

July 15, 1985

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Texas Tech News

UNIVERSITY NEWS AND PUBLICATIONS/P.O. BOX 4640/TEXAS TECH UNIVERSITY/LUBBOCK, TEXAS 79409/(806) 742-2136

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1-7-15-85

LUBBOCK--Kathleen Hennessey is working at becoming a master translator of 10,000 languages.

Fluent in five languages -- six if you count eskimo, Hennessey is trying to develop an "Esperanto," or universal translation technique, for computers.

Imagine a community with 10,000 inhabitants, each speaking a different tongue, and you will realize the magnitude of the Texas Tech University computer science professor's task.

"I want to make it easy for somebody who works on an IBM Personal Computer to send something to a Macintosh or a Honeywell or a WordStar word processor or a Xerox Memorywriter or an engineering workstation," she said. "All of these are incompatible, especially when you get to graphics, images and tables."

With more than 10,000 computer programs on the market, the computer industry since its beginning has lacked extensive standardization among both hardware and software. Now the task for computer scientists is to develop ways to interpret from one computer language to another without losing anything in the translation.

While some standard formats for communication between computers have been developed, they are based on the technique of the lowest common denominator. The result is that each translation of programs or data results in loss and alteration of the original meaning.

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"We are working on the transfer of technical documentation and publications among a wide variety of incompatible equipment and software," Hennessey said.

"The trick is to preserve all the information you receive and send it out in a form that others can handle," she said. "In any country in the world, you can tell someone you are hungry by pointing your fingers at your mouth, but you can't discuss with them complexities or abstractions or elegant thought. This is where we are with computer languages."

Translating technical data from machine to machine is a difficult information transfer because word processing, graphics and mathematical functions are involved, Hennessey said. However, Hennessey noted the need for resolving the problems behind such a complex data transfer.

"If we crack this, we crack everything else," she said. "If you take on too simple a problem, you come up with too simple a solution and new problems crop up with more sophisticated programs and hardware."

While the current theory for translating a computer language translator is simple enough to be taught in college-level computer science classes, making the theory work is much more difficult.

The methodology behind the theory is called "parsing" which classifies each word or character according to its function and relationship to other words and characters. What evolves is sort of a "family tree" for the words and meaning in the message.

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"However, when you actually go to do this you find that there are all kinds of conditions before and after what you are examining that affect the way you classify what you are looking at," Hennessey said. "You have to start knowing an awful lot about where each character came from and what it meant before, its pedigree in other words. Then you get into the field of semantics and you get into trouble."

Hennessey's knowledge of English, Spanish, Swedish, French and German has helped her approach and understand the computer language problem. It is not coincidence that the programming for computers is called a language. The same type of problems are encountered in translating from one spoken or written language to another as from one computer language to another.

"There is a different culture expressed in a language and the way the language expresses ideas," she said. "You cannot just translate a German sentence and get a French sentence that expresses the full original meaning."

Esperanto, a language proposed by some as a universal means of written and spoken communication, has never caught on because it is not a part of anyone's life or part of the socioeconomic fabric anywhere, she said.

"Some people speak Esperanto, but nobody lives it," she said. "Anyone who uses Esperanto has to be fluent in another language to earn a living."

"For a language of any sort to be current or to be adopted," Hennessey said, "it has to be a tool or medium that is basically either the only one or the easiest one to use. That's what this research is seeking for computers."

Hennessey's research into computer compatibility is being supported by a grant from the Xerox Corp.

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2-7-15-85

COMPUTER COMPATIBILITY--Helping the thousands of computer programs and dozens of computer brands on the market better communicate with each other is the goal of research being directed by computer science Professor Kathleen Hennessey at Texas Tech University. Hennessey's research, funded by the Xerox Corp., is aimed at translating technical data from machine to machine without losing any information in the process. (TECH PHOTO)

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3-7-15-85

MACHINE TALK--Texas Tech University computer science Professors Gopal Dass Lakhani, from left, and Kathleen Hennessey discuss their research in improving communication between different computer hardware and software. Hennessey is project director in the research funded by Xerox Corp. (TECH PHOTO)

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4-7-15-85

COMPUTER FLUENCY--Improving the ability of different computers and varying computer programs to communicate in full with one another is the goal of a team of Texas Tech University computer scientists. Participants in the research include Professor Gopal Dass Lakhani, Project Director Kathleen Hennessey and student research assistant Sarah Hollywood, daughter of Edward and Eleanor Hollywood, 818 8th St., Wolfforth. (TECH PHOTO)

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5-7-15-85

LUBBOCK--A rainbow of colors at Brownfield Highway and Indiana Avenue can provide a brief vacation from the hot summer doldrums.

The Texas Tech University gardens are in full bloom with hundreds of varieties of flowers and plants that garden officials encourage people to visit and enjoy.

Garden director George Tereshkovich said, "We have hundreds of different plants. Some have been in the garden for years and some are brand new. We try to label everything, but we don't have a count."

The gardens provide more than a colorful nature walk for Lubbock residents. They also serve as a living classroom for College of Agricultural Sciences students.

"By letting students actually see, touch and smell the plants they are studying, they learn better than by just looking at pictures in a book," Tereshkovich said.

The gardens also have areas devoted to various patio and other outdoor building materials which are being installed in conjunction with an area landscape contractor, he said.

"We want people to walk through our gardens not just to see the colorful flowers, but to see the kinds of things they can do in their own backyards and patios," Tereshkovich said.

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6-7-16-85

LUBBOCK--As increasing populations put more pressure on arid and semi-arid lands, awareness is rising in regard to the value of many under-exploited plants native to those regions.

Texas Tech University Biological Sciences Chairperson J.R. Goodin has edited a new book, "Plants for Arid Lands: A Global Perspective," which reviews and analyzes the needs and problems associated with managing these potential resources which can benefit local peoples and combat desertification, Goodin said.

Goodin's co-editors are Dr. G.E. Wickens, head of the Survey of Economic Plants for Arid and Semi-Arid Tropics, and D.V. Field, senior scientific officer, both of the Royal Botanic Gardens in London.

"There has been a lot of research in the past few years to try to determine exactly what plants grow naturally in the arid regions and what their potential is for food, fuel and medicinal purposes," Goodin said.

The book is a result of an international conference on arid plants held in London and sponsored by the Royal Botanic Gardens and Texas Tech's International Center for Arid and Semi-Arid Land Studies.

The book presents a global analysis of specific needs and associated problems and reviews work currently being undertaken in or for the arid and semi-arid areas by various individuals and agencies, Goodin said.

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"When wind and water erosion create disaster there is no way to reverse the process," Goodin said. "When the plants go, nutrition is gone and animals and people can't live. And, in the arid portions of the world, it is just too expensive to water and fertilize the areas back to life again."

The book also explains the Royal Botanic Garden's seed bank. The seed bank is an effort to gather seeds of all varieties of arid land plants before the plants become extinct. Currently, the bank has some 50-60,000 varieties in storage.

"The seed bank is a major project because they believe they have developed methods to allow them to store the seed for hundreds of years instead of the normal few months," Goodin said.

The book also focuses on the development of halophytes -- plants that grow in salty soil or water. Goodin said most deserts contain a great deal of saline water that could be used for irrigation if plants that will tolerate the salt can be identified and developed.

"We are trying to combine information on current research as well as historical information," Goodin said. "The work has immediate implications for many nations in finding new sources for commercial agriculture, food, fuel and shelter."

The book will be available Aug. 22 and can be ordered by any bookstore from George Allen and Unwin Publishers, London.

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7-7-16-85

LUBBOCK--In rough pioneer life clothing was a valued resource often used to its limit.

Examples of everyday clothing worn by early pioneers are scarce, but the pieces found in museum storerooms tell a story of a rugged, frugal lifestyle.

Betty J. Mills, curator of costumes and textiles for The Museum of Texas Tech University, has developed and is expanding a comprehensive collection of pioneer clothing to complement The Museum's Ranching Heritage Center, an outdoor exhibit depicting the early days of ranching.

"Studying the fabrics of early clothing and methods of making them reveals a great deal about pioneer thriftiness," said Mills. "Most pioneers had to be practical."

Many of the garments are lined in several different fabrics indicating a frugal use of fabric. Narrow seams and false hems were used to conserve fabric and corded piping was inserted in some seams to ensure greater durability.

Some of the clothing has a great deal of mending and patching to prolong garment life as long as possible, Mills said. When the garment could no longer be mended, the remnants were used for making quilts and children's clothing.

A strong point in The Museum's collection is a large selection of women's wrappers often referred to as a "Mother Hubbard." A wrapper was a long dress that flowed full and loose from the shoulders. The style began as a garment for wearing in the boudoir, but was later adapted for general wear around the house or on the ranch, Mills said.

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The collection of men's and children's clothing is not as abundant as women's, Mills said. Men often wore their clothes until they were completely worn out from work. Children's clothing, often made from fabric of worn adult clothing, was handed down and worn until there was nothing left.

Many of the pioneer women remade their clothing to update a style from one decade to another, Mills said. The changes were subtle since the styles did not change much from year to year.

Even old clothing that is badly worn can be valuable to The Museum's collection, Mills said. The rips and holes tell a story on their own and can sometimes be repaired or serve an important detail in research.

8-7-16-85

(EDITOR'S ADVISORY: Marie Tyler, the 1985 recipient of the National Golden Spur Award, will be available for individual media interviews at 9:45 a.m. until noon Sept. 20 during the Livestock Day program in the Livestock Arena. Tyler is known as the "first lady of beef promotion" and is knowledgeable about beef and its nutritional values. Tyler will be accompanied during the morning by American National CowBelles President Frances Owen of Lubbock. For additional information, contact Preston Lewis, University News and Publications, 742-2136.)

CONTACT: Sally Logue Post

9-7-17-85

LUBBOCK--A Texas Tech University researcher maintains feeding livestock low levels of antibiotics does not constitute a human health hazard and calls recent reports that link the practice to severe cases of food poisoning biased.

Thornton Distinguished Professor Rodney L. Preston of animal science said, "Critics claim the use of antibiotics, such as penicillins and tetracyclines, in livestock contributes to the development and spread of bacteria resistant to antibiotic therapy."

Preston pointed to recent accounts in the "New England Journal of Medicine" and "Reader's Digest" that report antibiotic-resistant salmonella were transferred to humans from the beef they ate.

Preston thinks, however, the conclusions reached in the articles are biased and based on incomplete data.

The articles trace an outbreak of salmonella in Minnesota to a beef feedlot located near a dairy herd from which the same genetic strain of salmonella was discovered in a calf.

"There were no strains of salmonella isolated from the feedlot cattle, the meat from those cattle, the packing plant or from the retail outlets," Preston said. "These are vital links that must be established before any sound allegation can be made regarding any source of a disease infection. Besides even if you assume the dairy herd and the beef herd intermingled, that isn't even good circumstantial evidence, let alone proof."

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Not reported in the articles, Preston noted, was the fact that samples of meat from the packing plant were tested by the Center for Disease Control, and no salmonella organisms were found.

The article also neglected to mention that some of the people had eaten uncooked meat. Preston pointed out the danger always exists of organisms such as salmonella being present, which is the major reason for cooking and pasteurizing food.

Another key factor in Preston's rebuttal is that the people involved had been taking a form of penicillin before the salmonella outbreak. This presumably rendered them susceptible because only resistant salmonella remained in their digestive systems.

"If this is true, then the same reasoning should apply to the cattle fed antibiotics," Preston said. "However, salmonellosis was neither reported nor suspected in the cattle from the suspect feedlot. Salmonella is not a major disease problem in cattle, including those fed antibiotics."

Preston said even though the debate over the continuation of antibiotic feeding should officially come to an end with a Food and Drug Administration (FDA) ruling this summer, he is pursuing funding for a project that could be an important factor in the livestock industry's case that antibiotic feeding is harmless.

"Because Texas Tech is about to open a new feedlot facility, we have an opportunity to determine what levels of antibiotic-resistant organisms exist in cattle not fed antibiotics," Preston said. "We can conduct this study because our new feedmill has never used antibiotics, or anything else for that matter," he said.

Livestock producers use antibiotics to improve feed utilization and to improve the general health of their livestock. Preston said after years of controversy over antibiotic feeding he believes the FDA will probably ban the feeding of tetracyclines and penicillins. He points out that the cattle industry, while against that move, has already recommended that producers stop the practice if only for public relations reasons.

"I really don't think there is a human health hazard from feeding antibiotics to livestock. If there were a real threat, I would think the people who do the feeding and usually eat their own livestock would have been the first to experience problems," Preston said.

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10-7-18-85

LUBBOCK--The T-shirt or blue jeans worn today could be a valued part of a museum clothing collection in decades ahead.

An important part of any museum's collection is saving for the future, according to Betty J. Mills, curator of costumes and textiles for The Museum of Texas Tech University. For example, Mills is collecting T-shirts -- an item she says makes a definite statement about our culture.

"There are all kinds of T-shirts and they are worn by children and adults, males and females," she said. "They come in all colors and some have a logo, a bizarre statement or even a symbol that represents a company, group or team."

Mills began the T-shirt collection several years ago when she realized the impact T-shirts had on the communication methods and fashion in our culture. A statement on a T-shirt may communicate what is happening in society at any period in time.

The Museum has received about 150 T-shirts and Mills said she will continue to ask for donations of shirts that are unusual or expressive.

"Who knows -- someday we may have the largest T-shirt collection in the world," she said.

Any clothing for a museum collection should be commonly worn items that have a message about a period of time, Mills said. Other items that are part of her collection for the future include a pair of patched blue jeans and a blue chambray shirt with embroidery -- items popular during the 1970s.

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The major hindrance in collecting articles of everyday clothing is that most people save only special occasion garments, she said. The casual clothing is used and discarded.

For more information on donating a T-shirt or another article of clothing, call The Museum, (806) 742-2461.

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11-7-18-85

LUBBOCK--Media excesses, as exhibited during the recent TWA hijacking and kidnapping, are the price the nation pays for having a free press, says a Texas Tech University mass communications professor.

And while media may go to extremes bordering on the unethical -- such as paying news sources for exclusive stories -- Dr. Alexis S. Tan said the public should tolerate those instances.

"If the U.S. press practices any form of censorship, even self-censorship, then we become guilty of some of the same conduct we criticize other countries for," he said.

Tan said the media did a good job reporting the hijacking, but television media should improve the way they cover such stories.

"Because of the immediacy of television, one can hear a tone of voice and see a facial expression," Tan said. "Stories such as this almost become theater. Newspapers and newsmagazines cannot communicate the small nuances of such events."

Television journalists must be acutely aware of their responsibilities and power because of that immediacy, he said.

Tan said research into the function and power of the press shows that media have the ability to set the agenda for what the public thinks is important.

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"What the media reports becomes important to the public and reporters have to make decisions on what really is of news value, then go with the story," Tan said. "In this instance the lives of a number of people were at stake so the answer to the question is, yes this is an important story."

Tan said media exercised poor judgment by paying for exclusive stories.

"According to accepted journalistic codes, paying for stories is not done. It is just not ethical," he said.

Tan also faulted the excessive attention focused on the hostage's families. One story about the families is news, further coverage simply plays on emotions, he said.

Tan said television reporters should avoid creating a circus-like atmosphere in their quest for an exclusive story. A possible solution would be for the four networks to pool their information and video so all are working from primarily the same information.

"All reporters would be working from the same material, but they would do their own interpretations of the story," he said.

"Television should also avoid broadcasting live events staged by interest groups," Tan said. "When you cover a staged event live, you are putting yourself completely in the hands of the hijacker. Television should reserve the right to edit their stories."

Tan pointed out that the hijackers aren't the only ones using the media for staged events.

"You can look at the event staged in Germany during the hostages return," he said. "That wasn't for the hostages benefit, that was for the benefit of all the government people who thought they should be there. I found myself wishing they would just get it over with so the hostages could get some rest."

Tan disagrees with the frequent argument that if the media did not provide coverage, terrorist acts would cease. He said that Middle Eastern cultures are vastly different from our own. The religious differences motivating most instances of hijacking and terrorism are part of a political attempt to win what is to some Middle Eastern people a holy war.

"We don't understand their reasoning because our religion isn't that way," Tan said. "But even if we didn't publicize their actions, they would continue. Critics who use that argument aren't looking at the real causes. The press is just a convenient entity to blame."

Tip Sheet
Week of July 21-27, 1985
12-7-18-85

SPECIAL SPEAKER--The former deputy director of the CIA and currently the President of Microelectronics and Computer Corporation (MCC), Admiral Bobby Ray Inman, will speak at a luncheon Thursday, July 25 at Texas Tech University. The luncheon is sponsored by the College of Business Administration. Contact Dr. Jerry Hunt, 742-3175.

FOOD POISONING QUESTIONED--Refuting claims that cattle given antibiotics such as penicillin and tetracyclines cause food poisoning in humans, Texas Tech University animal science professor Rodney Preston suggests those reports are biased and based on incomplete data. Contact Dr. Preston at 742-2453.

CALLING ALL T-SHIRTS--The curator of costumes and textiles for the Museum of Texas Tech University, Betty Mills, is collecting t-shirts and other commonly worn clothes to save for future museum clothing exhibits as a statement about today's culture. For more information call Betty Mills at 742-2461.

ALMOST COLLEGE TYPES--Ninth through twelfth graders make up the third session of Shake Hands with Your Future, beginning Sunday, July 21. The program is sponsored by Texas Tech's Institute for the Gifted. A class on the study of the brain is only one of a variety offered on Tech campus. For more information contact Mary Anne Speck, 742-2353.

THEY'RE STILL HERE--Over a thousand youngsters aged 12-18 continue the second week of Texas Tech Band Camp and kids 6 to 17 are in the final week of special youth classes at the Museum of Texas Tech. Good photo possibilities exist with each group through July 26. Regarding the band camp, contact Anna Whitlock, 742-2225. Contact Winifred Vigness concerning the museum classes, 742-2443.

For assistance with developing these and other story ideas, contact Mark Davidson/Jane Prince Jones, 742-2136.

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13-7-19-85

LUBBOCK--Two Texas Tech University College of Business Administration graduate students have won second place in the Houston Society of Financial Analysts scholarship competition.

Dean M. Alzapiedi of New York City and Kurt McEnaney, son of Daniel McEnaney Jr. of 5513 74th St., Lubbock, received \$750 scholarships for their second place finishes. Both are working toward master's degrees in finance.

Alzapiedi and McEnaney wrote papers examining the nature of the Texas banking industry in the next decade; issues facing bank management; and implications for holding companies, independent banks, shareholders, customers and the economy of Texas.

The program, designed to reflect the changing nature of security analysis as well as the growth of higher business education, was initiated in 1966. All Southwest Conference schools are eligible to submit two papers in the graduate and undergraduate categories.

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14-7-19-85

ATTENTION: Real Estate Editors

LUBBOCK--In most semi-arid regions of the world dwellings are built to cooperate with the climate -- not fight it -- for an end result in efficient energy usage.

Not so in the United States. JoAnn Shroyer, Texas Tech University professor of environmental design and consumer economics, has found that people in semi-arid regions of the U.S. are more inclined to overpower the climate through mechanical means.

Shroyer and her co-investigator, Professor Cora F. McKown, have found that in most semi-arid countries dwellings use both landscape and passive solar considerations to save energy.

The two studied housing forms in Iran, Africa, Iraq, Saudi Arabia, India, Syria, Algeria and Egypt, analyzing designs, materials and conservation practices. Then Shroyer used those concepts to design three housing plans that could be used in semi-arid regions of the United States.

Shroyer's plans for energy efficient dwellings use site selection, landscape, housing types, interiors, openings and windows, shading devices and other building materials to control heat, wind and dust.

"Using one energy-saving tip helps, but the maximum benefit begins," Shroyer said, "with city planning, and it involves planning at every step."

She said that to receive maximum benefits from all the planning requires cooperation from everyone, including the city planner, the architect and the interior designer.

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The dwelling plans designed by Shroyer use green hedge walls for dust control and a cooling effect; garden courtyards as microclimate modifiers; water pools as a cooling element; seasonal vegetation on wide verandas for shading of glass; modified wind towers for cooling and ventilation; floor-to-ceiling slit windows to control light, dust and heat; a screened breezeway for summer sleeping area; and an octagonal form to reduce wind resistance.

Shroyer concluded that many methods used in other nations to achieve comfortable living in a semi-arid environment could be used effectively in the United States.

Water containers placed in strategic positions can aid in the cooling process. Wind catchers, roof-top devices placed in the direction of prevailing winds for venting air into interiors, could be used effectively.

In general, Shroyer concluded that housing in semi-arid countries should be designed for the climate beginning with city planning and neighborhood layout.

Interior design is a factor often overlooked in energy efficiency, Shroyer said. Using cool colors, blues and greens, in the summer will give the home a cooler feeling, she said. Using warm colors, reds and earthtones, in the winter provide a warming effect in the home. Textures are also important, she said. Loosely woven fabrics provide more of a breeze in the summer.

Bookcases are another unusual way to insulate a home through interior planning. Books on an exterior wall of a home are an excellent insulator, she said. A garage on the north side of the house can also protect against wind and cold in the winter.

During the winter, window treatments should be open during the day to allow the sun to warm the room and closed at night to hold in warmth, Shroyer said. During summer, window coverings should be closed during the day to block out sun and opened at night to bring in cool air.

The human comfort factor of energy efficiency depends on understanding the interaction between climate, external, physical and human variables, Shroyer said.

The methods used in other countries are being used more in the semi-arid regions of the United States, Shroyer said. The semi-arid regions of the United States include portions of Washington, Oregon, California, Idaho, Nevada, Montana, Arizona, Wyoming, Colorado, New Mexico and West Texas.

Shroyer studied the countries through interviews, slides and research.