Binding Strengths

For two entities \( X \) and \( Y \) that are adjacent in an expression (that is, \( XY \)), the binding strength between them and the result of the bind is shown in this table:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>F</th>
<th>H</th>
<th>MOP</th>
<th>DOP</th>
<th>DOT</th>
<th>IDX</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>A</td>
<td>6</td>
<td>A</td>
<td>3</td>
<td>AF</td>
<td>3</td>
<td>AF</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>2</td>
<td>A</td>
<td>1</td>
<td>F</td>
<td>4</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>1</td>
<td>F</td>
<td>4</td>
<td>F</td>
<td>4</td>
<td>F</td>
</tr>
<tr>
<td>Y</td>
<td>AF</td>
<td>2</td>
<td>A</td>
<td>1</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>DOP</td>
<td>5</td>
<td>MOP</td>
<td>5</td>
<td>MOP</td>
<td>5</td>
<td>MOP</td>
</tr>
<tr>
<td></td>
<td>JOT</td>
<td>5</td>
<td>MOP</td>
<td>5</td>
<td>MOP</td>
<td>5</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>DOT</td>
<td>6</td>
<td>ERR</td>
<td>5</td>
<td>MOP</td>
<td>5</td>
<td>MOP</td>
</tr>
<tr>
<td></td>
<td>REF</td>
<td>7</td>
<td>A</td>
<td>7</td>
<td>F</td>
<td>7</td>
<td>MOP</td>
</tr>
<tr>
<td></td>
<td>IDX</td>
<td>3</td>
<td>ERR</td>
<td>3</td>
<td>ERR</td>
<td>3</td>
<td>ERR</td>
</tr>
</tbody>
</table>

where:
- \( \text{A} \): *Array, for example, \( 0 1 2 \ 'hello' \ α \ ω \)
- \( \text{F} \): *Function (primitive/defined/derived/system), for example, \( + - +.× \ \text{myfn} \) ⎕CR \{α ω\}
- \( \text{H} \): *Hybrid function/operator, that is, \( / \ ⌿ \ \backslash \)
- \( \text{AF} \): Bound left argument, for example, \( 2+ \)
- \( \text{MOP} \): *Monadic operator, for example, \( ," \ \sim \ & \)
- \( \text{DOP} \): Dyadic operator, for example, \( × \   \oplus \ \otimes \)
- \( \text{JOT} \): Jot, that is, compose/null operand \( . \)
- \( \text{DOT} \): Dot, that is, reference/product \( . \)
- \( \text{IDX} \): square-bracketed expression, for example, \( [α+1ω] \)
- \( \text{ERR} \): Error
  - * indicates a "first-class" entity, which can be parenthesised or named

In this table:
- the higher the number, the stronger the binding
- an empty field indicates no binding for this combination; an error.

For example, in the expression \( a b . c[d] \), where \( a, b, c \) and \( d \) are arrays, the binding proceeds:

\[
\begin{align*}
&\quad a b . c [d] \\
&\quad\quad 6 7 6 4 \quad \text{a binding strengths between entities} \\
\to &\quad a (b.) c [d] \\
&\quad\quad 0 7 4 \\
\to &\quad a (b.c) [d] \\
&\quad\quad 6 4 \\
\to &\quad (a(b.c))[d]
\end{align*}
\]