo Marshak, Gary Lorden, and Dr. Baltimore (yes, Dr. Baltimore) were very articulate in persuasive in convincing the rest of the faculty of the need to work on this issue, and they all deserve our thanks.

I met later in the week with Margo Marshak to review the faculty board meeting and discuss student issues. I thanked her for the MHF committee's decision to release information about funded proposals on-line after they are made, to make sure that people are aware of the committee's doings. We also discussed the nature of DDR, as the MHF has approved the purchase of a tournament machine to be placed in the SAC. I found myself hard-pressed explaining the sensation that is DDR, and the conversation was rather funny. Anyway, the point is, the DDR arcade machine is coming soon.

If you have issues or concerns you would like raised, please tell me so I can pass them on to Margo.

Yakima, Armenia, and Nat Turner: All Pointing the Same Way

Last weekend, I was at the Mellon Mays Scholar Regional Conference in Yakima, Washington. One sentence on Yakima: imagine Bruce Springsteen's "Factory," add an Indian reservation, put some snow on the ground, and introduce some ethnic tension between whites (own all the useful land and money), the Yakima nation (own all the

rest of the land, but have none of the jobs), and the migrant Hispanic community (owns absolutely nothing, but is also taking work from the Yakima). It was a fitting place

Eastwood's River Flows Slowly

By HARRISON STEIN

In his heyday, Clint Eastwood was the quintessential leading man of our parents' generation. Like Humphrey Bogart, Cary Grant, and John Wayne, Clint had the perfect mix of tough-guy machismo and gentlemanly compassion to win over any audience. Unfortunately, much like a major league baseball player, his skills eroded with age, and now, he's an accomplished, but inconsistent director.

His new movie, *Mystic River*, which is playing in limited release, is further proof that although Eastwood has directing talent (he won the Best Director Oscar for 1991's *Unforgiven*), he still has trouble maintaining a strong pace and an effective story. Given a terrific cast, Eastwood wisely focuses his picture on character development, and while the acting is nothing short of amazing, the story is severely lacking.

Mystic River begins with a very chilling image of teenaged Dave, Jimmy, and Sean playing street hockey. After Dave is abducted by two elderly pedophiles, their long-time friendship crumbles like stale coffee cake. Twenty-five years later, Dave (Tim Robbins) still hasn't recovered from the episode, and Jimmy and Sean (Sean Penn and Kevin Bacon, respectively) are equally miserable for various reasons.

Jimmy's world is turned upside down when his oldest daughter is

to have a conference dealing with issues of diversity in higher education, if perhaps just a little unglamorous.

The conference was fun, especially hanging out with students from other schools (Stanford, USC, and Heritage College). While the discussions that were formally had were valuable, and learning about the growth of Heritage College and what it is doing to its community was inspiring, I gained most from actually visiting Yakima and seeing what life was like there.

Wandering town, seeing the tourist and non-tourist parts of the reservation, and talking to people there I got a feel for a place that is also not dealing well with its ethnic tensions. The poverty for non-whites in Yakima is staggering. The reservation looks like a shantytown in places far away from the casino and museum. One of the issues dogging Heritage College right now is that its Native American enrollment is falling in proportion to the Hispanic enrollment (white college-bound students all go to the University of Washington), and this is producing some schisms in the college over what its priorities should be.

Consider where people hung out at night. The Hispanics all went to Siete Mares, the Yakima were having a pow-wow on the reservation, and some whites were dining at the restaurant at the hotel or were hanging out at Lefty's Tavern. It seems to me, an outsider, that the town has some deep divides.

So what though? People seem to be all right in Yakima County. If you are willing to ignore the enormous economic disparity, quality of education available between the private schools and public schools, or issues of political representation, I offer you one last problem to worry about. I was reading a book review for *Black Garden: Armenia and Azerbaijan Through Peace and War*, a book that covers the less-well-known cousin of Rwanda and Yugoslavia (among other recent ethnically-inspired civil wars). The reviewer holds that the author's point is that the war between the Azeris and Armenians was wholly without purpose. These people had lived side-by-side for decades, but, in the vacuum of authority following the collapse of the USSR, became untrusting of the other, lead-

brutally murdered. Sean, a small time cop, returns to his hometown to investigate this heinous crime and in the process, rekindles lost friendships with both Jimmy and Dave. However, once the investigation heats up, Sean is stunned when the primary suspect happens to be Dave.

The first half of the film is a stunning achievement, as Eastwood's film is both captivating and poignant. The atmosphere is staggeringly gloomy and the audience is forced to identify with the three characters.

Sean Penn is practically typecast as Jimmy, the misunderstood thug with searing emotional problems. Tim Robbins hasn't had a role this juicy since his star-making turn in *The Shawshank Redemption*. He demonstrates his versatility with an inspiring, emotionally straining performance. Kevin Bacon's often seems lost and uncomfortable, but he still adds a light side to an otherwise depressing movie.

Unfortunately, somewhere around the ninety-minute mark, the story falls apart and the movie becomes a sappy, incoherent mess. The dialogue is excellent throughout, but the plot is ill conceived. Though the setup is told effectively, the ending is overdone, overlong, confusing, and downright offensive. Also, Eastwood dumps his slow, laboring pace in favor of a disjointed conclusion, leaving the audience with a very bad taste in its mouth.

ing to a war that claimed tens of thousands of lives and forced hundreds of thousands to flee their homes. I don't foresee any collapse of the American government anytime soon, but I feel the point is salient.

As much as the last two decades have been marked by globalization and the end of communism, they have also seen a previously unheard-of rise in ethnically motivated conflict, with all its associated horrors of genocide, refugees, and economic collapse.

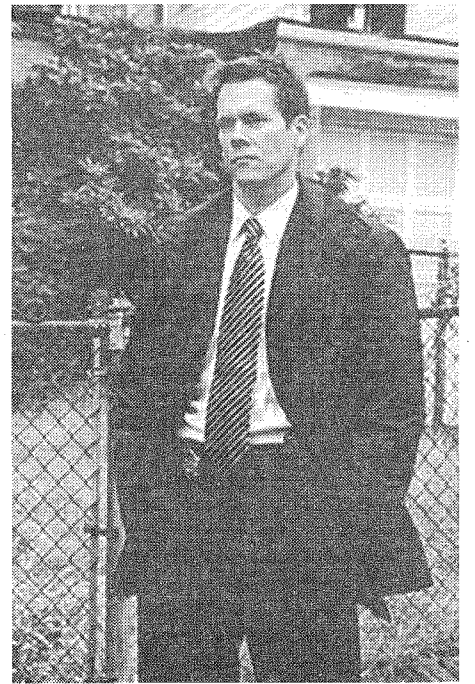
Look at the United States. Remember the Rodney King riots and the senseless violence it engendered between races that lived nominally together for years (and don't forget the Koreans who got mixed up in what is normally painted as a black-white conflict)? The last mayoral election in Los Angeles between Villaraigosa and Hahn was deeply divided along racial lines. Stretch your mind back farther, back to Nat Turner's rebellion in the 1830s. Last week's movie screening and discussion with the director was very enlightening, and I think Caltech students learned a lot from it. To our credit, I think Caltech students asked some very tough questions of the director, like how one can reconcile Nat Turner with Osama bin-Laden. Charles Burnett, the director, handled these questions with clarity and insight. He didn't duck the tough questions and he defended his views well: that Nat Turner was a man whose every recourse in life has been stripped from him. Without the ability to read or write, without legal power in the courts, without the ability to keep his children from being sold, his only option left was violence.

Despite our propensity to say these things can't happen here, the United States is no stranger to ethnic conflict. How we deal with these problems in our lifetimes, and they will arise, is going to be one of our generation's challenges. Sadly, it is a challenge Caltech does not prepare us for very well. However, with last week's movie screening and discussion and the growing dialogue over these issues, perhaps we can start turning that around.

Peace out Caltech,
Tom Fletcher

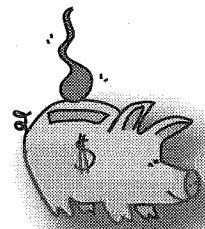
Although the screenwriter is accountable for producing an intelligent, involving story, it is ultimately the director's responsibility to ensure his final product is presentable. One major complaint with Hollywood films is too many potentially great pictures are undone by brainless, preposterous endings. Directors typically emphasize character development, substance, and style when making films, but for some reason, they tend to overlook the rationality of the story. Many intelligent people contributed to the creation of this film, but amazingly, no one realized that the conclusion was unusable.

And it's a shame, because *Mystic River* is almost an excellent film. Sean Penn and Tim Robbins absolutely steal the show, the filmmaking is stunning, and the soundtrack



courtesy of www.mysticrivermovie.warnerbrothers.com
Mystic Rivers, a film by Clint Eastwood, is now playing in theaters.

perfectly depicts the ambiance. The first ninety minutes are phenomenal and deserve a far better conclusion. Even though Eastwood shows he is still capable of great things, *Mystic River* is unable to keep its head above water.



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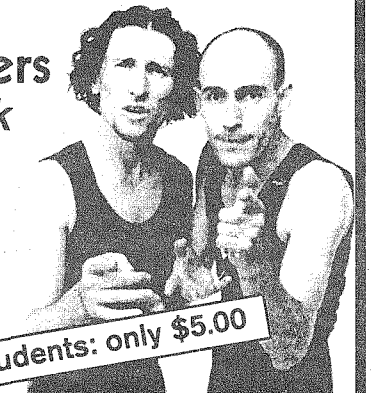
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Remembering Old Ruda's 123 Years

By DYLAN NIEMAN

Last Saturday marked the passing of Hava Ruda Rexha of Shushice, Albania. In her lifetime, the matronly Ruda never traveled beyond the borders of her small village. At the age of 14 she was forced into a loveless marriage with a much older man, and over the years she watched four of their six children die before age eight. Last year, she lost her sight, and shortly after that her legs gave out. But what her life lacked in quality it made up for in quantity. Mrs. Rexha was one hundred and twenty-three years old.

Born in August of 1880, back when Albania was still a part of the Ottoman Empire, the dodecagenarian witnessed the rise of nationalism and the establishment of an independent Albanian state. She saw the swell of communism during World War II and the country's subsequent transformation into a socialist republic, and the fall of communism in 1992. She was likely a part of the pyramid schemes ushered in by free market capitalism that blighted the national economy, and left video poker as the strongest growth industry. She survived the region's military occupation by Greece, France, Serbia, Germany, and Italy (twice) and more than three generations of civil war. She is survived by her daughter Vule, who is 80.

What was the secret to Ruda's incredible longevity? In a 2002 interview she reported that she ate only natural foods like vegetables, corn and cheese, and that she stayed constantly engaged in hard work. A profoundly religious woman, strict in her practice of Islam, she never drank alcohol. Instead, her strong beverage of choice was coffee,

which she enjoyed with cigarettes. Mrs. Rexha was an avid smoker and spurious reports suggest Philip-Morris was considering featuring the woman in an upcoming ad campaign until her recent death.

Whatever the source of her monumental staying power, it apparently had very little to do with love. Though it has long been said that absence makes the heart grow fonder, Rexha had this to say about her husband who's been dead for almost sixty years: "I did not want a wedding. I didn't love my husband. He was an old man." Presumably she said this in Albanian. The groom was about 60 at the time of their marriage and had been married twice before. He sired six children by her, the last when he was almost ninety, before dying prematurely at roughly 110 years of age. This was in 1945.

For a little perspective on the scope of her life, consider: she was five years old when Karl Benz first produced a car with an internal combustion engine, though the town of Shushice wouldn't see one for quite some time, and when they did, it was probably carrying German soldiers. Actually, private citizens were not allowed to own automobiles until 1990, so they're a little behind the times. Ruda was well past those awkward training bra years, and into her thirties before Mary Jacobs finally invented the bra and it wasn't until she was seventy-one years old and thankfully past menopause that oral contraceptive pills were first introduced. Warner Brothers released the first talking motion picture in 1926, when she was already forty-six years old. By another way of measuring time, Mrs. Rexha was older

than this Institute: Throop College wasn't founded until 1891, when she was already eleven years old. Our own resident elder, Jean-Paul Revel didn't arrive on this campus until she was already ninety-one. Can Dean Revel outwit, out play and outlast the rest of the world's senior citizens to claim top honors? Come on Jean-Paul, we're pulling for you!

If documentation of her age is confirmed, Hava Ruda Rexha will go into the Guinness Book of World Records as the oldest person ever to have lived, an honor currently held by Frenchwoman Jeanne-Jouise Calment, who died in 1997 at age 122. The French are no doubt sore, and may invade Albania again at some point in the future, but the Japanese looked at things a different way. While a Tokyo paper reported Mrs. Rexha's story, it was quick to point out that since the recent death of 116-year old Kamato Hongo of Kagoshima, the Guinness Book has listed a 114-year old Hiroshima woman, Mitoyo Kawata, as the world's oldest living person. That was until the thirteenth of November when she died. That's right, in a two week span the three oldest living persons died, leaving Charlotte Benkner, a one hundred and thirteen year old Ohio lady with the title. Ordinarily, when people this old pass on, natural causes are assumed but in this case I'm not so sure. Could this part of an American plot to advance Mrs. Benker's superior age to global status? Rumor has it that the woman may be the great grandmother of Blacker House's Matthew Johnston, who I did not bother to reach for comment.

Letter: Political Correctness Sickening

Dear Editors,

It really frustrated me, when I heard director Charles Burnett say, "I could only get a grant for making a movie on William Styron but not one on Nat Turner as the main character." In this day and age, I find it extremely ironic when a director who wants to make a movie specifically on the racism of the slavery era is forced to instead make a movie about a white writer who was controversial and seemingly racist in reference to one of the greatest perceived heroes of slave revolt in the black community.

Burnett, in response to questions after showing his documentary, *Nat Turner, a Troublesome Property* on Tuesday, November 11th, frequently came upon the topic of "what could be justified when." Members of the audience kept on pushing the usual questions of, "How could you justify somebody who killed innocent people as a hero?" whereas Burnett very rightly

responded by "How could you justify the people who sold and oppressed his [Nat Turner's] family".

It is basically always going to be a question of who has to stop being vengeful and who has to forget the past and start a new beginning. When an action is taken in isolation, it might seem extraneous and over the top but if its preceding events are also taken into consideration, it might not really be an "over-reaction". Burnett chose to refer to the very sensitive issue of September 11th by saying that indeed, there was something that caused people to revolt and kill so many innocent people that way. Of course, it was an action of unspeakable brutality but then again, what is the history and what are we fighting against? Maybe, if we look back in time and account for some of the actions we took, we might be able to explain some of the hatred.

Saying that everybody is equal and showing commercials where there are a carefully chosen num-

ber of black and white people to portray the departure of racism is an example of one of the extremely disgusting artificialities of a society that is increasingly troubled with being "politically correct". What is real is this- when people who want to make a solid difference are denied the right to do so; when Burnett, a man who could make a difference with his creativity was forced to change his expression only because he was at the hands of financial manipulation. When I asked him, how his documentary would be different if he were have made it using his own funds, he responded, "It would have no Styron. None of that!"

It is amazing how we all act as if everything is fine and the world is sunny and bright, whereas we have all these internal fights and insecurities that we believe can just go away by saying, "We are free" or "We have the freedom to express!"

Iram Parveen Bilal '04

Proof of Our Nerdiness: An Article on the Number Pi

By ALAN CHEN

Pi is the ratio of the circumference to diameter of a circle. It is also irrational, meaning that it has an infinite number of digits past the decimal place. People are discovering more and more digits of Pi. In that sense, Pi seems to be a metaphor for life; it's requires diligence and motivation to master. In addition, Pi has been important throughout the history of mathematics. We should respect the role of Pi by memorizing as many digits as possible.

Pi is a very interesting number. It has many digits! There's so many things to choose from. Personally, I like to memorize Pi because it's good practice to do math. Pi is ubiquitous...try to find a textbook in the bookstore that doesn't include Pi. So I'm going to take some time to convince you why you should memorize 200 digits of Pi.

So the next question is how to memorize Pi. Well you can do it in groups of five numbers. That makes it easier because five is a special number. five is lucky; at least for me! But what if you have homework and don't have time to memorize Pi? Then you can make your roommate memorize Pi. When you have to do a math problem, you can reference him. Just think if your roommate's name was Apostle, then you'd reference 'Apostle' just like in Math 1! Pi is very useful. It feeds you. Why do people wash their hands. I mean, it's so weird: you can't see bacteria can you? They're so small. But you can see Pi, and if you memorize it, you can have your Pi(e) and eat it too!

If you want to be at Caltech, you've got to memorize Pi. Memorize a pattern in terms of things you know. It's kind of like making sure to do your laundry so that you don't smell bad. Pi helps one think. If you want to think about important stuff, do go fishing. That's how to succeed. Pie tastes good, but Pi feeds up the soul. It is the substance of the soul. The joy of my life. It's like going up a flight of stairs. Wow, holy cow—Big, big explosive! 3.141592653589793238462643383279. You see, it's difficult. I mean, what's your goal? 100 digits? 10000 digits? You should memorize in groups of five. You know it's kind of like memorize a phone number. Which brings me to another question, why do some people smell so bad? Shouldn't they shower every day? Remember to wash your socks before you wear them again. Water is like very important. Almost as important as Pi.

Why is Pi important leads to some really important questions, like why is there bunk beds. Why don't you just put beds next to each other? I mean, you don't want to hit your head on the upper bunk, do you? That would hurt. Reminds me of World War II when things hurt, a lot. Tanks were very powerful, you know?

Now on to who should memorize Pi? Everyone! When I say Everyone, I mean Everyone... including a tank. I know that sounds silly, but really, if a tank can do it anyone can, and it helps everyone. As with most things in life, you get two chances: you can screw up the first time, but you get one more chance. Don't miss the last chance. You'll regret it; I know from experience.

Who the world knows what's happening? I mean, Pi is irrational, and we're constantly calculating more digits of Pi. When do we reach the

"If you want to be at Caltech, you've got to memorize Pi."

end? that's a big probably in mathematics today. How do you know when long is long enough? most people want it

longer. A few want it shorter. Longer is good because you have to memorize more characters and that builds character. It's like put your hand in a toilet looking for your cell phone. Get it?

Now I know what you're thinking...How could Pi help me in life? That's what I thought too, but boy how it did. It enhanced my experience of Caltech very, very much. Make sure you get it down flat. Flat as a golf course in fact. You know, Pi is applicable to golf. That's why Tiger Woods knows Pi; it helps his golf. I don't know how important it is but I'd guess on a scale of 1 to 10 it's pretty important.

Yeah, I know what you're saying. You're still in need of some inspiration? That's where Pi comes in, 3.14159. When push comes to shove, then comes to my most important point.

How long does Pi go on for? The answer might surprise you. Many, many digits I assure you. That's where computers comes in. They do things very quickly; much moreso than a human being in fact. Quicker than a fish can blink. And that's where the 10002345th digit of Pi comes in: 3. Three is also an important number. It reminds me of the number of colors on the French flag; three. If you have some time to take a break from your studies, you should check this out. It takes a little bit of effort.

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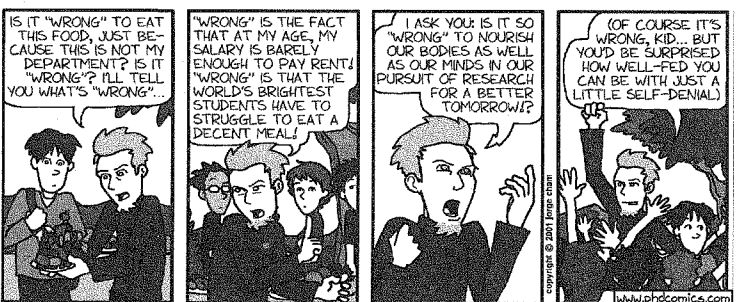
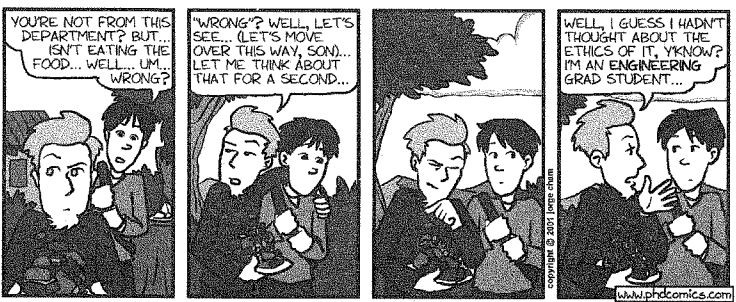
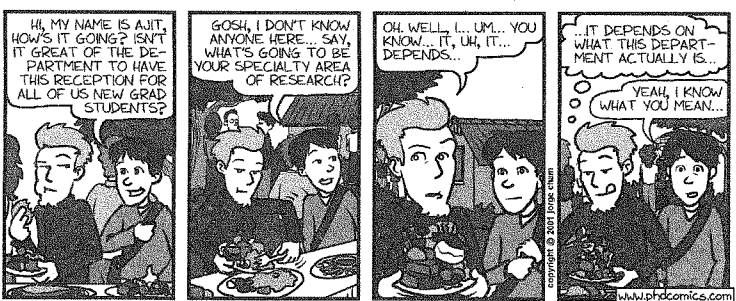
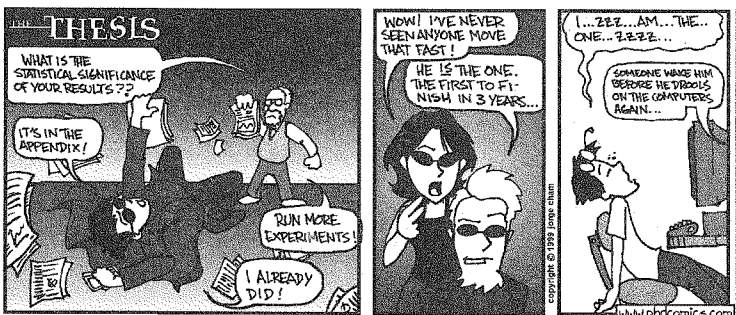
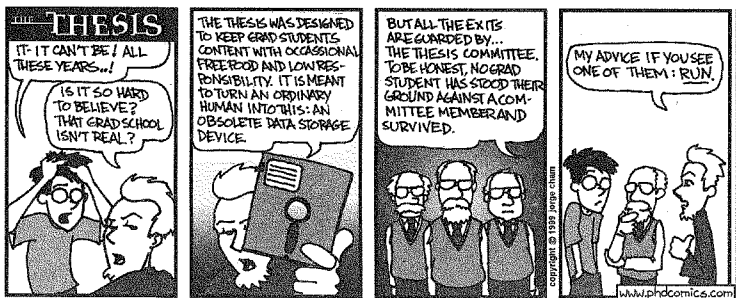
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www.skatepasadena.com
(The rink is across Green Street from Paseo, same building as Civic Auditorium, but enter in the back around the northwest corner of the building). If you want to drive, you can park for free at the parking meters on nearby streets or in Paseo parking lot (\$1 if you validate parking at Gelson's - with a small purchase). If you have questions or want to join the Caltech Ice Skating Club mailing list, please email skating@caltech.edu.

Women's Center Events:
**JUMP (JPL Undergraduate Mentoring Program) - Fall Luncheon with Caltech Alumnae
November 19, 2003. 12-1pm. Women's Center, 2nd floor Center for Student Services.
Meet JPL women scientists & engineers who are alumnae, learn about current research projects at JPL, and summer research opportunities! (RSVP to x. 5772 or mail to: jcicoch@studaff.caltech.edu)

**Health & Wellness - Getting Pregnant! What You Need to Know About Infertility November 20, 2003. 12-1pm. Women's Center, 2nd floor Center for Student Services.
Join Dr. Tourgeman for a discussion on issues of conception, pregnancy, and infertility.
**Undergraduate Lunch Program (RSVP required!) - You Didn't Get Here Because of Luck! with Dr. Valerie Young
November 20, 2003. 12-1pm. Women's Center, 2nd floor Center for Student Services.
Dr. Valerie Young explores why high-achieving young women have increased levels of self-doubt and often believe they are "fooling" other people as to the level of their abilities. (RSVP to x5772 or mail to: jcicoch@studaff.caltech.edu)

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ASCIT Minutes, Nov. 11

November 11th, 2003, 12:05 p.m., Olive Walk
Present: Joanna Cohen, Will Coulter, Abe Fetterman, Tom Fletcher, Kathryn Hsu, Jeremy Pitts, & Anna Sczaniecka
Absent: Galen Lorma and Corinna Zygourakis
Guests: Julia Ma, Leo Stein, Michael Turk, Matt Walker and Others.

- Agenda
1. Call to Order
 2. Ricketts and Ruddock each requested \$100 from multihouse for broomball this weekend. Vote: 4-0-0, approved.
 3. The Dev Team is understaffed and is recruiting. Students interested in working on donut should contact the Dev Team at devteam@donut.caltech.edu
 4. The Faculty Board was somewhat skeptical of the Committee Resolution and decided to postpone the submission of committee reports until further discussion. The next Faculty Board meeting is in December.
 5. *The little t* will publish an addendum, which will point out the errors in this year's edition. *The little t* is accepting corrections through Friday,

6. Election Chair sign-ups will go up Sunday, November 23rd.
7. The Admissions Committee is hoping to get Prefrosh Weekend extended to its original length of four days.
8. The CUE met for a second time and discussed their mission statement.
9. The IHC met with Margo Marshak and discussed the construction of the new houses. There are several matters to consider including whether the new houses will have faculty in residence. Also fundraising for the new houses was discussed and Baltimore expressed his support for the students.
10. Abe is hoping to organize a book signing with Will Wheaton. He also hopes to bring Chuck Palahniuk to campus.
11. The Moore-Hufstедler committee approved the second round of proposals for this term. One of the successful proposals was a DDR machine for the campus.
Meeting adjourned at 12:43 p.m.
Respectfully Submitted,
Anna Sczaniecka

CUE: Update, Evaluations

By KATHRYN HSU

Last June, on the advice of an ad-hoc committee of faculty, administrators and students, the Council on Undergraduate Education (CUE) was formed. It was to consist of the chairs of certain key faculty committees, administrators and students and would be chaired by Vice Provost David Goodstein. Since the first meeting (reported in the *Tech* 11/11/2003), the ASCIT Board of Directors has appointed two new student representatives to the CUE. In addition to Goodstein and other members, the CUE now includes students Haluna-Penelope Gunterman, and Lizz Felnagle. Professor Andrew Ingersoll, chair of the faculty Academic Policies committee has also been added.
The second full meeting of the CUE occurred on Tuesday, Nov. 4th, and was attended by all members except Professor Chris Hitchcock, Chair of UASH. At this time Professor Scott Fraser presented a report from the Core Curriculum Steering Committee. The committee has asked the HSS Division to prepare a plan to institute proposed changes to the Core 1 writing requirement. The committee has also begun to discuss ways of improving teaching feedback and evaluation methods.
The primary objective of this meeting, according to Goodstein, was to get all members familiar with one another, and establish what the primary functions of the CUE were to be. It was pointed out that since the CUE is not a faculty committee, it would be ineffective to have the CUE deal directly with any issues of inquiry. Since the Institute has a num-

ber of different facets (faculty committees, student governments, etc.), it would be inefficient to take action independent of such structures. Doing so would inadvertently usurp power from the faculty committee structure, or the student government structure. Instead, it was decided that the CUE could act as a primary catalyst for all the various portions of the Institute designed to handle problems with undergraduate education. This ideally should dramatically improve communication and strengthen collaboration between students, faculty, and faculty committees. The CUE could also put some teeth into implementing whatever solutions those bodies came up with.
The role of the CUE would then be to examine problems with the undergraduate education; as the only group on campus consisting of students, faculty and administration, the CUE should ideally be able to determine the best course of action for a specific problem. The problem should then be delegated to the appropriate faculty and/or student committee(s) for further examination and recommended solutions
Once this decision was made, the CUE began to assign tasks to address some of the long-standing problems present in undergraduate academics at Caltech. Discussion began on widescale improvement of the teaching evaluations and feedback, and the advising system. The Core Curriculum Steering Committee has been instructed to investigate the possibility of a web-based Teaching Evaluation and Feedback system that may be applied Institute-wide. The issue of academic advising has been assigned to the Academic Policies committee. Questions and comments regarding these issues should be directed to the CUE or to the chairs of these committees. The CUE's next meeting will be December 9th.

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CHICOS Project Set to Install 50th High School Cosmic Ray Detector

By JILL PERRY

PASADENA, Calif. - A large crane will lift two 250-pound, white, funnel-shaped cosmic ray detectors on top of a science building at San Fernando Middle School on Nov. 19 and as soon as a few cables are connected, students as young as 11 years old can kick off their own astrophysics research.

The detector is the 50th to be installed in an array of cosmic ray detectors that are located at schools throughout Southern California. It will be installed at 11 a.m. at the school, which is located at 130 N. Brand Boulevard, San Fernando. The media is welcome to attend, but the event is not open to the general public.

The California High School Cosmic Ray Observatory (CHICOS) is a collaborative effort between the California Institute of Technology, Cal State Northridge, UC Irvine and public and private high schools and middle schools in Los Angeles and throughout the San Gabriel Valley.

Speakers at the installation will include Caltech provost Steve Koonin, Los Angeles Unified School District board member Julie Korenstein, LAUSD superintendent Sue Shannon, San Fernando Middle School principal Arturo Del Rio, Caltech physics professor Bob McKeown, who created the CHICOS project and participating students and teachers.

After the detectors are lifted to the roof and activated, there will be a few public remarks and then teachers and students will demonstrate how the equipment collects data on cosmic ray showers and discuss their own role in the project.

The CHICOS project demonstrates how hands-on experiences can inspire enthusiasm for science among middle- and high-school students—enthusiasm that is crucial to the future of California as a center for discovery. It also illustrates the value of public/private and university/secondary school collaborations.

CHICOS "captures" cosmic rays slamming into Earth's atmosphere with the energy of a brick falling from a rooftop. In order to detect the cosmic rays, detectors must be deployed, like a large fishing net, over many square miles to capture signs of the incoming rays. The schools participating in the CHICOS project make up parts of that critical net.

Deployment of the CHICOS array began in fall 2001 and the plan is to install 90 detectors by 2004. Students and teachers from CHICOS schools worked in a Caltech lab during the past two summers, building and testing equipment for one week while enjoying daily presentations on related scientific topics.

Students have worked with CHICOS data independently from home and school and are encouraged to make real scientific contributions to the data collection and analysis. Many additional students are reached through site visits, classroom presentations and a growing set of classroom curriculum units developed by CHICOS researchers and teachers.

In the last decade, particle astrophysicists have operated several large detectors to study cosmic rays because the origin of the particles is unknown. It is assumed that they

are atomic nuclei accelerated to prodigious energies by violent magnetic activity somewhere beyond our galaxy.

The primary research goal of CHICOS is to collect data on these cosmic rays in order to characterize their rate of arrival and directions of origin. CHICOS is already the largest operating array in the northern hemisphere and will continue in that role for many years.

Together with other large-scale detection facilities CHICOS hopes to shed light on the identities of these mysterious travelers from far beyond our galaxy.

An example of one of these other projects is the Auger Observatory on Pampa Amarilla in Argentina. It consists of 1600 detectors over an area of 1200 square miles; the detectors are set about a mile apart.

For more information about CHICOS, see the web page: www.chicos.caltech.edu. News media planning to attend should call (626) 395-3227 by 5 p.m. Nov. 18 to ensure a parking space and written materials.

Ensminger to Describe Experiments in Lecture

By MARK WHEELER

PASADENA, Calif. - Social norms instruct much of human social interaction in all societies and they often flavor profound differences across cultures. But where do such norms come from and more interestingly, how and why do they change over time and what impact do they have on economic performance?

Jean Ensminger, a professor of anthropology and chair of the division of the humanities and social sciences at the California Institute of Technology, will discuss these topics in her talk "Experimenting with Social Norms," the third of the 2003-2004 Earnest C. Watson Lecture Series at Caltech.

Her talk will take place on Wednesday, November 19, at 8 pm. Ensminger will base her talk on research she's conducted since 1978 with the Orma tribe, partially nomadic cattle herders who live in northeastern Kenya, near the Somali border.

"It's an unusual data set in that regard," says Ensminger. "One of

the wonderful things about being an anthropologist is the relationships you develop with people over time. The longer I work in my field site the more rewarding the research becomes. I have seen profound changes in this society. And appearances can be deceiving—despite the fact that people still live in grass houses with no running water or electricity and where there are few roads, you would be amazed to hear of some of the extraordinary changes in gender relations, social structure and culture that are unfolding each year. It is extremely difficult to begin to unravel the processes that drive these changes without a longitudinal perspective—that is exactly what I am attempting to do now."

Her talk will also present experimental economic research from a collaborative project with more than a dozen fellow anthropologists who have worked in other hunting and gathering, horticultural, herding and industrial societies.

Such data from controlled experiments conducted around the world, she says, help to flesh out the processes involved in the co-evolution of market institutions with social norms that govern cooperation, fairness and trust.

Ensminger's lecture will take place in Beckman Auditorium, near Michigan Avenue south of Del Mar Boulevard, on Caltech's campus in Pasadena. Seating is available on a free, no-ticket-required, first-come, first-served basis.

Caltech has offered the Watson Lecture Series since 1922, when it was conceived by the late Caltech physicist Earnest Watson to explain science to the local community.

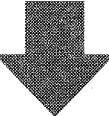
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Meteor Watch: Leonid only showers once a year. Math majors forced to up the ante; project biannual cleansings.

Energy Conundrum Solved By Study of Nearby Gamma Burst

By ROBERT TINDOL

PASADENA, Calif.—For the past several decades, astrophysicists have been puzzling over the origin of powerful but seemingly different explosions that light up the cosmos several times a day.

A new study this week demonstrates that all three flavors of these cosmic explosions—gamma-ray bursts, X-ray flashes and certain supernovae of type Ic—are in fact connected by their common explosive energy, suggesting that a single type of phenomenon, the explosion of a massive star, is the culprit. The main difference between them is the "escape route" used by the energy as it flees from the dying star and its newly born black hole.

In the November 13 issue of the journal *Nature*, Caltech graduate student Edo Berger and an international group of colleagues report that cosmic explosions have pretty much the same total energy, but this energy is divided up differently between fast and slow jets in each explosion.

This insight was made possible by radio observations, carried out at the National Radio Astronomy Observatory's Very Large Array (VLA) and Caltech's Owens Valley Radio Observatory, of a gamma-ray burst that was localized by NASA's High Energy Transient Explorer (HETE) satellite on March 29 of this year.

The burst, which at 2.6 billion light-years is the closest classical gamma-ray burst ever detected, allowed Berger and the other team members to obtain unprecedented detail about the jets shooting out from the dying star. The burst was in the constellation Leo.

"By monitoring all the escape routes, we realized that the gamma rays were just a small part of the story for this burst," Berger says, referring to the nested jet of the burst of March 29, which had a thin core of weak gamma rays surrounded by a slow and massive envelope that produced copious radio waves. "This stumped me," Berger adds, "because gamma-ray bursts are supposed to produce mainly gamma rays, not radio waves!"

Gamma-ray bursts, first detected accidentally decades ago by military satellites watch-

ing for nuclear tests on Earth and in space, occur about once a day. Until now it was generally assumed that the explosions are so titanic that the accelerated particles rushing out in antipodal jets always give off prodigious amounts of gamma radiation, sometimes for hundreds of seconds.

On the other hand, the more numerous supernovae of type Ic in our local part of the universe seem to be weaker explosions that produce only slow particles. X-ray flashes were thought to occupy the middle ground. "The insight gained from the burst of March 29 prompted us to examine previously studied cosmic explosions," says Berger. "In all cases we found that the total energy of the explosion is the same. This means that cosmic explosions are beasts with different faces but the same body."

According to Shri Kulkarni, MacArthur Professor of Astronomy and Planetary Science at Caltech and Berger's thesis supervisor, these findings are significant because they suggest that many more explosions may go undetected. "By relying on gamma rays or X rays to tell us when an explosion is taking place, we may be exposing only the tip of the cosmic explosion iceberg."

The mystery we need to confront at this point, Kulkarni adds, is why the energy in some explosions chooses a different escape route than in others. At any rate, adds Dale Frail, an astronomer at the VLA and coauthor of the *Nature* manuscript, astrophysicists will almost certainly make progress in the near future.

In a few months NASA will launch a gamma-ray detecting satellite known as Swift, which is expected to localize about 100 gamma-ray bursts each year. Even more importantly, the new satellite will relay very accurate positions of the bursts within one or two minutes of initial detection.

The *Nature* article is titled "A Common Origin for Cosmic Explosions Inferred from Calorimetry of GRB 030329." There were also contributions from the Universities of Cambridge, Hawaii, and Australia.

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Film's Portrayal of Turner Contentious for Viewers

Continued from Page 1, Column 3

persing reenactment with historical fact and fiction drawn heavily from Harriet Beecher Stowe's 1856 *Dred* and from two versions of *The Confessions of Nat Turner*, the first a period lawyer's transcriptions of jail-cell interviews with the hanged slave and the second author William Styron's Pulitzer Prize-winning literary dramatization.

Styron's version has come under particularly heavy fire because it speculates a perceptibly stereotyped interracial relationship between Turner and his master's white daughter, the only person Turner killed. "You do have to wonder why she was the only one Nat killed," said Rosenstone.

For its part, Burnett's play-acted rendition of Styron's view depicts a Turner so confused by the daughter's interest in a slave that he stabs and bludgeons the girl with a fence post.

"At first, he wanted to do something that would bring the races together by portraying slavery in such a horrific light," said Burnett of Styron, "and his way of humanizing Nat was to make him confused sexually. Unfortunately, he ended up playing to stereotypes."

Personally, Burnett opposes Styron's view. "It's not that you don't have a right to be creative, but if you're going to talk about us—people of color—at least be honest about who we are," held Burnett.

In a conscious effort not to "impose my values on the film," however, Burnett's documentary gives ample time to Styron's portrayal through reenactments and interviews with both the novelist himself and sympathetic historians.

Consequently, Burnett came under fire from contemporaries such as those in the National Black Consortium, which refused him funding for the project. One African-American film review journal even went so far as to call the documentary "a monstrosity... bordering on being racist" because it substantiates Styron's imagination.

Still, conscious of their feelings, Burnett's film also incorporates a range of Styron's critics among professors black and white as part of what Rosenstone tagged a "self-criticizing apparatus."

Burnett also closes with an interview-laden general discussion of how time can fog historical accuracy. "I don't think the film says any one version is right," he offered. "There are stereotypes and through the culture, we see it only through that lens. But I think the film addresses that."

Perhaps that's enough to earn Burnett a pass from contemporaries, many of whom still respect the director for his groundbreaking work on the award-winning 1977 "Killer of Sheep," now ensconced as a "national treasure" in the Library of Congress, or some of his



Director Charles Burnett reacts with good humor to a question posed by an audience member after the screening of his documentary on the life of preacher turned slave rebellion leader Nat Turner. D. Korta/The California Tech

later racially charged classics like "Glass Shield" and "Annihilation of Fish."

But Caltech students, many of whom took the opposite view, proved another story. "I liked the film," maintained Clark Guo '06, "but I didn't like the way that while they showed both sides, they were definitively more sympathetic to the idealized version of Nat Turner."

Going on to call the murders in

Turner's rebellion "morally reprehensible," Guo asserted that "it's just because it's so far in the past that we sympathize today. I find it annoying that the screenwriter considers Nat a hero." Guo's remarks touched off a scuffle on the merits of heroism and on whether Turner fits the bill.

While some in the audience such as Adam Azarchs '05 struggled to comprehend how a murderer could be seen as a hero, Burnett preferred to consider Turner in the context of his time. "You do need strong figures to model yourself after," he explained, "someone who's willing, despite the odds, to go against the system."

He also drew a parallel to the merits of Osama bin Laden, whose Sept. 11 attacks Burnett cited as a motivation for the documentary. Like bin Laden, he said, Turner was society's pop madman. "You have to think, with 9-11 and Osama bin Laden: is he really crazy, insane and all that? When you justify going into Afghanistan after 9-11 and all, you have to ask: wasn't Nat doing

the same thing?"

Some students were more sympathetic with Burnett's take. "I think he did a very articulate job of considering some very tough questions," praised ASCIT President Tom Fletcher '04. "I have to say that I was skeptical, but I walked away convinced."

But regardless of students' individual reactions, the chance to consider race in a public setting was a unique one for a Caltech student body notorious for its too-tiny fraction of minorities. "I just think that the opportunity to see that and to meet with a filmmaker is a great thing," said Humanities Professor Cathy Jurca, who assisted Rosenstone in orchestrating the event.

And that's exactly what the director had in mind. "People have read the stories, the history books, but they want to know more," offered Burnett. "They want to know what Nat Turner means to us. And without imposing our values on it, that's what we've tried to do."

Schneider Reaches for Understanding Through Study of Science, Literature

By DIANA LIN

On Friday afternoon, I found myself walking down the hall of Mudd Laboratory on the very south-west corner of campus to meet a professor I knew only by name, Tapio Schneider. At the very end of the old, brown-tiled hall, I arrived at the half-opened door labeled room 112 and awkwardly introduced myself as a writer for the Tech.

I felt I had to explain myself, because when I had contacted him through email to set an appointment, his first question was "is there any reason you are writing about me?"

This was when I realized how important my assignment to introduce new faculty members was. In an institution embodied by great

names such as Feynman, Millikan, Einstein and the like, there are so many anonymous young striving minds following in their footsteps.

Tapio Schneider is an assistant professor in the Environmental Science and Engineering Department. He teaches the ACM/ESE 118 applied statistics and data analysis course and also courses about the dynamics of the atmosphere and ocean.

His field of study is concentrated on atmospheric science. He studies the causes and affects of different climates in different regions of the world by creating simulations with complex climate models to theorize why the weather is at it is today, how it was in the past, to better predict what will occur in the future.

For example, he studies how the geographical location of Los Ange-

les, bordered by mountains, affects the wind patterns that contribute to the dry weather.

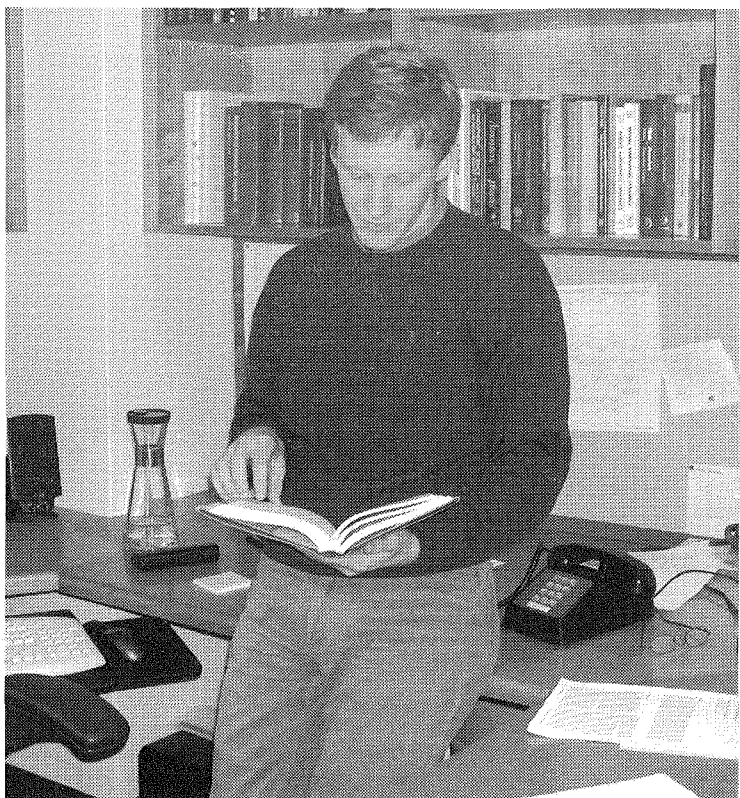
Tapio Schneider came to Caltech last year after earning his Ph.D. a year earlier from Princeton University. Before that, he majored in math and physics at a university in Germany before coming to the U.S.

Although he admits that the Environmental Science Department at Caltech is small, it is this very intimacy that allows him to work with others from different concentrations to give a larger breath of study. Here he has happily found a group of like-minded eager young scientists to research with. Part of his passion for science is his innate love for understanding the world around him.

He also studies literature, which he explains is another way of understanding people, society and the surroundings. Literature is very similar to science in its fundamental motivation to understand the environment, despite common perception that the two fields are opposites.

Tapio Schneider very much looks forward to continuing his research here at Caltech, armed with the computer within the warm bright room of his office.

In addition to his research, he continues to pursue his hobbies in cross-country skiing, swimming and running.



L. Tran/The California Tech

Tapio Schneider became an assistant professor here last year after completing his Ph.D. at Princeton.

Diversity for Enrichment Rather Than Filling Void

Continued from Page 1, Column 5

sifying the faculty and revamping the system of admissions, Dr. Malcom urges Caltech and similar institutions to establish better relationships with minority serving institutions (MSIs) such as the historically black colleges in the South.

She also believes universities should offer minorities opportunities for earlier research experiences in order to attract them to STEM careers at an early age.

To make these things happen, Dr. Malcom calls not for punishing departments and schools that fail to promote diversity but to reward faculty and divisions that "do the right thing."

Regarding Caltech specifically, Dr. Malcom believes that the Insti-

tute should help underrepresented minorities build a community where "they can feel safe." Citing her undergraduate experience at the University of Washington, Dr. Malcom said that of the three blacks in her dorm, the other two flunked out and she nearly did so as well because she was too intimidated to ask her white chemistry professor for the help that she needed.

Concluding her talk, Dr. Malcom called for society to not look at minority representation as a deficit to be filled but as something that brings different ways of looking at the world and different experiences which, in the end, enriches everyone.

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