The tail of an arrow reservoir (on \( R \)) can be renormalized with wheels without spoiling \( R_3 \).

With the same reasoning, also the heads?

**Problem** Renormalizing heads spoils the good behaviour of \( Z \) rel capping and rel smooth vertices; it is therefore a bad idea.

**Problem** Renormalizing tails (or heads) spoils the good behaviour of \( Z \) rel naive strand doubling; hence it must play a role in the equations for \( F/V \):

\[
F/V = F/V, \quad F/V \quad V
\]
adj usting V may resolve this

I don’t see how any V works could help here.

Problem R should go to $R^{-1}$ upon strand reversal; this happens only to odd wheels.

$$\Rightarrow$$ The “problem” seems irrelevant; just map positive xings to $R$ and negative xings to $R^{-1}$, and everything seems to work.

The Bottom Line: without too much conviction, it seems better to renormalize V/F and leave R untouched.