BUTFIRST

The response to our first issue of the ILX has been most gratifying but we certainly don't want to rest on our laurels. This second issue brings you even more including reports on three recent Logo conferences (Tokyo, Los Angeles and Mexico City), sketches a new Dutch version of Logo, looks at how a mental hospital in Buenos Aires is using Logo, reviews some new Logo books from "Down Under," views Logo from a corporate perspective in Japan, and summarizes a research project in West Africa that used Logo as a tool in teaching illiterate women to read.

The ILX Logo tour to Iceland and the Netherlands still has vacancies and a tour to the World Conference on Thinking in Honolulu next Christmas vacation is now firm. Tom Lough is directing the compilation of this year's bibliography for Logo 86, and we hope to make this valuable resource available to our subscribers who do not travel to Boston this summer.

As there is an abundance of world-wide Logo information to report on, let me finish with a **Logo** quote of the month ... "The context for human development is always a culture, never an isolated technology. In the presence of computers, cultures might change and with them people's ways of learning and thinking. But if you want to understand (or influence) that change, you have to center your attention on the culture ... not the computer." Seymour Papert, "Computer Criticism and Technocratic Thinking," *Theoretical Papers*, MIT, 1985.

[signature]

Australia

by Anne McDougall
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Logo Books from Australia

Australian Logo workers are producing a variety of resource materials, ranging from the robot turtles produced commercially in Tasmania to many little booklets and collections of worksheets developed by individual teachers for their own use and for distribution to others. Following is a description of some commercially published Logo books written by Australian authors.

The first of these is Learning **Logo on the Apple II**, written by Anne McDougall and Tony and Pauline Adams, and published by Prentice-Hall in 1982. This book was written for use by an individual learner working at a computer, probably a teacher with no previous computer experience. In fact it has been used in a much wider variety of settings, particularly in schools, with many secondary and upper primary students using it as a resource for project ideas and for developing understanding and skills with programming concepts such as list processing and recursion.

The book has been translated into German by Gerald Pommranz, **Einsteig in Logo** (Prentice-Hall International, 1984) and into French by Jacky Akoka, **Logo Sur Votre Apple** (Prentice-Hall International, 1984). Learning Logo books have subsequently been written for the versions of Logo available on several other microcomputers, as **Learning Logo on the TRS-80 Color Computer** (Prentice-Hall, 1984), **Learning Logo on the Commodore 64** (Pitman, 1984) and **Learning Logo on the BBC Microcomputer** (Prentice-Hall, 1986).

The next book to appear was **Let's Talk (Apple) Turtle**, by Liddy Nevile and Carolyn Dowling, published also by Prentice-Hall in 1983. **Let's Talk (Commodore) Turtle** and **Let's Talk (BBC) Turtle** have been published subsequently. There are two editions of each of these books, one for students and one for teachers or parents. The teacher's edition contains the pages of the student one in reduced format, with teacher's notes accompanying each unit of work outlining its aim, materials required, details of how to do each activity and any problems that could arise in the course of the work. The book consists of twenty sequential units of work, each containing activities to be done at a computer and complementary activities to be done away from the computer. It does not teach Logo programming as such, but explores the range of graphics available for use in programs, touching on some powerful mathematical ideas on the way. It was designed for use by the youngest school children, but has been used with Logo beginners of all ages, including adults.

The authors plan a series of these books, and the second in the series, **How Turtles Talk**, should be available very soon. This book does introduce Logo programming, and looks at some language questions as well as more mathematical material. It retains the format and structure of Let's Talk Turtle. Later books in the series will explore the use of Logo as a word processing language, as an information handler, and as a language for musical activities.

Thinking with Logo by Valerie Clarke and Susan Chambers has appeared most recently, published by

Australia Continued:

McGraw-Hill in 1985. Believing that "a more direct, structured approach is an effective way to use Logo as a tool to teach general thinking skills and specific computing and mathematical concepts," these authors have prepared a set of worksheets, games and ideas for students from grades 1 to 8. The book includes more than one hundred carefully structured worksheets and a disk of games used in the activities outlined in some of the worksheets. Permission is given for teachers to copy the worksheets freely. This book appears in two versions, one for the Apple and the other for the Commodore 64.

Asia
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There have been some very exciting happenings in the Japanese Logo world recently. Japan's relationship with Logo has been developing over the last four or five years, so it is natural that there is more activity here than in many other Asian countries. A look at some of the ways that Logo is growing in Japan may be instructive for other countries just beginning to start Logo work.

Computers for Learning Conference: One of the more public Logo events took place at the end of 1985 when Seymour Papert of the Massachusetts Institute of Technology and Duane Yee from Hawaii's Punahou School were speakers at the Computers For Learning (CFL) Conference held in Tokyo. This meeting was sponsored by ASCII Corporation (the developers of MSX and a Japanese associate of Microsoft Corporation) and was attended by over 1000 people. A good part of CFL was a discussion / demonstration of the kind of discovery learning that could take place with computers.

Dr. Papert gave a demonstration Logo lesson to a group of children who had a little Logo experience, first giving them some ideas and then letting them play with the tools he had given them. After noting that all the children were doing things of a different nature,

Dr. Papert asked the children to teach members of the audience how to write a procedure. Thus, the children were turned into teachers, the audience, many of whom were teachers, became learners. This idea of "learner as teacher" and "teacher as learner" is a very important aspect of Logo education, and it was extremely enlightening for the Japanese audience to be able to view this in action.

Very often Logo, and specifically the new MSX Logo, was the point of discussion, but, as Papert was careful to point out, the major importance of Logo was its philosophy, not a specific piece of software.

Lego - Logo Workshops: Japan's most active Logo user's group, Logosome Z's, is the publisher of a regular newsletter and a number of Logo books, the latest one on MSX Logo. Recently Logosome Z's has been working on developing the public awareness of Lego and Logo as educational tools. Beginning with articles in their newsletter and expanding this spring to a series of workshops throughout Japan, Logosome Z's Setsuko Abe and Shinichi Kurita, with the support of Kumon Publishing Company, will introduce children and teachers to the basic concepts of Lego and Logo and the relationships between them.

These two day workshops will be offered to children ages 9-12, with the hope that parents and teachers will attend as well. The purpose of the workshops will be to give some experiential understanding of the similarity of the building block construction of Lego projects and Logo procedures.

Ms. Abe noted that Japanese children have a great fascination for computer games, but have no idea of creating their own games or controlling anything by their own efforts. These workshops will open up that world of possibilities for them and each workshop site hopes to continue beyond the initial sessions.

Children's Castle: Two of the Lego-Logo workshops will be held at recently opened children centers. In the last ILX, the concept of Children's Palaces in China where Logo and other creative activities were introduced to children was mentioned. In 1985, Japan opened two similar centers which are directed toward stimulating children's curiosity and development. One is the Yokohama Children's Science Museum (Yokohama Kodomo Kagakukan) and the

other is the National Children's Castle (Kodomono Shiro) in Tokyo's Aoyama district. Children's Castle is described as a "place of adventure, exploration, excitement, fun and play" and will begin two other more formal Logo classes (one for 3 - 6th grades and the other for 7 - 9th grades). These classes have already gathered twenty or so participants and the teachers are being prepared by the staff of the Children's Castle with help from Naomi Miyake, who has her doctorate in psychology from the University of California and has written a book about Logo.

Yamaha's Experimental Logo Classes: Professor Miyake is also involved as an advisor for another new project -- that of Yamaha Corporation's experimental Logo classes. Yamaha and their parent company, Nippon Gaki, have been involved with music education for the past twenty years, and are now trying to expand their work. A new section of Yamaha has been established in the area of computers and education and the first project has been experimental Logo classes. Six classes of twelve students each have been operating since November and will continue for four months. These classes will be evaluated and the decision will be made about expanding the Logo program or getting into another area of continue for four months. These classes will be evaluated and the decision will be made about expanding the Logo program or getting into another area of computer education.

Yamaha has a large number of music schools throughout Japan (and other countries as well). One purpose of their experimental classes is to see if there is a relationship between their work in music education and computer education, specifically Logo. Music, they feel can be useful in helping children be more creative and independent learners. They are wondering if Logo can do this. If these experimental classes can offer favorable conclusions, then Yamaha's new Education Division will consider the possibility of linking up with the Music Division to utilize the already established music schools to make Logo available as another developmental tool.

In the next issue of ILX, this column will look at Logo schools being planned for Japan and will discuss reasons why companies and not schools are the leaders in Japan's Logo movement.

North America
by Michael Friendly
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Conference Watch: In the future I hope to be able to report on more items of Logo news which I get from readers in North America. In the meantime, we continue with Conference Watch, looking briefly back, then ahead to the spring and summer.

West Coast Logo Conference: Though most of the major computer developments in North America have begun on the west coast (read, California), the main centers of Logo activity have been on the east coast (read, Boston). The West Coast Logo Conference, held November 21-23 in Los Angeles may not have changed this entirely, but it took a big step toward establishing a west coast Logo community.

The conference was very well organized by Terry Cannings of Pepperdine University with the assistance of several computing teacher organizations. Over 900 people attended, a turn-out bolstered by the relatively low registration fee. The speakers at the conference included a great many "Logo Leaders" of North America: Seymour Papert, David Thornberg, Tim Riordon, Tom Lough, Robs Muir, Paul Goldenberg, John Allen, Jim McCauley, Molly & Dan Watt, Brian Silverman, and Michael Tempel. In addition, there were many presentations by west coast teachers describing Logo activities in their classrooms.

There were two main highlights which several people mentioned to me: In addition to the panel discussions and formal presentations, the conference included a set of "meet the leaders" sessions, in which small groups of people could talk informally and in depth with many of the guest speakers. There was a great deal of lively interchange in these sessions which many people who attended considered the best part of the conference for them.

Second, there was a lot of excitement generated by a demonstration by Papert & Silverman of a new version of Logo targeted specifically for educational use. In the upper elementary grades and above, a good deal of computer use in the classroom focuses on Logo and word processing. So why not combine them? The new *LogoWriter* provides a completely different model of interaction, with text, graphic, and - procedure windows, powerful word processing capabilities, and gives the turtle the ability to interact with text on the screen. Rumor has it that LCSI has big plans for this project (code name "Goofy"). The prototype runs on a PC jr., but the final product will run on Apple and other machines. See the notice at the end of the column.

I understand that David Moursund plans to publish a number of presentations from the West Coast Conference in *The Computing Teacher*. If you want to get the conference proceedings, you might try writing to Terry Cannings, Pepperdine University, 3515 Sepulveda Blvd., Los Angeles, CA 90034, USA.

ECOO SIG-Logo Mini-Conference: As the icy fingers of winter regain their grip on Toronto, the SIG-Logo group of ECOO (Educational Computing Organization of Canada) has moved into high gear with plans for its second mini-conference on Logo, to be held March 22, 1986, at York University. The conference theme, "Look to the Learner," will address the uses of Logo across the educational spectrum, and include a blend of topics relating to philosophical, theoretical, and practical issues.

We are quite excited about the program for this one-day Logo event. The schedule begins with a keynote address by Paul Goldenberg titled, "Functional Metaphors: Clear Thinking about Process in Language and Math." Paul says, "Turtles are supposed to be 'easy'; lists and output are supposed to be 'hard'. But what is 'hard' depends very much on the metaphors and models of our teaching." Some of the talks slated for the morning session are:

- Bill Higginson ("The Environment of Logo")
- Marilyn Rivett ("Microworlds for Young Learning")
- Sebastian Reisch ("Using Logo in Senior Mathematics")
- Linda Colgan ("Secondary Math Microworlds")
- Sterling Beckwith ("Why Turtles Can't Sing")
- Michael Friendly ("Exploring Language with Logo")
- Rina Cohen ("A Developmental Approach for Introducing Young Children to Logo")

There will also be hands-on and dialog sessions with some of the presenters in the afternoon. ILX readers who wish more information about the conference or who wish to attend should contact Lynda Colgan (416-667-6304) or write to Paul Davidson, Sloane Public School, 110 Sloane Ave., Toronto, Ontario, CANADA M4A 2B1.

Logo 86: Plans are underway for the Third Annual International Logo Conference, to be held at MIT in Boston from July 9-11. Address communications regarding the conference to Brian Harvey, MIT E15-309, 20 Ames Street, Cambridge, MA 02139, USA.

Stay in Touch: Conferences are exciting! You meet new people and new ideas, attach faces and personalities to names of people whose work you've read, and perhaps build a new friendship or working relationship. But these opportunities are too few and far between (not to mention too expensive). Our hope is that the ILX will help you bridge the gap and stay in touch with Logo developments around the world.

But you can help too. Send your thoughts on this column, and on Logo activities in your neck of the woods you think would be of interest to our readers. If you have access to any of the large computer networks (e.g., ARPA, UUCP, CSNET, BITNET, MAILNET, etc.) you can send E-mail to FRIENDLY @ YORKVM1 on BITNET, or to me on CompuServe at 72777,253.

It takes somewhat larger steps to bridge the gap --- FD 1000!

LogoWriter Announced

Logo Computer Systems Inc. has announced a new Logo product called *LogoWriter*, a combination of the LCSI Logo language and a programmable word processor, all in one. Work with both text and graphics (with up to four turtles) on the same screen area is possible.

For a free information packet, write to Logo Computer Systems, Inc., 9960 Cote de Liesse Road, Lachine, Quebec, CANADA H8T 1A1.

Africa

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Computers and Illiterate Women

In my studies of how illiterate adults might respond to computer based learning experiences, I worked with a group of women in Dakar, Senegal, and another group in Dorchester, a section of Boston, with a considerable population of immigrants from Spanish-speaking countries in South and Central America. Although the conditions of the experiments were too different and the samples too small for rigorous comparisons, they do suggest some conclusions.

My field work on illiterate adults had two motivations, one derived from observations made in working with children, and the other an interest in adult education itself. The work with children sensitized me to the importance of the support children can get from parents who understand to some degree what their children are learning and who are themselves sensitive to educational values. The other source of interest was the question: Could Logo be used to give women brought up with traditional values a greater, or a different, interest in learning?

Since the coming of technology, the existence of industry has put economic pressure on people. The more they were educated, the less manual work they had to do and yet the more money they could earn. Thus, people became conscious of the value of education; middle and lower class people became more and more eager to study so they could raise their living style. There soon developed, as in Western societies, a vicious circle: a tendency for children with rich and educated parents to become even more privileged; they can afford to go to good schools which are expensive and they have the support of their parents.

In Senegal, there is hope that social structures can change the fact that children with educated or rich and supportive parents have more chance to succeed in learning.

Another issue is that if there are public structures rich enough in stimulating tools, a child from an average Senegalese family can escape from illiteracy. In Senegal, public schools are available for any child. However, classes are so overcrowded and the environment so poor for learning, that children need substantial support at home to get results. One answer is to improve schools. Another is to create opportunities for learning in the home.

My work in Senegal had three parts: a first interview, a learning experience with Logo, and a second interview. These interviews took place with five illiterate Senegalese women.

The first interview was designed partly to stimulate awareness and the will to learn by offering these women an opportunity to learn Logo. The main topic of conversation was literacy and the questions I asked included: Can you sign your name when you go to the post office to cash a money order or do you have to pay someone to do it for you? Would you like to be literate? What do you know about computers?

Aida wanted to be literate to be able to read and write her own letters. She would like to understand what is in the press. She said she had always wanted to go to school but her parents never let her go.

Anta would like to be a better manager, know how to write and be able to read her customers' measurements, the bills and checks. She would like to be able to communicate easily with people from other countries. She also said that she wanted to follow her children's instruction and help them in their homework.

Ndeye wanted to understand French, to read and write it. She thought she would be able to find a job in Dakar.

Ndiaya said she wanted to understand "what the educated people are talking about." She said jokingly and almost with disgust that she would like "to show off" by speaking French and working in an office. Then, she said "I want to be able to follow my children's future instruction."

Elisabeth's reason was to be able to read, write, and speak French. Thus, she could write letters and find a better job.

The answers revealed that the group wanted to learn to overcome the difficulties they had in dealing with administrative matters. The women also thought that knowing how to read and write would provide them job opportunities.

They preferred to learn in French instead of in Wolof, which is their native language. When I asked them the reason, their responses were that they wanted to be able to communicate with their children who were taught in French, to read the signs and understand them.

None of them had ever heard about computers before this study. Thus, this high technology had to be introduced rather smoothly and gently.

The main strategy was to go to these women and place the computer in a setting familiar to them. It was in the back yard of one of the women's houses where these women usually meet in the afternoon to talk after their daily house work. We were sitting on the ground or on low Senegalese stools. There was nothing formal.

We were using an Apple IIe computer and Logo software. I introduced the computer and Logo to them by showing some graphic designs of different shapes and colors which interested them all and which Aida thought she could use for her pagnas (a wrap-around garment worn by traditionally dressed woman). Then I showed letters and numbers. They found the machine very similar to a typewriter with a television screen. I added, "... plus, here you control the television images by yourselves, typing on the keyboard." They seemed very excited and curious.

They decided to learn French. They wanted to learn how to write their names and spell them and how to make some arithmetic operations which they used when they went to the market. The procedures were written using Logo's graphics capabilities to draw letters and numbers. Using these procedures made them see the whole process of drawing letters and numbers by the turtle, step by step. When a letter or number is typed on a computer keyboard, it can be seen written on the screen but, without Logo procedures, the writing process is transparent to the user.

Decisions were made as group process. This was not only a natural consequence of their usual behavior, it tended to create courage through mutual support.

The women preferred using the computer keyboard to type their names first with my help. They would repeat the process themselves until they felt confident about the right order of the letters. Then, spontaneously, they took a notebook and a pencil and started to write them down. They were deciding what to do next. Usually, for the married women, it was the husband's name which was written next, and then the

Africa continued...

children's names. For the single woman, Elisabeth, the next thing she wrote was a list of the French alphabet. She wanted to know them all at the same time. I was encouraging her to find a way of using these letters so that she would know how to pronounce them when they were combined together. This was how I introduced to them the notion of combining a consonant and a vowel to form a syllabic character and sound like BA, BO, RI, etc. Each time I showed a new syllable, I asked them to find a word in which one could find the same sound. We then wrote the word. If I introduced a word in Wolof, I would give them the French translation. What was interesting for them was the ability of reading and writing with the French alphabet, but the meanings of the French words were acquired at the same time. I let them practice with these syllables, building their own words in the same way they were creating their names.

The second week, they raised the question of learning numbers. Three of them knew how to count orally in French. None of them had known the written forms of numbers. I started by showing them the 10 decimal numbers on the keyboard and one by one they typed them on the screen. They reacted in the same way as with the letters; they wrote them down. Aida asked why they did not go up to 10. Then, I showed her a CFAF 100 coin and asked her to read the numbers on it, one by one (un, zero, zero). She did it and realized that this represented also CFAF 100. Thus, I explained to them how numbers bigger than 10, were constructed. Aida, Anta, and Ndiaya picked the idea up very fast and started to ask questions like: "Is 2 and 0 20? What do you call 1 and 1, 1 and 2, 1 and 3, etc.?" Basically, as they knew the names and meanings of the numbers, they just had to learn the symbols representing them. Ndeye and Elisabeth were following very quietly; I asked them to play with the numbers and they began to make combinations; Aida, Anta, and Ndiaya sat back and were helping by saying the names of the numbers. Although I was listening, I tried to make them feel that I was not observing their work, until they asked me. In this way, they were committing themselves to this activity.

They would go home with their husband's name and some numbers in their notebooks, in order to impress their family. One could see how proud they were to show that they could do something on their own.

The second and last interview was to evaluate their feeling about the machine they were discovering, and themselves. The questions were: What do you think about this machine? What would you like to do after these seminars, using what you have learned?

They said that they liked this teaching method with the machine and Logo because it was less frustrating for them to write a letter (with the computer). The machine would draw it correctly the first time and they could show with pride what came out of their typing.

The common answer about their future was to find a new job or to be more comfortable with the one they had (Anta, for instance). However, the oldest woman of the group who was 52 and had 10 children wanted to help other illiterate persons to learn how to read and write. She was ready to act, to participate in improving her community.

In the next ILX, I will compare this experience with that of Hispanic women.

Europe
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The Netherlands Logo Center is situated in Nijmegen, the beautiful University town in southern Holland with the bridge made famous by the American war movie. It is, as far as I know, the only Logo center in Europe (the world?) which is funded directly by a government.
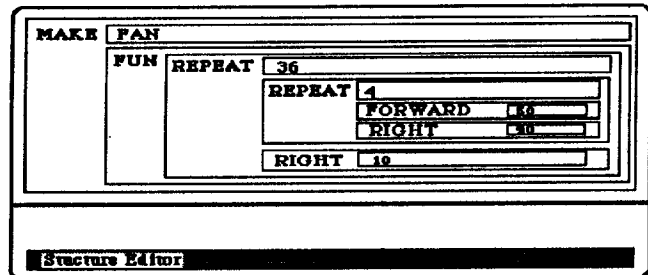
One of the Logo Center's most interesting projects is the development of a LCN (Logo Centrum Nederland) Logo. This is an extensible and portable version, which is being tested on a range of machines from the VAX 11/780 to the Apple II. The current implementation which is being tested is due to be released as a cartridge for the Commodore 64.

The following is from a description of the design of LCN Logo by the director of the Netherlands Logo Center, Harry Pinxteren. This summer's ILX tour to Iceland/Netherlands will center itself in Nijmegen and Harry will be the tour's host. Logo enthusiasts will have the opportunity to be part of this tour (see note on page 7).

Like the BOXER system - Logo's alleged successor - LCN Logo is editor toplevel which is based on the principle of 'what you see is what you get'. There is no distinction between between direct and edit mode. This allows for interactive manipulation, evaluation and execution of structures (procedures, subprocedures). Results are immediately returned in the lower level of the edit screen, or displayed as system or error messages in the (reverse video) bottom line. So the edit screen is divided into three parts like this:

```
☐




              Welcome to LCN Logo
           (c) LOGO Foundation Nijmegen
 Structure Editor
```
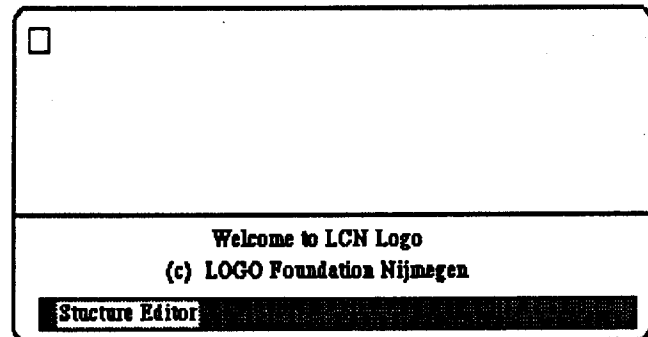
The editor visualizes the structure of Logo programs in terms of 'planes' (not unlike 'boxes' or 'windows') very much like BOXER. Here is what a familiar Logo procedure looks like:

```
MAKE  FAN
      FUN  REPEAT  36
                   REPEAT  4
                           FORWARD    50
                           RIGHT      90
                   RIGHT  10


 Structure Editor
```

Unlike BOXER though, the editor will only show one plane at the time, which is called the *active* plane. This will be displayed in reverse video, thus focusing the user's attention to "where the action is." Active planes can be evaluated and executed, copied, inserted, deleted, replaced and re-edited, without leaving the editor. This means that there is no need for separate debugging aids. Editing, tracing and repairing bugs become mutually supporting activities. The cursor is used as a pointing device. System messages explain the manipulation of planes which is based on a *spacial metaphor*. So using the editor operates very much in the same way as working with sheets of paper. Besides, planes follow the LCN Logo syntax which, indeed, is very simple. There is only one rule to which there are no exceptions. In fact, LCN Logo has a *visual syntax*, making important (programming) concepts transparent (e.g. parameters, functions, trees) and promoting readability and understandability of text at the same time. In case of an invalid operation or the evaluation of an incorrect (sub)expression, an error message is displayed in the bottom (reverse video) line. The cursor indicates *where* the error has occurred.

An example of two possible active planes and system messages is given in the following figures (as realized on a CBM 64).

```
MAKE FAN

   FUN REPEAT 36

            REPEAT 4
                     FORWARD 50
                     RIGHT 90

            RIGHT 10




Editor   Change Word
```

```
MAKE NAME
      FUN WITH arg1
              arg2
      IF equal? arg1
              arg2
         THEN   stm1
         ELSE stm2




Editor: I don't have a plane to insert
```

The first figure shows an activated nested REPEAT of the procedure FAN, which in LCN Logo will be a function, i.e., it will return a result (there is no need for OUTPUT), in this case, the position of the turtle on the x- and y-axes. This active plane can be inserted at the position of the active plane in second figure (which in this example does not make very much sense) and the result of this operation can immediately be tested (by pressing the RUN-key on the CBM64). As the figures show, LCN Logo only has one binding mechanism, named MAKE. The difference between different bindings has been made explicit by using FUN (for FUNCTION) in case of the definition of a function object, and a (quoted) name, or value, in case of the use of MAKE as in current Logo's, e.g.,

Make number
     10

In the same way, the use of arguments of a function has been made explicit by the (pseudo) function WITH. Arguments of functions are entered in a column. Provisions have been made so as to support an easy handling of this syntax rule (layout).

A plane based editor allows for direct educational applications, such as the manipulation of arithmetic operations or the exploration of language rules (trees).

LCN Logo TG features common primitives like FILL, which fills every chosen shape drawn by the turtle. In addition, LCN Logo has standard 3-D TG, with primitives to change from 2D to 3D mode and to move the turtle along the z-axis. Also, there is a primitive called POINTOFVIEW to choose the vanishing point of perspective.

Sprites come standard in multi-color using a single-key sprite-editor. Realization of sprites depends on the specifications of the sprite-board used.

Tiles are 8 by 8 pixel blocks which can be shaped and combined as sprite-sets to design logo's, icons, and backgrounds for games and simulations. Like sprites, tiles can easily be designed using a single-key editor and can be saved and retrieved from disk or tape. As sprites, tiles can be combined with other worlds. An example would be the simulation of the familiar instant TG environment in which standard TG commands and commands for saving and retrieving programs are displayed as icons which can be selected by a mouse (joystick) controlled pointer.

Further information about LCN Logo can be obtained from Mr. Harry Pinxteren, Logo Centrum Nederland, P.O. Box 1408, 6501 BK Nijmegen, The Netherlands. Or better yet, visit The Netherlands and Iceland this summer for a great one of its kind ILX study tour.

The COMPSCI '86 conference will be held on May 12-13 in Clayton, Australia. Also, "Computers in Education: On the Crest of a Wave?" is the 4th Australian Computers in Education conference and is scheduled for August 24-27. For more information on these conferences, write to the Computer Education Group of Victoria, P.O. Box 88, Balaclava, Victoria 3138, Australia.

The 1986 Western Comparative and International Education Society Conference is scheduled for December 28-30 at the Univeristy of Hawaii under the direction of Victor Kobayashi and Dennis Harper. The conference theme is "Technology and Education: International Perspectives. The ILX is arranging low cost air fares and accommodations from the U.S. mainland.

Latin America
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This issue's Latin America column looks at two organizations using Logo in Argentina and finishes with a report from Daniel Orey on the Computers in Education Symposium recently held in Mexico City.

The Computer Equipped Laboratory of the **Pediatric Mental Health Service of the Italian Hospital, Buenos Aires, Argentina,** was created in May, 1981. At the present time the laboratory has two machines, one a Texas Instrument 99/4A, which is used to work with Logo in Spanish. The other is an Apple II which permits the activities with music, paddles, graphic tablet, and text printing as well as Logo. The recent incorporation of a word processor will favor the work with children with learning problems. The introduction of a turtle robot or floor turtle, will allow Logo to be used with more severely mentally disabled children, as well as those who are physically handicapped.

From a practical point of view, and so as to facilitate the exposition, we could divide the children who attend the laboratory into two major groups: (1) physically handicapped children and (2) mentally handicapped children (neurosis and psychosis, learning disturbances, and mentally retarded). The hospital is beginning a new era which includes both clinical assistance and the possibilities of research and investigation. The hospital hopes that future experiences will lead to new improvements meeting the increasing needs of different children so that they may become more able and happy persons. Further information can be obtained from Deborah Anne Powell, Hospital Italiano, Gascon 450, 1181 Buenos Aires, Argentina.

The **Bayard Institute of Argentina** began working with Logo in 1982. They were persuaded that a mere accumulation of facts is not the final goal of education; that the modern young person should possess the capability of using his mind in a way that will enable him or her to solve the problems he or she will have to face in the future. To this end the school must offer the student an environment of freedom, where learning can take place naturally while working towards the development of his reasoning potentialities.

The training of teachers was, and still is, a major concern in the development of this experience. Since 1982 many courses have been offered to the staff including psychology and headmaster training, as well as Logo classes. In 1982 they opened the Logo room with six Texas Instrument 99 4/A computers. In 1985, a new room was opened with the old equipment, while in the first room they now have 2 TI, 3 Commodore 64, and 2 Texas PC computers.

Up to now there have been 4768 class hours with the Institute's regular pupils. Open courses add another 590 adults and children and another 1584 hours of Logo. The figures just stand for the formal aspect of the Institute's work with Logo. Behind them lies the constant task of research, to make it really valid in the intellectual development of our pupils. It would be enriching if all those working with Logo could exchange their failures and achievements. For more information about the Bayard Institute contact Annelise de Forteza, Director General, Instituto Bayard, Castex 3348 - Salguero 2969, Buenos Aires, Argentina.

The following report was submitted by Daniel C. Orey of the University of New Mexico. He reports on the **II Simposio Internacional de Computacion Infantil** held in Mexico City, October 1985:

It was with some trepidation that I gazed out at the city below us as the plane landed in Mexico City. I must admit I had expected to see it in ruins. After all, the press reports had made it seem so. Instead, I saw it more or less as it always is, teeming, exciting, and glamorous. It was injured, in places severely; however, as always and in a way that I have become to admire greatly about my Latin American friends, they pick things up and get on with it all. And so it was with the Conference.

The Simposium was one of the most interesting, dynamic, and organized conferences I have ever attended. Discussions ranged from practical ideas in programming and curriculum development projects to the more theoretical or philosophical discussions.

I have found that, in the United States, people feel somewhat cheated if they go to a computer conference and do not get time to have hands-on experience. In Mexico, I was delighted that every session that I attended was the catalyst for "lively" dialogue and consultation. I have come to admire the Mexican computing community for their heroic efforts in the face of the serious economic situation. From the time I have spent with computer educators from Latin America, I have become aware of some interesting and creative solutions being developed throughout the region.

Three projects being undertaken by the Mexican computing community are especially worth noting. The first is the plan from the Ministry of Education to place microcomputer labs in public libraries. I believe they have already 15 to 19 functioning. The second is the computer project at UNAM (The National Autonomous University of Mexico), where there is work being done with children and computers in many places in Mexico. As well, a group at the National Pedagogical University in Mexico City is working on interesting alternatives and software development. And, finally, the work being done by the people at *Chispa* children's magazine is noteworthy.

I would like to thank my Mexican collegues, especially Sr. Ricardo Nemirovsky, for inviting us to participate. I have learned many things from computer educators outside the United States. International conferences such as this one create important international dialogue. We in the United States have become somewhat isolated. Mexico offers an affordable alternative for anyone interested in what is happening outside the United States. As I mentioned to many Mexicans at the conference, I was no longer sure that my state deserved the title of New Mexico. It was obvious to me that THE "New" Mexico was south of New Mexico. Congratulations go to all of you in Mexico involved with the conference.

(Ed. note: The conference proceedings (in Spanish, for the most part) are available for 3000 pesos from Dr. Jorge Bustamante, Insurgentes Sur #949-9º, Col. Napoles, Mexico D. F. 03810. Daniel Orey is maintaining a list of those interested in a tour package to attend the 1986 symposium in Mexico City this fall. Write to: Daniel Orey, CIIMTE - COE, The University of New Mexico, Albuquerque, NM 87131, USA.)

For information on the 1986 ILX summer study tour to Iceland and The Netherlands, write to Educational Spectrum, Inc., 188 Summerfield Street, Scarsdale, NY 10583 USA.

ILX Roving Reporter

by Gerry Eddy

Gerry Eddy and her husband are spending a one year sabbatical leave traveling around the world by bicycle and investigating how Logo is being implemented. Her first ILX report comes from England. Gerry is a media specialist in the Aurora Public Schools of Aurora, Colorado.

When the British Logo Users' Group gathered late last year in Glascow, members were enthusiastic about the future of Logo in Britain. The long expected full Logo for the widespread BBC computer had finally become available in January, 1985, and this was to be, indeed, the year of the turtle.

The stars, however, have not been kind. Government cutbacks have made it difficult for schools to purchase the new Logo and many have decided to continue using the stop-gap turtle drawing program DART. Teachers, unhappy over declining income and unsatisfactory work conditions, are refusing to attend after school training sessions, reducing Logo in-service training to a minimum. Many teachers are giving priority to other kinds of computer experience...word processing, database projects, simulations...rather than Logo. Government funding for the five year Microcomputers in Education Program is running out in the spring of 1986, causing a number of competent and experienced computer educators to start looking for new jobs.

In spite of difficulties, however, many Logo projects are moving ahead. The British have a big advantage in that Logo fits very naturally into British primary classrooms. In this setting, where teachers have a great deal of freedom in the way they organize their teaching, Logo can become a natural extension of classroom work. A teacher of 7 year olds uses random floor turtle drawing to investigate open and closed shapes, and to draw land forms such as islands, peninsulas, harbors, etc. A teacher of 5 and 6 year olds develops a game with the children who are studying knights and castles. The children must maneuver the turtle to knock over skittles decorated as knights and then drive the turtle into a cardboard castle. These kinds of applications are as yet sparse, but they are spreading.

Obviously in a limited stay in Britain of a few short whirlwind weeks, I could only begin to see what English schools are doing with computers. My observations are personal and skewed by the experiences I happened to have and the places I happened to see.

One of the most interesting developments on the Logo scene is control Logo. Children are asked to take problem solving with Logo beyond the microworld of the computer to the world of physical objects around them. Sometimes they may design a buggy or cart using Fisher Technic Advanced building sets, or using "junk" such as empty cans and rubber bands. With interface software and small motors they can drive these buggies using Logo.

An extremely interesting control project was carried out by Janice Staines and her 10 year old children at Delves Junior School, Walsall, West Midlands. These children became interested in designing a traffic light which would operate in a realistic fashion. After observing the corner light and making notes on the proper timing, they built a traffic light, controlled from Logo, which followed the proper sequences. The construction of the light itself provided a challenge for part of the children, while others made the roads for the intersection or worked on the Logo program.

A whole range of remote control devices are becoming available for use with control Logo. There are input devices such as thermometers, tilt switches, heat sensors, and light sensors, which can be used to activate output devices such as bells, lights, motors, buggies, or what have you. The potential for curriculum related logical thinking, problem solving, and just plain fun is limitless.

My general impression is that where Logo is being used well, it is being used very, very well indeed, but most often it is not being used at all. Even in schools which are very enthusiastic about computer use, teachers are doing creative work with simulations and databases and leaving Logo on the sidelines.

The following people have expressed a willingness to correspond with ILX readers in other parts of the world.

• Dave Jackson, Sudley Junior School, Audley Rd., Stechford, Birmingham, England. Classroom teacher in an IMB Project school with a computer and printer in every classroom. Almost the entire school uses Logo at some level, but Dave's most interesting work is with a town planning simulation with his 9-10 year olds from very deprived backgrounds.

• Janice Staines, Delves Junior School, Walsall, West Midlands, England. Very experienced and creative classroom teacher who has used control Logo with 10 year olds. Has done much floor turtle work with younger children, and is currently involved in a sprite project with 5-6 year olds.

• Hamish McLeod, Psychology Department, University of Edinburgh, Forrest Hill, Edinburgh EH1 2QL, Scotland. Interested in Logo as it relates to sex stereotypes.