

New Paradigms Emerging from the Quantum Revolution

The observer is entangled with the system being observed.

"Observations not only disturb what has to be measured, they produce it...we compel [the electron] to assume a definite position...We ourselves produce the results of the measurements."

Pascal Jordan

Particles that are spatially separated can somehow be entangled and dependent on one another.

"I cannot seriously believe in [the quantum theory] because it cannot be reconciled with the idea that physics should represent a reality in space and time, free from spooky actions at a distance".

Albert Einstein, March 1947

"It seems to me that your axiom of the 'independence of spatially separated objects A and B' is not as convincing as you make out...objects far apart in space which have a common origin need not be independent..."

Max Born, in a letter to Einstein, 1948