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WU Record

Published For The Washington University Community

March 23, 1978

SAC Aids Admissions Process with Student Insights

For some, it may be a distant memory, while for others, one easily recalled, but the experience of preparing for college with the necessary visits and interviews may rank among life's most harrowing. Not only is there fear of being academically unqualified, or of sounding foolish to an admissions officer, but also of not fitting in, of clothes and hair not being right, of being *so young*.

The Student Admissions Committee (SAC), a large group of WU students from all undergraduate levels and divisions, works at smoothing over some of the bumps in the admission process for prospective students.

"Everything we do is for prospective students, with the goal of their coming to WU," agreed cochairpersons, Sara Johnson and Mitch Berman, both of them law school-bound seniors. "We all want the best student body possible."

The functions of the committee include calling prospective students during winter break and the year on the Wide



Peter H. Zimmerman

Graced recently with a sunny and snowless day, senior Debra Gallant (left), a SAC tour guide, pointed out campus buildings and landmarks to prospective students and their parents.

Area Telephone Service (WATS); preview weekends and overnight hosting, where students interested in WU spend a night in the dorms; and admissions folder reading. In addition, SAC minority and transfer student committees combine the duties of other committees to work with specific student populations, and members of a School of Fine Arts committee and a School of Engineering liaison keep SAC in touch with these schools' separate but parallel admissions programs.

All SAC members also spend one hour a week interviewing prospective students. Fifty students take part in these SAC activities. Tour guides number an additional 30.

SAC's origins date back to 1964 when Admissions Office staff members Margaret Dagen and E. B. McDonald realized that an organized method was needed to conduct campus tours for a growing number of out-of-town students.

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Two Engineering Fellowships Honor Dean Emeritus Harold P. Brown

When Harold P. Brown, now assistant dean emeritus of WU's School of Engineering and Applied Science, retired in 1977, he was honored with the establishment of the Harold P. Brown Engineering Fellowship Competition.

Beginning in the fall of 1978, Brown Fellowships will be awarded to two students entering the School of Engineering as juniors participating in the Three-Two Plan. The Brown Fellows will receive full tuition plus a stipend of \$500. The fellowships will be renewable for a second

year and will be awarded on the basis of merit only, that is, on academic and extracurricular records established at the students' participating Three-Two college and on the students' promise for professional achievement in engineering and applied science.

In the Engineering School's Three-Two Plan, a student takes three years of liberal arts at one of the associated or corresponding colleges cooperating with WU in the plan and two years of professional training at WU. These students

earn a bachelor's degree from their college and an engineering degree from WU.

Brown initiated and developed the Three-Two Plan, which is now responsible for 20 percent of the upper-division students in the Engineering School. He also



Harold P. Brown

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Poll Reveals Freshmen Rate WU Academics High, Social Life, Low

Replies to a questionnaire distributed last semester to freshmen at WU have recently been tabulated.

Designed to collect information about student attitudes for the WU Admissions Office, the project was the joint effort of William H. Turner, director of Admissions, and Hazel Z. Sprandel, associate director of the Career Counseling and Placement Office.

The responses to the questionnaire clearly showed that freshmen are satis-

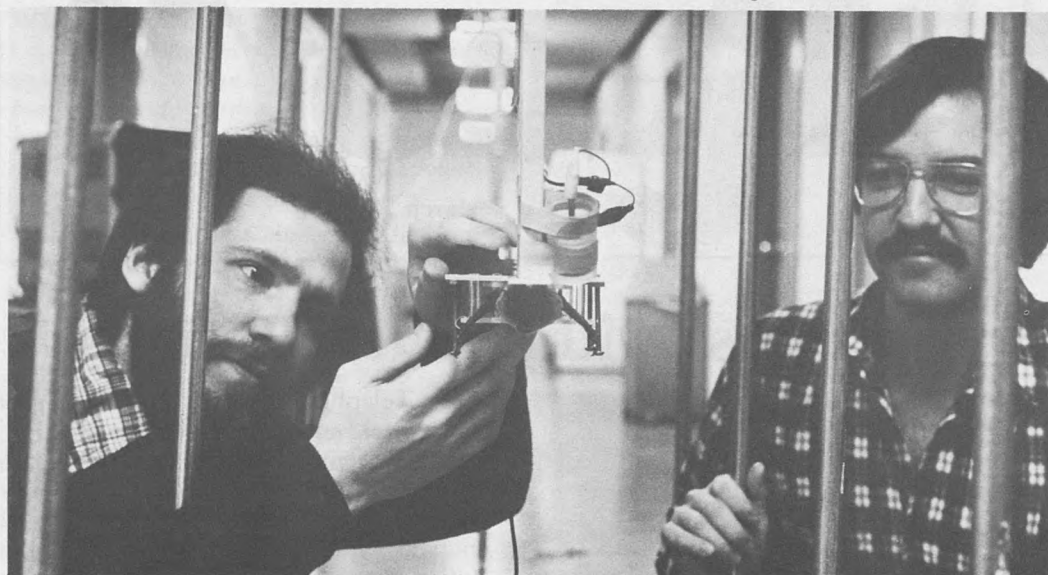
fied with the University as an academic institution. Over 85 percent of the 313 respondents thought the faculty excellent or good, and almost 70 percent rated the teaching at WU as excellent or good. Some 80 percent thought very highly of the size of the school. The research reputation of the University also received high marks.

The data also indicated several problem areas. More than a quarter of the respondents were not satisfied with aca-

demic advising, and a third of the students thought the student-faculty ratio only average. Twenty percent gave an unsatisfactory rating to student-faculty interaction. There was substantial dissatisfaction with food service facilities and only a quarter were satisfied with social activities at WU. Questions about a number of other aspects of campus life also were asked in an attempt to gain a comprehensive view of student attitudes.

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2 Mustache Bats Take A Ride On A 'Batmobile' To Help Biology Researchers Study Biosonar



Dan Kuriloff (left), an undergraduate biology honors student, and Bill O'Neill, Professor Nobuo Suga's research assistant, securely fasten a mustache bat to a batmobile.

The awkward object slides down a hair-thin wire on two white plastic wheels. Fastened securely underneath, a small, brown, furry creature throws its head from side to side. The creature is a Panamanian mustache bat, *Pteronotus parnellii rubiginosus*, and the object is called a "batmobile."

The batmobile is part of an experiment in Professor of Biology Nobuo Suga's laboratory where he is studying the mustache bat's biosonar system, which differs from that of all North American bats and which man can mimic only with sophisticated electronic equipment.

All bats, of course, use sonar (sound navigation and ranging) to find their way around in the dark, and even in the daylight because of their poor eyesight. But the mustache bat performs an interesting variation on this theme. Within a specific range, its auditory system, which includes its ears, brain and everything in between, is adapted to use a particular frequency of sound, 61 kHz. (61,000 cycles per second.) While North American bats emit mainly an FM (frequency modulated) signal for echolocation, the mustache bat always emits a short FM signal plus a long CF (constant frequency) signal of about 61 kHz.

A CF signal has certain advantages over an FM signal. The CF signal concentrates sound energy in a single frequency so that it is easier for the bat to pick it out of background noise when it returns as an echo. Because it uses CF signals, the mustache bat performs another interesting variation called "Doppler-shift compensation."

A Doppler shift is a change in sound frequency caused when either the source of a sound or the receiver of a sound is moving relative to the medium through which the sound waves are traveling. For example, if an observer is riding on a

train that is approaching a crossing, the crossing's warning bell will seem to clang more rapidly and at a higher pitch the closer the train comes to the crossing. This Doppler effect makes the frequency of the bell's clanging seem to shift, in this case, to increase.

The same Doppler shift occurs to the sound emitted by a bat. The 61 kHz. signal emitted by the mustache bat in flight will return, for example, as a 63 kHz. echo. Because the mustache bat's auditory system is tuned to 61 kHz., it is better equipped to analyze an echo of that frequency. So, the bat compensates. If it detects a Doppler-shifted echo of 63 kHz., it will begin to emit a lower frequency so that the returning echo will remain at 61 kHz.

Suga and his former student, Professor Philip Jen (now at the University of Missouri at Columbia) found that 30 percent of the mustache bat's auditory cortex is devoted to analyzing this 61-63 kHz. signal. A principle similar to that followed by other mammals seems to be working here: the more important a function is to a species, the greater the area of the brain devoted to that function. Echolocation is imperative to the mustache bat's survival. Through evolution this bat has developed a particular signal and the appropriate auditory mechanisms which enable it to locate an insect, judge its distance, speed and the direction of its flight and even determine whether the insect is of a particularly appetizing species.

Because the mustache bat has such a strong affinity for a 61 kHz. signal that it compensates for the Doppler shift of the signal's echo, the batmobile experiment was developed to determine just how accurate that compensation is. Suga is involved in the study of the bat's brain;

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SAC

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Over the years, they have watched their brain child grow from a small group of tour guides into an organization much larger and more complex.

"Since its beginning, it's been a rolling stone, gaining momentum with students' interests," said Dagen.

A major change in the committee's functions occurred some 10 years ago when students wanted to expand their participation to include talking with prospective students, learning about admissions criteria and actually reading application folders.

"While staff members can only observe and interpret the college experience," McDonald said, "students live it. They wanted their insights to be considered in the selection of their peers."

The concept was unique and not without its skeptics. However, the program remained and became a model for other colleges and universities.

SAC has still not reached its adulthood. New committees, such as the Overnight Hosting Program, intended for in-town students, are added all the time.

"Last year, one of our members, herself a transfer student, felt we were not dealing well enough with the needs of transfer students," Johnson said. "It turned out she was right. A new group was formed and now the Transfer Student Committee is very active."

The breadth of the students' efforts is evident in a recent report by the Winter Break Committee. With 260 WU students participating, 1342 phone calls and 23 visits to high schools were made over the winter break. Later this spring, members of the WATS Line Committee will spend several evenings calling scores of admitted students, urging them to make WU their choice.

Culminating a year of work by all SAC members is "Spring Thing," April 9 and 10 on campus, when an expected 300 admitted students will visit WU.

The importance of admissions is not lost on Johnson or Berman. "We feel that the Admissions Office is unique in allowing us such an active role in its crucial operations," Johnson said. "They have shown a lot of confidence in our judgment and abilities," Berman added.

Dagen and McDonald are well satisfied with the collaborative and mutually beneficial SAC-Admissions Office relationship. Not only does the experience teach students something of the inner workings of the University, they noted, it also tends to groom campus leaders and strong alumni.

"SAC members have always been very reliable and hard-working," said Dagen. "We have a great deal of respect for them."

McDonald's response was simple. "We couldn't do without them."

(Charlotte Boman)

Bats

(continued from page 2)

so his postdoctoral associate Bill O'Neill and several undergraduates in the biology honors program, mainly Dan Kuriloff and Tad Berry, have conducted the experiment for the past semester and a half. They have found the mustache bat's Doppler-shift compensation to be fairly accurate, as originally described by Professor Schnitzler (now at University of Marburg, Germany), and have discovered what Suga believes to be the reason other researchers could not find Doppler-shift compensation in mustache bats.

According to Suga, these bats must be placed in as realistic a setting as possible before they will exhibit Doppler-shift compensation. If the bats, which are kept in confined quarters during their trip from Panama, are taken from this environment and put in an experimental situation that does not mimic the bats' natural flight, no Doppler-shift compensation will occur. If they are taken from confined quarters and used in the bat-mobile experiment, 25 percent of them Doppler-shift compensate. And if they are placed in a dark room in a cage in which they can fly around for a period of time before they are used in the bat-mobile experiment, then a great percentage of them will compensate for Doppler-shifted echoes.

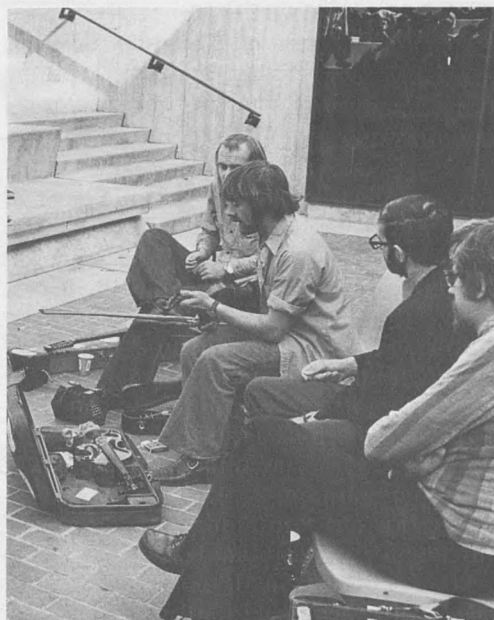
Suga and O'Neill are the only neurophysiologists in the world now experimenting on the auditory system of the Panamanian mustache bat. They support WU's reputation as a major center for bat research. In addition to their research, Peter Wasserbach and Ted Sullivan, neurobiology graduate students, are researching bat biosonar in the big brown bat, one of Missouri's common species of bats, and Associate Professor of Psychology James Simmons is researching bat behavior.

Their research adds to the knowledge of basic brain functions in all mammals, including man. Of his research, Suga says, "it is very clear that our research greatly contributes to the understanding of hearing systems, that is, of their basic neural mechanisms."

O'Neill and Jim Jaeger, Suga's laboratory technician, will travel to Panama early in April to collect more mustache bats. And in coming months, *Science* magazine, a prestigious weekly publication, will publish two more articles in a series of four written by Suga and his coworkers explaining the details of his research to the scientific community.

(Nick Ingala)

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Lusty reels, jigs, Irish airs and ballads are the fare of the Boys of the Lough, who will appear in Graham Chapel, Fri., March 24, at 8 p.m. See Calendar listing for details.

Brown

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developed the Langsdorf Fellowship Competition, the Engineering Practice Program, the Saturday School Program for High School seniors, the Undergraduate Research Fellowship Program and the Intensive Course Programs for Three-Two students.

Brown has had three major careers as professor of organic chemistry, industrial research chemist and consultant and as an academic administrator. He is the author of many scientific articles in organic and polymer chemistry, adhesives and elastomers and is the holder of patents in these fields.

His past four years at WU have been devoted to the development of the Three-Two Plan, and his accomplishments and contributions to engineering education at WU were recognized last year by the establishment of the Brown Fellowships and by these words of James M. McKelvey, dean of the School of Engineering and Applied Science: "He is the person most directly responsible for the impressive growth in numbers and quality of the undergraduate engineering student body at Washington University."

L. S. SHAW (HSIAO LI-SHENG), prominent contemporary Chinese painter and calligrapher from Hong Kong, will give a demonstration of brush painting and calligraphy on Sun., March 26, at 3 p.m. in the Washington University Gallery of Art, Steinberg Hall. An exhibit of Shaw's figure and landscape paintings will continue at the Gallery, lower level, through March 28.

DISCO DANCING is only one of a number of courses the Campus Y is offering this semester, beginning March 22 to 29. If there is enough interest, a short Chinese cooking class will be given. For further information, call 889-5010.

Poet Nikki Giovanni Headlines King Symposium March 23-29

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The 1978 Martin Luther King Symposium (A New Search for the Dream) will be held at WU from Thurs., March 23, through Wed., March 29. Poet and lecturer Nikki Giovanni will be the featured guest speaker. The schedule of events for the symposium is as follows:

Thursday, March 23: Movie, "I have a Dream," Mallinckrodt 325, AV Room, noon (also at 8 p.m. in Wohl Formal Lounge). Admission, 50 cents and an item of clothing.

Friday, March 24: Movie, "The River Niger," Rebstock 215, 8 p.m.

Saturday, March 25: Panel Discussion on "Dr. King's Ideas and His Dream," at 5 p.m. in Mallinckrodt Cafeteria. Panelists will be Horace Mitchell, director of WU's Black Studies Program and assistant professor of black studies and education; Robert C. Johnson, WU assistant professor of black studies; Robert L. Williams, WU professor of psychology; and the Rev. Bernard Lafayette, Jr., regional director of the National Institute for Campus Ministries and WU adjunct assistant professor of social work. A soul food dinner will follow the discussion.

"Club Savannah" Party in Holmes Lounge with the "Stimulation Review," at 9 p.m.

Monday, March 27: "Black Velvet Awakening," a student salute to Dr. King with dance, drama and song, 7 p.m. in the Women's Building Lounge.

Tuesday, March 28: Marathon Basketball Game, Grads vs. Undergrads, in Francis Fieldhouse Gym at 7 p.m. Proceeds will go to the Association of Eritrean Students.

Wednesday, March 29: Nikki Giovanni, poet and lecturer, will speak at Graham Chapel at 11 a.m. A luncheon at Wohl Center at 12:30 p.m. (charge for meal) will be attended by Giovanni.

Informal Discussion with Nikki Giovanni at 1:30 p.m. in the Women's Building Lounge.

The symposium is being sponsored by the Association of Black Students, ZANU (Zimbabwe African National Union) Support Committee, Black Studies and Special Educational Services.

TOURS OF TYSON RESEARCH CENTER will be held during the month of April for members of the WU community and their families. Generally, Tyson is not open to the public. The tours concentrate on ecology and are led by Richard Coles, director of the center. They take about two-and-one-half hours. Since groups for each tour are limited to 25, interested persons should make a reservation by calling Mrs. Palmer at 938-5346 on Mondays, Wednesdays and Fridays. The schedule of tours is as follows: Sat., April 1, at 9:30 a.m. and at 1:30 p.m.; Sun., April 2, at 2 p.m.; Sat., April 15, at 9:30 a.m. and at 2 p.m.

4 Calendar

March 24-30

FRIDAY, MARCH 24

11 a.m. Department of Chemical Engineering Seminar, "Hydrodynamics of Two-stage Flow Through Porous Media," J. C. Charpentier, prof. of chemical engineering, Laboratoire des Sciences du Genie Chimique, Nancy, France. 199 Cupples I.

3 p.m. Department of Chinese and Japanese Lecture, "Chinese Poetry in Chinese Painting: The Synthesis of a Double Art," Jonathan Chaves, prof. of Chinese literature, Cornell U., Ithaca, N.Y., 218 Brown Hall.

SATURDAY, MARCH 25

8:30 p.m. Women's Programming Board Women's Disco Dance. Umrath Lounge. Admission \$1. Cosponsored by the Women's Caucus of the George Warren Brown School of Social Work.

MONDAY, MARCH 27

2:30 p.m. Department of Chemical Engineering Seminar, "Modeling Trickle Bed Reactor Processing Volatile Liquid Reactants," A. Germain, prof. of chemical engineering, Universite de Liege, Belgium. 100 Cupples II.

4 p.m. Department of Anthropology Lecture, "The Contribution of Medical Anthropology: Human Reproduction," Lucile F. Newman, prof. of anthropology, Dept. of Community Medicine, Brown U., Providence, R.I. 303 Mudd.

4 p.m. Department of Psychology Colloquium, "Laboratory Simulation of Optimal Feeding Strategies," Lynn Kaufman, prof. of psychology, Rutgers U., New Brunswick, NJ. 102 Eads.

8 p.m. Hillel Lecture, "Israel and the Palestinians," Shlomo Avineri, prof. of political science, Hebrew U., Jerusalem, Israel, Hillel House, 6300 Forsyth.

TUESDAY, MARCH 28

4 p.m. Department of Anthropology Seminar, "Current Research on Early Human Interaction," Lucile F. Newman, prof. of anthropology, Dept. of Community Medicine, Brown U., Providence, R.I. Women's Bldg. Lounge.

4 p.m. Department of Chemistry Seminar, "Protein Structures Related Aspects of Copper (II) Chemistry," A.W. Addison, prof. of chemistry, U. of British Columbia, Vancouver. 311 McMillen Lab.

WEDNESDAY, MARCH 29

11 a.m. Martin Luther King Symposium Lecture, "Readings and Commentaries," Nikki Giovanni, poet, reading selections from her works. Graham Chapel.

4 p.m. Center for the Study of American Business Seminar, with Franco Modigliani, prof. of economics, MIT., Cambridge, 300 Eliot.

8:30 p.m. School of Architecture Lecture, "Post-Modern Architecture," Robert A. M. Stern, NY architect and author. Steinberg Auditorium.

THURSDAY, MARCH 30

4 p.m. Department of Chemistry Seminar, "Glycolipids," Norman Shaw, WU visiting prof. and prof. of chemistry, Microbiological Chemistry Research Lab., U. of Newcastle, England. 311 McMillen Lab.

7:30 p.m. George Warren Brown School of Social Work Lecture, "The Issue of Race in Social Work Practice," Leon Chestang, prof. of social work, U. of Chicago, Ill. Brown Lounge.

MUSIC

FRIDAY, MARCH 24

8 p.m. Office of Student Affairs Concert, The Boys of the Lough, performers of traditional folk music of the British Isles. Graham Chapel. General admission \$5.50; \$4.50 for WU students with SU card in advance. Tickets available at Edison Theatre Box Office and Streetside Records in Webster Groves.

8:15 p.m. WU Choir Concert, Orland Johnson, WU prof. of music, director. The program will include the "Chichester Psalms," by Leonard Bernstein, and "Songs of Praise," by Salamone Rossi. United Hebrew Congregation, 225 S. Skinker.

8:30 p.m. Women's Programming Board Concert, with Kay Gardner, flutist, singer and songwriter. Women's Bldg. Lounge. Admission at the door \$3; \$2 for WU students.

SATURDAY, MARCH 25

12 noon. WU Wind Ensemble "Pops" Concert, Dan Presgrave, director. Plaza Frontenac.

SUNDAY, MARCH 26

8 p.m. Department of Music Electronic Music Concert, including student compositions created on ARP and Moog synthesizers, combining traditional and electronic instruments and pre-recorded tapes. Tietjens Rehearsal Hall, 6500 Forsyth.

THURSDAY, MARCH 30

8 p.m. Department of Music Faculty Concert, with WU instrumental instructors William Martin, viola soloist and George Silfies, piano. The program will include works by Fasch, Schubert, Hindemith and Brahms. Martin and Silfies are also members of the St. Louis Symphony Orchestra. Steinberg Auditorium.

Poll

(continued from page 1)

The questionnaire was primarily intended to provide information useful to the Admissions Office in its continuing attempt to portray WU to prospective students. But the data are also being distributed to the deans of various academic divisions and the directors of other components of the University for their use in assessing operations, and when appropriate, responding to problems. Plans now call for the survey to be conducted annually as an aid to measuring the results of improvements and changing student attitudes.

FILMS

FRIDAY, MARCH 24

7 and 10 p.m. WU Filmboard Series Double Feature, "Bananas" and "Love and Death" (8:30 and 11:30 p.m.). Brown Hall Theatre. Admission \$1.50. (Also Sat., March 25, same times, Brown; and Sun., March 26, 8 p.m. and 9:30 p.m., Wohl Center.)

SATURDAY, MARCH 25

8 p.m. Office of Student Affairs Double Feature, "42nd Street" and "On the Town." Rebock Auditorium. Admission \$1.

MONDAY, MARCH 27

5:30 p.m. S-40 Crafts Guild Film Series, "Lorraine Hansberry: The Black Experience in the Creation of Drama" and "Yonder Come Day." Wohl Center Formal Lounge.

7:30 p.m. WU Filmboard Series Double Feature, "Red Dust" and "China Seas" (9 p.m.). Brown Hall Theatre. Admission \$1.50 for either or both films. (Also Tues., March 28, same times, Brown.)

TUESDAY, MARCH 28

12 noon. Tuesday Women's Film Series, "Got To Tell It: A Tribute to Mahalia Jackson" and "The Flashettes." 303 Mallinckrodt. (Also, 6:30 p.m., Wohl Center Formal Lounge.)

WEDNESDAY, MARCH 29

7:30 p.m. New German Cinema Series, "Every Man for Himself and God Against All," directed by Werner Herzog. German with English subtitles. Brown Hall Theatre. Admission \$1.50. (Also Thurs., March 30, 9:45 p.m., Brown.)

9:45 p.m. WU Filmboard Series, "The Green Wall." Brown Hall Theatre. Admission \$1.50. (Also Thurs., March 30, 7:30 p.m. Brown.)

EXHIBITIONS

"Recent Works," an exhibit of works by Gyorgy Kepes, Distinguished Visiting Louis Beaumont Professor of Art. WU Gallery of Art, Steinberg Hall, upper gallery. 9 a.m.-5 p.m., weekdays; 1-5 p.m., Sat. and Sun. Through April 2.

"Leonard Baskin; Images of Man," a dual exhibit on this contemporary artist and illustrator on display both in the WU Gallery of Art in Steinberg Hall and in the Rare Book Department of Olin Library. Hours are 9 a.m.-5 p.m., Mon.-Fri. and 1-5 p.m., Sat. and Sun. in the Gallery; 8:30 a.m.-5 p.m., weekdays, in the Rare Book Department. Through April 2 at both locations.

"Chinese Painting by L. S. Shaw (Hsiao Li-sheng)," an exhibit of ink and watercolor works by this well-known contemporary Chinese artist. WU Gallery of Art, Steinberg Hall, lower gallery. 12 noon-5 p.m., Mon.-Fri.; 1-5 p.m., Sat. and Sun. Through March 28.

DAVID FELIX, professor of economics at WU, gave a paper entitled "Consumption Dynamics and the Future of Economic Growth," at the 19th annual convention of the International Studies Association in Washington, D.C., on February 22.