Biomedical ethics • A boy and his dog

Artificial Intelligence: Can Machines Think?

January 14, 1983
If we read of one man robbed or murdered, or killed by accident, or
one house burned, or one vessel wrecked, or one steamboat blown up,
or one cow run over on the Western Railroad, or one mad dog killed,
or one lot of grasshoppers in the winter,—we never need read of another.
One is enough. If you are acquainted with the principle, what do you care of a
myriad of instances and applications? To a philosopher, all news, as it is called, is gossip, and they who edit and
write it are old women over their tea.

—Henry David Thoreau

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Dear Reader,

I am a student at a small liberal arts school in the Midwest. The party situation here is real cool. I especially like the frat parties. They play loud music, some really fine stuff, and everybody gets totally plastered and the chicks all get incredibly loose. However, I could never score. That's why I wanna tell ya bout somethin that happened this past Sunday that completely knocked my socks off.

It all started when some dudes and I were just sittin round the house and one of us said there was a really cool band playing that night. Well after we saw some more of the two of us decided to check it out. We both had a buzz on, so we just went for it. The band was doing this version of a very popular song and the chicks were all over it. They were a pretty tight group.

After the first song, the chicks all started to dance and the band started to play faster and faster. The drummer, bassist and guitar player all sounded really cool. There was this pretty large guy on trumpet who sounded like Satchmo. They were a pretty tight group.

As soon as the guitar started to play, the chicks all started to dance. I felt like it was all for me. Suddenly the stage was empty. The band had taken a break so we hopped out and did another J of primo herb. One of my friends said the guitarist played Moneyman.

One could think we were those serious music people. I figured Moneyman's legs probably looked nothing like hers. We all agreed the band called something. It was really hot. We drank some more and called another pitch.

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Letter to the Editor

Planet: out of this world

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words and bits on Computer Center: preparing students for a computerized future
by Kevin Smith

Paralleling the increasing use of computers in all sectors of society, today, interest in computers at Lawrence has risen dramatically in the past few years. Just a few years ago, when a computer was regularly offered in the computer science course which covered more or less the same material taught now in CO2 (first-one-third of a credit) and BASIC (second-one-third) courses.

Now, by contrast, each term four or five half-credit courses are available, for both beginning and advanced programmers. Along with the increase in courses that have come a tripling in the number of students over the last three years. The number of students has now virtually reached the saturation point; with around 100 students in enrollment every term, almost every student at Lawrence is taking one class before graduation.

The computer is not disjoint from the rest of the university either, as James Evans, Chemistry Prof. and Director of Computer Services points out. The use of faculty from various departments to teach the introductory courses is only one of the ties. More importantly, the computer is being increasingly used as an aid for research. Experiments, simulations, statistical analysis, or individual student's research. The faculty also use the computer as an aid in research projects.

The computer is available for non-class-oriented activities. Any Lawrence student is free to use the computer at any time, and is free to use whatever programming language or computer environment he or she wishes. Many students use the computer for everything from preparing research papers to doing homework and for any other activities in which students use for everything from preparing research papers to doing homework and for any other activities.

Dr. William Chaney, Lawrence's George M. Steele professor of history, Wednesday's evening's lecture marked the beginning of the computer science lecture series, a series which exists between certain computer science courses.

"The qualitative difference between spaces?" The point of this year's lecture was that obvious differences exist in the quality of one's surroundings. A space may be cramped or open, crowded or, as the qualitative aspect of space goes beyond this more physical description. "One feels different in a church than one would on the sidewalk," explains Professor Chaney. There is an aspect to space that in some cases makes it sacred. A sacred space is "a break in the homogeneity of space," a "profane" space. Once a space has been established as sacred, the veneration of the area will continue through shifts in dominant religions and cultures. Thomas says we may find that gravesites considered sacred in pagan times may become the sites of medieval churches. The institution changes, but the space, for whatever reason, is still set apart from its surrounding area. Much evidence of sacred space is offered in the history of medieval Germanic and Celtic Northlanders, as those who have taken Professor Chaney's English History course are no doubt well aware. Studies of place names reveal that "groves, enclosures, places...

What's in store? Probably not a lot for anytime soon, in part due to questions about how it relates to a liberal arts education. At the same time, there is a growing need for high programmers that it seems unlikely that anyone leaving here with the interdisciplinary concentration in computer studies would have any major difficulties landing a job. A number of Lawrence alumni are presently employed in the field of computers, including working for Digital Equipment Corporation, the manufacturer of the computer "Man of the Year." The Lawrence computer center is preparing students for such a computerized future.

Lawrence has a long and distinguished history. Students have had direct access to computers since 1965, and access to a PDP 11 computer is, of the same style as the present one, with identical command set since 1972, putting Lawrence "in the forefront of the computer revolution among small colleges." Unfortunately, such a large college and universities, direct access has never been limited to upper-level students. In addition, programs written by faculty and students are used at many other computer installations, including working for Digital Equipment Corporation, the manufacturer of the computer "Man of the Year." The Lawrence computer center is preparing students for such a computerized future.

Cancer strikes 120,000 people in our work force every year. Although no dollar value can ever be placed on a human life, the fact remains that our economy loses more than $1 billion in productivity each year when a person dies of cancer. The American Cancer Society and the Medical College of Georgia, in cooperation with the American Cancer Society and the Medical College of Georgia, have developed a computer program to help identify careers that are likely to be affected by cancer.

The program, called "Cancer Career Counseling," is designed to help cancer patients and their families make informed career choices. The program is available to all cancer patients, regardless of stage or type of cancer. It is free to patients, but cancer patients should contact their local American Cancer Society office for more information before using the program.

The program is a valuable tool for cancer patients and their families, as it provides information about the impact of cancer on the workplace and offers suggestions for adapting to a new workplace environment. The program is available online and can be accessed at the American Cancer Society's website.
Every year the Watson Foundation awards seventy $10,000 fellowships to students from approximately 180 colleges and universities across the United States. The foundation seeks students who can demonstrate "a broad interest in some aspect of international concern." The foundation announces the winners of the grants the second or third week in March.

The Watson Foundation seeks "creative, realistic, and personally significant" project proposals, and Lawrence's four representatives demonstrate those characteristics well.

Emily Copeland, a Russian and German major from St. Paul, Minnesota, plans on seeking a graduate degree in international relations after participating in the Lawrence University 1981 Slavic Trip. She plans on graduate school in international relations after Lawrence and cites her passion for people, languages and cultures as the impetus for her proposal to study refugees. "Refugees are a current world problem because they show us the importance of large international organizations," she states. "And the whole idea of international organizations is going to be bigger and bigger as we start to have more world conflict and war."

Emily Copeland and Hugh DelHos

"I hope to get a better understanding of the importance of nationalism and religion and what these two things can mean for people," states Hoffman. "They will be taking on a new identity and religion plays such an important part in their lives."

Hoffman's project will be split into two parts. The first will be spent in refugee reception centers in Israeli cities which are designed for temporary housing and assimilation of the more skilled immigrants who will eventually spread out into the Israeli community. The second stage he will spend in permanent refugee communities for the unskilled Russian immigrants which Hoffman likened onto the Israeli kibbutzes. In both stages Hoffman plans to seek out individuals and families and work with the immigrants on a personal basis.

"I hope to be able to make some especially valuable comparisons between the Russian immigrants' former and brand new lifestyles," he says. "I believe that I will be able to make some especially valuable comparisons between the Russian immigrants' former and brand new lifestyles."

Chris Mathews

PROFILE

Watson Selection: not quite elementary

by Hugh DelHos

On Thursday, January 13th, Lawrence's four Watson Fellowship nominees, seniors Emily Copeland, David Hoffman, Bev Larson, and Chris Mathews, were interviewed by a representative of the Watson Foundation as part of the generous program's final selection procedure. The four Watson hopefuls are among approximately 100 college seniors from 50 schools throughout the United States who are being considered for the prestigious fellowship.

Every year the Watson Foundation awards seventy $10,000 grants to college graduates to engage in a year of independent study and travel abroad following their graduation. The fellowship offers the opportunity for an adventure of the students' own choosing unaffiliated yet focused and disciplined "wanderjahr" where they can explore a particular interest, test their aspirations and abilities, and most importantly, develop "a more informed sense of international concern." The foundation announces the winners of the grants the second or third week in March.

The Watson Foundation seeks "creative, realistic, and personally significant" project proposals, and Lawrence's four candidates respond with those characteristics well.

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future without robots", and has initiated a "Robot Support Scheme" to encourage the use of industrial robots. With the strength of the English labor unions and the plants producing the high rate of unemployment, the government's encouragement of the use of robots could have a tremendous effect on the society.

Watson plans to tour the University of Edinburgh's labs, which are some of the first robot research labs in the world as well as seek out the industrial plants of Birmingham and Southeast Wales. He hopes to make contacts through labor unions, the English Department of Labor, and, of course, the local pubs.

Mathews hopes to further his education in the field of artificial intelligence and computer science after graduation.
OPINION

Medical Ethics: No right or wrong decision

by Bill Scheller

During the next eight weeks, both the Lawrence and Appleton Communities will have the opportunity to do something outside of the ordinary, to take part in a class in which you can't give a wrong answer; in fact, the point of the class isn't to give answers but to find questions. The class is in Biomedical Ethics, a series of lectures and discussions sponsored by Lawrence University and the Wisconsin Institute for the Humanities.

Because of recent advances in medical knowledge and technology, the medical profession now has the ability to perform intricate operations and procedures which can improve, sustain, or at least prolong the lives of patients who, up until today, had no hope of living. An initial reaction to this new technology would be to greet it with great happiness and optimism. However, when one examines the implications of this new technology it becomes clear that these advances cannot be recognized as simply "good things". Because of its nature, technology and science is amoral—that is, being outside of the concept of right and wrong. The new findings in medical science are simply tools, only when they are placed in the hands of human beings can they be used for the benefit of humanity. To understand this point, it must be recognized that while medical science and technology can come up with theories and procedures earlier than ever before, there are still affictions which result in disease and treatment. Therefore the prolongation of a life may come at the expense of much pain and suffering on the part of the patient and his or her family.

Professor Stanley points out that there is no clear right or wrong answer to the questions which are considered in Biomedical Ethics, and he asserts that the answers which are arrived at are more important than how one would approach, evaluate and work to make the decision. Mr. Stanley feels that the Humanities are the key to finding the possible solutions concerning moral dilemmas, and that the field of Biomedical Ethics has been established in order to give information and guidance to people faced with making such decisions. While there can never be concrete answers to these types of questions, he feels that, by examining the sources of values in our society, an individual should be able to arrive at an informed and personally justified decision.

The establishment of the field of Biomedical Ethics should be applauded, but viewed with some suspicion. Because Biomedical Ethics is not concerned with facts and procedures, but with judgments and ethical questions which are not amoral, it's impossible for the field to be totally objective. Though it is purported that there are no right or wrong answers to the problems in this field, it is hard to imagine that people confronted by the moral dilemmas of Biomedical Ethics will not directly look to and rely upon the "experts" in the field, and thereby succumb to the certitudes which Mr. Stanley identifies as the villains of moral decisions. Stanley correctly points out that there exists no right or wrong decision, isn't the ability of the decision maker to truly justify his choice in his own mind the goal which is to be achieved? If this is the case, perhaps the establishment of an intellectual field in this area is an ingrément upon the individual.

By recognizing this dilemma, the whole issue of individual freedom vs. social responsibility must be addressed. Is it right for a life or death decision concerning a fellow human being to be left in the hands of one or two individuals simply because they are related to the patient by blood? Can society relinquish its responsibility for the welfare of an individual to one person, or for that matter an individual to be required to carry the burden of a life or death situation alone? What right does a faceless society have to interfere in the personal and family affairs of an individual? It is tempting to think that medical dilemmas should be solely left up to the individual, or to the experts who speak for a society, but it is wrong to do so. The individual and society cannot be separated from one another, both are dependent upon each other. Therefore both individuals and society must together examine and address the moral issues raised in Biomedical Ethics. The fact that right and wrong are not always concrete ideals, and can be at times relative terms, must be accepted. Many questions will be raised during the lecture and discussion series, and while few answers might be found, perhaps by coming together some individuals will gain some knowledge concerning a few of the moral dilemmas of today.

Biomedical Ethics made easy

Editor's Note: Professor Stanley's essay on Biomedical Ethics is the first in a series of professional contributions. Further elaboration on Stanley's commentary can be found on page two.

by Professor John Stanley

Lawrentian: We were wondering if you would be willing to write a story for the Lawrentian about the Humanities Institute on Biomedical Ethics.

Stanley: What do you mean write a story? Me? I thought that was what you guys did.

Lawrentian: Well, it is, I mean we do, but you see we have this new format now. It was too hard to get people to prepare to write and there was never anything going on that was really "news." I mean nothing really interesting and challenging to write about.

Stanley: What about the Humanities Institute on Biomedical Ethics?

Lawrentian: Well, yes, that is sort of interesting, but even for rewarding topics like that we can't get reporters. I mean we tried to get three reporters to cover the lectures and we just struck out. We thought you might write a feature on it, we know you are interested in it.

Stanley: Well, yes, I am, but I've got papers to grade, and classes to prepare, and research underway, and I'm trying to run this institute. And writing an interesting, engaging feature article takes a lot of time. You can't just toss it off the top of your head like a Freshman Studies theme. I’m sorry; I don’t have the time.

Lawrentian: You see what we are up against? That's just how all the students talk. I though faculty were supposed to be good role models.

Stanley: Look, I'd like to help you. I like the Lawrentian. But you should consider newspaper— or magazine. It should be done by students. It should represent student interests and student viewpoints. It should..."' Love it. But the students won't do it. It's up to you guys. If you won't help, we'll die. Actually in a sense we're already dead, but that was just an attention getter. I mean we aren't really dead yet...but, if you guys won't help, we will.

Stanley: Well, maybe I could do something to help, but I don't have time to write a feature article. How about if I just do an interview?

Lawrentian: An interview of what?

Stanley: Of me.

Lawrentian: Of you? How will it work?

Stanley: I don't know; I'll just ask me. I'll be willing to write a feature article on the Humanities Institute or Biomedical Ethics for the new Lawrentian magazine and see what I say.

January 14, 1983 — The Lawrentian — 5
Computer intelligence...

by Chris Matheus

The editors of TIME magazine, by proclaiming the computer "machine of the year" rather than awarding their traditional "man of the year," expressed the feeling that the influence of computers upon our world has become more important than the efforts of any single human being. It is, in effect, a claim that the computer holds the most potential power to change the world -- for the better or for the worse. The computer, this machine capable of such impact, certainly appears to have acquired its status by virtue of a degree of intelligence. But can it be said that computers are intelligent, and if so, to what extent? These are the questions confronted by research in the field of artificial intelligence (AI).

According to M. Minsky of MIT, "artificial intelligence is the science of making machines do things that would require intelligence if done by man." AI is concerned with working out theories of intelligence, explaining cognitive processes, and developing procedures of thinking. Further, it attempts to implement these concepts through the computer. In the words of AI researcher D.L. Waltz, "the computer is a laboratory in which (AI practitioners) develop new ways of thinking about thinking." The study of AI, however, is not independent of the study of human intelligence; much of human intelligence serves as a basis for work in artificial intelligence. For in theory, if human intelligence could be 'completely' understood then artificial methods could be developed to mimic this intelligence.

Of course, the functions of the human mind are far from being completely understood. Artificial Intelligence is not out, however, be committed to perfectly mimicking human intelligence in order to qualify itself as being an independent, intellectual form. The electronic computer and the human brain are two fundamentally different devices which derive similar results in drastically different ways: the computer solves problems by representing them as a collection of numerical bits of data, whereas the brain accomplishes the same goal through representations of the biochemical nature. The study of AI, therefore, is not restricted to an exact imitation of human intelligence. Rather, AI research is concerned with creating intelligence that is on a level comparable to human intelligence. As a result of AI's different approach to intelligence, new and unique theories and models of human intelligence have been developed which contribute to our understanding of the human mind.

The current research in AI consists of several subtopics. However, since the scope of this article is limited by space, only a few of the more interesting research areas will receive attention, with the hope that they will convey the flavor of the rest of the field of AI. These areas include: theories of game playing (chess playing in particular), visual systems, language comprehension, and methods of learning.

Game Playing

The topic of game theory has been a prime candidate for AI research from the beginning. In particular, the game of chess has received much attention. Currently, chess playing computers possess the skill to play near the level of a human expert. These programs use 'thinking' procedures quite different from those of its human opponents. While a grand master may depend primarily upon his experience and intuition, a computer program will generally capitalize on its superior ability to analyze thousands of alternate moves and countermoves a second, and thereby is able to determine the one move that appears most advantageous from among a large sample of possible moves. These programs rely on heuristic principles -- informal rules of thumb -- to guide the program so as to analyze only those moves which appear promising. For example, coded in a chess playing program might be a rule prohibiting itself from considering moves which jeopardizes the safety of its queen. Although heuristic methods do not guarantee that the 'best' solution is always obtained, programs that can efficiently determine in advance which solutions hold more potential than others will ultimately prove to be superior.

Heuristic principles naturally apply to the rest of AI as well, since intelligence is not simply a brute-force procedure in which all possible solutions to a given pro-

Eniac, the Grandaddy of them all, complete with 12,000 vacuum tubes.
problem are considered, but in, rather, an involved and complex process in which only a select few of the possible outcomes are considered in such a way that these alternatives arise as superior. How to determine the best answer to all a given problem from an infinite selection of relevant and irrelevant answers is one of the questions at the heart of AI.

Visual Systems

We take for granted the complex information processing that our visual systems must perform to allow us to interpret our world. Take, for example, our perception of a simple cube. The pertinent information of the cube is obtained by analyzing its edges, the shading of its sides, the convergence of our eyes, the focusing of our lenses, our knowledge of perspective, our familiarity with the essence of cubism, and several other internalized factors; our minds process this information and leave us with a clear and distinct mental image of the cube. This process is very difficult to artificially replicate and requires sophisticated methods of artificial intelligence.

Most artificial visual systems that have been developed to date typically involve the input of visual information through video cameras and the interpretation of the resulting electrical signals into numerical data. This data is then analytically processed through computer programs which reduce the digital representation of the image to this essential line components; this information is in turn utilized in an attempt to distinguish between distinct objects. Simple two dimensional images are roughly comprehensible by current visual systems; progress is being made on three-dimensional processing, but 2-D systems are tremendously more complex and remain a hope of the future. This area of AI is important because of its application to industrial robots used in factory assembly lines. The more advanced of these robots are being equipped with crude visual systems which can identify, say, between a correctly assembled circuit board and one with a resistor out of place.

Language

One of the most important, and yet most difficult, challenges in AI is that of programming (human) language comprehension into a computer. The first efforts in this area began in the 1950's with a program designed to translate English into Russian by means of a simple word-for-word translation. This program translated the sentence "The spirit is willing but the flesh is weak" into Russian and then back into the English sentence "The vodka is strong but the meat is rotten." This first failure stressed the fact that language is very complex and somewhat abstract, and it is for this reason that language is such a challenge to imitate artificially.

Learning

The notion of teaching a computer to learn is fundamental to the problem of creating intelligent machines that will become independent of their programmers. Learning is significant to AI since only when computers are able to teach themselves will they truly begin to acquire the form of intelligence possessed by man. A computer programming language, called LISP, was developed in the early 60's to facilitate the exploration of AI. It is particularly useful for the study of theories of learning because programs written in LISP are able to alter themselves; if a program is able to change its own content it becomes capable of reprogramming itself, and thereby capable of learning new skills. Learning also involved the acquisition of knowledge of conceptual relationships, and sorting and storing that knowledge so that it can be used at future times to apply to new and foreign concepts. The learning of concepts involves the development of hypotheses based on relationships, which can be applied and adjusted in the future to identify those things that relate to the concept. This task of programming learning capabilities into a computer, like that of most problems in AI, involves many different, inter-related facets many of which are not, as of yet, clearly understood.

Degrees of intelligence

These few examples of artificial intelligence demonstrate that computers are far from being intelligent as human beings. While they are able to perform tasks which require human intelligence, it is easy to argue that these accomplishments do not necessarily warrant crediting the computer with intelligence of its own. These combined efforts, however, appear to be a step in the right direction - that is, towards creating an intelligent machine. In 1950, A. M. Turing invented a test that could be used on a machine to determine if it was intelligent (in the human sense). In the Turing Test, a machine is interrogated by a person who attempts to determine if it is a human being; the machine's goal is to convince the interrogator that it is a human. If the machine successfully fools the interrogator, who may ask any imaginable question, into believing that it is a human being, then that machine, according to Turing, must be credited with possessing human-like intelligence. Whether or not this is an accurate test has been strongly debated for over thirty years. But one thing is sure: it will be much, much longer than a mere thirty years before we will be able to administer the Turing Test to a presumably intelligent machine with the hope of it passing. When this day comes the computer will probably be a candidate for "man of the year".
Contemporary art show is good draw

by Tom Otten

The Pacific Northwest Drawing Invitational ("An Overview of Contemporary Drawing Mannerisms") which moved into the Worcester Art Center last Friday, is an intriguing show primarily because it allows viewers to become acquainted with several dominant trends present in contemporary American art. A traveling exhibition organized by Eastern Washington University's Department of Art and Artists' Society, the show is comprised of one piece each from 32 different artists from the Northwest. A wide range of media is present and most of the pieces are interesting and competently executed, but what makes this show well worth attention is the fact that it is a relatively accurate, fairly well balanced reflection of overall trends present in contemporary art.

The somewhat trendy "New Expressionism" dominates this show, and while most of it does not resemble the rather forced and self-conscious work of New York expressionists—for instance, Julian Schnabel—much of it looks more than a little pretentious. All these pieces make use of bold, roughly drawn figures in a style which often approaches caricature in garish color schemes or stark blacks and whites. Patrick Siler's 4 Ways to Fall, showing four men falling over empty beer bottles, fits into this category, as does Nor- man Loun's Storage Room No. 2. This latter piece is easily one of the best in the show; its soft variations of brown, grey, and white pastel and its technical perfection drawing succeed in elevating this mundane subject to a higher, more moving level than one might expect; its one of the few drawings in the show which leaves a strong impression upon the viewer.

Some of the drawings in the show are reminiscent, shock value, and erotic content. Whether this criteria will eventually produce truly excellent work is not clear yet; the question may end up being a matter of personal taste. What is clear is that use of the style can result in very bad pieces, and Hugh Webb's Pave compositionally, the piece is a bit confusing, and its heavy debt to Matisse is obvious, but it has the freshness and unpretentiousness found in the best landscape drawings, and this makes it attractive.

Though there are no masterpieces present, most of the drawings in this show are surprisingly solid. Non-student pieces primarily concerned with abstract black charcoal shapes is more honest than most other pieces present. Its accomplishment is one of pure and graceful drawing, of an ability to control and manipulate line.

Likewise, Lynne Haagensen's color pencil drawing Virginia Stienen is a more "honest" drawing than most other pieces present; its accomplishment is one of pure and graceful drawing, of an ability to control and manipulate line. Compositionally, the piece is a bit confusing, and its heavy debt to Matiasev is obvious, but it has the freshness and unpretentiousness found in the best landscape drawings, and this makes it attractive.

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New Young: simply wierd

by Tom Skinner

Neil Young is weird—this is not a point which needs argument, it is a simple fact. How many other musicians can you think of who purposely attempt to frustrate their fans? Who says things like "I'm lucky that there's still I can do that will piss people off about me. I mean, you know. I am?" And even if there were any doubts left about Young's eccentricity, they are crushed with the release of his latest album Trans. (Geoffy 1982)

Once one of the major symbolic figures of the late-sixties post-Woodstock era, Neil Young has become music industry's latest computer advocate. Soon and Hold" is the best computer song on Soul" are all Vocoder victims. "Sample and even a remake of the classic "Mr. Neil Young's eccentricity, they are crushed there were any doubts left about "Computer Age" and "We R in Control" is more like "real music" than the others.

The villain responsible for the failure of Trans is Young himself, he evidently believes is the "wave of the future." computers. Judging by Trans, what he sees as the future of his music, is a transition, a tug-of-war critical juncture; "The whole album," he admits, "is a transition leading from an acoustic sound into the direction of slicker arrangements and a greater use of keyboards, as well as voicing disgust over the warnings about the possible dangers of letting computers run human lives, but one to which Trans falls prey. Not all of this album is done with synthesizers, however, and it is on the three normally recorded songs that one can really see how Young has changed from his early days. "Little Thing Called Love" is the obligatory radio cut, a simple, fast-paced number with Young's famous '56 Gibson Les Paul. "Old Black", ringing faintly in the background, and "Hold On To Your Love" is a mellower, Comes A Time-styled song. Both show Young heading in the direction of slicker arrangements and a greater use of keyboard and vocals are difficult to follow.

Neil: not just another pretty face.

music—heavily synthesized instruments dischoring drums and computerized arrangements applied to rock music. The problem with Trans is that while Young readily acknowledges Kraftwerk's influence on his music, he does not pull it off nearly as successfully as they do. Poor computer music can be pitifully immature at times, a problem which Computer World managed to avoid, but one to which Trans fails prey.

The villain responsible for the failure of Young's computer music concept is a device known as the "Vocoder," a sort of vocal synthesizer created in the mid-1960's and further modified by Young. In a recent interview in Musician, Young proclaimed that..."computer music is like a mask. I can sound like so many different characters its unreal, all within my own voice..." These characters' voices, however, are often unpleasant rather than appealing a character which seriously damages the overall sound of the album. "Computer Cowboy," "Transformer Man," and even a remake of the classic "Mr. Soul." are all Vocoder victims. "Simple and Hold" is the best computer song on the album, perhaps because it sounds more like "real music" than the others. "Computer Age" and "We R In Control" both contain valid, if somewhat ridiculed, warnings about the possible dangers of letting computers run human lives, but are also fairly dull musically, and the vocals are difficult to follow.

Of all the tracks comprising Shrode's "vision," his main priority in a redical in increase in LUCU's general entertainment accounts. To accomplish this, Shrode wants to raise university funds into campus events. Currently 37,000.00 dollars per year is the all-inclusive figure. He maintains that other ACM schools outside LU's budget considerately. With this in mind, Shrode is pushing for a 40,000.00 dollar increase. This earmarked for Shrode's revamping campaign. This could possibly mean cutting back on other university accounts, but which accounts he does not know. It might also effect a tuition increase of at least 40.00 per student per year.

Shrode's philosophy is simply that more money yields better music. Still it is questionable, in the present state of the university, whether so much money is necessary or justifiable. With the new system, all campus events - from the Chamber Music series to the disco - would be free to all students. Thus is the greatest advantage of the plan. At the moment, the Artist Series is poorly attended, with only sixty subscribers, hardly enough to fill even the chapel's choicest seats. Encouraging the students to attend the series by making it free, and therefore more accessible, is a worthwhile endeavor. The plan was voted on by students and the results have not yet been determined. It also needs general university ratification. Aside from the entertainment, Shrode would use bank accounts.

Shrode has made another bold stab. He reviewed his survey results, and discovered that 76 percent of those students polled would like to see a comedy act. Therefore he has booked Garrett Morris, the comedic of "Shrode's grossest gamble. Morris promises a new routine and might very well fill the chapel when he appears on Sunday, February 13.

But for someone who complains about relatively high tuition costs, perhaps Morris will bring down the house. Yes, the ticket will be expensive, and with Garrett Morris is a national act, and he will not be cheap. He has booked Garrett Morris, the comedians, will be paid 1000.00 dollars. The cost of the ticket is 4.00 or 5.00 dollars. The performing Arts Council's annual account totals 3400.00. With the proper perspective, our tuition can and should cover worthwhile and diverse entertainment. That does not mean the biggest and best in the business can imagine the musical possibilities using the same funds.
The little bottle clinked on a larger one when Roy took it out of the cupboard. It was full of pink medicine. He unscrewed the cap, pinched its blunt rubber head, and released until the pink came up to the hairline. "Come on over here and take your medicine." Melanctha and Pig were staring at each other with cocked heads. He went over and squatted around her. His knees almost touched the glass. He pulled her chin up and inserted the dropper in the corner of her mouth. She rolled her eyes back and tried to lick the dropper. The singers threw the weight of their voices into the chorus and Roy began to bounce. Melanctha wagged her tail and nipped his knees. The lead singer got to the place where the song was deep in his throat and coming to life and the hangers. Then he looked down at her. "Come on let's go back and just listen." He set her on the fat pillow in the living room. When he turned to change the music she sunk away. "Scared you bad, didn't I." He picked some foreign music and turned it on. Then he fished her from the bedroom and lay in the big pillow holding her in his arms. She squirmed, but he scratched her between the ears. She放松ed pillow holding her in his arms. She squirmed, but he scratched her between the ears. She relaxed pillow holding her in his arms. She squirmed, but he scratched her between the ears. She relaxed.
The Women go to Court, seek revenge

by Heidi Berres

Hey Lawrentians! Here's your chance to learn something: something about the LU Women's Basketball Team. Just read on and you can find out who the players are and how they are doing now that the second half of their season has started.

This Tuesday the team played an ag- gressive, fast-break oriented St. Norbert's team. And guess what? They lost handily. Despite a new-man-to-man defense and a number of effective defenses, the Vikings did not stop their opponents from scoring continual- ly. On the other hand, the girls had limited success against the opposing coach. Kastner replied at the end of the game; "we simply did not get back on defense fast enough. When we run our plays we are a good team, but we need to get our backs into the game early and play transition basketball. We have not done that in some games and it is discouraging." Neither the coaches nor the girls are giving up, however. With nine games left, the team still has time to regroup and get the team spirit and enthusiasm that they need.

Each of these articles is not to be taken lightly. Too many times, in a competitive league, we are introducing the team members to you. So what I hope to do isn't to introduce the team members to you. What I hope to do is to introduce the team members to you.

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Also starting at forward is a 5'10" sophomore, Kary Strickland. Kary Strickland, of course, in her fourth year here and just enjoys every minute of it,Robin? She's the team's best all-around player and her game will be key to success. She's the optimal choice for the team these days. Robin is one of the team's leaders.

Finally, starting at center is a 5'11" senior, Ann-Marie McCrank. Nicknamed "The Black Stallion" by her friends, she's the team's best lowcenter. She's a great asset.

The game is against Lakeland at 7 p.m. Nothing helps home court advantage more than the support of the fans. So, get your seats and cheer the women on in their next game.

Confessions of an unabashed Pack'er-backer

by Andy Larsen

in everyone's life small problems must be dealt with as well as big ones, and the time has come for me to deal with one of mine, namely my unabashed fanaticism to the Green Bay Packers. That's right, folks, I'm coming clean about my addiction to the Green Bay Packers. Just a note to reassure you that I, as well as every other Packers fan on this campus, despise our proximity to Green Bay. It is simply not cool to be a lopsided victory over St. Louis in their home opener.

The article can't stop with just the introduction of the starting five, though. There is a lot more to the team than just Nietsche, Brecht and Marx at the top. As for myself, it's just a dumb movie stimulated my mind or anything of the sort. How about showing some enthusiasm of yourself if you're not already out to the Alex to cheer the women on in their next game?

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Men’s Swim Team: Ready for Nationals

by Sparky

Coach Davis shrugged.

“Swimming,” he said, “is my life and my life is swimming. It is in the swimming pool that the voice of the individual is most audible. To the man who cherishes superficiality, it is that of a demagogue. Sophomore Dave Zeiss and his backstroke are not to be overlooked. Nor are the lethal breaststrokes of juniors Brad Anger and Mike Uram. Add to this the flawless butterfly practiced by sophomore Greg Leong and one comes up with a team capable of bringing a hint of a smile to the Marine Corps-hardened face of Coach Davis.

Freestyle, though, is the spine of a swim team, or so states a dusty plaque in a corner of Coach Davis’ office. The records of the fabled Peter House have vexed Lawrence’s freestylers for nearly fifteen years. Deemed unapproachable by many knowledgeable commentators, co-captains Dave Powers and Larry LePorte, and senior Chuck Hunter merely scoff at them.

“I have spent many hours in my tiny laboratory adjacent to Dr. LaMarca’s office, and I know these records are within our reach,” said the brooding Powers, “We are, after all, men.”

Sophomore Dave Provence was equally enthusiastic. “I am poised!” he repeated again and again.

“Of course you are poised,” said Andrew Burnett as he grappled with the team’s customized weightlifting equipment. “With every pound I lose, this team becomes collectively leaner and hungrier. We are developing the stealth of wild guinea pigs. As they ravage the countryside for vegetation, so shall we ravage our opponents.”

Lady Swimmers Optimistic

by Megan Bailiff

Looks like it will be another good year for the Lawrence University Women’s Swim Team. There are several returning letter winners along with some strong freshmen. The sole senior and captain of the team, Megan Baldwin, feels optimistic about this year. Other returning swimmers are juniors Irene Serewicz and Edina Wilson as well as sophomores Jennifer Kibler, Sue Wilkinson, and Cindy Pronko. The team also welcomes the following promising freshmen: Gwen Bauder, Joani Gudeman, Lisa Krolow, and Caroline Neumiller. The season begins on Tuesday night at 4:00 with a home meet against Carthage College. It will be a great season...with lots of home meets...so come and show some support for the women of L.U.S.T.!”