| | Penn Treebank | | | | | Text8 | | | | |
|--------|---------------|------|--------|--------|-----------------------|--------|------|--------|--------|-------|
| | # of | # of | memory | Valid. | Test | # of | # of | memory | Valid. | Test |
| Model | hidden | hops | size | perp. | perp. | hidden | hops | size | perp. | perp. |
| RNN | 300 | - | - | 133 | 129 | 500 | - | - | - | 184 |
| LSTM | 100 | - | - | 120 | 115 | 500 | - | - | 122 | 154 |
| SCRN | 100 | - | - | 120 | 115 | 500 | - | - | - | 161 |
| MemN2N | 150 | 2 | 100 | 128 | 121 | 500 | 2 | 100 | 152 | 187 |
| | 150 | 3 | 100 | 129 | 122 | 500 | 3 | 100 | 142 | 178 |
| | 150 | 4 | 100 | 127 | 120 | 500 | 4 | 100 | 129 | 162 |
| | 150 | 5 | 100 | 127 | 118 | 500 | 5 | 100 | 123 | 154 |
| | 150 | 6 | 100 | 122 | 115 | 500 | 6 | 100 | 124 | 155 |
| | 150 | 7 | 100 | 120 | 114 | 500 | 7 | 100 | 118 | 147 |
| | 150 | 6 | 25 | 125 | 118 | 500 | 6 | 25 | 131 | 163 |
| | 150 | 6 | 50 | 121 | 114 | 500 | 6 | 50 | 132 | 166 |
| | 150 | 6 | 75 | 122 | 114 | 500 | 6 | 75 | 126 | 158 |
| | 150 | 6 | 100 | 122 | 115 | 500 | 6 | 100 | 124 | 155 |
| | 150 | 6 | 125 | 120 | 112 | 500 | 6 | 125 | 125 | 157 |
| | 150 | 6 | 150 | 121 | 114 | 500 | 6 | 150 | 123 | 154 |
| | 150 | 7 | 200 | 118 | 111 | - | - | - | - | - |