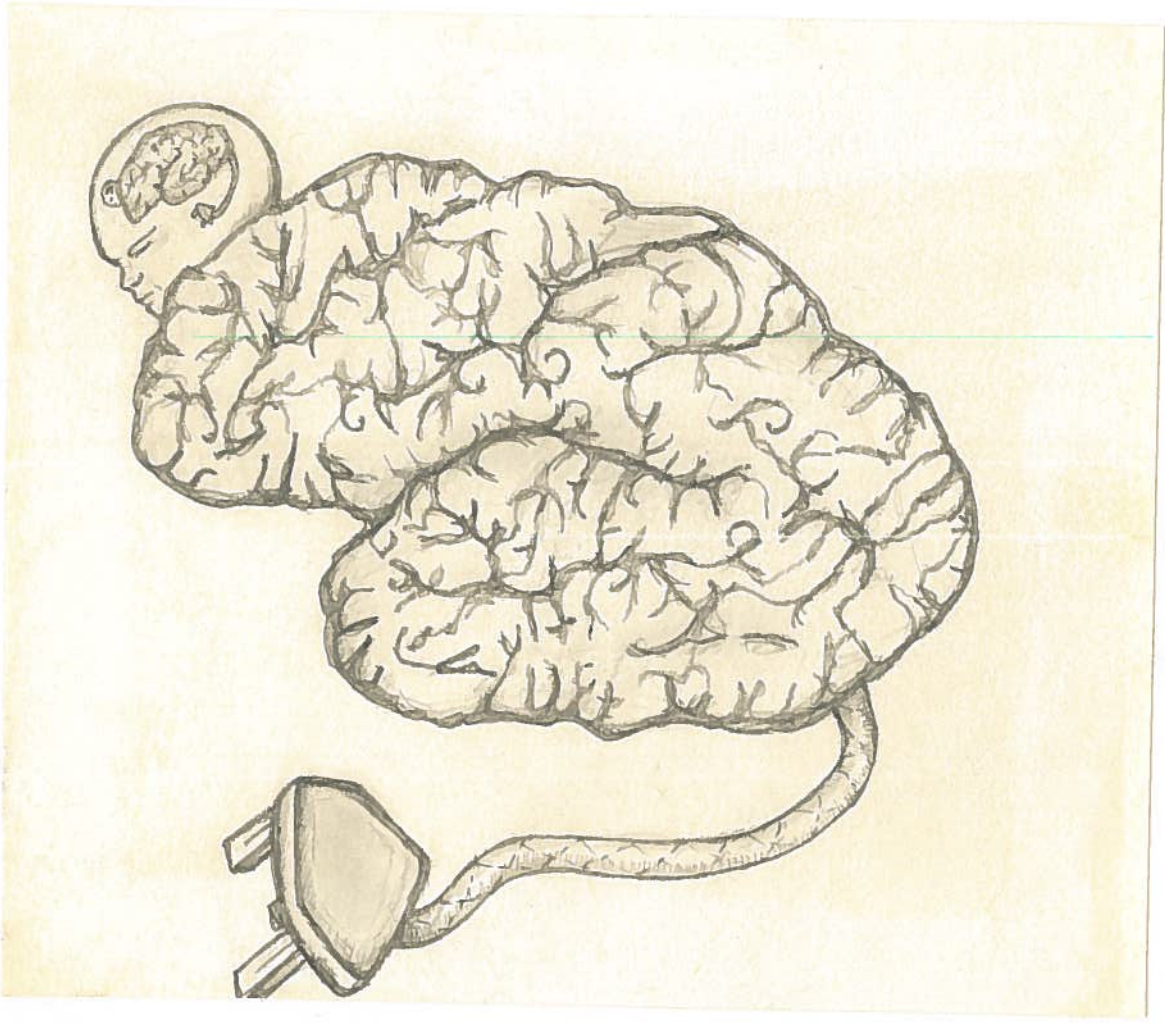


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Volume 1 Number 1

February 1986



Elektronik Brane

The 'Elektronik Brane' publishes low-quality indefinite derivative articles that have not been appropriately reviewed by competent workers in the fields of artifice, inelegance, artifice & inelegance, artificial elegance, inelegant artifice or cognitive agriculture. The journal aims to provide a forum for research workers and students in the field and to hinder communication between them and other scientists interested in applications. Emphasis is placed on both meta-theoretical theoretical inapplicable inappropriate and incomprehensible work that lacks deep conceptual structure. The scope of the journal includes: underware engineering; pattern dissolution; under-fives' graphics; natural language obfuscation; information displacement; mismanagement disinformation systems.

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3rd International Conference on Confectionist Modelling - Summary
Dept. of Artifice & Inelegance, University of the South Bridge
January, 1986

Lunching on Massively Cereal Nutbars - Madge R. Teicher

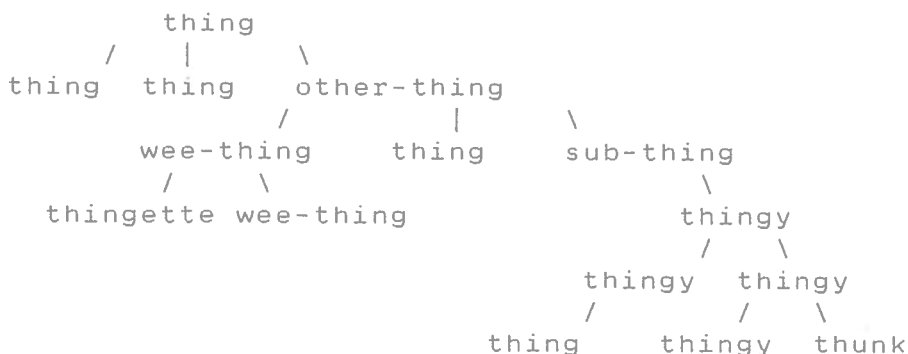
The confectionist theory of intelligence, named after the great linguist Henry Sweet, is stimulating a great deal of attention and salivation. The model is based round a very simple scheme, as follows. There are one or more "packets", where each packet may contain a finite number of "bites". There is a single "server", and one or more "consumers" (where the server may also be a consumer). Each "packet" is opened, usually by the server, and "forwarded" to each "consumer" in turn, who "ingests" (Schank et al.1975) zero or more bites. It is possible to prove that the number of bites is a monotonically decreasing function of the number of "ingests" executed.

Further variations on this include the "procedural model" (where each "bite" has separate instructions), the "temporally bounded model" (each package labelled "Best Before..."), the "declarative" package (e.g. "the scrunchiest munch in town"),

A date-and-walnut base - Morgan K. Kleathe

A large date-and-walnut base of heuristic bodgy bits of wurrrld knowledge will be encapsulated for the confectionist model in a nut 'shell'. The temporal procedural attachment of 'wrappers' may be overruled and if their hash has been settled due to violation of the 'sell-by' selectional restrictions. Alternatively make-weights may 'bottom-out' and rules for strict-subwrapperisation be ignored as long as they contain mis-shapes bus-tickets or balls-of-navel-fluff (labelled alternatively as oose in the dialectical materialism representation):

A TREE



Call for papers - Confectionist Modelling 1987

The theme of next year's conference will be 'Assortments, allsorts and selections'. The programme will include a three day workshop on 'Syntactic Sugar'. The convener will be S. Oor Ploom (Hawaii).

A Fully Semantic Syntax

Michael G. Johnson

A major area of contemporary research attempts to identify a linguistic paradigm which combines expressive power with formal simplicity. Approaches include Winograd's 'Blocks World', Mayakovsky's 'Blocs World', Writer's 'Block World' and Drain's 'Blocked World'.

Given the significance of self-reference in the formal and axiomatic theories of computer science and artificial intelligence it is somewhat surprising that little attention has been paid to the mode of discourse of these genre. After all, in meta-diachronic terms, computer science and artificial intelligence are young tongues, rich in intensional synchronicity and a plethora of parole if somewhat lacking in langue. Thus, as convergent paradigms, they present very small scale interfaces to what are to outsiders very very abstract problem areas.

Our work has identified a object oriented rule based system which generates all known complete consistent algorithmic concepts using a massively divergent random grammar, which has been implemented in CProlog (App. 1).

APPENDIX 1

Incomprehensible Concept Syntactic Generator

```
col1(['axiomatic', 'top-down', 'bottom-up', 'user-friendly',  
'state-of-the-art', 'high-level', 'low-level', 'ontological',  
'psychologically-real', 'pushdown', 'pop-up', 'abstract',  
'concrete', 'computationally-expensive', 'large-scale',  
'small-scale', 'asymptotic', 'theoretical', 'hypothetical',  
'optimal', 'object-oriented', 'interactive', 'goal-oriented',  
'complete', 'consistent', 'finite-state', 'quasi']).
```

```
col2(['explanatorily-adequate', 'concurrent', 'partial', 'total',  
'informal', 'formal', 'top-down', 'bottom-up', 'bottoms-up',  
'pathognomic', 'diachronic', 'synchronic', 'autonomous',  
'convergent', 'divergent', 'rule-based', 'frame-based',  
'knowledge-based', 'icon-based', 'conceptual', 'paradigmatic',  
'syntagmatic', 'incomplete', 'executable', 'problem-solving',  
'real-time', 'real-world']).
```

```
col3(['meta-level', 'connectionist', 'confectionist', 'depth-first',  
'breadth-first', 'best-first', 'worst-first', 'consistent',  
'inconsistent', 'worst-fit', 'best-fit', 'pseudo',  
'non-deterministic', 'deterministic', 'reductionistic',  
'backward-chaining', 'forward-chaining', 'multi-tasking',  
'inconsequential', 'implicit', 'explicit', 'partial',  
'incomprehensible', 'unilateral']).
```

```
col4(['structured', 'semantic', 'undecidable', 'decidable',  
'backtracking', 'functional', 'positronic', 'procedural',  
'algorithmic', 'combinatorial', 'fuzzy', 'intensional',  
'extensional', 'provable', 'random', 'redundant', 'declarative',
```

```
'NP-complete', 'NP-incomplete', 'linear', 'categorical',  
'tractable', 'recursive', 'parallel', 'sequential', 'compatible',  
'extra-logical', 'paradoxical', 'ambiguous', 'self-referential',  
'analogous', 'graphical', 'behaviouristic', 'transformational']]).
```

```
col5(['interface', 'network', 'object', 'automaton', 'data-type',  
'representation', 'toolkit', 'washbag', 'specification', 'tree',  
'procedure', 'function', 'model', 'library', 'algorithm',  
'grammar', 'concept', 'blackboard', 'database', 'flavour',  
'system', 'expression', 'prototype', 'chart-parser', 'domain',  
'nroff-macro', 'sub-goal', 'specification', 'micro-world',  
'implementation', 'work-station', 'syndrome', 'approximation',  
'corpus', 'utterance', 'speech-act', 'analogy', 'graph', 'analysis',  
'feature']]).
```

```
stars([meta, very, massively]).
```

```
randinc(1).
```

```
llength([], 0).
```

```
llength([_|L], N) :- llength(L, N1), N is N1 + 1.
```

```
rand(N, Max) :- retract(randinc(X)),  
                X1 is X+1,  
                asserta(randinc(X1)),  
                N is ((floor(cputime*9)+X) mod Max)+1.
```

```
grab(1, [Word|_], Word).
```

```
grab(N, [_|List], Word) :- N1 is N-1,  
                           grab(N1, List, Word).
```

```
getword(Col, Word) :- l(Col, ListLength, List),  
                     rand(R, ListLength),  
                     grab(R, List, Word).
```

```
select(Col) :- getword(Col, Word),  
              write(Word),  
              write(' ').
```

```
choose(1, _).
```

```
choose(_, Col) :- select(Col).
```

```
option(Col) :- rand(R, 3), choose(R, Col).
```

```
nextstar(1, _).
```

```
nextstar(_, Star) :- write(Star),  
                    write(' ').
```

```
starchoose(1).
```

```
starchoose(_) :- getword(stars, Star),  
                write(Star),  
                write(' ').
```

```
        rand(R,2),
        nextstar(R,Star).

staroption :- rand(R,3),
             starchoose(R).

qualchoose(1,_).

qualchoose(_,Col) :- staroption,select(Col).

qualoption(Col) :- rand(R,3),qualchoose(R,Col).

line :- qualoption(col1),!,
        option(col2),!,
        qualoption(col3),!,
        option(col4),!,
        select(col5),!.

lines :- repeat,line,nl,fail.

addlength(Col) :- C=..[Col,List],
                 C,
                 llength(List,Length),
                 asserta(l(Col,Length,List)).

startup :- addlength(col1),
           addlength(col2),
           addlength(col3),
           addlength(col4),
           addlength(col5),
           addlength(stars).

gibber :- startup,lines.
```

New Insights in Semantic Windows

Gale K. Thinke

This state-of-the-art methodology is pushing back the frontiers of cognitive science and stirring the minds of multidisciplinary in fields as far apart as neurolinguistics and psychosemiotics. The basic tenet involves the positing of entities known as 'semantic windows'. As discourse proceeds an individual will be able to access multiply intersecting semantic fields by using a 'sliding' semantic window; hence the possibility of topic-shift maintaining overall comprehensibility as long as reference is never made to anything outside the scope of the currently active semantic window.

Failure of communicative competence, e.g. in psychopathology, can be explained by 'window breaking', 'small windows', 'portholing', 'frosted glass' or 'mirror panes'(the last is a particular instance of the 'talking to a brick wall' phenomenon). The possibilities for text generation are obviously enormous. Automatic consistency may be maintained with the guarantee of never violating 'strict hierarchies' yet without ever having to actually be aware of what you're talking about.

In Brief

Abstract Padding Service

'Elektronik Brane' hopes to be able to offer to its subscribers in the very near future an 'abstract-padding' service (similar to the 'book thumbing service' offered by the 'Irish Times', c.f. 'The Best of Myles Na Gopaleen', Flann O'Brien). Under this scheme customers will submit a small, simple abstract of 'Janet and John' format which will be processed using a combination of the 'semantic window' technique (see below) and the Incomprehensible Concept Syntactic Generator to produce a paper of length and opacity suitable for publication in the customer's favourite journal.

The 'abstract padding' service will be available in various versions from Super-Deluxe to Basic. The latter is of course written in Basic and will not include words of more than three syllables or sentences embedded to depth greater than 2. The former includes a choice of very very high-level languages, quotations in the appropriate language from obscure works of Polish logicians or Finnish morphologists, massively incomprehensible multiply centre-embedded sentences utilising multi-word concepts from the Incomprehensible Concept Syntactic Generator and the option of 'screen-swapping' in semantic windows so that topic-drift may be committed without the reader realising.

This article was produced on a 'semantic window text generator' simulation using the Incomprehensible Concept Syntactic Generator. Readers puzzled by apparent paradoxes of self-reference should lie distracted in a ditch until they are feeling a little less Russellian.

Logic chips to simulate fish

A work-in-progress report was received by 'Elektronik Brane' from colleagues in the White Fish authority who are involved in a long-term project building logic chips to simulate the behaviour of pelagic finite-state-automata. (This work is to a large extent funded by the generous interests of E Rollio & Sons Fast Food Emporium.) Progress has been slow but steady and culminated in the successful simulation in December 1985 of the neural network of the acorn worm. It is hoped that an effective reduction in size of the simulator (from that of large refrigerator to that of small microwave oven) will be possible over the next few months. Subject to available funding, projected enterprises include the mapping of the mental models of the Herring, Codd, Saith and Haggis.

The Mystery of the Missing SHRDLU

Ian Growd

1. "Pick up a big red block."

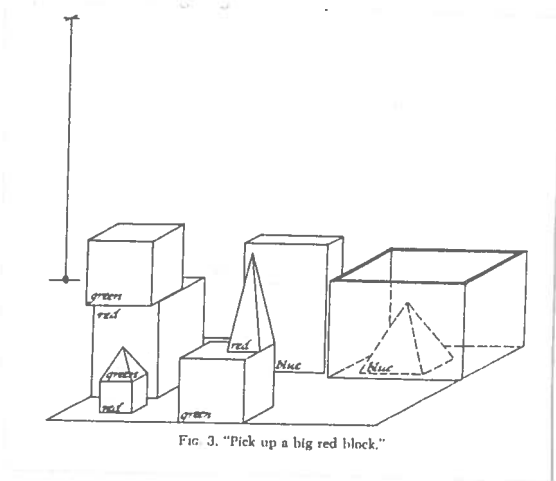
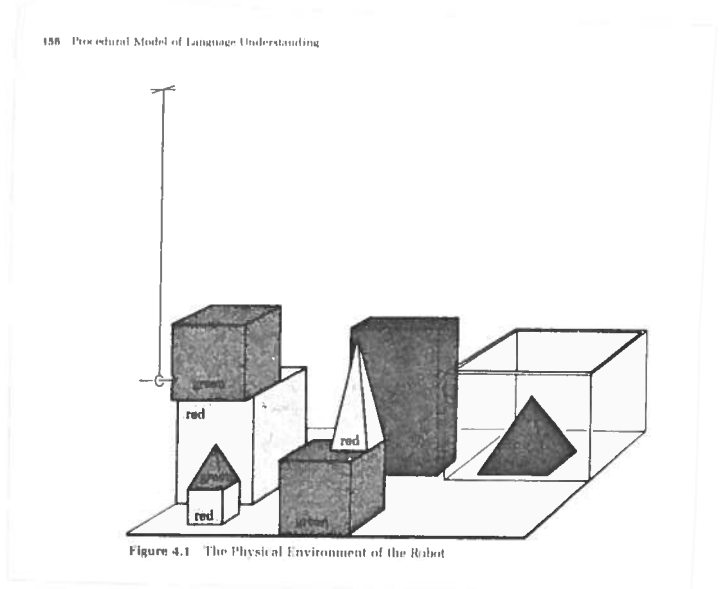


FIG. 3. "Pick up a big red block."

Fig 1.a[1]



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Figure 4.1 The Physical Environment of the Robot

Fig 1.b[2]

Intelligence in Understanding

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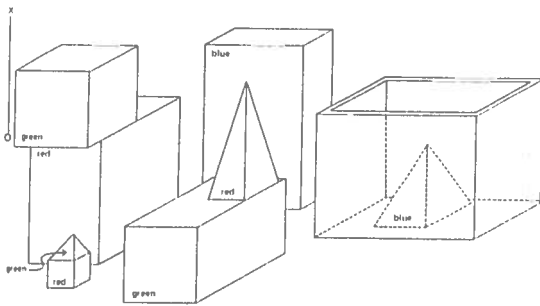
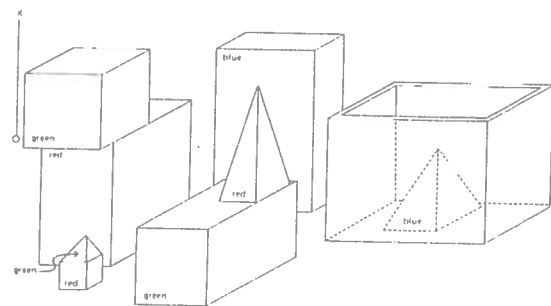


FIGURE 6.1
"Pick up a big red block."

Source: Adapted from Terry Winograd, *Understanding Natural Language* (New York: Academic Press, 1972), p. 8. This and following figures from this source reprinted by permission.

Fig 1.c[3]

FIGURE 110. "Pick up a big red block" [From Terry Winograd, *Understanding Natural Language* (New York: Academic Press, 1972), p. 8]



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SHRDLU, Toy of Man's Designing

Fig 1.d[4]

2. "Find a block which is bigger than the one you are holding and put it into the box,"

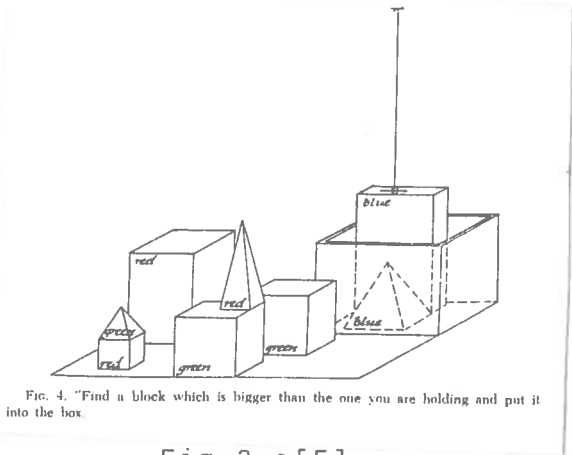


FIG. 4. "Find a block which is bigger than the one you are holding and put it into the box."

Fig 2.a[5]

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Conversation with SHRDLU

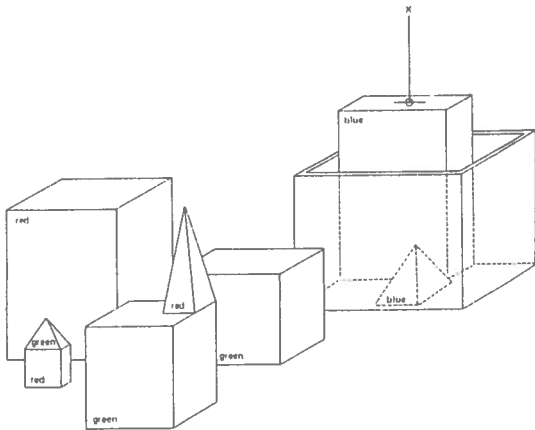


FIGURE 6.2
"Find a block which is bigger than the one you are holding and put it into the box."

Source: Adapted from Winograd, *Understanding Natural Language*, p. 9.

Fig 2.c[7]

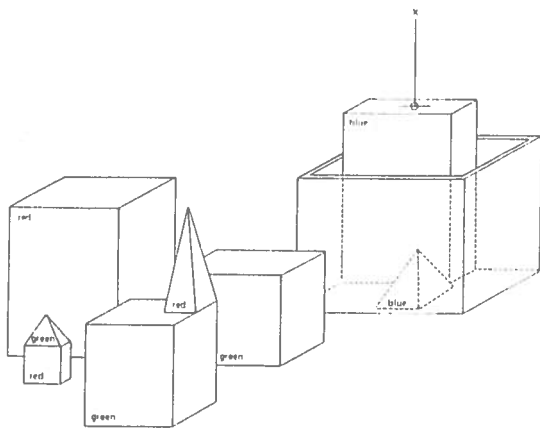


FIGURE 11.1. "Find a block which is bigger than the one you are holding and put it into the box." [Adapted from Terry Winograd, *Understanding Natural Language*, p. 9.]

Fig 2.d[8]

158 Procedural Model of Language Understanding

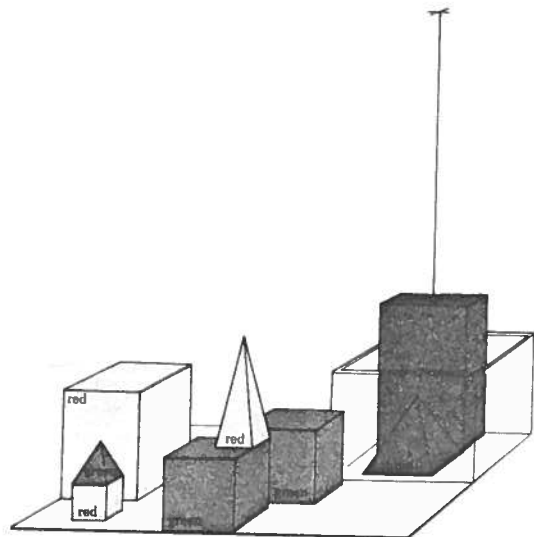
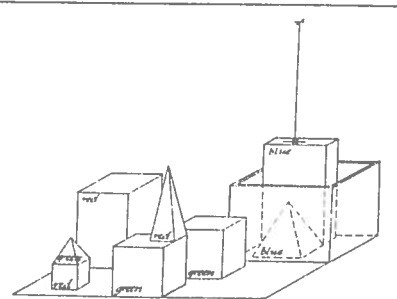


Figure 4.3 "Find a block which is taller than the one you are holding and put it into the box."

Fig 2.b[6]

Figure 11-1. SHRDLU

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1. Pick up a big red block
OK (The system answers "OK" when it carries out a command)
2. Find a block which is taller than the one you are holding and put it into box.
BY IT: I ASSUME YOU MEAN THE BLOCK WHICH IS TALLER THAN THE ONE I AM HOLDING.
OK
3. What does the box contain?
THE BLUE PYRAMID AND THE BLUE BLOCK.
4. How many blocks are not in the box?
FOUR OF THEM.
5. Can a pyramid be supported by a block?
YES
6. Can a pyramid support a pyramid?
I DON'T KNOW.
7. Stack up two pyramids
I CAN'T (The robot tries and fails)
8. I own blocks which are not red, but I don't own anything which supports a pyramid
I UNDERSTAND
9. Do I own a box?
NO
10. Do I own anything in the box?
YES, TWO THINGS: THE BLUE BLOCK AND THE BLUE PYRAMID.

The world of toy blocks manipulated by the program SHRDLU. This sample has been assembled from excerpts from Terry Winograd's description in *Understanding Natural Language* (New York: Academic Press, 1972), 8-15. Comments in parentheses are Winograd's own. Sample reprinted by permission of Terry Winograd and Academic Press.

Fig 2.e[9]

3. "Will you please stack up both of the red blocks and either a green cube or a pyramid?"

TERRY WINOGRAD 161

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TERRY WINOGRAD

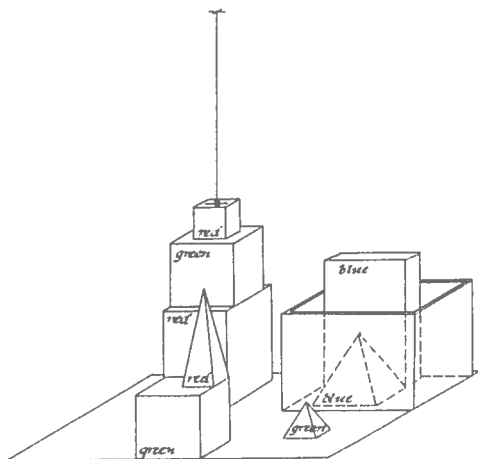


FIG. 5. "Will you please stack up both of the red blocks and either a green cube or a pyramid?"

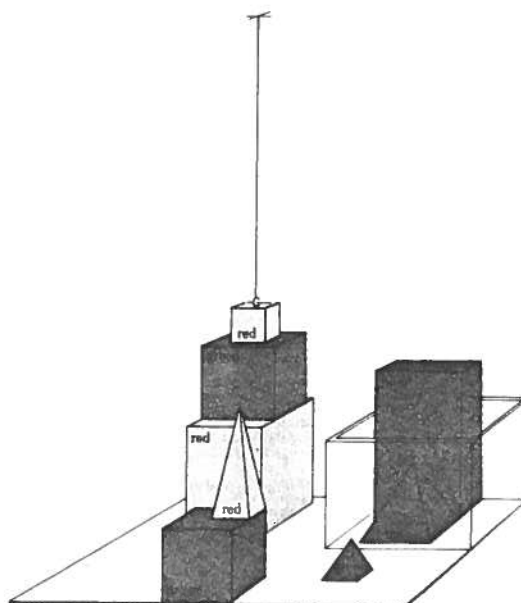


Figure 4.4 "Will you please stack up both of the red blocks and either a green cube or a pyramid "

Fig 3.a[10]

Fig 3.b[11]

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Conversation with SHRDLU

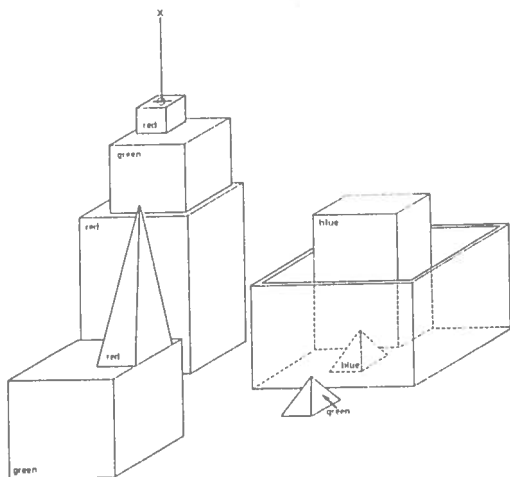


FIGURE 6.3

"Will you please stack up both of the red blocks and either a green cube or a pyramid?"

Source: Adapted from Winograd, *Understanding Natural Language*, p. 12

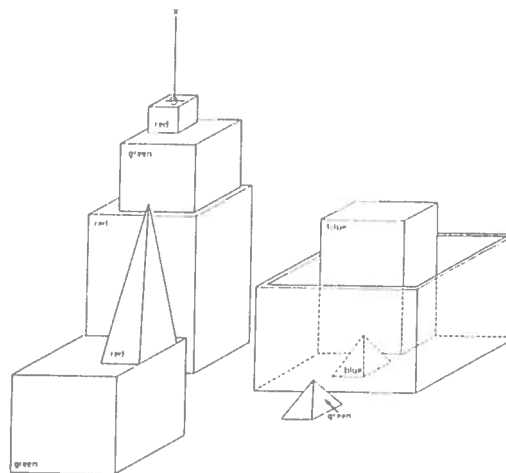


FIGURE 112. "Will you please stack up both of the red blocks and either a green cube or a pyramid?" [Adapted from Terry Winograd, *Understanding Natural Language*, p. 12]

Fig 3.c[12]

Fig 3.d[13]

References

- [1] T.Winograd, 'Understanding Natural Language', E.U.P., 1972, p 8.
- [2] T.Winograd, 'A Procedural Model of Language Understanding', in R.C.Schank & K.M.Colby (eds), 'Computer Models of Thought & Language', Freeman, 1973, p 156.
- [3] M.Boden, 'Artificial Intelligence & Natural Man', Harvester, 1977, p 115.
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- [6] T.Winograd, 'A Procedural Model of Language Understanding', in R.C.Schank & K.M.Colby (eds), 'Computer Models of Thought & Language', Freeman, 1973, p 158.
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- [10] T.Winograd, 'Understanding Natural Language', E.U.P., 1972, p 12.
- [11] T.Winograd, 'A Procedural Model of Language Understanding', in R.C.Schank & K.M.Colby (eds), 'Computer Models of Thought & Language', Freeman, 1973, p 161.
- [12] M.Boden, 'Artificial Intelligence & Natural Man', Harvester, 1977, p 118.
- [13] D.R.Hofstadter, 'Godel, Escher, Bach: an Eternal, Golden Braid', Penguin, 1979, p 589.

