Prefrosh Weekend: They Were Here

Prefrosh Nerdiness Questioned

BY ROYAL REINECKE

This year’s Prefrosh Weekend brought beautiful weather as well as a large infiltration of impressiveable young admitted students to Caltech for the days of April 22 through 24. Once again, familiar phrases like the infamous “They’re all fine houses” could be heard resonating across the campus.

The large influx of prefrosh became apparent by Thursday night when all of a sudden techers could no longer recognize every face they encountered. However, dangling nametags and packets of information quickly gave away the identity of the prefrosh.

Many Caltech students helped contribute to the success of the weekend by helping out at the airport and on campus. Sophomore Dima Kamalov, a planetary science major acted as a “Bus Runner,” greeting prospective students as they got off their planes. Knowing that he would be providing a first impression of a Caltech student, Dima prepared not sleeping for forty-eight hours in advance.

“I thought that would be really exemplary of Caltech life,” he explains.

Meeting prefrosh at the airport also allowed Dima to make an initial analysis of the admitted students. He noted that they “leave a bit to be desired in the expression of a Caltech student,”

Prefrosh represent quite a diverse cross-section of the Caltech community into contact with theater and “have a student-produced theater project.”

This year’s production consists of five one-act plays, featuring a grand total of eighteen members of the Caltech community as actors, four directors and a set/sound/lighting crew of five. Each play was chosen by the director and cast after an open casting call. According to producer Kayte Fischer ’05, everyone who auditioned was given a part. Each play was rehearsed independently of the others for the last three to eight weeks, with several run-throughs of the entire show in the end.

The result is a highly entertaining mix of humor, ranging from utter silliness to a sort of bittersweet reflections on life, love and respect. All pieces have a strong undercurrent of love and respect. All pieces have a strong undercurrent of love and respect.

Continued on Page 8, Column 4

Arms Research Leads To Ethical Dilemmas

By WILLIAM FONG

On Wednesday, Daniel Kevles gave a lecture at the Beckman Institute Auditorium titled “Science, Arms and the State: J.R. Oppenheimer and the 20th century.” Sponsored by the William and Myrtle Harris Distinguished Lecture Series in Science and Civilization, Kevles discussed the moral dilemma facing scientists when working for the state.

Beginning his talk by mentioning that this year would have marked the 100th birthday of J. Robert Oppenheimer, the father of the nuclear age, Kevles posed the dilemma that scientists of the 20th century including Oppenheimer have faced. That is, although a scientist has an obligation to the state with regards to national security, a scientist in the process commits a personal sin by developing weapons whose sole purpose is to injure soldiers or civilians.

In his lecture, Kevles provided two in-depth examples that display this dilemma: the use of chemical warfare in World War I and the development of the nuclear bomb in World War II.

The subject of chemical warfare was first mentioned at the Hague Convention of 1899. There was a declaration to ban the use of projectile devices to release chemicals. The ban was passed to protect civilians and women and children, not as a precaution
Prefrosh Visit Classes, Enjoy Special Activities

the Caltech Christian Fellowship. Other flyers drew upon the prankster spirit of Caltech. For example, advertisements for the Caltech Cthulhu Fellowship proclaimed, "When He awakens, His faithful servants will be eaten last. Wouldn’t you like to be eaten last?"

On Friday, many prefrosh checked out the classes, packing the lecture halls with a turnout unseen since the first week of the term. Freshman Math and Physics proved especially popular classes to visit. A couple ambitious prefrosh were even spotted taking notes on the material being covered.

The club fair also proved popular during lunchtime on Friday with the Meat Club offering free samples of goat and lamb roasted right before the prefrosh's eyes. On the other side of the spectrum, vegetarian club managed a strong showing as well. Just about every prefrosh mentioned some experience he or she had never engaged in before coming here-from ballroom dancing in Avery to tie-dying in Dabney House. Perhaps on her way to getting some preparation for the Caltech sleep schedule, Krystin Fong of Sacramento, California eagerly admitted with a grin how she "tried coffee for the first time" during Prefrosh Weekend.

Another prefrosh, Molly Davis of Magalia, California explained, "Everything about Caltech says it is crazy and psycho, so I thought, ‘maybe I’ll fit in here.’" Molly went on to say that her Prefrosh Weekend Experience showed her that, "It [Caltech] is not a school of 900 complete and total nerds sitting in their rooms studying all the time." (Well... at least not on Prefrosh Weekend!)

Meanwhile, lecturers developed their own views of the prospective frosh. At Saturday's lunch, Freshman Civil Engineering major Kristen Ward dubiously remarked, "I don’t know, but I was sitting over there eating pizza and they [the prefrosh] were cracking delta-epsilon jokes."

When asked his opinion on the prospective members of the class of 2008, Junior Jared Updike definitively replied, "They’re all fine prefroshes." Jared, a computer science major, took his prefrosh to a CS lecture and afterwards brought him to talk with the professor of the class.

Virtual Childhood

The Transformation of Play

Week of the Child Honored With Speech by Tufts Childhood Expert

Elachi to Lecture On Recent JPL Missions

By MARK WHEELER

PASADENA, Calif. — It’s been a busy year for the Jet Propulsion Laboratory, with a number of recent missions serving as the first salvos of a bold space science and exploration program in the coming years. Two goals, notes Charles Elachi, JPL’s director and vice president and professor of electrical engineering and planetary science at the California Institute of Technology (JPL) is a NASA facility managed by Caltech), are to explore the universe and search for life in it. On Wednesday, April 28, Elachi will discuss the numerous missions that will spread throughout the solar system over the next decade in his talk, "Challenges and Excitement of Space Exploration,” the last of the 2003-2004 Earnest C. Watson Lecture Series at Caltech.

In the 12-month period (summer of 2003 to summer of 2004), he notes, the most advanced space infrared telescope (the Spitzer Space Telescope) started its mission of exploring the universe in the infrared, while the Galaxy Evolution Explorer (GALEX) is mapping the sky in the ultraviolet.

Two rovers (Spirit and Opportunity) continue in their search exploration of Mars in coordination with two orbiters (Odyssey and Mars Global Surveyor). At the same time, Stardust and Genesis are collecting samples from a comet’s coma and the solar wind for return back to Earth (Genesis, with its solar wind sample, lands September 6; Stardust returns its comet sample in January 2006), while Cassini will start its exploration of the Saturnian system as it goes into orbit around Saturn on June 30.

Elachi was born in 1947. He received a B.S. from the University of Grenoble, France and a Diplome Ingenieur from Grenoble’s Polytechnic Institute in 1968. He then received an M.S. and Ph.D. from Caltech in 1969 and 1971, respectively. He has since earned an MBA and an additional M.S. Elachi’s lecture will take place at 8 p.m. 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 as a way to explain science to the local community.
Week in Sports: Track & Field Sets School Records, Men's Baseball Takes a Tough Lost, Teams Wrap Up with SCIACS

By MIKE RUPP

April 19, 2004

Athlete of the Week

Tamara Becher

Women's Track and Field

The Senior from Croton-on-Hudson, New York set the school record in the 3000 meter Steeplechase this past weekend at the SCIAC Preliminaries with a time of 12:04.19. Becher’s performance catapulted her to 4th best time in this conference this year, heading into this weekend’s conference championships. In addition to the new record, Becher also qualified for the Women’s 800 Meter run with a time of 2:34.59. Becher’s performance helped earn the Caltech Women a tie for 5th place at the Preliminaries.

Week in Review

Men’s Tennis (7-11)

Head Coach: Mandy Gamble

Men’s Tennis

SCIAC Championships

Caltech.............3
LA-VERNE...........6
CALTECH..........7
Whittier.............0
Caltech.............6
OCCIDENTAL........6

The Men’s Tennis team finished its season this past weekend at the SCIAC Championships. The season had started with a 6th place finish at the school in the Women’s 100 Meter High Hurdles with a time of 16.31 seconds. 14 Personal records fell, including Sophomore Jeremy Leibs in the 100 Meter, Sophomore Stuart Ward in 400 Meter, Sophomore Gustavo Olmin in the 3000 meter Steeplechase and Senior Ali Hassani in both the 400 and 200 meters. Those student-athletes who qualified for the SCIAC Championships will compete this weekend.

Men’s Baseball

Head Coach: John D’Auria

Women’s Tennis

SCIAC Championships

Caltech.............3
LA-VERNE...........6
CALTECH..........7

The Women’s Tennis team finished its season this past weekend at the SCIAC Championships losing to La Verne and Cal Lutheran before their third match was rained out. Sophomore Jenny Huo won both her singles and doubles matches against La Verne in the loss. The team’s performance this season represented considerable improvement from last year’s 0-21 record. Congratulations to the whole team!

Track & Field

Head Coach: Julie Levesque

The Men’s Baseball team took a tough loss against Claremont Mountain-Scripps this past Friday, losing 0-17. For the season, Sophomore Tim Boyd has been the team’s best performer at the plate, with a .409 batting average and leading the team in total hits, slugging percentage and on-base percentage. Junior Isaac Gremmer has been the team’s best pitcher with two wins and 32 strikeouts in 43 and 1/3 innings while also producing at the plate with a team-leading eight RBI in 10 games. The team plays its next game this Friday at La Verne.

Men’s Golf

Head Coach: John Suarez

Women’s Waterpolo

The Men’s Golf team took a close loss to Cal Lutheran this past week with an away match at CMS. Sophomore Gustavo Olmin in the 3000 meter Steeplechase and Senior Ali Hassani in both the 400 and 200 meters. Those student-athletes who qualified for the SCIAC Championships will compete this weekend.

Women’s Waterpolo

Caltech.............0
CMS..............17

The Men’s Waterpolo team lost three matches this past week, two against conference rivals Pomona-Pitzer and Occidental, both of whom are in the CWPA Top D3 poll. Senior Jacki Wilbur was the best performer for the team, with totals of three goals, nine steals and six ejections drawn. Sophomore Bekah Eason had her second hat trick (three goal performance) and is currently third on the team in scoring.

SCHEDULE

Apr. 21: Women’s Water Polo at Cal Lutheran, 5:00 PM
Apr. 22: Men’s Golf, SCIAC 18-Hole Tournament, 12:30 PM
Apr. 23: Men’s Baseball at La Verne, 3:00 PM
Apr. 24-25: Women’s Water Polo at SCIAC Championships, All Day

Bold indicates HOME game
A genuinely realistic film that securelty describes everyday life, comes along once or twice a decade. People go to movies for all different reasons but very few expect to learn valuable lessons, and as a result, films like the classic American Beauty are simply unforgettable. Sam Mendes’s groundbreaking 1999 debut contains some of the best acting you will ever see, including an unprecedented performance by the unmatched Kevin Spacey, yet the movie’s greatest strength is its ability to create a vivid depiction of the pitfalls of seemingly ordinary lives.

Spacey plays Lester Burnham, a bored-out, middle-aged malcontent with a dead-end job who suffers a mid-life crisis when he recognizes the lack of purpose in his peddling life. His wife Carolyn (Annette Benning in an ear-worth- y role) is a tool of upper-class society willing to sacrifice her own morals in order to climb the social ladder, while daughter Jane (Thora Birch) is the epitome of teenage angst. From the outside, it appears that this wealthy suburban family is living the American Dream, but on a closer look, their life is a complete charade.

Lester finds an escape from his monotonous existence through a disturbingly lustful yearning for his daughter’s high school friend, Angela, while Carolyn demonstrates her new independence by starting a wild affair with a conceded real estate mogul. In the meantime, Jane falls in love with her outlandish next door neighbor, a self-made drug dealer with a controlling, homophobic father. All three stories come together on a rainy day in one of the most satisfying conclusions in cinematic history.

Kevin Spacey won a much deserved Best Actor Oscar for his touching portrayal of a broken cynic, because he steals virtu­ ally every scene in one of the most memorable performances in modern cinematic history. Spacey makes Lester as vulgar, sarcastic and unlikable as possible, yet he is still a hero because the audience can identify with his struggles. Benning and the supporting cast more than hold their own as they each give sparkling performances to complement Spacey’s once-in-a-lifetime role. The young actors, including Thora Birch, Wes Bentley and Mena Suvari are revelations because they manage to stand out despite the presence of so many talented, experienced actors.

Nonetheless, what separates American Beauty from today’s other well-acted drama is Alan Ball’s script, one of the best screenplays of the decade. The story is so creatively written that the audience is forced to identify with at least half a dozen different characters. In addition, the script is amazingly witty, as American Beauty is slowly becoming one of the most quoted movies of the 90s. Most importantly, however, American Beauty has more valuable life lessons than any movie in recent memory. Through Lester’s bizarre exploits, we begin to appreciate the gravity of beauty in this world and because of Jane’s relationship with Angela, we learn that there is nothing worse than being ordinary. Also, every person in American Beauty is different than he/she appears because sometimes, we have to look closer to truly understand someone.

American Beauty is one of the most important movies ever made and the best film of the 1990’s because it manages to speak to all different generations. Teenagers can relate to Jane’s intense problems, while many have felt like Lester at one time or another. In his very first movie, Sam Mendes has managed to make a movie for everyone and the end result is absolutely beautiful.

Even if you’ve seen it before, it’s worth watching American Beauty again for all its beautiful acting and life lessons.

The cast of MTV’s Real World - San Diego will be in the Avery Dining Hall on Monday, April 26 at 6:30. They will talk about some of the real life challenges they have faced and are also going to run a question/answer/discussion session with the Caltech students who attended it will be a very neat opportunity to hold an open dis­ cussion with students who have gone through a lot and come out on the other side. The questions will be about non-academic issues facing college students today.

Summer Work Study: Information and Deadlines: Summer Work Study are available in the Financial Aid Office. If you are interested in Summer Work Study, please submit the required application as soon as possible, but no later than June 1, 2004. Your entire financial aid application must be complete by June 1, 2004 in order to be considered for Summer Work Study. If awarded, the work study funding will begin July 1, 2004.

Attention all undergraduate students on Financial Aid: The summer work study program requires at least 10-15 hours of work to study or work study to loan, for your 2003-2004 financial aid application. Requests for 2003-2004 awards made after May 7 will not be considered. Please contact your Financial Aid Advisor or the Financial Aid Office at 62680 if you have any questions.

Reuse A Shoe: Get your old sports shoes back in the game! The City of Pasadena is offering a quarters or driving to the line. When dropping off shoes for a shoe collection, please follow these simple guidelines:

* Athletic shoes only (any brand and type)
* Mixed materials (plastic, leather, rubber)
* Guests are welcome to donate new shoes, shoes in good condition; $15/class for all others.
* Shoes must be cleaned before dropping off.
* Don’t tie shoes together.
* No Metal (spikes, cleats, etc.)

ATTENTION: Students!

The Mathematics Department is offering the 2004 Mathematics Research Prize ~ A cash prize of $500 awarded for the best original undergraduate mathematics paper written by a Caltech junior or senior. Contests must be concluded by a faculty member familiar with the work. If the entry is sufficiently worthy, the faculty member will nominate the contestant, and act as sponsor. Each student is entitled to only one entry. The Mathematics Department is pleased to announce two categories of prizes to be offered again this year to Caltech undergraduate students.

1. The E.T. Bell Undergradu­ate Mathematics Research Prize — A cash prize of $500 awarded for the best original undergraduate math­ ematics paper written by a Caltech junior or senior. Contests must be concluded by a faculty member familiar with the work. If the entry is sufficiently worthy, the faculty member will nominate the contest­ ant, or contestants, must be written on the envelope only, not on the entry. The Judging Committee will consist of 3 undergraduates. The judges will select a group of finalists and submit their entries to the mathematics faculty, who will make the awards. The prizes of $75 will be awarded to each of the group of finalists and the best entry will receive $100. The names of the winners will be announced by April 30.

2. The Morgan Ward Competition — Open to any Caltech fresh­ men, sophomores, or juniors. Each student is entitled to enter a group of prizes in case of more than one outstanding entry.

The Hawaiian Club is offering hula (traditional Hawaiian dancing) this term! Class will be held in Winniette Lounge on Sunday evenings (May 9 to June 13) with the exception of 4/24 and 5/1: these classes will be held on Monday, 4/25 and 5/2. The cost is $5/class for Caltech community members, $7/class for non-Caltech members. For more information, see our website at http://www.­caltech.edu/­hula. The Earl McKinnie Prize is awarded each year for the most outstanding undergraduate research. All full-time students officially registered at Caltech as undergraduates are eligible to compete. This year, prizes will be given in three categories: poetry, prose fiction, and non-fiction essays. All submissions must be typed and double-spaced. Include your address and phone number. In all cases, freshmen may submit up to three poems. Submis­ sions must be delivered to S. M. Smith Competition honoring Professor Smith and his extensive work in the Humanities and Social Sciences, 228-27, Pasadena City College, May, and the names of the winners will appear in the commencement program. The Competition will di­ vide the award in each category in case of more than one outstanding submission. Previous winners in each category, who were members of this competition for that competition, may not enter the contest. Any essay submitted must be the student’s work. For more information, contact Diana Guzman, 3605, or Barbara Estrada, exten­sion 5734.

The Literature Faculty is pleased to announce the Annual Hallett Smith Competition honoring Professor Smith and his extensive work in the Humanities and Social Sciences. Complete two projects, one of which must be double-spaced and should not exceed 4,000 words. The essays may be either a full-length essay of up to 4,000 words, or three shorter essays (100-200 words each), or a single or combination of these. All essays must be submitted by the end of the semester. The term committee may award prizes for the best essay and for more than one outstanding entry.

Continued on Page 6, Column 3
Dear Editor,

I write to correct some misun­derstandings about your report of the student housing segregation debate on April 14 and to make clear observations about that debate, the issue, and the cli­mate on campus. My only claim to right to speak are that I had framed an earlier version of the topic myself, that I spoke pub­licly on the occasion, and that your reporter misrepresented my position and any statements.

At the end of the often-illumi­nating and often-contentious discus­sion between the two pairs of student debaters, Ms. Bilal, the chair of the Public Speaking Club, asked me to say anything. I did. I began by reminding that the topic as I’d claimed was a “sus­pect” as the U.S. Supreme Court puts it—especially race and gender. When we observe an object­ive pattern of unbalanced ra­cial and/or gender ratios, we have to ask whether some people are being excluded against their will. When we read a set of things mentioned as facts, it is to be undeniable and genuinely made to feel unwelcome in particular houses. Perhaps some of the ma­jority groups make remarks that they feel are entirely innocuous or even just humorous that individu­als from other groups interpret as indicating that they are inferior or different—undesired.

At this point, we simply don’t know what accounts for the pat­tern of segregated undergraduate housing at Caltech, and we don’t know whether it can be alleviated by simple consciousness that the imbalance exists, or whether more vigorous action will be necessary to achieve this end.

Perhaps nothing made it clear that Caltech is faced with a prob­lem, and not just a condition better than the appearance of the “Affir­mative Action is Racism” banner during the debate. By equating any action against or even discus­sion about segregation during the dis­­cussion, the students ignored the history of discrimination, the continuing effects of past dis­­crimination, and the quite consid­erable existence of private and state­enforced discrimination.

They also associated themselves with positions pro­posed in the 1960s by Alabama Governor George C. Wallace, the man who增收 symbolically in the school­house door at the University of Alabama in order to prevent any action to enforce the U.S. Constitution by allowing African-American students, and many students, and not only those targeted by the sign, might feel uncomfortable in the Caltech housing. Members of a group that has under­gone so ignorable of his­tory, too current race and gender pressures and so insensitive to the feelings of others. They might then “vol­unteer their readership.”

Is this the sort of social climate that Caltech should foster?

J. Morgan Kooner

Prof. of History and Social Science

p. Kenneth California Tech

Letter to the Editor: Is Segregation “Natural”?

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...
one essay. All contestants must submit two hard copies of their work to Professor Jenijoy La Belle, Division of the Humanities and Social Sciences, 228-77, no later than April 23, 2004.

This year’s prize will be $350, though the judging committee may divide the award in case of more than one outstanding submission. For more information, contact Prof. La Belle, extension 3605, or Barbara Estrada, extension 3609

The Collegiate Inventors Competition 2004

Call for Entries

Download the application pack- et from: www.invent.org/coll egiate

To recommend someone for the award, E-mail collegiate@invent.org or call 330-849-6887. The Grand Prize Award is $50,000. The Deadline for the 2004 competition is June 1, 2004.

Humanities and Social Sciences Seminars for this Term:

29 April (Friday) Munro Seminar
Carl Hoefer (Barcelona), “Chance, Time and Causation”

3 May (Thursday) ASCIT
Eugene Greene, Princeton University, “Cognitive Conflict in Nature and Culture”

May (Friday) Munro Seminar
Marti Funkhouser (Fordham), “De-composing City; Walt Whitman’s New York and the Science of Life”

Dance Classes

All classes meet in the Braun Gym multipurpose room. There are 8 classes in each series. No special clothing or shoes are required for either the beginners’ class or the challenge court. RSVPs required only for the beginners’ class. Beginning Belldancing Saturdays, 12:45-1:45 PM, begins 4/5; Professional Instructor: Leela; Trial class fee: $5 for students, $8 for others. Calltech students full term fee: $20 ($2.50 per class!). Other Caltech community members full term fee: $50 ($6.25 per class!); CLASS SIZE IS LIMITED to RSVP to Kelly@caltech.edu

6) Hip-Hop for Advanced Beginners; Thursdays, 9-10 PM, begins 4/1; Professional Instructor: Collette Sibil; Trial class fee: $5 for students, $8 for others; Caltech students full term fee: $20 ($2.50 per class!). Other Caltech community members full term fee: $40 ($5 per class!)

Interested in Applied Math in a broad sense? What is research in graduate school? And where does it lead outside of academia? Join the new student chapter of SIAM! (Society for Industry and Applied Mathematics). We organize events to bring together undergraduate and graduate students from across campus to come and hear cool talks and vital career advice. Here’s a sample of our activities:

The “Meetings on Mathematics in Industry” are big, quarterly events, where we get top mathematicians to come and talk about their work in the industry. In addition to these quarterly meetings we organize a weekly student seminar with speakers from the ACM and CS departments. Undergrads are welcome to participate and present their work. This year several talks focused on the IEEE’s Top 10 Algorithms of the 20th century - this Friday is on the Fast Fourier Transform. Come and join us at noon in room 200 Guggenheim. Launch is provided.

Sign up for free student membership to SIAM during the Google event, and receive a free subscription to ‘SIAM News’ and ‘SIAM Reviews’. Stay informed on the upcoming chapter activities by joining our mailing list. For more info and to get involved, visit www.its.caltech.edu/~siam.

Racquetball Challenge Court

Located in the Braun Gym. Show up to the Racquetball club’s challenge court and take on anyone here. We usually have two reserved courts, and we play winner stays on. Challenge yourself and a worthy opponent! Everyone is welcome and we normally have all skill levels showing up (including beginners). And if you don’t know how to play, look for our next monthly club sponsored lesson. You can borrow the necessary equipment from the front desk.

Piled Higher and Deeper

by Jorge Cham

www.phdcomics.com

Congratulations to all 2004 Degree Candidates!!

The Bursar’s Office will be scheduling your In-Person Exit Interview soon. This process is designed to inform you of the status of your student account and furnish you with loan related information. This interview will be conducted in our office, which is located in the Center for Student Services Building, room 120.

To find out more about this procedure please visit our website: www.bursar.caltech.edu/checkout_grad.htm

Our staff is here to make this procedure easy and friendly.
Distinguished Alumni Represent Eminence in Industry, Academia

By MARK WHEELER

PASADENA, Calif.—One way to measure how well educational institutions educate their students is to note what kind of mark their alumni make in the real world. Each year since 1966 the Alumni Association of the California Institute of Technology has acknowledged those graduates who have attained extraordinary achievement in business, their community and in their professional life.

This year, six graduates—leaders in science, industry and academia, have been selected to receive the Institute’s Distinguished Alumni Award. The awards will be presented at a ceremony on May 15, during Caltech’s annual Alumni Reunion Weekend and Seminar Days.

The Distinguished Alumni Award is given to members of the Class of 1957 or later who have attained professional recognition in their field. Recipients are chosen by a committee of the Institute’s trustees, alumni and students. The awards are given to recognize outstanding contributions to the Institute.

The award for the Class of 1957 is being given to Narendra Gupta, a research professor of chemistry at the University of California, Irvine. Gupta is the author of the book The Extragalactic Universe: Exploding Stars, Dark Energy and the Accelerating Cosmos.

He also received the Interstellar Medium Prize in 2007 from the American Astronomical Society for his research on the origin and evolution of the universe. Gupta has also written more than 200 research papers about supernovae, the large-scale distribution of galaxies and the size and shape of the universe. After postdoctoral work at Kitt Peak National Observatory, where he is the Clovis Professor of Science and served as chairman of the astronomy department for seven years.

He was also associate director of the cosmicray Community at the Smithsonian Center for Astrophysics from 1997 to 2001 and co-chair of the American Academy of Arts and Sciences. He served as chairman of the astronomy department for seven years.

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Chemical, Nuclear War Provided Difficult Challenges for Scientists

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against the inhumane nature of chemical warfare. It would not be until World War I that this ban would be tested.

One of the most infamous German scientists in modern history is the father of chemical warfare, Fritz Haber. His early work included the discovery of a mechanism for nitrogen fixation. This breakthrough research earned Haber a Nobel Prize in 1918. However, Haber would gain notoriety after achieving this pinnacle of scientific success.

The stalemate that had developed between the French and the Germans as a result of trench warfare led to the search of a new tactic. Haber suggested the use of chlorine gas since the gas had the ability to sink into the trenches and essentially suffocate the opposing troops. Although this violated the spirit of the declaration from the Hague Convention, it was legal on the technicality that it was released from a cylinder, not a projectile.

First used in Belgium, the chlorine gas was released from 5730 cylinders, each filled with 200 pounds of chlorine gas. By 1916, poisonous gas was being released by explosion, which violated the spirit and the letter of the Hague Convention ban.

In addition to chlorine gas, other gases were used including mustard gas, arson-containing gases and phosgene. Instead of attacking troops, these chemicals were also used to contaminate areas that were favorable for the opponent. For example, the lifetime of mustard gas is long, rendering an area inhabitable for days or weeks.

In World War I, an estimated 560,000 casualties resulted from chemical warfare, not including the numerous injuries in areas with chemical-related injuries.

The end of World War I brought discussion about the humanity of chemical warfare. There was growing awareness regarding their use on civilians and their use in conjunction with aerial attacks. A reporter at the League of Nations called chemical warfare “barbarous and inexcusable.”

In 1922, the Washington Conference passed a ban on chemical warfare unanimously, but the French refused to ratify it, thus killing the resolution. Another attempt at banning chemical warfare came in 1925, when the Geneva Protocol called for a ban against the use of poisonous gases and bacteriological agents. However, the protocol was defeated in the U.S. Senate.

Despite public outcry denouncing chemical warfare, a group of lobbyists formed in 1919 that represented the chemical industry. Their platform was that the development of more deadly chemical agents would serve as a deterrent to war. In one instance, the lobbyists cited 24% of soldiers hit by artillery in WWI were incapacitated compared to only 2% for gas attacks and concluded that gas was 12 times more humane.

Such ridiculous claims did little to win over the public. Instead, the perceived detachment of chemists from the harsh realities of chemical warfare led to a negative public image of the chemical industry.

While the chemists of World War I fulfilled the social responsibility of science to the state, they lacked the ethics to earn public approval. However, the arrival of J.R. Oppenheimer would provide the American public with an image to replace that of Albert Einstein as the face of scientific genius. Often referred to as the father of the nuclear bomb, Oppenheimer led the Manhattan Project whose goal was to beat the Germans in the development of a nuclear bomb.

Once the Germans were defeated, the purpose of a nuclear bomb seemed unclear. However, Oppenheimer spearheaded a majority opinion that supported the use of a nuclear device on Japan—civilians in order to save 250,000 American lives that would be lost.

humor and as the show progresses, the humor becomes a bigger and bigger part of the overall piece.

The first piece, Poor Little Lambys by Stephen Gregg, is a didactic comedy about a gentle grandmother whose grandchildren play a cruel game on her at a softball game. As an opener, this play is not as flashy as it could have been; in addition, it is ammunicer to latecomers, requiring the viewer to pay attention from the beginning to understand the end. While I would not have started off the production with such a serious, investigated piece, I applaused the actors and director for undertaking this piece at all, as it is a difficult one to perform.

The second play, Picture Hearts, written by Caltech’s own Raajen Patel ‘04, is the only one labeled as “serious” in the program. The piece is, indeed, semi-serious, but as a reflection on college life it is quite humorous, as the audience can identify with the exaggerated plights of the characters. Picture Hearts is a concatenation of three related scenes which may well be called snapshots of college life. For something actually written by a Techer, this play is incredibly good, hell, it’s pretty darn good, period. While first glance the laughs are less sophisticated than those evoked by the previous play, just thinking about the material presented in Hearts and putting it all together makes the play seem a lot deeper, with more subtle themes than those created by the plot twist at the end of Lambys.

The final three productions are just humorous. English Made Simple by David Ives and Playwriting: A Rooftop Lesson by Rich Orloff, the third and fifth plays performed, have a remarkably similar structure, which is exaggerated by having both plays directed by the same director and feature an identical cast of three. The first features a narrator that walks the audience through several versions of a hello at some sort of reception or cocktail party. The second has a theater professor explaining the drama behind a man stopping another man from jumping on the roof. While the plays are superficially similar, a nearly-identical presentation of both of them does not give proper attention to the sub­­tles that distinguish one form the other. However, both of these plays were the best part of the overall act performance.

Finally, the fourth production was the well-known Variations on the Death of Trotsky, also by David Ives. The Variations were never my favorite piece, but this production showed the play at its best. It ran crisp and quick and was over before it was boring, just like a good production should behave.

In short, all the productions were pretty darn good. While some plays appeared more polished than others, all were worth seeing. As an old stage manager, I can only find one major point of criticism to the actors: a few need to make sure they stay in character onstage, especially when they are not speaking. Considering no one who auditioned was turned down for a part, however, the acting was surprisingly good.

If the one-acts will be repeated next year, which is unclear, I do suggest that is that more care be taken in selecting the plays. While all were excellent, all three final plays had the same structure, namely variations on a simple chain of events. But perhaps this criticism is too severe, after all, the point of the One-Acts is to show that they are really, really fun. And they certainly are. The One-Acts were unexpected, but they are really not. And they are really well performed. And they are really well performed. And they are really well performed. And they are really well performed.

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