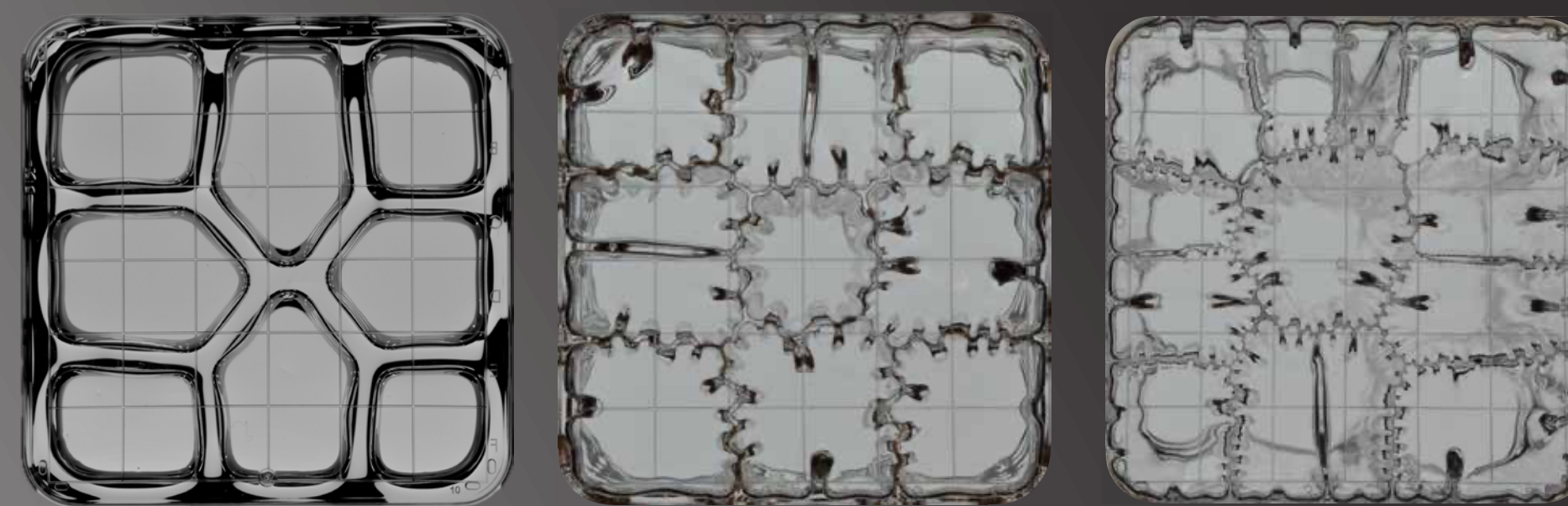


## Stretch Arms Flow to Make a Touchdown

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When more dense material lies on top of less dense material, the less dense material rises and the denser one falls. This phenomenon is seen with any class of materials: liquids, solids, and the things in between. At the interface of density-differing materials, periodic ridges and grooves appear - a pattern-forming behavior called Rayleigh-Taylor instability.

When an ultrasoft viscoelastic solid lies on top of air, the imperfect network within this viscoelastic material 'flows' downward as the network elasticity yields to gravity and the viscous components rearrange. This peculiar material property lets one notice a distinctly deformed morphology not seen with typical viscous liquids or elastic solids.



→  
*softer* viscoelastic solid