

Search accuracy model

$$\begin{aligned}
\text{Level 1 : } \quad y_{ijk} &= \beta_{0jk} + \beta_{1jk}SO_{ijk} + \beta_{2jk}G_{ijk} + \varepsilon_{ijk} \\
\text{Level 2 : } \quad \beta_{0jk} &= \gamma_{00} + U_{0j} + V_{0k} \\
\beta_{1jk} &= \gamma_{10} + U_{1j} + V_{1k} \\
\beta_{2jk} &= \gamma_{20},
\end{aligned} \tag{1}$$

Search time model

$$\begin{aligned}
\text{Level 1 : } \quad y_{ijk} &= \beta_{0jk} + \beta_{1jk}SO_{ijk} + \beta_{2jk}G_{ijk} + \varepsilon_{ijk} \\
\text{Level 2 : } \quad \beta_{0jk} &= \gamma_{00} + U_{0j} + V_{0k} \\
\beta_{1jk} &= \gamma_{10} + V_{1k} \\
\beta_{2jk} &= \gamma_{20},
\end{aligned} \tag{2}$$

Full search time model

$$\begin{aligned}
\text{Level 1 : } \quad y_{ijk} &= \beta_{0jk} + \beta_{1jk}SO_{ijk} + \beta_{2jk}T_{ijk} + \\
&\quad \beta_{3jk}SO_{ijk} * T_{ijk} + \beta_{4jk}G_{ijk} + \varepsilon_{ijk} \\
\text{Level 2 : } \quad \beta_{0jk} &= \gamma_{00} + U_{0j} + V_{0k} \\
\beta_{1jk} &= \gamma_{10} + U_{1j} + V_{1k} \\
\beta_{2jk} &= \gamma_{20} \\
\beta_{3jk} &= \gamma_{30} \\
\beta_{4jk} &= \gamma_{40},
\end{aligned} \tag{3}$$

Initiation time, scanning time, verification time, fixation duration model

$$\begin{aligned}
\text{Level 1 : } & y_{ijk} = \beta_{0jk} + \beta_{1jk}SO_{ijk} + \beta_{2jk}G_{ijk} + \varepsilon_{ijk} \\
\text{Level 2 : } & \beta_{0jk} = \gamma_{00} + U_{0j} + V_{0k} \\
& \beta_{1jk} = \gamma_{10} + V_{1k} \\
& \beta_{2jk} = \gamma_{20},
\end{aligned} \tag{4}$$

Fixation count, fixated objects count, and target refixations model

$$\begin{aligned}
\text{Level 1 : } & y_{ijk} = \beta_{0jk} + \beta_{1jk}SO_{ijk} + \beta_{2jk}G_{ijk} + \varepsilon_{ijk} \\
\text{Level 2 : } & \beta_{0jk} = \gamma_{00} + U_{0j} + V_{0k} \\
& \beta_{1jk} = \gamma_{10} + U_{1j} + V_{1k} \\
& \beta_{2jk} = \gamma_{20},
\end{aligned} \tag{5}$$

Gaze and head directions model

$$\begin{aligned}
\text{Level 1 : } & y_{ijk} = \beta_{0jk} + \beta_{1jk}SO_{ijk} + \beta_{2jk}AC_{ijk} + \\
& \beta_{3jk}SO_{ijk} * AC_{ijk} + \varepsilon_{ijk} \\
\text{Level 2 : } & \beta_{0jk} = \gamma_{00} + U_{0j} \\
& \beta_{1jk} = \gamma_{10} + U_{1j} \\
& \beta_{2jk} = \gamma_{20} \\
& \beta_{3jk} = \gamma_{30},
\end{aligned} \tag{6}$$

Gaze latitude, gaze and head amplitude model

$$\textit{Level 1 : } y_{ijk} = \beta_{0jk} + \beta_{1jk}SO_{ijk} + \beta_{2jk}G_{ijk} + \varepsilon_{ijk}$$

$$\textit{Level 2 : } \beta_{0jk} = \gamma_{00} + U_{0j} + V_{0k}$$

$$\beta_{1jk} = \gamma_{10} + U_{1j} + V_{1k}$$

$$\beta_{2jk} = \gamma_{20},$$

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