

Ex: Assume that $p(x)$ & $q(y)$ have definable independence.

Then $\exists r(x,y) := p(x) \otimes_c q(y)$ i.e. $a, b \vDash r \Leftrightarrow a \vDash p, b \vDash q \text{ \& } a \downarrow_c b$
and it has definable independence/c.