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Wifty Gifts

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“Logo LinX:” December 1987

Judi Harris

“Wifty Gifts”

I relish the moment when I introduce this procedure to my students:

```
TO SQUARE :NUM
OUTPUT :NUM * :NUM
END
```

PRINT SQUARE 5 returns the value 25. PRINT SQUARE 10 yields 100. Invariably, someone laughs, and says: “Oh! I thought that you meant...”

```
TO SQUARE :SIDE
REPEAT 4 [FORWARD :SIDE RIGHT 90]
END ”
```

In this month’s article, I mean BOTH—and more.

Double Trouble

Some of my favorite jokes involve double entendres. For example,

“Did you know there was a computer in the Garden of Eden?”

“No, I didn’t know that!”

“Yes: Eve had an Apple, of which Adam took a byte.”

Logo double entendres can inspire a special kind of divergent thinking.

Nifty Gifts

What makes a Logophile’s eyes sparkle, besides a LEGO TC Logo set? (No, this is not another bad joke.)

New procedures to add to their Logo toolkit!

Glen Bull and Paula Cochran (1985) suggest that:

The extensible quality of Logo allows new commands to be added to the language that would be tedious for the average user to develop. These software tools allow the capabilities of Logo to be extended, just as slots on the IBM PC or Apple IIe make it possible to extend the hardware capabilities of the computer.

An important characteristic of a tool is that it may be used for tasks that the tool maker never envisioned. A hammer, for example, is traditionally used to build [a] dog house or a bird bath. It might also be used to prop open a door, smash bugs, or form part of a modern sculpture. (p.1)

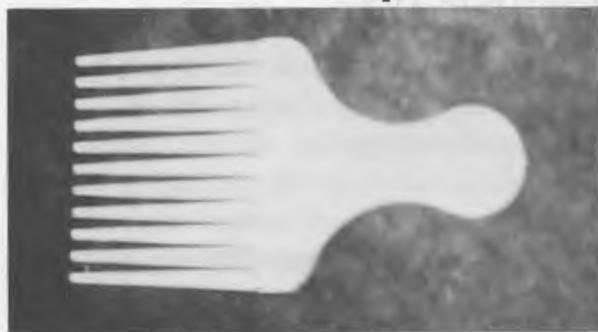
Why not give a Logophile some new procedures during this holiday season? Even better, why not give Logo fans some new INTERPRETATIONS of their trusty tools?

Choices?

Bull and Cochran’s (September 1984) random selection tool, PICK, is an old friend.

```
TO PICK :LIST
OUTPUT ITEM 1 + (RANDOM COUNT :LIST)
:LIST
END
```

Here is another TO PICK "procedure:"



Uncharted Waters

Bull and Cochran's (September 1986) chart tools:

```
TO LINE :LENGTH
FORWARD :LENGTH
BACK :LENGTH
END
```

```
TO OVER :LENGTH
PU
RIGHT 90
FORWARD :LENGTH
PD
LEFT 90
END
```

```
TO BAR :HEIGHT
REPEAT 2 [FORWARD :HEIGHT RIGHT 90
FORWARD 20 RIGHT 90]
OVER 20
END
```

can help with bar graphing. They can also be "coded" like this:



TO LINE



TO OVER



TO BAR

Double Trouble

Some Logo double entendres have double representations. Martin and Bearden's (1985) work with bouncing balls, and Bull and Cochran's (May 1986) bounce tool:

```
TO BOUNCE :LIST
IF :LIST = [] [STOP]
SETY 50 * FIRST :LIST
BOUNCE BUTFIRST :LIST
END
```

might be restated in two different ways:



...and of course, the familiar fabric softener.

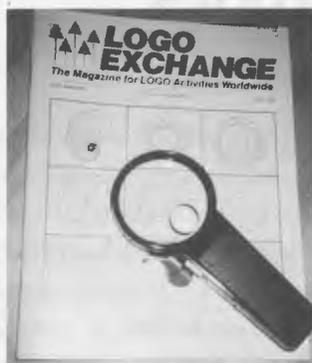
A Vision

Some tools, like Bull and Cochran's (November 1984) INSPECT, help us to examine lists.

```
TO INSPECT :LIST
IF EMPTY? :LIST [STOP]
PRINT FIRST :LIST
INSPECT BUTFIRST :LIST
END
```

Other tools make a different vision clearer.

TO INSPECT



Procedural Hues

Steve Tipps (1984) provided us with some spectacular spectral procedures:

```
TO GREEN      TO ORANGE      TO BLUE
OUTPUT 2      OUTPUT 4      OUTPUT 5
END           END           END
```

To use these tools, type SETPC GREEN, SETPC ORANGE, or SETPC BLUE. Or, you may wish to attempt a different method:



TO RED, TO ORANGE, TO GREEN, TO BLUE, TO PURPLE, TO BLACK

Procedure Puns

Finally, there are those procedures that, when (mis)interpreted, yield mostly groans.

```
TO PLOT :NUMBERS
IF EMPTY? :NUMBERS [STOP]
SETPOS LIST (XCOR + 40) (FIRST :NUMBERS)
```

PD
PLOT BUTFIRST :NUMBERS
END
(Bull and Cochran, March 1987)

TO PLOT



More "Procedures"

What will be in your students' Logo holiday toolkits?

- A lab notebook? (TO COLLECT.DATA)
- A wind-up toy? (TO MOVE)
- A slide rule? (TO CONVERT)

Here's hoping that you will have a happy, healthy, and DIVERGENT holiday season.

[Editor's note: Do you or your students have good additions to the above collection? If so, send your pictures and procedures to Judi Harris, and we'll publish the best in a future issue.]

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TEACHING TOOLS

Logophiles and Logo Files

Glen Bull and Gina Bull

It is a familiar story. A child raises his hand and asks for assistance. The teacher arrives and tries to help, but the original error has scrolled off the screen. Sometimes it is possible to reconstruct what happened, and sometimes not.

There is a way to record events even when you are not there. In this case, the child has typed the letter "O" instead of the number "zero."

FORWARD 50

Logo Doesn't Know How to 50

A DRIBBLE file provides a record of everything the child has typed. This enables the teacher to go back and examine everything which has taken place in the session. The simplest form of a DRIBBLE file sends everything to the printer. In Apple Logo II (or LCSII Logo II), the command to do this consists of the command DRIBBLE followed by the slot number in which the printer card is located. (Usually, though not always, the printer card will be in Slot 1.)

DRIBBLE 1

In IBM Logo, the equivalent command

consists of DRIBBLE followed by "PRN.

DRIBBLE "PRN

This is an easy enough command to try, and if you have one of these versions of Logo but have not used the DRIBBLE command, you should try it. Be sure that the printer is turned on and attached to the computer. If the printer is not turned on, Logo will politely wait forever for the printer to respond. The command to stop dribbling to the printer is (appropriately) NODRIBBLE.

Creating a File

Not every computer has a printer attached to it. Computers without printers can still DRIBBLE. It is just necessary to send the text to a file on a disk rather than to paper in the printer. In this case, the command is DRIBBLE followed by the name of a file. Try creating a test DRIBBLE file. Just type DRIBBLE "TESTFILE.TXT, and then type a few Logo commands. Be sure that you have a formatted disk in the disk drive when you do this.

DRIBBLE "TESTFILE.TXT
CLEARSCREEN