$$\tau_X \quad : \quad \begin{array}{ccccc} K & \longrightarrow & \mathbf{Free}(X) & \longrightarrow\!\!\!\!\!\rightarrow & X \\ \downarrow & & \downarrow & & \| \\ (K)^F & \dashrightarrow & \mathbf{Free}(X) \sqcup_K (K)^F & \dashrightarrow & X \\ \downarrow & & \downarrow & & \\ (K)^C & =\!\!\!=\!\!\!= & (K)^C & & \end{array}$$