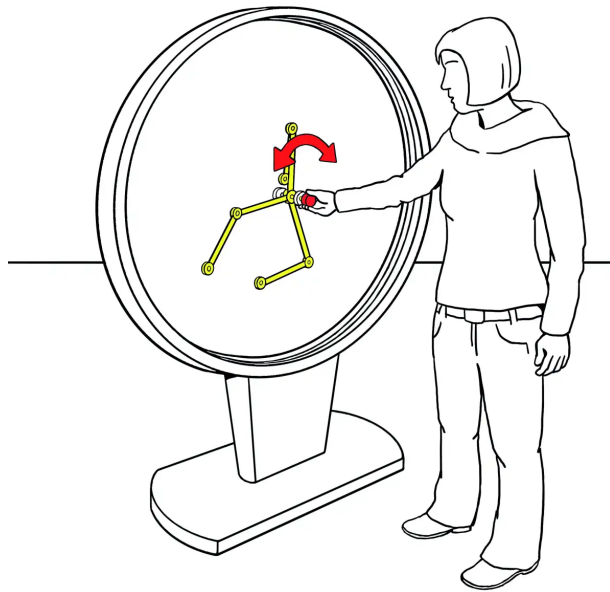


# Chaotic pendulum

Can you predict how the pendulum will swing?



Turn the knob to set the pendulum in motion.

Observe the movement sequence.

Repeat the attempt.

Can you make the pendulum swing again in the same movement sequence?

This pendulum is a chaotic system: the innumerable possibilities of movement of the individual pendulum arms and their mutual influence cannot be foreseen. Even the smallest changes at the start have unpredictable effects on the subsequent behaviour of the pendulum. It is, therefore, almost impossible to induce two sequences of motion, which are even almost the same.

In everyday life, we are always encountering chaotic events: on busy motorways, congestion emerges as if from nowhere and dissolve just as abruptly again – and also the weather does not always do what the weathermen forecast for us. With the help of supercomputers and sophisticated computing models, good forecasts can be generated for a few days, but small changes in the initial situation can quickly lead to surprises.