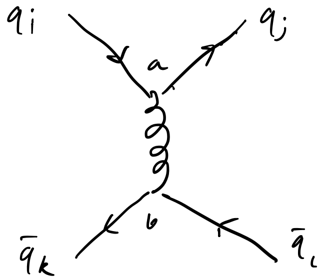
Let's compute the force between $u\bar{d}$ pairs in the color singlet state.



$$\propto T^a_{ji} T^b_{kl} \delta^{ab} = T^a_{ji} T^a_{kl}$$

The sign of the coupling factor tells us if the force is attractive or repulsive; by analogy to QED (and plugging in non-relativistic spinors), positive sign is attractive. Labeling colors $|r\rangle$, $|g\rangle$, and $|b\rangle$, the octet states are linear combinations of states like $|r\bar{g}\rangle$, and the singlet state is $\frac{1}{\sqrt{3}}(|r\bar{r}\rangle + |g\bar{g}\rangle + |b\bar{b}\rangle)$.

If the quarks are in the state $|r\bar{g}\rangle$ $(i=1, k=2)$, compute $T^a_{j1} T^a_{2l}$ by summing over outer product of first column times second row of each Gell-Mann matrix:

$$\frac{1}{4}\left[\begin{pmatrix}0\\1\\0\end{pmatrix}\times(1,0,0) + \begin{pmatrix}0\\i\\0\end{pmatrix}\times(i,0,0) + \begin{pmatrix}1\\0\\0\end{pmatrix}\times(0,-1,0) + \begin{pmatrix}0\\0\\1\end{pmatrix}\cancel{\times(0,0,0)} + \begin{pmatrix}0\\0\\i\end{pmatrix}\cancel{\times(0,0,0)}\right.$$
$$\left. + \begin{pmatrix}0\\0\\0\end{pmatrix}\cancel{\times(0,0,1)} + \begin{pmatrix}0\\0\\0\end{pmatrix}\cancel{\times(0,0,-i)} + \frac{1}{3}\begin{pmatrix}1\\0\\0\end{pmatrix}\times(0,1,0)\right]_{jl}$$

$$= \frac{1}{4}\left[\begin{pmatrix}0&0&0\\1&0&0\\0&0&0\end{pmatrix} + \begin{pmatrix}0&0&0\\-1&0&0\\0&0&0\end{pmatrix} + \begin{pmatrix}0&-1&0\\0&0&0\\0&0&0\end{pmatrix} + \frac{1}{3}\begin{pmatrix}0&1&0\\0&0&0\\0&0&0\end{pmatrix}\right]_{jl}$$

$$= \begin{pmatrix}0&-\frac{1}{6}&0\\0&0&0\\0&0&0\end{pmatrix}_{jl} = -\frac{1}{6}\delta_{j1}\delta_{2l},$$ so final state has same color as initial state (color is conserved). Negative sign means this configuration is repulsive.

A similar computation for $|r\bar{r}\rangle$ gives

$$T^a_{j1} T^a_{1l} = \begin{pmatrix}+\frac{1}{3}&&\\&+\frac{1}{2}&\\&&+\frac{1}{2}\end{pmatrix}_{jl},$$ and summing over $|r\bar{r}\rangle \to |r\bar{r}\rangle, |g\bar{g}\rangle, |b\bar{b}\rangle$

gives a trace: $\frac{1}{3}+\frac{1}{2}+\frac{1}{2} = \frac{4}{3}$. $\left(\frac{1}{\sqrt{3}}\right)^2 \times 3 \times \frac{4}{3} = +\frac{4}{3}$, so singlet is attractive: $q\bar{q}$ pairs like to form color singlets.