



HEART PUMP — possible substitute for human heart during cardiac surgery.

## Sarpkaya: EM Students Developing Metal Heart

### Surgery Uses Air Pressure To Advantage

Persons suffering from heart ailments may be able to look forward to a better chance of surviving a corrective operation as a result of research being done in the engineering mechanics department here at the University.

Dr. T. Sarpkaya, professor of engineering mechanics, has been working with his students for the past year toward the development of a mechanical heart. When perfected, it will be used to replace the heart during surgery in which the action of the heart must be stopped.

Although the machine is presently in the experimental stage and many problems remain to be solved, progress is being made toward the development of a pump which can be satisfactorily used in a human operation.

Dr. Sarpkaya's mechanical heart is made from plexiglass and metal plates, and is assembled such that air passages called "ventricles" will operate solely on air pressure to produce the oscillations and pressures required to duplicate the operation of the heart.

The machine contains no parts other than the inlet and outlet blood valves, and the principles of fluid mechanics account for its operation. The absence of moving parts is a definite improvement over previously de-

signed pumps because it produces a minimum or red blood cell breakdown, called "hemolysis". This problem has been encountered by many others who have attempted to build suitable pumps. Dr. Sarpkaya said.

Any machine which will be used to replace the heart during an operation must match the systolic and diastolic (high and low) pressures as well as the heart beat rate. Dr. Sarpkaya's model accomplishes this by the use of air control valves. The pump has been used successfully in actual tests on dogs for six to eight hours at the school of medicine in Omaha.

Despite the many advantages of the machine, there are distinct problems preventing its commercial use, he noted. The most serious of these is matching the pump's operation to the psychological and mental conditions of the patient. Changes in the patient's condition during the operations must be met with readjustment of the pump spontaneously.

As yet, it is difficult to accomplish this adequately, even though a variety of monitors and gauges are used constantly during the operation to record all changes in the patient's processes.

He said that if some type of feedback system could be employed to correlate the psychological conditions of the patient to the operation of the pump, many of the existing problems would be solved.

### Production Featured—

## Prep Journalists To Convene

Some 400 high school journalists are expected to attend tomorrow's 32nd annual convention of the Nebraska High School Press Association.

The event, to be held on campus, will include a series

of journalism workshops on newspaper and yearbook production, radio-television broadcasting and advertising.

The general session will begin at 9:30 a.m. Friday in the Student Union with Roger Feidler of Columbus presiding.

Dr. Robert Manley, assistant professor of history, will speak at the noon luncheon, presenting an illustrated talk on "Nebraska Trails," with musical accompaniment.

John Sandoz of Crieghton Prep, Omaha, will preside at the luncheon. Separate luncheons will be held for students in advertising and radio-television.

Awards for outstanding high school yearbooks and newspapers will be presented at the banquet tonight. The banquet will begin at 7 p.m. in the Union.

The registrations include 1,142 adults, those who are not carrying 12 or more hours, and 1,103 campus students carrying 12 or more hours.

"The increase in adult registrations apparently is due to more interest in continuing education," Ellingson said.

### Night Classes Up Enrollment

Registrations for evening classes at the University of Nebraska are the highest since 1956 and equal all-time records set after World War II.

Edor Ellingson, supervisor of evening classes, said fall registrations now total 2,245 compared to 1,706 a year ago.

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## IFC Letter Sets Aims Of KAP's

A paper stating the aims and purposes of Kappa Alpha Psi, a University fraternity laying the ground work for admission to the Interfraternity Council (IFC), was distributed to IFC members at their meeting Tuesday night.

Ulysses Brown, president of the fraternity, will be present at next week's meeting to discuss the letter with the IFC.

Kappa Alpha Psi, founded at the University of Indiana on Jan. 5, 1911, follows the purpose of achievement and making college life meaningful to the student by creating an atmosphere of brotherhood for all mankind.

For these reasons, the fraternity has never denied membership on the basis of color, religion or national extraction.

On Nov. 15, 1916, Kappa Alpha Psi founded the Eta chapter on the University campus. Due to the fact that the number of men graduating exceeded those coming into the fold, the chapter has been on the verge of inactivation, the letter said. The reason this did not take place is because the Lincoln alumni were active in keeping the fraternity records and history.

The undergraduate membership has never been of the size to warrant action for recognition by the IFC. There is now a pledge class of 35 men, 18 of which are formally pledged into the pledge club and the others waiting formal pledging as soon as they have the required 15 hours with a grade of five or better. For active membership, the pledges must have 30 credit hours with a grade average of five.

The letter pointed out that it is currently the purpose of the fraternity to make itself known to the University and IFC. It stressed that the purpose is not to be known as a segregated or discriminating group due to the fact the membership may be predominantly Negro on the University campus. Of the 27,500 members in 242 active chapters of Kappa Alpha Psi, not all members are Negroes.

Ted Scharfenstein, assistant executive secretary for the National Pi Kappa Phi fraternity, was introduced as a guest of the IFC meeting by John Stohlmann, president of Pi Kappa Phi.

PTP To Sponsor Tour Of Sheldon

People to People is sponsoring a tour of the Sheldon Art Gallery on Sunday Nov. 3.

Interested students are to meet at 1:50 in front of the north door of the Student Union.

Guides from the art gallery will explain the various objects of interest.

People to People is also sponsoring a series of Friday night socials which start at 7:30. Teachers from Arthur Murray will give dancing instructions at these socials.

The Student Council yesterday unanimously passed a resolution urging the student body to attend the Missouri-Nebraska football game in Columbia, Mo., and to support the University football team by their attendance.

An amendment, made by Dick Weill, vice president, pointed out that the Council is not sponsoring an official migration.

Glenn Korff, in proposing the resolution, pointed out that Nebraska is going after its fourth conference win and is facing "a good team that will be playing for its homecoming." He added, "The Missouri officials have indicated

that all Nebraska students will be admitted, if not to a stadium seat, at least to some kind of seat."

A motion calling for an expression of disapproval to be sent to the University of Alabama was brought off the table and withdrawn. The motion concerned an oath that University of Alabama students were required to sign pledging themselves to refrain from any service with the news media in matters expressly touching on matters of race relations and reporting of same. The oath has recently been modified by the University to restrict students from writing about Negro students

or applicants at the University of Alabama alone.

"Since the oath no longer has enough application to be worthy of censure, I don't feel that we should act on it," said Tom Kort, who originally made the motion.

Susan Segrist, representative from Arts and Sciences and Council chairman of the Midwest Model United Nations (MMUN), announced that Kwame S. Adusei-Poku, press and information officer of the permanent mission of Ghana to the UN, has been obtained as the speaker during United Nations Week. He will speak Dec. 4. The Council passed a motion raising the United Nations Week budget from forty dollars to fifty dollars. This will be used to help pay for the speaker, who has asked that any speaker fee be donated to his favorite charity. The Student Union is giving fifty dollars for this purpose.

Dennis Christie, president and Council representative to the commencement committee, announced that June 1964 commencement will be held

## 'Sadie' Named At Ag Dance Friday Night

The annual Sadie Hawkins Dance will be held at the Ag Union Activities Building at 8:30 p.m. Friday, Nov. 8.

The finalists for Miss Sadie Hawkins are: Janell Quaring, Alpha Chi Omega; Judy Sorrenson, Alpha Phi; Carolyn Ksieusek, Burr East; Sandy Wright, Delta Gamma; Lynn Smith, Gamma Phi Beta; and Liz Hecox, Kappa Delta.

Lil' Abner finalists are: Jim Cada, Alpha Gamma Rho; John Turnbull, Ag Men; Gary Kimbrough, Alpha Gamma Sigma; John Wendt, Burr West; and Keith Gilster, Farmhouse.

These candidates were chosen on the basis of talent and costume. The final voting will be held at the dance from 8:30 to 10 p.m.

The Sigma Phi Epsilon combo will play for the dance, and tickets are on sale now.

Tickets may be purchased from any of the candidates or at the Ag or City Student Unions. The price is \$1 single or \$1.50 per couple.

## Military Ball Features Covington Orchestra

The Warren Covington Orchestra will play for the Military Ball, November 16, Bill Gunlicks, publicity chairman for the Ball, announced.

"Partners in Peace" will be the theme of the dance to be held at the Coliseum. The tickets will go on sale Monday for three dollars a couple in the Student Union and Military and Naval Science Building, according to Gunlicks. They may also be bought from any junior in ROTC.

The honorary commandant and various service queens will be announced at intermission of the dance.

Army ROTC and Capt. Harold Klingman are in charge of the dance.

The fifteen-piece band is capable of playing anything from soft society music to Latin American cha-chas and

## YD's Meet To Reveal Programs

The young Democrats (YD's) will hold a reorganization meeting at 7 p.m. in 345 Student Union tonight. The policies and programs for the semester will be outlined and committees will be appointed, according to Murry Shaeffer, YD president.

Shaeffer said the purpose of the YD's is to publicize the policies and goals of the national Democratic party and the Kennedy administration.

The YD's are not interested in promoting argument for the sake of argument, added Shaeffer. He indicated that they are in no way interested in what the far left and far right are doing to amuse each other.

"We are interested in the exchange of sincere and constructive ideas, but will not waste the time of all concerned by throwing petty slams at any organization," he said.

"It is imperative that everyone interested attend the meeting tonight, especially those who signed up for Young Democrats at the freshman activities mart," Shaeffer said.

Army ROTC Reveals Distinguished Students

According to Capt. Wes Woolworth, assistant professor of military science, the following Army ROTC cadets have been designated Distinguished Military Students (DMS) for the 1963-64 school year: Russell Daub, John Demel, Grant Gregory, Ronald Hanthorn, Cary Hiner, Albert Cranford, Robert Spearman, Al Book, R. Neale Copple and James Morrison. Mrs. James Morrison will assist.

Members of the editorial staffs of the Daily Nebraskan and Cornhusker will assist with the workshops. They include: Dr. William Hall, director of the School; Dr. Robert Spearman, Al Book, R. Neale Copple and James Morrison. Mrs. James Morrison will assist.

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Dr. Roberto Esquenazi-Mayo, associate professor of Spanish, will speak on "The



Covington

will play the type of music the dancers prefer. Covington plays the trombone and sings baritone. He is adept at dancing and is expected to give a cha-cha demonstration at the dance.

Gunlicks pointed out that the dance is formal and men may wear either their ROTC uniform or regular formal dress. Those in advanced uniforms will be required to wear their uniforms.

We hope to have them ready to go into effect by second semester and to hand out cards at registration," said Kerrey.

The Student Council yesterday accepted an action report concerning a student discount card for all students. Bob Kerrey, student welfare chairman, said that the student welfare committee has been investigating the possibilities of securing price discounts in local stores and has found many stores would be willing to go along with it.

Cards will be distributed to students at no charge and will allow as much as 25 percent off at certain stores, Kerrey pointed out. Any store may participate in the plan.

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BEHLEN ADDITION—Artist conception shows where physics researchers will be able to begin work in the Behlen addition when it is completed this fall.

## Five-Story Physics Building Scheduled For Fall Opening

By John Gerlach  
Staff Reporter

Private, state, and national sources are contributing to improve and expand the facilities available for research in physics here at the University.

The newest addition to the campus will be the Behlen Laboratory of Physics which is now being constructed behind Brace Laboratory on 10th Street.

The \$1,250,000 building was made possible by a large grant of stock from the Behlen manufacturing company. This money will be added to funds appropriated by the state of Nebraska and will be matched with an equal amount, up to \$600,000, by a University grant from the National Science Foundation.

Under conditions of the grant by the National Science Foundation, the building, which is expected to be com-

pleted this fall, must be used for research purposes only.

When finished, the Behlen lab will consist of five floors and an underground accelerator room. Two of the floors will also be below ground level. However, the foundation was constructed so that two more floors may be added in the future.

The accelerator room will house the Cockcroft Walton accelerator, now located in Brace Laboratory, which provides space for the addition of a nuclear accelerator of equal size. The sub-basement will contain laboratories associated with the accelerator plus space for atomic and molecular ion studies with some room for nuclear physics research.

The research that is now being carried on and that will be conducted in the Behlen lab is of as high a quality as that done anywhere in the nation," said Dr. E. J. Immerman, chairman of physics department.

The primary limitation is not in quality but in the fields of research which are represented here. The primary need is to expand the research program into some additional areas which will provide a wider range of research opportunities for the graduate student," he said.

The first floor above ground will be devoted to research in solid state physics and experimentation with X-rays.

Departmental offices, staff offices, and an expanded library will occupy the second story. On the top story will be the nuclear physics laboratory, with space for possible laser research, plus offices for theoretical physicists.

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