L_1 *pragmatic listener* $P_{L_1}(s|u) \propto P_{S_1}(u|s) \cdot P(s)$

$\downarrow$

S_1 *pragmatic speaker* $P_{S_1}(u|s) \propto \exp(\alpha U_{S_1}(u;s))$

$\downarrow$

L_0 *literal listener* $P_{L_0}(s|u) \propto [\![u]\!](s) \cdot P(s)$