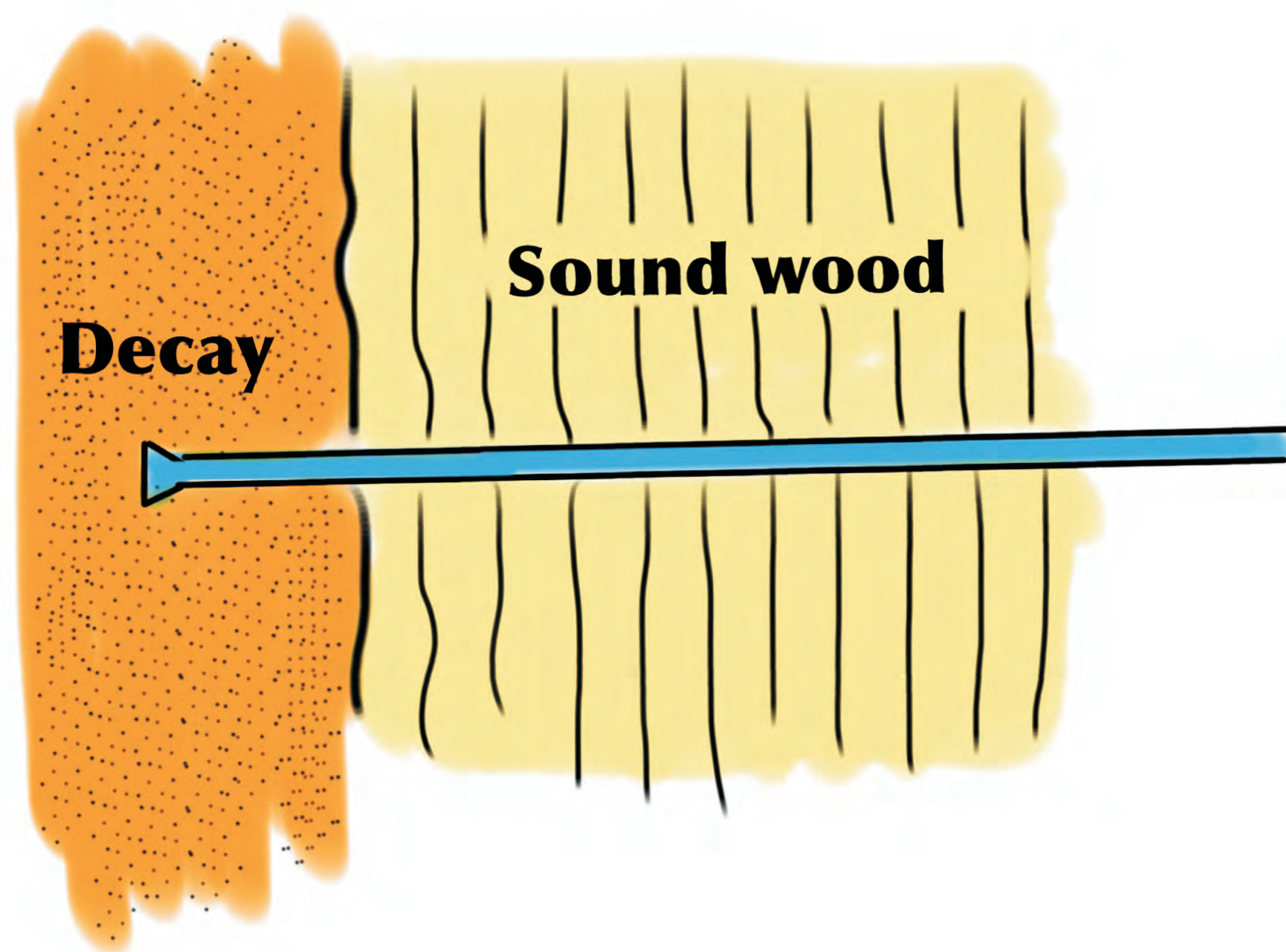
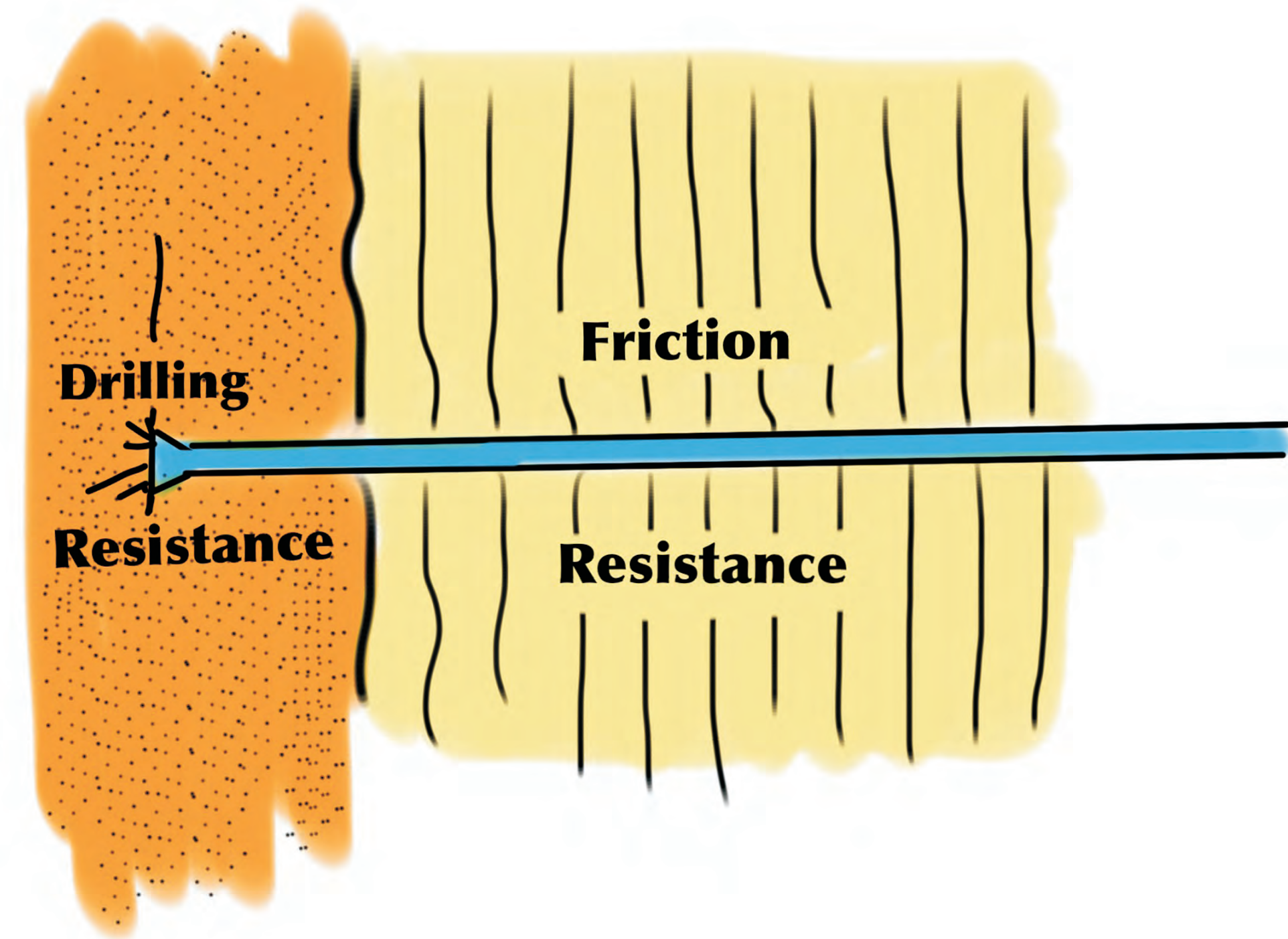


Advantages in Decay Detection by Separate Measurement of Translational and Torsional Resistance

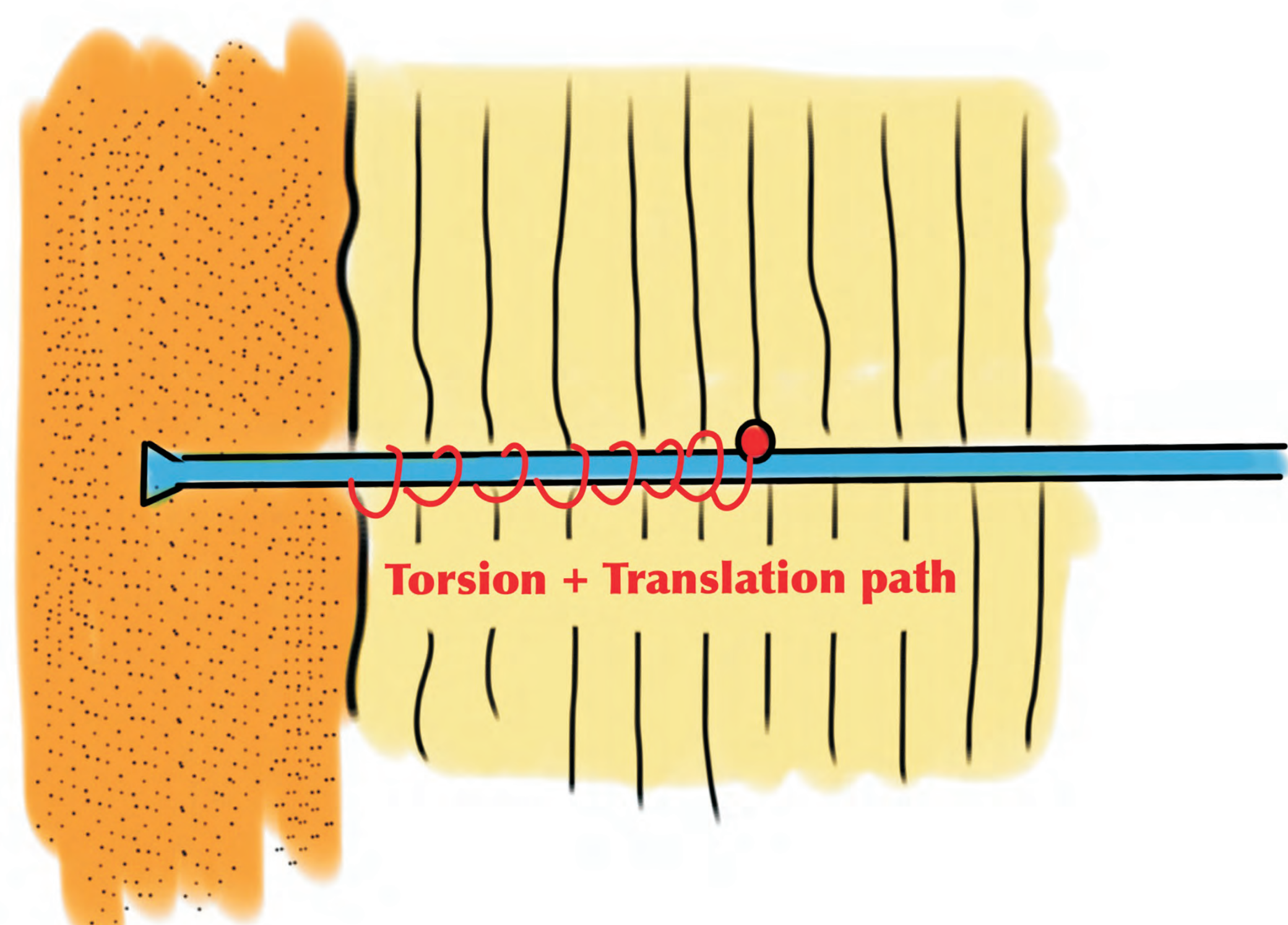
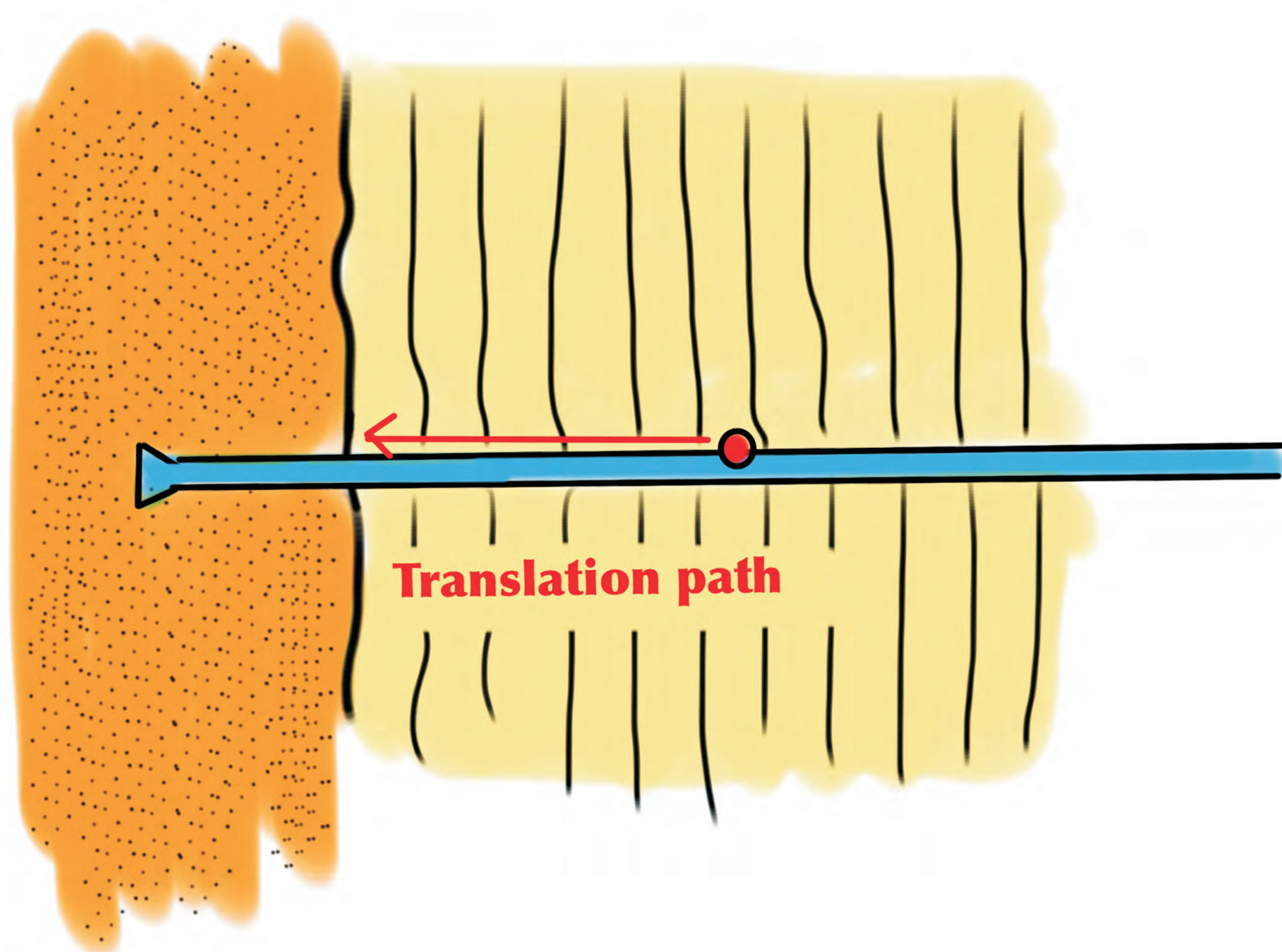
C. Mattheck, K. Bethge



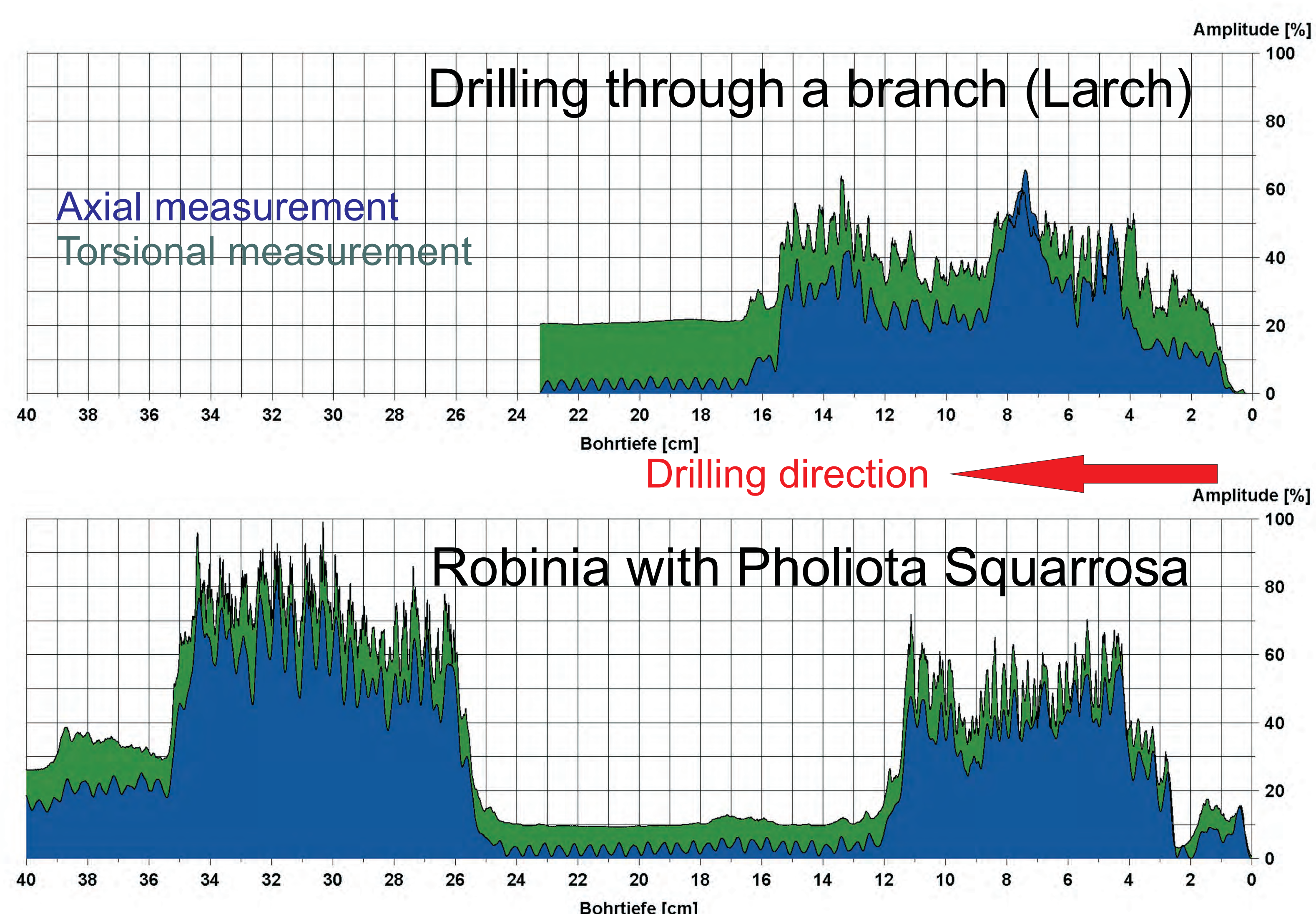
Principle of measurement



Two components of drilling resistance



$$\text{Friction energy} = \text{friction path} \times \text{friction force}$$



Summary: Less friction means better decay detection. If the translation path is shorter than the rotation path, axial drive energy drops more pronounced than the torsional energy reading, when the needle tip reaches decay. The example measurement confirms this. After our experience especially early stages of decay are usually better detected with the combined reading of translational and torsional measurement.