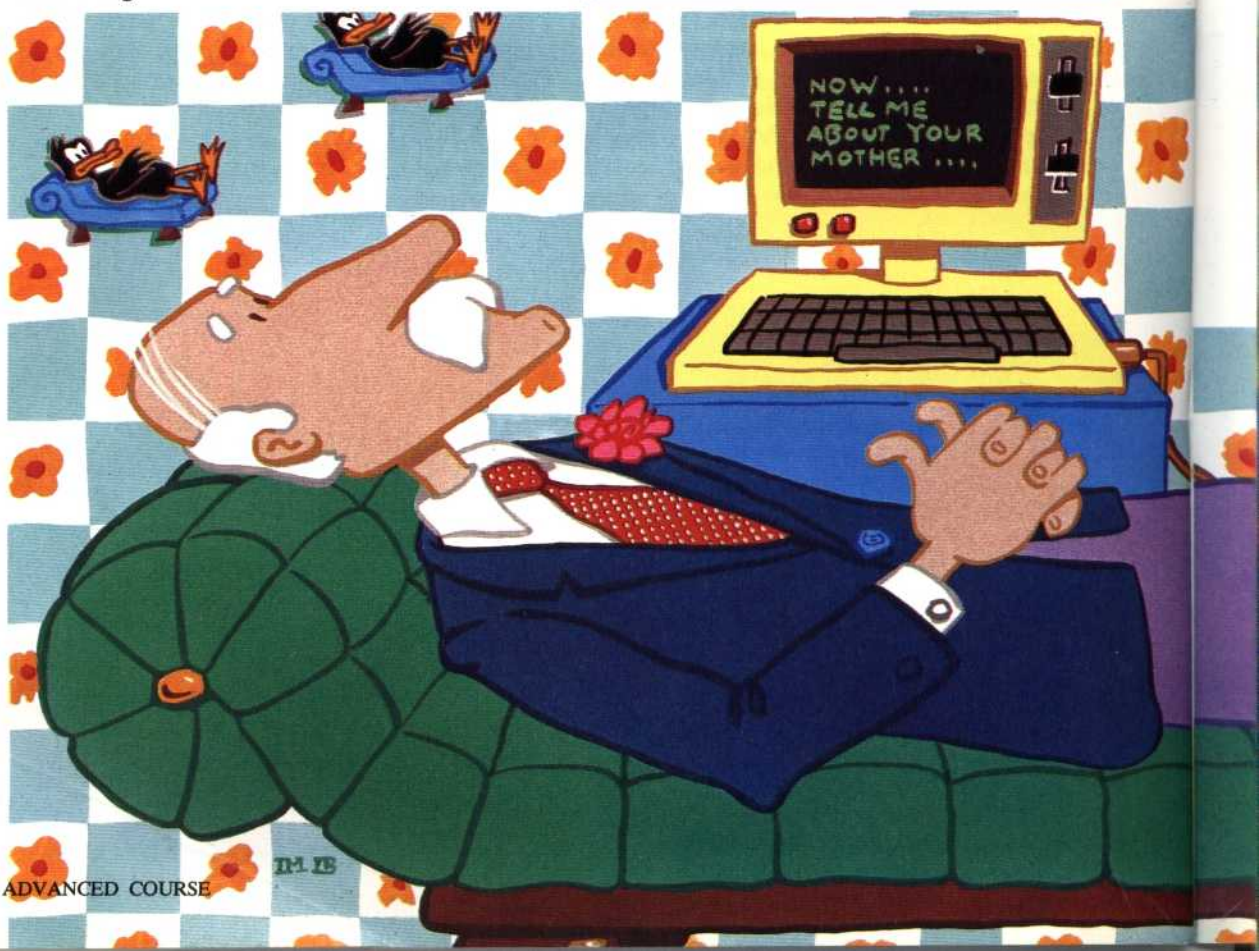
PRIVATE CONSULTATION

The 'fifth generation' of computers will not require programming as we know it, but will 'understand' 'natural languages' — their operating systems will accept and carry out commands expressed in the user's own language. Here we present a simple simulation that illustrates the principles of such a system.

One of the pioneers of computing, Alan Turing, proposed a famous test of artificial intelligence: he said that if a machine could converse with a human, and the human couldn't tell that he was talking to a machine, then the machine could be said to be 'intelligent'. So far, no machine has truly passed that test, but several programs approach it by deflecting the human's interest in the conversation from the machine's responses, so that the human does all the talking. This may sound far-fetched, but it's surprisingly effective. If you think about an enjoyable conversation you've had, you'll probably find that you did most of the talking, while the other person simply supplied conversational 'noises' or prompts. This is the principle of many types of psychotherapy and counselling.

Program

```
100 GOSUB 2000:   REM INIT
200 FOR L=1 TO 2*LT STEP 2
300 PRINT O$:INPUT I$
400 GOSUB 3000:   REM ANALYSIS
500 NEXT L
1000 PRINT  TAB(5); "-----THE SESSION'S
OVER-----"
1100 PRINT  TAB(4); "--PRESS ANY KEY TO
CONTINUE---"
1200 A$=INKEY$:IF A$="" THEN GOTO 1200
1300 GOSUB 5000:  REM REPORT
1900 END
1999 REM************************
2000 REM**   INITIALISE  S/R  **
2001 REM************************
2050 LT=10:AN=10:T9=500:EX=2*LT
2100 DIM R$(AN):DIM H$(2*LT)
2200 DATA "YES..","TELL ME MORE..", "GO
ON..","AND..","SO.."
2250 DATA"IS THAT IMPORTANT..","WHY DOES
 THAT MATTER.."
2300 DATA "PLEASE EXPLAIN THAT..", "WHY
DO YOU SAY THAT.."
2350 DATA "HOW DOES THAT AFFECT YOU.."
2500 FOR K=1 TO AN:READ R$(K):NEXT K
2600 CLS:O$="HI - WHAT'S THE TROUBLE.."
2950 RETURN
2999 REM************************
3000 REM**   ANALYSIS    S/R  **
3001 REM************************
3100 IF I$="GOODBYE" THEN EX=L-1:L=2*LT:
RETURN
3200 H$(L)=O$:H$(L+1)=I$
3300 R9 = INT(AN*RND+1):IF R9=R0  THEN
 GOTO 3300
3400 O$=R$(R9):R0=R9
3950 RETURN
4999 REM************************
5000 REM**   REPORT      S/R  **
5001 REM************************
5050 CLS:PRINT TAB(10);"**REPORT**"
5100 FOR K=1 TO EX STEP 2
5150 PRINT TAB(5);H$(K)
5200 PRINT H$(K+1)
5300 FOR D=1 TO T9:NEXT D
5400 NEXT K
5900 RETURN
```



MICHAEL BROWNLOW