

# Contents

<i>List of figures</i>	ix
<i>Acknowledgements</i>	x
<i>Preface</i>	xi
<b>1 Introduction</b>	1
<b>2 The senses</b>	22
<b>3 Memory – the storehouse of knowledge</b>	41
<b>4 Language</b>	54
<b>5 Thinking</b>	68
<b>6 Learning</b>	86
<b>7 Action</b>	98
<b>8 Understanding ourselves</b>	111
<b>9 Final word</b>	119
<i>Index</i>	123

# Figures

<b>1.1</b>	<b>Some optical illusions</b>	<b>6</b>
<b>1.2</b>	<b>The BLOCKSWORLD at the beginning of the conversation between SHRDLU and its user</b>	<b>16</b>
<b>1.3</b>	<b>Schematic diagram of a connectionist machine</b>	<b>17</b>
<b>2.1</b>	<b>Picture of a sculpture by Henry Moore and the boundaries found by sets of detectors operating at three scales</b>	<b>25</b>
<b>2.2</b>	<b>A random dot stereogram</b>	<b>28</b>
<b>2.3</b>	<b>Some entries in the catalogue of 3-D models</b>	<b>30</b>
<b>2.4</b>	<b>A BLOCKSWORLD scene</b>	<b>33</b>
<b>2.5</b>	<b>The sixteen derived junction types</b>	<b>34</b>
<b>2.6</b>	<b>The human ear</b>	<b>37</b>
<b>4.1</b>	<b>The structure of the sentence <i>The red car sped along the motorway</i></b>	<b>59</b>
<b>5.1</b>	<b>Examples of initial and final arrangements of the numbers 1 to 8 in the 8-puzzle</b>	<b>69</b>
<b>5.2</b>	<b>A sequence of eleven actions that solves the Missionaries and Cannibals problem</b>	<b>72</b>
<b>5.3</b>	<b>The Tower of Hanoi</b>	<b>73</b>
<b>5.4</b>	<b>The four geometrical shapes in the THOG problem</b>	<b>80</b>
<b>7.1</b>	<b>The organisation of the motor cortex</b>	<b>99</b>