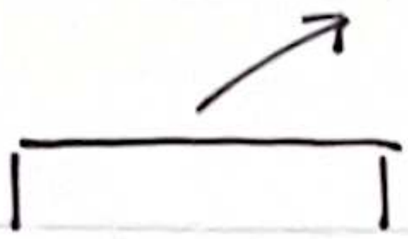
$x + \Delta x$ defines 1 Particle

↳ Uncertainty in quality of particle.



Perturbation in x

↓

Small Particle ← [$(x + \Delta x)$

- Q - Effects are significant on 1 - Particle

x is very small

=)

↑

microstate of particle

Composite particles are made of Many small Particles.

For N-cluster of small Particle

State of cluster is $(x + \Delta x)^N = x^N + \ldots$

↓

As N grows larger terms involving Δx tends to 0.

Since Q - Effects often involve probability

AND

↓

eg. For a 3 - cluster

$P_{composite} = P_1 \times P_2 \times P_3$

↳ micro-states

Adding more small Particles reduce uncertainty. (less Q-Effects / perturbations)

$(x_1 + \Delta x) \times (x_2 + \Delta x) \times (x_3 + \Delta x)$

Where $x_1 = x_2 = x_3$

matter is made up of similar particles.