

[Text from earlier versions]

This effect may be understood by considering the timing of the minimum distance formulated by Weihs and Webb (1984).

For $K < 1$ the prey is faster than the predator. In this case, intuition leads us to accept that an escape directly away from the predator ($\alpha = 0$) is the best solution. What is not so obvious, is that there exists a range of possible escape angles for which the minimum distance function does not change. That is, there is no single optimal escape angle. Thus, a prey can escape along any direction within this range with no penalty.

We begin by noting that at $t = 0$, $D^2 = X_0^2$. For this case, we are interested in escape angles between the two optimal solutions given by Weihs and Webb equation $0 \leq \alpha \leq \arccos(K)$. *anglerange*