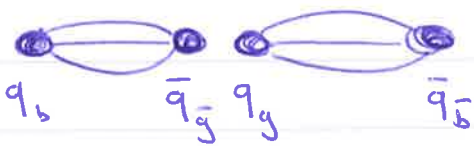
what happens to $q\bar{q}$ pair?

simple picture

quarks start to separate

think of elastic string between them

strong dipole field builds between them with uniform energy density (due to gluon self interactions)



As separation increases, energy increases. When $E > 2m_q$

String breaks up into $q\bar{q}$ pairs

As energy decreases bound states form and get mesons and baryons