$$
\begin{tikzcd}
x \in X, B' \arrow[r, "id_X"] \arrow[d, shift right] & x \in X, B \arrow[r, "F"] \arrow[d, shift right] & y \in Y, C \arrow[r, "id_Y"] \arrow[d] & y \in Y, C' \arrow[d] \\
{[x]_{B'} = \xi' \in \mathbb{E}^n} \arrow[u, shift right] \arrow[r, shift left, "T"] \arrow[rrr, bend right, "B"'] & {[x]_B = \xi \in \mathbb{E}^n} \arrow[u, shift right] \arrow[l, shift left, "T^{-1}"] \arrow[r, "A"] & {[y]_C = [F(x)]_C = \eta} \arrow[r, shift left, "S^{-1}"] & \eta' \in \mathbb{E}^m \arrow[l, shift left, "S"]
\end{tikzcd}
$$

$B = S^{-1} A T$

$B = Mat(F, B', C') = ([F(b_1')]_{C'} \; \dots \; [F(b_n')]_{C'})$

$A = Mat(F, B, C) = ([F(b_1)]_C \; \dots \; [F(b_n)]_C)$

$T = ([b_1']_B \dots [b_n']_B)$

$S = ([c_1']_C \dots [c_m']_C)$

Falls $Y = X$, $B = C$, $B' = C'$, dann heißt der Übergang $A \to B = T^{-1} A T$ Ähnlichkeitstransformation. (Similarity transf.)