References


Figure Captions

Figure 1. Mean response latencies (correct responses only) to a probe flash occurring on a target, as a function of number of targets.

Figure 2. Percent of trials on which subjects failed to respond to a probe flashed on a target, as a function of number of targets.

Figure 3. Expected performance of the Serial Tracking Algorithm (described in the text), as a function of the (reciprocal) of the speed of attention scanning. The data were calculated by running simulations of the serial tracking algorithm over the actual stimulus sequences used in the experiment. Predictions use the standard model (graph 1), a model which stores the predicted future location of the sampled point (based on its velocity and direction) (graph 2), and a model which guesses randomly among the three available responses when it detects any probe and also detects that it has failed to correctly track all targets (graph 3).
Table 1: Confusion Matrix of stimulus and response types (percentages are based on all responses given for that stimulus type).

<table>
<thead>
<tr>
<th>Stimulus Type</th>
<th>No response</th>
<th>Target</th>
<th>Distractor</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>target</td>
<td>141</td>
<td>1042</td>
<td>147</td>
<td>7</td>
<td>1196</td>
</tr>
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<td></td>
<td>87.1%</td>
<td>12.3%</td>
<td>0.6%</td>
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<tr>
<td>distractor</td>
<td>21^b</td>
<td>149</td>
<td>988</td>
<td>52</td>
<td>1119</td>
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<td>12.5%</td>
<td>83.1%</td>
<td>4.4%</td>
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<tr>
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<td>4.4%</td>
<td>5.0%</td>
<td>96.6%</td>
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<td>1242</td>
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<td>1112</td>
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</table>

*Selected comparisons (a priori t-tests)*
- Significant (p<.05): a - c, b - c, d - h, e - m, j - k
- Non-significant (p>.05): a - h, d - m, s - c, f - i