$$\mathbf{FC} = \mathbf{SC}\epsilon$$
 $\mathbf{S}^{-1/2}\mathbf{FC} = \mathbf{S}^{-1/2}\mathbf{SC}\epsilon$
 $\mathbf{S}^{-1/2}\mathbf{FS}^{-1/2}\mathbf{S}^{1/2}\mathbf{C} = \mathbf{S}^{1/2}\mathbf{C}\epsilon$
 $\mathbf{F'C'} = \mathbf{C'}\epsilon$
 $\mathrm{diag}(\mathbf{F'})$