

EVELINE PYE

Resonance

The Millennium Bridge has a low natural frequency. Before it was built, engineers used mathematical models to check its vibration in storms, gusts, gales and squalls. But when it opens to the public on a still June morning

they discover pedestrians don't walk like Naomi Campbell or mimic a drunk's random stagger on a painted line. No, they sway from side to side and the lateral force causes oscillation, which chimes with the bridge's low frequency.

As individuals adjust their gait to maintain balance, the crowd begins to move in unison, creating a timed force, like a parent's push on a playground swing. Resonance causes the aluminium deck to rock with increasing amplitude,

just as small synchronised movements on social media can sway public opinion - if they beat in time at the same rate.