

A spotlight is positioned in the upper left corner, casting a bright, circular beam of light onto a dark stage. The beam is wide and soft-edged, creating a strong contrast with the surrounding darkness. The text "spotlight" is written in a white, italicized serif font within the beam. Below it, the text "disjoint vs. independent" is written in a black, italicized serif font. In the bottom left corner, the Duke University logo is visible. In the bottom right corner, the name "Dr. Mine Çetinkaya-Rundel" and "Duke University" are written in white.

spotlight

*disjoint vs.
independent*



Dr. Mine Çetinkaya-Rundel
Duke University

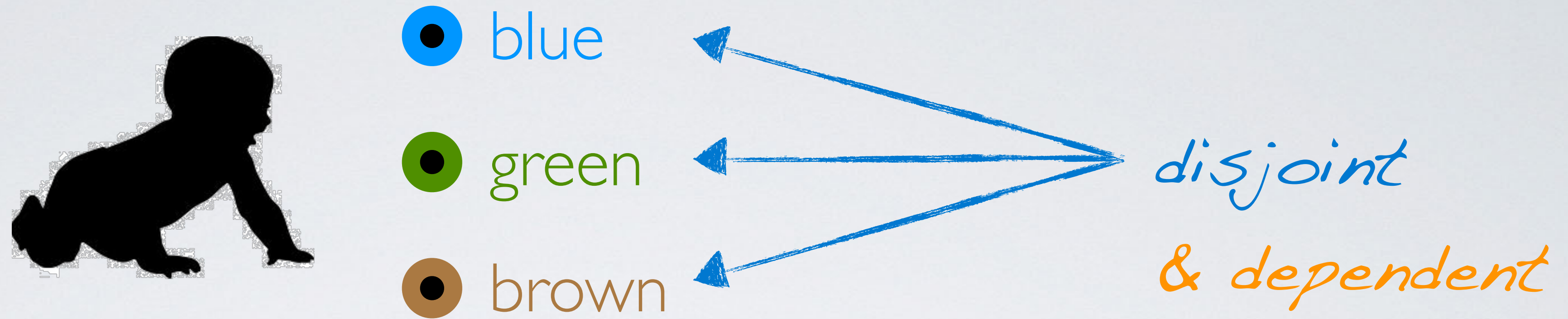
two events that are
disjoint
(mutually exclusive)
cannot happen
at the same time

$$P(A \text{ and } B) = 0$$

two processes are
independent
if knowing the outcome
of one
provides no useful
information about the
outcome of the other

$$P(A | B) = P(A)$$

one baby:



two babies:

