$$m \not \parallel n := \begin{cases} m n & \text{if } m :: \alpha \to \beta, \ n :: \alpha \\ \lambda k. \ m \left(\lambda f. \ n \left(\lambda x. \ k \left(f \ /\!/ \ x \right) \right) \right) & \text{otherwise} \end{cases}$$

$$m \not \parallel n := \begin{cases} n m & \text{if } n :: \alpha \to \beta, \ m :: \alpha \\ \lambda k. \ m \left(\lambda x. \ n \left(\lambda f. \ k \left(x \ \lVert f \right) \right) \right) & \text{otherwise} \end{cases}$$

 $m \parallel n := \begin{cases} \lambda x. \ m \ x \land n \ x & \text{if} \ m :: \alpha \to \beta, \ n :: \alpha \to \beta \\ \lambda k. \ m \ (\lambda x. \ n \ (\lambda f. \ k \ (f \parallel x))) & \text{otherwise} \end{cases}$