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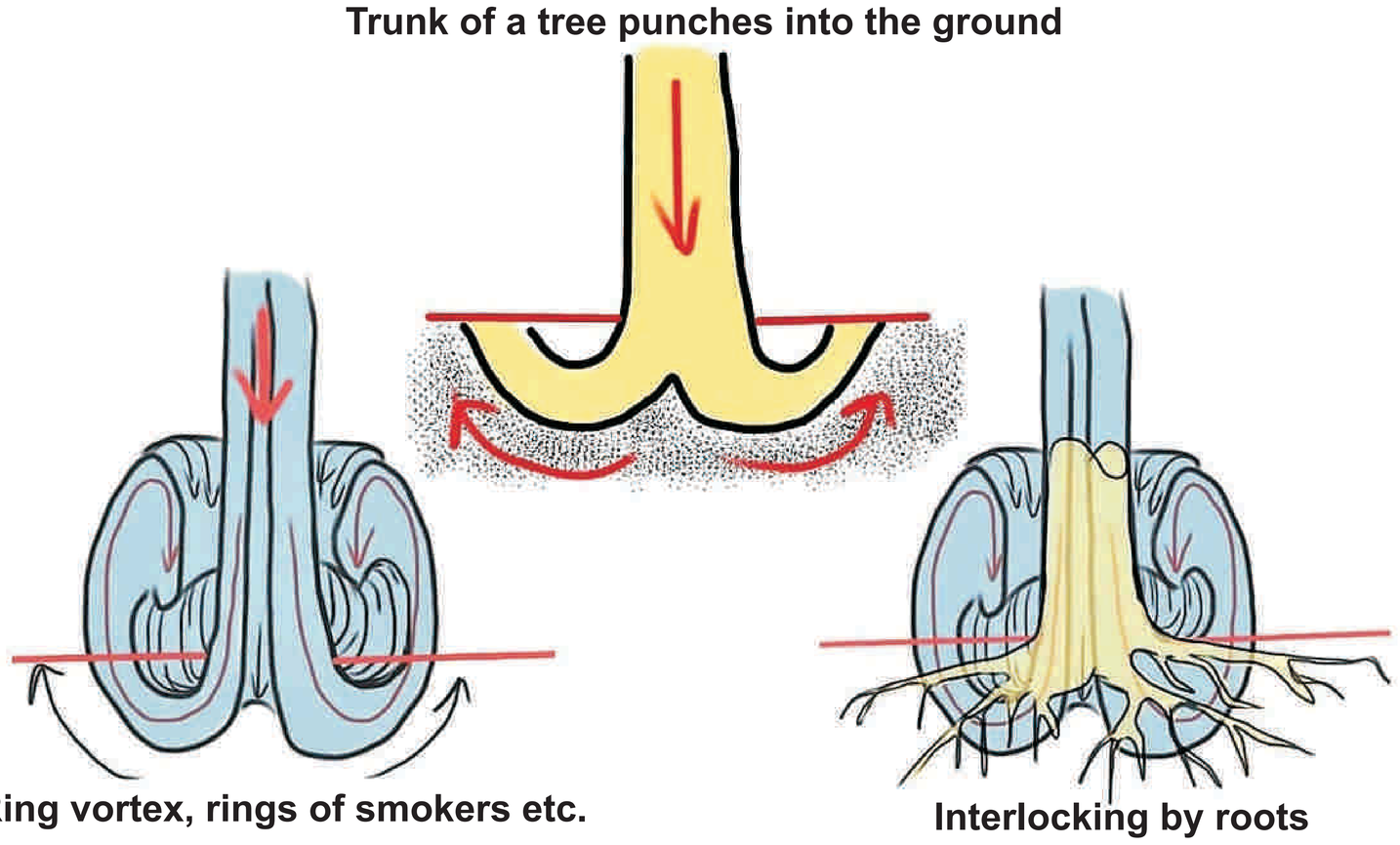
# The tree root under the tree weight: a ring vortex?

## (after „Pauli explains the form in nature“ [1])

**C. Mattheck, K. Bethge , K. Weber**

If a jet of water hits a water tank, a ring vortex is created.

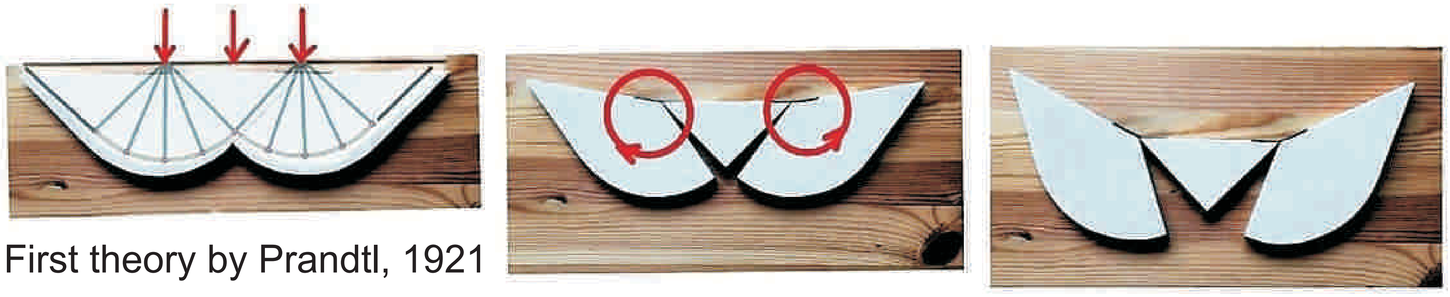
**Trunk of a tree punches into the ground**



**Ring vortex, rings of smokers etc.**

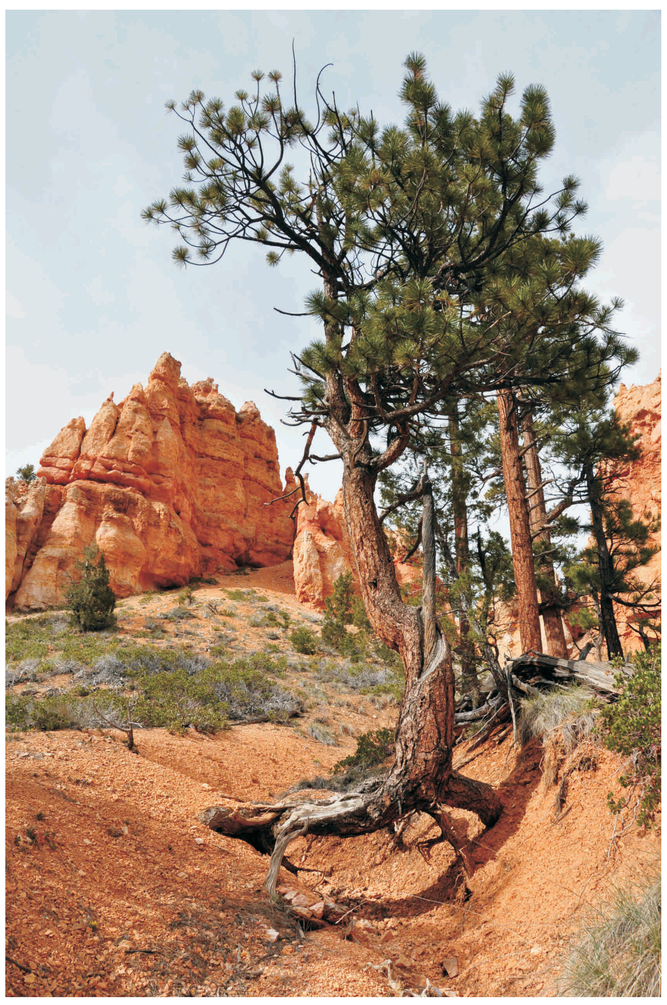
**Interlocking by roots**

**Wooden model:**



First theory by Prandtl, 1921

Below the trunk of a tree the root plate has a similar tendency to roll up. Only the interlocking roots of the root plate with the surrounding soil can prevent the rolling up.




If there is a lack of soil or interlocking roots the strong roots then will bend upwords.

**Literature:** [1] Mattheck, Claus (2018) Pauli explains the form in nature, published by KIT Karlsruhe

14.01.2019