

**Remarks delivered at
Groundbreaking Ceremonies
for the
Arnold O. and Mabel M. Beckman
Institute for Advanced Science and Technology**



University of Illinois at Urbana-Champaign

On Friday, October 10, 1986, the University of Illinois officially broke ground for the Arnold O. and Mabel M. Beckman Institute for Advanced Science and Technology. Scientist inventor-industrialist and U of I graduate Arnold O. Beckman had given the University \$40 million to establish a unique interdisciplinary research institute on the Urbana-Champaign campus. The Beckman Institute will apply a new approach to interdisciplinary research by joining the biological and physical sciences in quest of a better understanding of human and artificial intelligence.

The gift was supplemented by \$10 million in state support sponsored by Governor James R. Thompson to assist in preconstruction costs and preparation. In addition, the governor committed the State to "the perpetual maintenance and operation of the Institute," and promised \$2 million annually "to help launch new and creative lines of scientific investigation."

Construction of the Institute began in 1986 and is expected to be completed by December 1988. The Institute will be located where the University's first building once stood, and will mark a new gateway to the campus on the north.

Thomas E. Everhart, chancellor of the Urbana-Champaign campus, presided over the groundbreaking ceremonies, which included remarks from several key participants closely involved with the planning and design of the Institute. Following are excerpts from their remarks.

Thomas E. Everhart
Chancellor
University of Illinois
Urbana-Champaign

Today is a great day in the history of the University of Illinois. We are here to celebrate a dream that is in the process of becoming a reality because of the commitment of many people. This dream took shape in the minds of faculty on this campus. They dared to dream that by sharing their ideas, their talents, and the results of their scholarship and research, giant strides forward in understanding intelligence in its many forms could take place here on this site in central Illinois. From this understanding will come benefits for humans, not just in Illinois, not just in the United States, but around the world.

This dream was shared by Arnold and Mabel Beckman. Through their commitment, an institute to bring these scholars, research scientists and engineers together to fulfill this dream will soon rise here.

Their dream and this Institute present challenges to all of us. It is challenging some of us to rethink how work should be organized within a modern university. It is challenging scientists who are experts in their own disciplines to learn more about other disciplines. It is already challenging our faculty and our students to think more broadly as well as more deeply. It has challenged our architects to think how such an institute should be designed and their questions have forced all of us to think more deeply on these matters. This dream and this Institute have captured the imaginations and the commitments of the local Champaign-Urbana community, the great State of Illinois and indeed, of the nation.

Stanley O. Ikenberry
President
University of Illinois

There won't be a history book written about the University of Illinois that won't include a chapter on today and won't include a chapter that will say something about what happened one year ago today, when we rededicated this site as the future home of the Arnold O. and Mabel M. Beckman Institute for Advanced Science and Technology.

Dr. Beckman is a very kind and gentle man. But I must tell you he is also a very firm taskmaster. When we first talked about how this project might proceed he made it unmistakably clear that he wanted it to proceed with some dispatch, with some promptness, and we began to talk about the date when the architect might be selected for designing the Beckman Institute. I told him that I thought we could easily have that done by the first of the year and he suggested to me, wouldn't it be possible to get it done by December 10th? I said yes, I think it will be possible to get it done by December 10th. And then he suggested the possibility of scheduling the groundbreaking October 10, 1986. I said, yes, I think it would also be a very good idea to have the groundbreaking on October 10th.

The fact that we are here this morning—that we have come so far—is a tribute to many people. It is a tribute to the faculty and the many others who have worked so hard on this project, including our architects—in fact, all members of the team who have made today possible. But it is a tribute to the responsiveness of Illinois state government and the generosity and genius of Arnold Beckman more than any other two single factors.

Many are not aware that Governor Thompson was an early confidant in regard to the Beckman Institute for Advanced Science and Technology. I briefed him early as to our dreams, our ambitions, and what we were hoping to accomplish. I asked the Governor to be an active participant because I suspected early on that Dr. Beckman

would require some matching participation on the part of the University of Illinois and I knew the Governor would be instrumental in bringing that about.

What we do here today is important for what the Beckman Institute will be. It will be the largest, most comprehensive, most sophisticated scientific building ever constructed on the campus of the University of Illinois. But the Beckman Institute is important even more for what it will do; it will bring together the communities of the physical and the biological scientists on our campus, students and faculty alike, in new and different ways and on a scale much larger and grander than attempted at any other time, not only at this University but any other university.

Much of what has been planned for the Beckman Institute was the vision of Arnold Beckman himself. Dr. Beckman reviewed with great care several drafts of a proposal for the Institute. He offered several suggestions, emphasizing its interdisciplinary character, which is now so much a part of the concept of the Beckman Institute that we are tempted to believe it was solely our own idea! It was Dr. Beckman who urged us to bring together scholars from disparate fields in ways that we had not earlier attempted. The genius, the vision of the idea in Dr. Beckman's mind, was also joined by a stern practicality. I began to have my first flutterings of encouragement when Dr. Beckman began to press me on precisely how this Institute would operate, how it would be organized, how it would function, and how quickly we thought we could bring it into reality. This is probably the best explanation of Dr. Beckman's success as a remarkable human being: joining together an incredible vision of what might be with a remarkable practicality in making dreams and visions come true.

James R. Thompson
Governor
State of Illinois

In February of 1985 when I first discussed this project with Dr. Beckman in California we were having lunch at a Republican affair that was near and dear to his heart and I casually turned to him and said, "Dr. Beckman, Dr. Ikenberry is counting very much on your help and support for the Beckman Institute." And he said, "Well, I don't know about that. . ."—and alarm bells went off in my head! I turned to my assistant and said, "Cancel this afternoon's golf game!"

I then asked Dr. Beckman if we could talk further after lunch, and he said, "Well, if you'll come out to the plant, OK." I did so, and for the next several hours Dr. Beckman and I talked across the board about the appropriate role for private philanthropy in a public university. And Dr. Beckman told me in no uncertain terms that he thought that the support of public higher education was primarily, if not exclusively, the responsibility of the taxpayers of the state as well as its governor and legislature. He went on to say that there was indeed a role for philanthropy at public institutions, principally from its alumni and corporations and others. But, he added, there had to be some demonstration that the state itself, and the people of the state, thought enough of their university to be willing to sacrifice other projects in order to achieve educational excellence.

I said, "Dr. Beckman, my belief is that 1985 will be known as 'The Year of Education' in Illinois, and by the time the Legislature and I are through with this spring's session you'll have no doubt about our commitment both to elementary and secondary education, to reform in higher education, and to its closer collaboration with economic development and research." Dr. Beckman simply said, "Well, Jim, I'll just wait and see what you deliver."

And we delivered. The \$10 million contribution from the State of Illinois to match Dr. Beckman's extraordinarily generous \$40 million contribution was payment

number two. For in 1985 we also achieved both educational reform in Illinois and the single largest advance in educational funding in the history of this State. We kept our promise to the people and the schools of this State and I kept my promise to Dr. Beckman.

I want to say a personal word about the importance of the Arnold and Mabel Beckman Institute to the State. First, it sends notice around the world that the University of Illinois, our land-grant university, our flagship university, refuses to take second place or second rank in anything. It sends notice around the world that if you as a teacher or a researcher or a student want to be associated with the most extraordinary effort to be found anywhere in the world on the issue of artificial intelligence you had better be associated with the Beckman Institute. Everything else is an "also ran."

The Institute is important to the State of Illinois because it further diversifies this State's commitment to high technology—both in the universities and in the marketplace. We refuse to put all of our chips in one basket. We don't want to be another Silicon Valley and have our high-tech fortunes rise and fall on cyclical trends in an industry. That is why at the University of Illinois and in Champaign-Urbana and the surrounding area, we encourage not only the study of artificial intelligence but microelectronics, research and development in supercomputing, and the application of supercomputing, engineering, agrigenetics and so many other areas. That is why in the City of Chicago we pursue high technology in medicine and biotechnology; why in Lake County we encourage pharmaceutical technology; why on the I-57 Corridor of Opportunity, we are pursuing laser technology and related software with Bell Labs and other companies. We want a strong and diversified high tech base for this State and our efforts are paying off.

The Institute also sends notice to the world that Illinois is not afraid to invest for the future. Even if we have to squeeze other parts of the budget just a little, we are investing in education now for a payoff in the future. It tells the world that we in Illinois are equal to that challenge. If the competitive edge is to be restored to American industries so that Americans and Illinoisans

may fairly compete for the jobs of tomorrow, it will be because education, especially higher education, has drawn into a much tighter collaboration with business, with economic development efforts of the State and of the nation. And that is the key to our economic survival in a very challenging world economy.

The challenge begins with children at risk from birth to age 3, and it ends with postdoctoral continuing education at the university level, and includes everything in between. It means we encourage not only what the Beckman Institute stands for, but we also encourage the work of others, like professors Larry Smarr and David Kuch, the nationally-renowned supercomputer leaders at this University, as well as literally hundreds of others at both campuses of this University and other public and private campuses across the State.

I would like to conclude on a note of pride. I am very proud to be here today as the 39th governor of Illinois, and I am especially proud as a citizen of this great State. My being born here was a matter of my parents' choice, not mine, but my residence here and the residence of my family is a matter of our choice. We are Illinoisans by birth, by heritage, and by choice. And I am extraordinarily proud that a native Illinoisan from Collum, Illinois would, after such a long sojourn in California, recall with such favor and generosity not just his University but his native State. And words in an inscription on a building to be constructed cannot ever convey the sense of gratitude of the 11½ million people of Illinois to Arnold and Mabel Beckman for the extraordinary generosity and wisdom of their gift.



Dr. Arnold O. Beckman addressed the more than 500 alumni and friends of the University who attended groundbreaking ceremonies for the Arnold O. and Mabel M. Beckman Institute for Advanced Science and Technology.



Digging in for the new Beckman Institute are (from left) Nina T. Shepherd, president of the Board of Trustees; Illinois Governor James R. Thompson; Dr. Beckman; Mrs. Beckman; University President Stanley O. Ikenberry, and Urbana-Champaign Chancellor Thomas E. Everhart.



Dr. and Mrs. Beckman and Illinois Governor James R. Thompson pause a moment during groundbreaking activities at Illinois Field, site of the University's first building and now home for the Beckman Institute.

Nina T. Shepherd
President
U of I Board of Trustees

It's a personal privilege for me to represent the Board of Trustees at this ceremony today. As a trustee, I have watched the business of this University for almost 12 years, and I cannot recall a single event in that time that has generated more excitement or more pride than the announcement last year of the Beckman Institute for Advanced Science and Technology.

Each of us has come to realize that the Beckman Institute is a unique idea for science and industry that will greatly influence the future of the University of Illinois. So on behalf of the trustees of the University I want to publicly acknowledge all the untiring efforts of hundreds of people—both within and without the University—who brought about this day so quickly.

While today's ceremony will symbolize the construction of an extraordinary building, it will also symbolize the maturation of extraordinary vision.

William T. Greenough
Chairman
Program Committee
for Biology, Behavior and Cognition

Iwould like to give special thanks to Ted Brown, who is now serving as Acting Director of the Beckman Institute. Ted has been the faculty member who has worked the hardest to turn the concept of the Beckman Institute into the architectural blueprints we have today. Ted is unable to be with us today, and I think the faculty owe him a debt of gratitude for his truly tireless service in working with the architects, the faculty, and others to coordinate a design and layout we are all very enthusiastic about.

Dr. Beckman's donation and the State's contribution make an excellent example of cooperation between state and private sources of funding of university research. There

will be a continuing need for the Beckman Institute to receive nourishment from all quarters—federal, state, and private—if it is to reach its full potential. As with the detailed programming of the Beckman Institute, the matter of continued funding is the target of an increasingly intense effort by the faculty who have been involved thus far.

The program planning for the Beckman Institute has been one of the most stimulating occasions for interdisciplinary research on this campus in its history. From the moment the various diverse groups of faculty involved in programming this building came together, two different sorts of things have been occurring in our meetings.

The first has been the obvious need to work out at considerable haste the plan for the building. We have done that, thanks to a terrific group of architects, some very good non-faculty people on this campus, and especially Ted's heroic efforts. The faculty have designed in one year (which is probably a near record for any university building) an institute that will house the most diverse range of disciplines ever assembled in a single structure at the University of Illinois.

The second thing going on in our meetings has been a large number of truly fascinating interchanges that have occurred as people, many of whom have never met before, have begun to discover points of common interest in their research. Meetings typically scheduled for 9 a.m. to noon on Saturday morning often continued informally for another three hours.

The effect of these contacts has been catalytic. Joint research projects have been developed among people who did not know of each other's existence a year ago. Research proposals jointly prepared by such unlikely combinations as biologists, physicists, and computer scientists are becoming frequent, if not common. The first course in my memory to be jointly offered by computer scientists and neuroscientists, called Computational Neuroscience, has begun meeting this semester.

I could go on with examples but the point is clear. Dr. Beckman, Mrs. Beckman, and Governor Thompson, we have even more to thank you for than the Beckman Institute. Your recognition of our need for interdisciplinary interaction has already begun to make the vision of the Institute a working reality.

Karl Hess
Chairman
Program Committee
for Materials Science, Computers and Computation

As we have heard, the idea of the Beckman Institute has already greatly stimulated our research, and as the building rises a dream will become true for many of us. Much thought and work went into the design of the building. We are dreaming of interdisciplinary research that connects the materials and physical sciences with microelectronics. The complex of buildings that will rise here on the north campus will have large-scale integrated circuits and massive parallel computer architectures with supercomputing applications keyed to artificial intelligence and research related to the human brain. The University of Illinois has traditionally been very strong in these areas. I was attracted from 6,000 miles away and found a new home here and we hope that with the Beckman Institute these strengths will take a quantum leap forward. We are dreaming of research that truly ranges from physics to function and from molecule to mind.

There is a single point in the Institute that fascinates me most—the focus of the planned research on the human being. I am convinced that the possibilities for discovery are second to no other field. It is our hope that in the future the Beckman Institute will be regarded as one of the truly great efforts related to intelligence, mankind's most precious gift.

Noel Fagerlund
Executive Vice President
Smith, Hinchman & Grylls Associates, Inc.

A little less than a year ago, an institution in Illinois sent a letter to a collection of architects and engineers informing them that they would be considered for the design of a proposed new building called the Beckman Institute. Accompanying that letter was a summary of a proposal for the Institute. I was immediately captured by the scientific agenda outlined by the intellectual ambition that was contained within. A "glue" ran through the entire paper which I can best describe as an intense commitment to an idea and a building.

It was a very special opportunity to design a facility that, on the one hand, could serve such aspirations, and, on the other, to do it at a campus so rich in architectural heritage. Or perhaps it was the opportunity to do it for an administration and a set of scientists who started the proposal with the words "We pledge. . . ." I must say that my instincts were precisely correct.

This has been a very special set of circumstances with a unique group of people. The words that come to mind that characterize the last 11 to 12 months are *integrity, commitment, cooperation, sensitivity, and hard work*. The result, I believe, is simply an excellent building that, first and foremost, will serve to stimulate the scientific agenda and, secondly, will provide a very memorable physical addition and landmark to this campus.

Arnold O. Beckman
Director Emeritus
SmithKline Beckman Corp.

This is, of course, a pleasant moment for Mrs. Beckman and me. I do not have any prepared remarks; I am just going to say what is in my heart. I hope all of you realize what a tremendous salesman the State of Illinois has in its Governor. He comes out to California and, as a side issue following a luncheon, he talks to somebody who has been away from Illinois for 60 years and persuades him to come back and get active again in the activities of Illinois. I thank you for that, Governor. I would also like to say that we have been receiving thanks from so many people, my conscience is beginning to bother me. I really shouldn't accept any more. It is our turn now to give thanks to you.

I really mean that. Mrs. Beckman and I would like to do what we can in our remaining years to help science and humanity. The Institute has provided an excellent opportunity for that, and I am indebted to the University and to all who had a part in getting us interested in this project.

What has amazed me most on this project is the way everyone has cooperated. I have been impressed especially with the Governor and the members of the Legislature, how they came through with their commitments. And I am particularly impressed with the faculty. I served on the faculty at Caltech for a number of years, so I'm somewhat familiar with them. I was told years ago it is simpler to move a cemetery than it is to get a faculty to agree on anything.

But it is amazing here. It is astonishing to see how faculty gave up personal considerations and really worked together. It is a great sign for the future of this Institute. I am sure that it will live up to all the hopes we have for it.

I would like to follow up on what Governor Thompson said about not being second rate and striving to be the best. I recently attended a convocation at one of the campuses of the University of California where President Gardner spoke on that same theme. He told

the students there not to settle for mediocrity, and to do nothing but the best. I would like to add one thing more to that. "Do nothing but the best" is a good slogan, but with this Institute let's try also to make the best even better.

The evening of October 10, 1986, during the University of Illinois Foundation's 51st Annual Membership Dinner, U of I Board of Trustees President Nina T. Shepherd awarded Dr. and Mrs. Beckman with Board of Trustees Distinguished Service Medallions. The text of the award citation follows.

**The Board of Trustees
of the University of Illinois
To Mabel and Arnold Beckman**

Four years ago, when the University of Illinois conferred upon Arnold O. Beckman the degree of Doctor of Science, we recited only a few of his accomplishments in American science and industry. The faculty of the University honored a "chemist, inventor, industrialist, leader in public affairs, and a patron of higher education."

As impressive as his many accomplishments have been, it is the Beckmans' creative and judicious philanthropy in aid of the University of Illinois which we honor this day. Together, in their stewardship of the Arnold and Mabel Beckman Foundation, they have supported programs which met a strict standard: promise of great benefit for mankind through application of knowledge. Applying this criterion, they have led this University in the establishment of a fund to support promising young scientists.

Moreover, others have been beneficiaries as well: for the National Academy of Sciences and the National Academy of Engineering, a West Coast study center was made possible; for Stanford University, a Center for Molecular

and Genetic Medicine; for Rockefeller University, an endowed research professorship; for the University of California at Irvine, the Beckman Laser Institute; and for the California Institute of Technology, the Laboratories of Behavioral Biology and the Laboratory of Chemical Synthesis. These gifts and others will yield benefits to society for generations to come and help prepare society to face and solve rationally the problems that confront it.

In the Arnold O. and Mabel M. Beckman Institute for Advanced Science and Technology, we see the embodiment of Arnold Beckman's vision—maintaining the efforts of outstanding researchers across a wide spectrum of sciences in a long-range focus on major complex questions. The Institute, with its Center for Materials Sciences, Computers and Computation and its Center for Biology, Behavior and Cognition, can serve as a catalyst for productive and complex research, interdisciplinary, unfettered by traditional limits on interaction among researchers, and all to the benefit of mankind.

The Beckmans have set a standard for selfless service. To generosity and public spirit, they have added a coherent philosophy and creative imagination to build an environment for the advancement of mankind.

In recognition of their leadership and their encouragement to this University, and in honor of their enduring concern for humanity, the Board of Trustees of the University of Illinois awards Distinguished Service Medallions to Mabel and Arnold Beckman.