The Library That Never Was: Harold Brown's Failure

With the Institute once again facing the selection of a president, the time seems ripe for a re-examination of Caltech's problems at the time Harold Brown was selected and what happened to him under his stewardship, this week's episode: The Case of the Missing Humanities Library.

In April of 1969 the ad hoc faculty Committee on Aims and Goals urged that "the important role played by the humanities be protected, strengthened, and even somewhat expanded," but it also noted "any expansion in the humanities will necessitate a much larger library," and advocated that planning for a new library facility be undertaken immediately. Obviously, attracting good new faculty members in the humanities necessitated profound research and intellectual conditions allowing them to advance their scholarly development.

Millikan library had been completed (with the proviso that it was the smallest building on campus for twenty years) and was already being recognized as inadequate for the needs of an expanding humanities department. The sort of goals kicked around for that period were 400,000 volumes in the Humanities by 1977 and figures as high as one million volumes had been mentioned as early as 1964 by such notables as Murray Gell-Mann. Proposed growth rates ranged from 30,000 volumes per year down to 13,000. One of the first factors to be taken into account was just how much Millikan could hold.

The formula is: a full floor in Millikan has 2100 shelves, figure 3 shelves to the section. Each shelf is 3 feet long and will hold about 25 average volumes. Given the average size book, the total capacity for 2100 shelves would be 52,500 volumes. The practical capacity, however, is about 80% of that figure, or 42,000 volumes of standard size. This neglects the proliferation of non-standard size volumes, which reduces the capacity to about 38,000.

At the time, humanities occupied floors 3, 4 and 5 of Millikan Library. After the new floor 3 being housed per floor foot, with the total footage being about three times that figure to allow for unavoidable services, staff, machinery, equipment, lobbies, etc. Estimates for a square foot of building housing, however, were 40. Please turn to page three.

Exchange Yourself for a Year

Caltech has two exchange programs available to undergraduates. The first is an exchange with Occidental College and Scripps College. Students enrolled at Caltech may schedule classes at either of these institutions and receive credit for them at Caltech. Students pay the regular tuition at Caltech and normally do not have to pay more tuition at these colleges. There are occasionally special fees to be paid. Students must have obtained the approval of the instructor of the exchange course, the student's option advisor, the Registrar and the Division of Financial Aid.

The program was designed for students enrolled at Caltech who wish to expand their program by taking advantage of the variety of courses offered at Occidental or Scripps. The program is not normally available to freshmen. Anyone interested in the program should consult the catalog from Scripps or Occidental to find courses they would be interested in taking. These catalogs are available in Millikan Library. After the courses to be taken, students should prepare a program and discuss it with their advisors. If the advisors approve, check with the Registrar. If the Registrar approves, go enroll for the class.

Students are allowed a normal load. Graders obtained in these exchange program courses are not used in computing Caltech's GPA. There will be a formal transcript as credit received.

There is another exchange program available to transfer students. Students may spend up to a year at another college. We presently have three arrangements with Antioch College, Pomona College, Swarthmore College, and Scripps College.

The catalogs of the colleges and prepare a program of classes. The courses must be chosen so that the students complete the requirements for their Caltech degree in the normal time. This requires some assurances that the courses taken will count towards the degree. This usually involves a statement from the option representative or the Registrar. After a program has been prepared, the Dean sends a letter of recommendation to the college concerned and the college normally accepts the student.

The program is designed for good students who feel they would like to spend a period away from campus. The option advisor, the Registrar, and the Division of Financial Aid Office. The catalogs listed above are all small liberal arts colleges. Pomona is Please turn to page three.

Women Only Housing May Come Next Year

By Jim Reichle

Next year's female freshmen may be able to opt for single-sex housing if a plan to reserve the old ROTC Annex for women only will be acted on soon by the Housing Committee. According to Ralph Kavanagh, chairman of the committee, the Annex is the most likely site because of its proximity to the rest of the houses. It is not as isolated as some of the off-campus locations, nor as integral as a female-only alley in one of the houses would be. The Annex would also be cheaper to use, says Kavanagh, since it requires only minor modifications for this kind of experiment. The coeds who would live there would participate in Rotation, and have membership in one of the regular houses, says Kavanagh.

Two months ago, six under­graduate women contacted Housing Committee members with the idea of single-sex housing. Master of Student House Jim Mayer recently polled under­graduate students here about the idea. Most of the respondents took a "dim view of the idea," while Kavanagh says the parents of some prospective female fresh­men have expressed concern over the proposal being considered here.

In an effort to eliminate this potentially discouraging feature from their plan, the Housing Committee came up with its present plan.

Single-sex housing for under­graduate women has been tried three times before here. When women were first admitted to Tech, in 1969, they were all put in one alley in Blacker house. This arrangement lasted about three weeks. The women were absorbed into the other houses. This year, single-sex housing was instituted at Lunar Street, but the coeds there felt too isolated.

The plan for single-sex housing next year is still in the housing committee. Kavanagh expects the committee to make a recommendation to the faculty committee soon, to get things rolling. The plan must be approved by the control panel in the usable, says Kavanagh. This is when the admissions committee goes out to look for applicants. Kavanagh would like the inter­viewers to be able to offer the single-sex housing arrangement to the female applicants who want it.

Prof Wins Award

William A. Fowler, Institute Professor of Physics at Caltech, has been awarded the Eddington Medal of the Royal Astronomical Society for his outstanding contributions, to nuclear astrophysics.

The Eddington Medal, which commemorates the late Sir Arthur Eddington, British astrophysicist, is awarded approximately every three years for specific investigations in theoretical astronomy. The Royal Astronomical Society's Council has cited Dr. Fowler for his pioneering research in nuclear physics and its impact on astrophysics. Particularly noted were his investigations of the origin of the chemical elements, the production of deuterium and helium in the universal fireball and massive objects, and his release of invitational and nuclear energy in massive objects.

Other honors and awards given to Fowler include the 1972 Veblen Prize from Columbia University, the Tom W. Bonser Prize from the American Physical Society (1970), the Medal for Merit from the American Nuclear Society (1948), and the National Medal of Science from President Ford in 1974.

Fowler is a member of the National Academy of Sciences and in 1976 he served as president of the American Physical Society.

Fowler received his PhD from Catholic in 1926 and joined the faculty that same year. In 1970 he was chosen to be the first holder of the Institute Professorship of Physics, an endowed chair established by Caltech to give special honor to outstanding faculty members.

Olive Walk Changes

By Ed Bielecki

Some time in the near future, the Olive Walk planters will reappear on the Olive Walk. (ed note: my information that the PFD was unhappy with the "planters" appears to have been wrong.) This means that things will be back the way they were before the Beautification of Third Floor.

The following is the administration's proposed solution to the Olive Walk Question:

1) No parking, driving, or unloading on the Olive Walk at any time, except at the beginning and end of the term, at which time the platers will be moved out of the way.

2) No parking, driving, or unloading on the Quad, from 8 am to 3:30 pm Monday through Thursday.

3) On weekends, and from 5:30 pm to 8 am on weekdays, the traffic control posts in the driveway and David R. Smith Memorial Ramp will be removed so students can take advantage of the 30 feet of unloading zone. Parking will not at any time be allowed on the Quad.

Please stay tuned for further changes from the way things were discussed by the IHC last week. If you have any comments or complaints about this proposal, collate Marc Wold, the new IHC Chairman, and tell him.
Help Wanted

Since I have been working for The Tech, and especially since becoming ENG 2, I have observed an interesting phenomenon. Lots of people complain about the quality and/or quantity of The Tech—"What happened to the twice-a-week Tech?" "How about twelve pages?" "Hey, there aren't any sports stories," "How come so much on entertainment?" and many other ideas have become familiar refrain.

Well, there is a simple solution to these problems. Join the Tech staff. If you are involved in any activity you feel don't get enough publicity, write about it or take pictures. Or if you're not involved in anything, come to Lit 15 meetings Tuesdays at 12:15 pm in 128 Baxter. Earn three units of credit for writing or week! Or, just drop by the Tech office. If you can't write, we can always use people to do layout and pasteup (if you don't know what that is, we'll teach you on Mondays and Thursdays).

So, from now on all complainers about The Tech (or its countenance) will be treated the same as people wanting to join the staff.

Spencer Klein

TOFR Wwhoopp!

To the Editor:
I was looking at my 77-78 TOFR, and I was studying the MEAN and STDEV data of various classes. I came to AM 95, with STDEV 7.4 in criticism. I was curious; I searched for higher STDEV's, but that was the largest. Then I thought that 7.4 was rather large for data on a scale of 1 to 7. By trial and success I found that the formula that was used to calculate STDEV was:

\[ \text{STDEV} = \sqrt{\frac{\sum(x-\overline{x})^2}{N}} \]

where \( x \) runs over all the data.

Now I don't know very much statistics, having taken only MA 2e and Ph 3 for education in that field. But I thought that the

formula for standard deviation was:

\[ S.D. = \sqrt{\frac{\sum(x-\overline{x})^2}{N}} \]

Using this formula, the standard deviation of criticism for AM 95 is 1.62.

The standard deviation is approximately the range about the mean minus 2/3 of the data lie. Since the mean is 2.8 in this case, the implied range is about 1.2 to 4.4. Since TOFR data are discrete rather than continuous, if we assume that the "average" is really just a random variable uniformly distributed between 5 and 5.5, we are justified in including 3/10 of those responding, 1 of all those responding 2 or 3, and 2/10 of those responding 4, as being in the range 1.2 to 4.4. This yields about 60% within 1 standard deviation of the mean. I think it is clear by this discussion that the second formula is correct, while the first formula and the published value of 7.4 is meaningless. Note that to correct the published TOFR value 7.4 I simply divide it by \( N \) to \( N/10 \) for a very good approximation.

Other than this error and that many of the classes in which I am interested are not listed in the TOFR, I have no complaint.

By the way, in case the Director of Academic Affairs thinks I might like to help out on the next TOFR, the answer is "NO!"

Joel Rabinstein

Reflections

To the Editor:
I like to share what is important to me. The letter (the long one) I wrote about two weeks ago was important to me; I was glad to share that. Physics is important to me, I like to share that. But I want even more now to share some feelings which no one else has encountered to date seriously for me.

I came to Caltech staving for approval. I realized during the term that the way I studied physics were due to be the most important elements of my life. I realize now that I do not fully understand these values or to take seriously the commitment I established. For the next two years I felt fundamentally isolated from other people and considered my thoughts as being so unworthy of being taken seriously except by myself.

Since coming to Caltech I've felt an unprecedented sense of fellowship and understanding from my peers. It is the most frustrating as well as fulfilling experience for while I have longed for both social and scientific relevance, this only aggravated some of the problems I brought with me here.

We all products of our environment, I think that boys of our culture are prepared during childhood in a rather original way to be successful. They are conditioned to react to the physical world with a positive, black and white, all or nothing thinking. By contrast girls are raised indulgently. We are conditioned to react to the physical world in an indirect and social manner. It is as though through this indulgence society tries to apologize for the brutal treatment it accords our boys. We are taught to act in these and other differing manners through the selective approval we receive during and after childhood. To some extent what is accomplished hereby can be overridden through other means, but it is difficult to overcome the loyalty and a good deal of the indoctrination developed during childhood.

The way in which the forces of peer approval have acted upon me since my coming to Caltech trouble me in a way. I find it easy to impress people here with my intelligence, my perseverance and my responsibility. But I would be justified in including a common, a social group. I'm not talking about roles and other differing manners.

Insofar as social roles are concerned, the approval I received at Caltech was by nature conservative if not reactionary. The difference in my situation is mostly that the lack within the Caltech undergraduate environment of an established and socially enforced code of feminine social behavior. Such a code has evolved in many areas of society in which a place has traditionally (historically) been assigned for girls or women. I often feel I don't fit within the Caltech undergraduate social environment as a girl or as a boy but as something in between and apart from both. Normally what substances or legitimized any social role is social approval. My problem is that it is difficult to find this sort of approval here no matter how I act no matter what role I try to assume. It is replaced by social condemnation but by indifference.

I'm not talking about role models or about individual relations. I'm talking about a social code, about myself as a member of some social class. This liberty loses in import because my basic needs are for substantive and meaningful self-fulfillment as a social member. I'm not talking about roles and other differing manners. I haven't conclusively solved this problem not do I expect I can at this time. But I have a resolution to a consequence of this letter. But as I mentioned earlier, this dammed up week. So I'm determined to keep it to myself. As always, I welcome your constructive and non-destructive comments, even if it's only someone telling me that I'm wrong.

The California Tech

Volume LXXIX Number 20
Friday, February 3, 1978

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The California Tech

Thanks

To the ex-Editor,
Thank you very much for your effort to the Tech this year's mudeo. We feel it was a great success, as we enjoyed it almost as much as the fresher and sophomores.

In case you hadn't seen the photos, the Pasadena Star-News of last Monday, we've included copies for you.

Appreciate your thanks for your assistance.

Sincerely,
The Junior Class Officers
Paul Gutierrez
Marc Wold
Joyce Lightbody

Complaint

To the Editor:
We are disappointed that you chose not to run a notice for the MUNCHKAN comic series on a spandau basis. This comic is without a doubt one of the funniest and most humorous commentary that the school newspaper has ever had in it. The writers obvious­ly possess a deep insight into the true nature of the student body. This series is marvellously able to express their thought-provoking phi­losophy in just four short panels. The Tech staff should be down on their knees begging these writers to accept an increase to continue their work.

Anonymous letter from two people who don't even know P or M

Art Exhibit

"The Poetry of Systems," a new exhibit opening at Caltech's Baxter Art Gallery on February 25, will include a wall drawing designed by New York artist Sol LeWitt especially for the show and a gallery. After the exhibit, the drawing will be painted over.

Photography, sculpture, other paintings and art forms in the exhibit will center around the artistic use of the logical progression of systems—especially a musical scale or familiar group of properties. Work by artists Chaim Gross, Horowitz, Paul Feind, Joyce Lightbody, and Karen Shaw will be shown.

Dr. Susan L. Larsen, assistant professor of art history at USC, will be our social group. I'm show, which will run through March 25.

Baxter Art Gallery is operated by Caltech's Division of Humanities and Social Sciences and the Pasadena Art Alliance. The gallery is located in 1 Donald E. Baxter, M.D. Hall, the Humanities and Social Sciences on campus, and is open to the public. No charge. Noon are to 5 p.m. Tuesday through Sunday. For more information, call 795-6811, ext. 1371.

Faculty carved the roast beef in last Wednesday's special food service dinner.

Friday, February 3, 1978
Library Failure

continued from page one

Thus, without going into the gory details, roughly 40,000 square feet would be needed to house 500,000 volumes at a cost of $1.6 million, estimated for a strictly utilitarian building. Not only was this library not built despite all the forecasts showing the need for it to be critical by now, but Harold Brown, used to more elegant digs in D.C., while directing the napalming of peasants, turned up his nose at a revamped Gates for housing the administration and promptly cleaned humanities out of the third floor of Millikan.

Where did all of this leave Caltech? How about the trailing edge? At the time of Harold Brown's arrival Caltech had collections totalling 200,000 volumes, compared with, say, MIT at 1 million plus, UCLA at 2.2 million and Harvard with 5 million plus. These statistics, of course, somewhat misleading is the existing literature in humanities is vastly greater than that in science. A typical university library is approximately 80% humanities and 20% sciences.

Finally, it takes a great deal of money to put together a major library. Not only is it difficult to induce people to foretax money for the purchase of books, collections (not quite as easy or ego-rewarding as a building with your name on it), but Caltech has been experiencing difficulty raising money locally, primarily because the economy has been sluggish at best since Carter was elected. After Harold Brown sat on the problem for eight years, it's difficult to envision the new institution President being anything but expatriate. Brown pared Caltech down and kept it lean through his time, centralizing government financing of research and economic stagnation, but we may be a lot too lean right now.

—McQ

Trustee Wins Award

Harry J. Volk, a Caltech trustee, will receive the first Rutgers Club Community service award. Volk has been a trustee since 1950.

The award will be presented by Dr. Edward J. Bloustein, president of Rutgers University. It will be given annually to a Rutgers alumna in recognition of outstanding civic responsibility. Volk was a member of the Rutgers class of 1927 and the Rutgers Norfolk, Law School class of 1930. He is now Chairman of the Board of Union Bancorp, and services on the boards of Pacific Lighting, Western Airlines, and Times Mirror.

Extra Space

Your illustrious new Tech editor

Pantomimist Performed

On Jan. 26, if you had the misfortune of not being on the quad at noon, then you did not see Israeli pantomime artist Shmuel Livne. This entertaining performance was sponsored by the Caltech Hillel. The most amusing act was "Swallyower." The swallow makes great motions to please the crowd. The flourishes and embellishments do not help the swallow to swallow the swallower, but are there to impress and awe-strick the audience. This swallow slowly works the sword in, but presently discovers that he cannot remove it. He tries to work his struggle to remove the sword into the act, but inevitably fails.

In another act, "Orchestra." Livne conducts an orchestra playing music by Rossini. He also plays several insturments in turn, and makes fun of a string bass player who falls over in the middle of the piece. My only criticism of this act is that sometimes he imitated musicians playing instruments that could hardly be heard in the particular passage.

Other themes were based on Genesis, war, and childhood. In this sense his performance was very Israeli. Israelis are proud of their ancient ties to the land of Israel. Bible is a required subject in both the secular and the religious schools. The influence of war on Israeli society cannot be overstated. There is compulsory military service for three years beginning at age 18, and everyone serves in the reserves. The army is the most pervasive institution in Israel. And Israel is one of the most child-oriented societies in existence. There is free kindergarten from age three. On Kibbutzim especially, children are given highest priority.

Livne performs as a mime, wearing a white shirt and black tights. His next performance in Caltech will be presented by the Caltech Hillel, at Bennington Hall, Oct. 26.

—MCO

Exchange

continued from page one

nearby, Antioch is in Ohio, Swarthmore in Pennsylvania, and Williams in Massachusetts.

The colleges listed above are ones with which we have formal exchange programs. In individual cases, if a student is interested in another college or university, we could write directly to try to make similar arrangements. During the last few years, we have had discussions along these lines with people at Remington College in Vermont and Oberlin College in Ohio. We would be quite willing to try to make such arrangements.

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Page Three

THE CALIFORNIA TECH
For many years, the student houses have been in a state of not so benign neglect. Because of this, they have become rundown and dilapidated. In many places, they violate OSHA regulations.

The administration has finally taken some interest in the problem. President Christy set up a committee to investigate the problem. Among the numerous things needing rehabilitation are holes in walls, unpainted walls, cold cement floors in rooms, inadequately lighted corridors, frayed carpets, and virtually useless kitchenettes. Anyone who has lived in one of the houses for any length of time is doubtless aware of these and many other problems.

It is about time that the administration took an interest in student housing. However, just setting up a committee doesn't guarantee that something will be done. There are many pitfalls to be avoided. "Necessary repairs," may take up much or all of the money, leaving things essentially as they were. Christy may only make a token appropriation. Or worse, the project may just die away, never to be seen again.

If you feel (as I do) that this project is important for our welfare, tell someone about it. Talk to someone on the committee (Dr. Robert Kavanagh, Dr. Jim Mayer, Robert Gang, Eric Kafer, Sheila Creuther, Jim Mingus, or Phil Rector), and tell them what you think needs to be done. Or, let the administration know how you feel about this desperately needed rehabilitation.

—Spencer Klein
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Frank Capra, former Techer, will be with us this week at Cinematech in the form of two of his most popular films.  
Mr. Deeds goes to town is a wonderful like. Capra graduated from here about 1918 with a degree in (don't hold it against him) chemical engineering. After graduating, he started writing comedies for Mack Sennett and later took up making films. He's the only director to ever have a film win all the top Academy Awards in one year. It happened one night(see). This film took best picture, director, screenplay, actor and actress.

Mr. Deeds goes to town is a quaint story about a small town, down to earth poet who suddenly inherits a large fortune. The results of his exploits in the 'big' city and his attempts at dispersal of his fortune are portrayed. This film contains some of the funniest scenes Capra ever did. Throughout the film Capra pokes fun at the rich and the parasites of the rich, while at the same time showing the importance of simple values.

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Mr. Deeds goes to town is a quaint story about a small town, down to earth poet who suddenly inherits a large fortune. The results of his exploits in the 'big' city and his attempts at dispersal of his fortune are portrayed. This film contains some of the funniest scenes Capra ever did. Throughout the film Capra pokes fun at the rich and the parasites of the rich, while at the same time showing the importance of simple values.
Update Yourself

The series kicked off a few weeks ago with Dr. Tom Trombello and his talk about "The Cracks Between Astrophysics, Space Science, and Solid State Physics." Subsequent talks have been given by Dr. Rick Field on particle physics, Dr. Henry Huang on current research with immunology, and by Dr. Jesse Greenstein on degenerate matter in stars. Students are encouraged to ask questions and, as the ads say, "Bring Your Lunch." Update is the only and interesting way to introduce yourself to new ideas in science.

The Caltech Y is sponsoring a series of noon discussions on current research at Caltech. UPDATE, as the series is called, is a series of discussions on current research on the frontiers of science. Each Wednesday at noon, a Caltech professor comes to give a short, informal talk about the research that is involved. The talks are given in the informal atmosphere of Lounge One, which allows the professors to show slides, viewgraphs, or draw on blackboards. Generally, the professors give a short illustrated talk and then go into questions and answers.

CAMPUS INTERVIEWS Feb. 8, 1978
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THE CALIFORNIA TECH
**The News**

**Update Yourself**

Next Wednesday, February 8 at 12 noon, Dr. Norman Davidson, professor of chemistry, will give an UPDATE discussion presentation on “Research on Nuclear Acids - A Contemporary Scientific Revolution.” The Cal-tech Y is sponsoring the informal series and encourages you to BRING YOUR LUNCH and rap with a professor.

**Ski Toons This Spring**

If you would like to ski at Taos Ski Valley, New Mexico, this spring break, with the Ski Club, please contact Mark Fischer, 793-3449 or Mike Meyer, 229 Lloyd 440/294, by Monday, February 6, 1978

**Play for Fiorello**

The orchestra for Fiorello needs some more bodies, specifically a violin, viola, bass trombone, and trumpet. If you are interested, contact Flora X2157 Set More Fiorello violin, viola, bass trombone, lam. Meet in the orchestra for some more bodies, specifically a Play Club, Taos Ski Valley, New Mexico, February 8, 1978 if you wish to sign up for an audition. Contact Mark J. Rosker, Ricketts 16-A, 449-9414, P.O.D. 10am & 8pm, Price & Waterhouse, CT 515 Set More Money

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**The Ascit Friday Night Movie**

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7:30 p.m. & 9:30 p.m.
in Baxter Lecture Hall

ADMISSION: 50c—ASCIT members $1.00—anyone else

Next Week

The Man Who Shot Liberty Valance

**Naval Enthusiats**

There will be a naval reenactment game at 7:45 pm. on Saturday, Feb. 4 in Dabney Lecture Hall. There will also be a table in the Clubroom 1 of Wilmot Co. on Friday and Sunday night beginning at 7:30 pm.

**Classified Ads**

WANTED: Naive, easily taken frosh still looking for used bicycle. Am willing to throw my roommate into the deal (this can be negotiated). Prefer 10-speed. Contact Mark J. Rosker, Ricketts 16-A, 449-9414, PROFESSIONAL TYPING by experience executive secretary. IBM Selectric correcting. Clean, well-displayed work. Specializing in essays, resumes, Misc., etc. Fast, reasonable. Phone 441-1640.

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