The Tamao-Fleming reaction was mentioned in class today. To encourage you to think some more about the chemistry, consider the following transformation:

\[
\text{O} \quad \text{Me}_2 \quad \text{Si} \quad \text{KF, KHCO}_3, \text{H}_2\text{O}_2 \quad \rightarrow \quad \text{OH} \quad \text{OH}
\]

Formulate a mechanism for the transformation illustrated above.

How? [HINT: think temporary silicon connection and radical addition to a C=C.]
Account for the stereochemical outcome.

\[
\begin{array}{c}
\text{HO} \\
\text{O}
\end{array} \quad \rightarrow \quad \begin{array}{c}
\text{HO} \\
\text{OH}
\end{array}
\]

How? {... think of carbene/carbenoid chemistry}