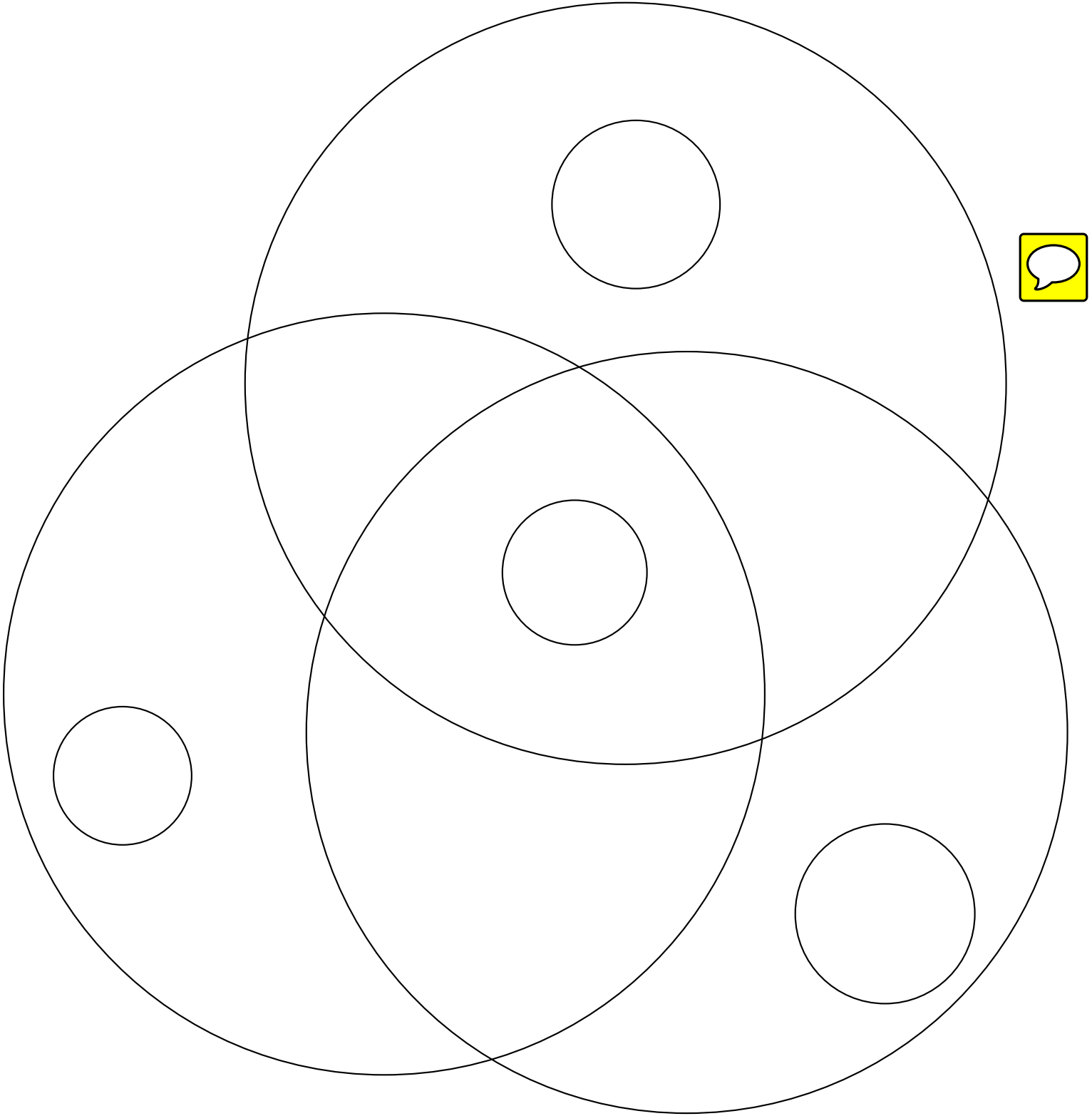

Counterexample: there is no way to stab all of these nested disks with a pseudo-disk.