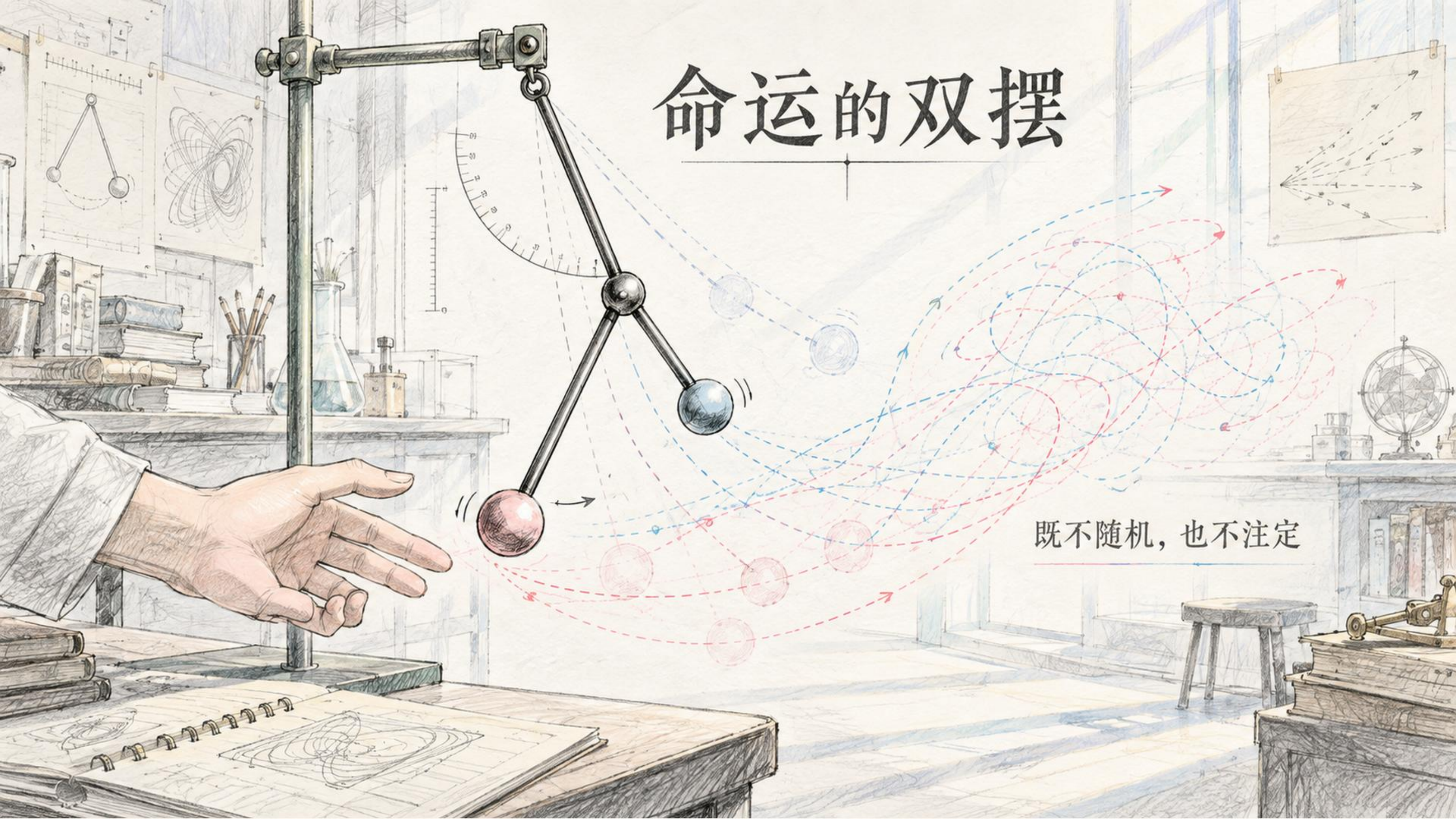


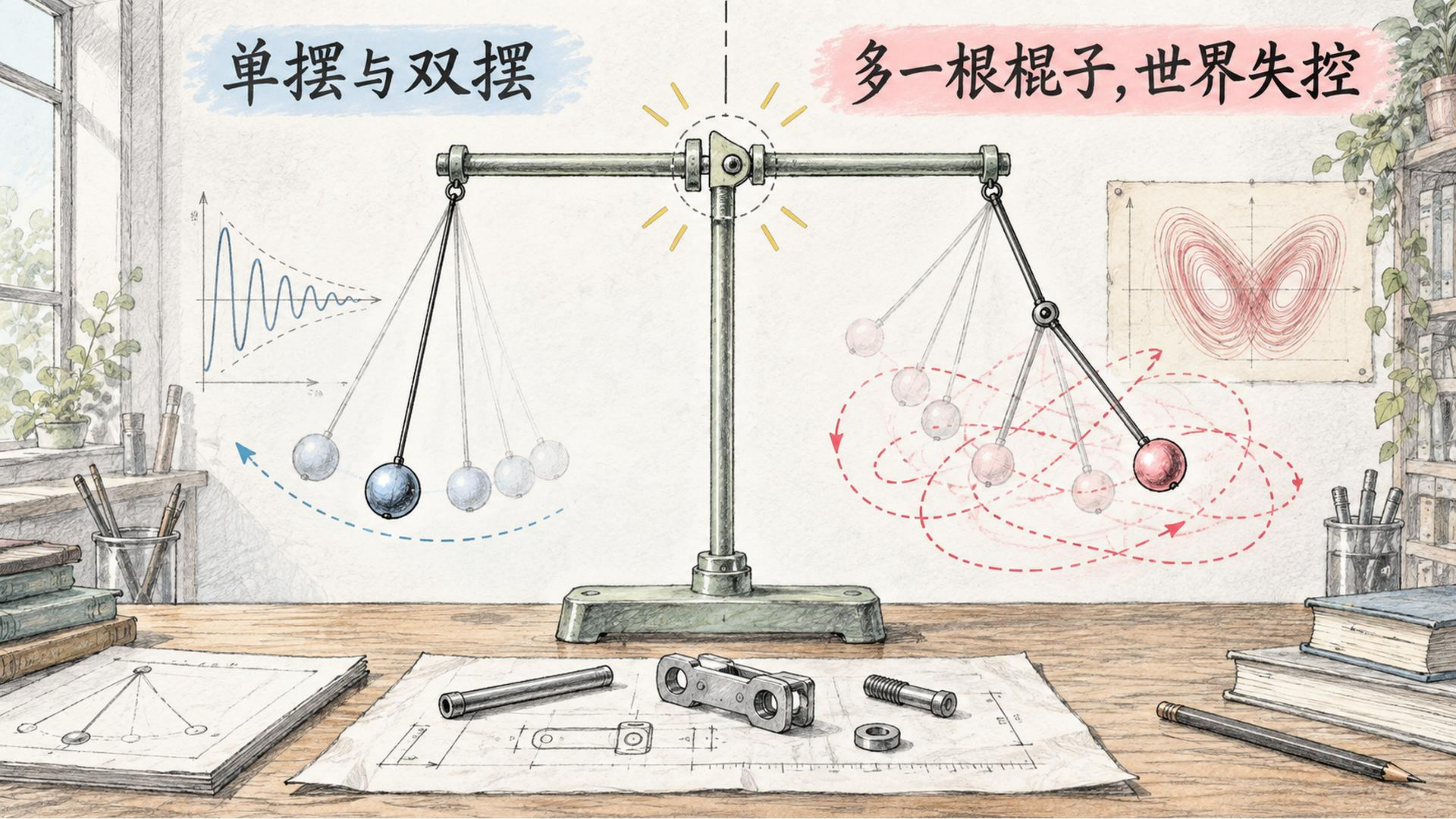
命运的双摆



既不随机，也不注定

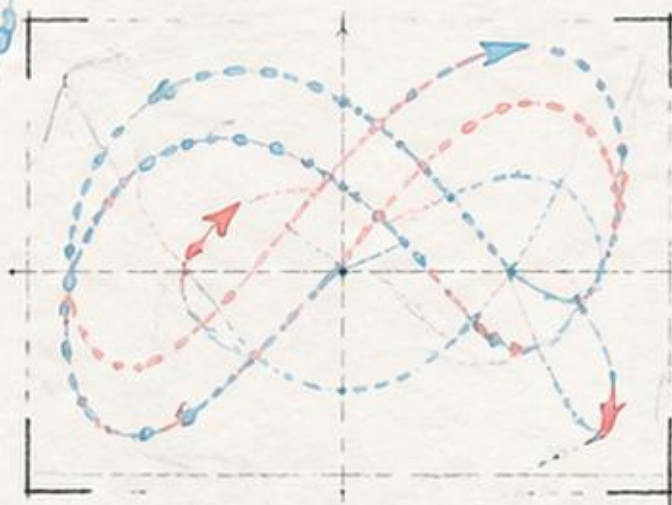
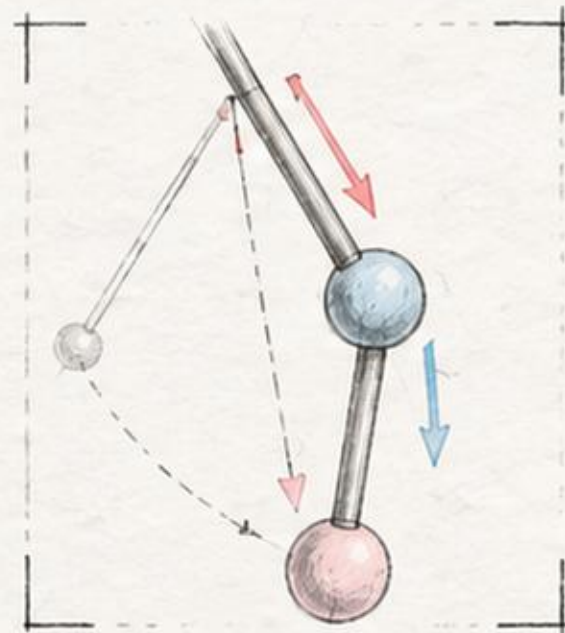
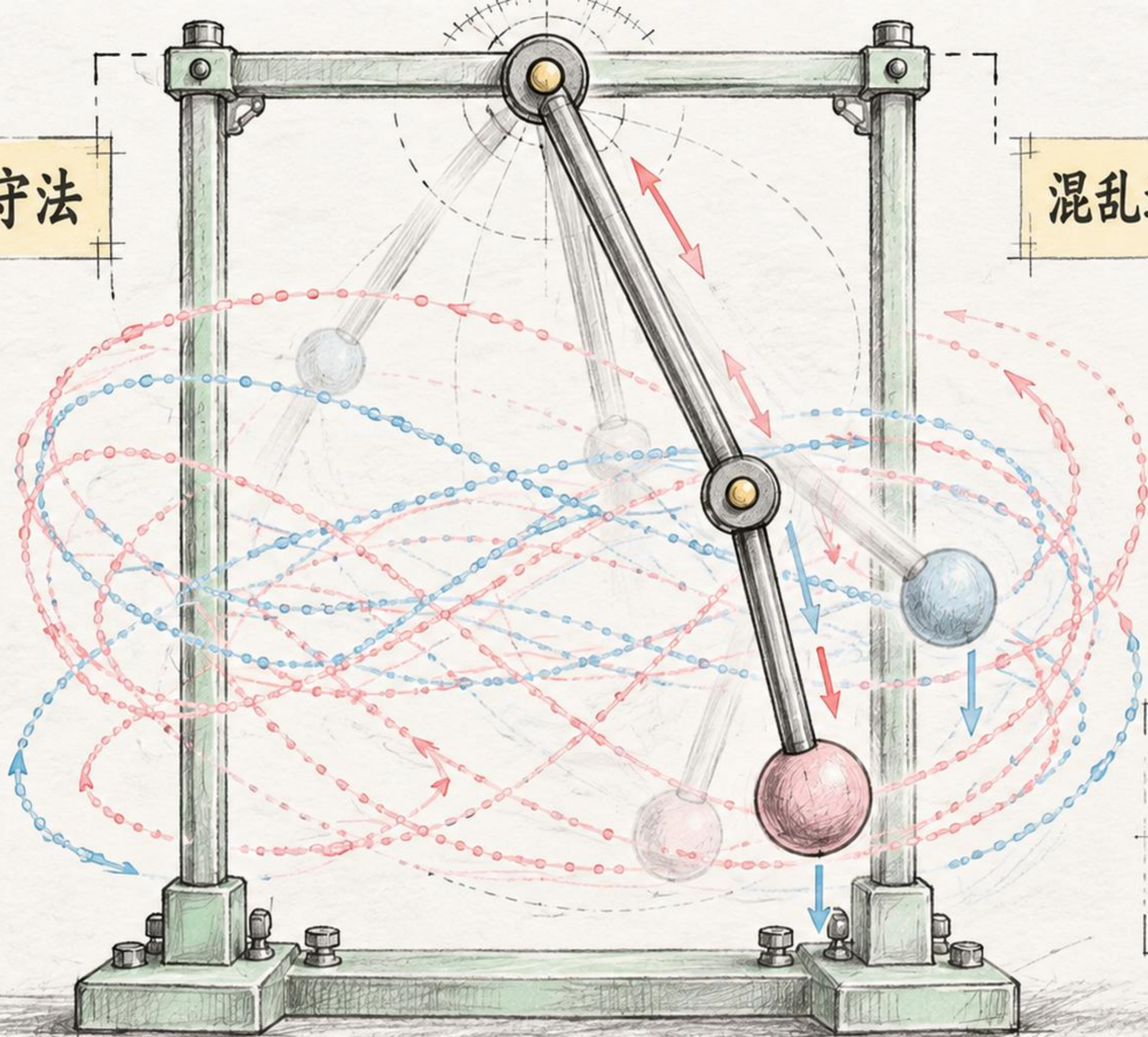
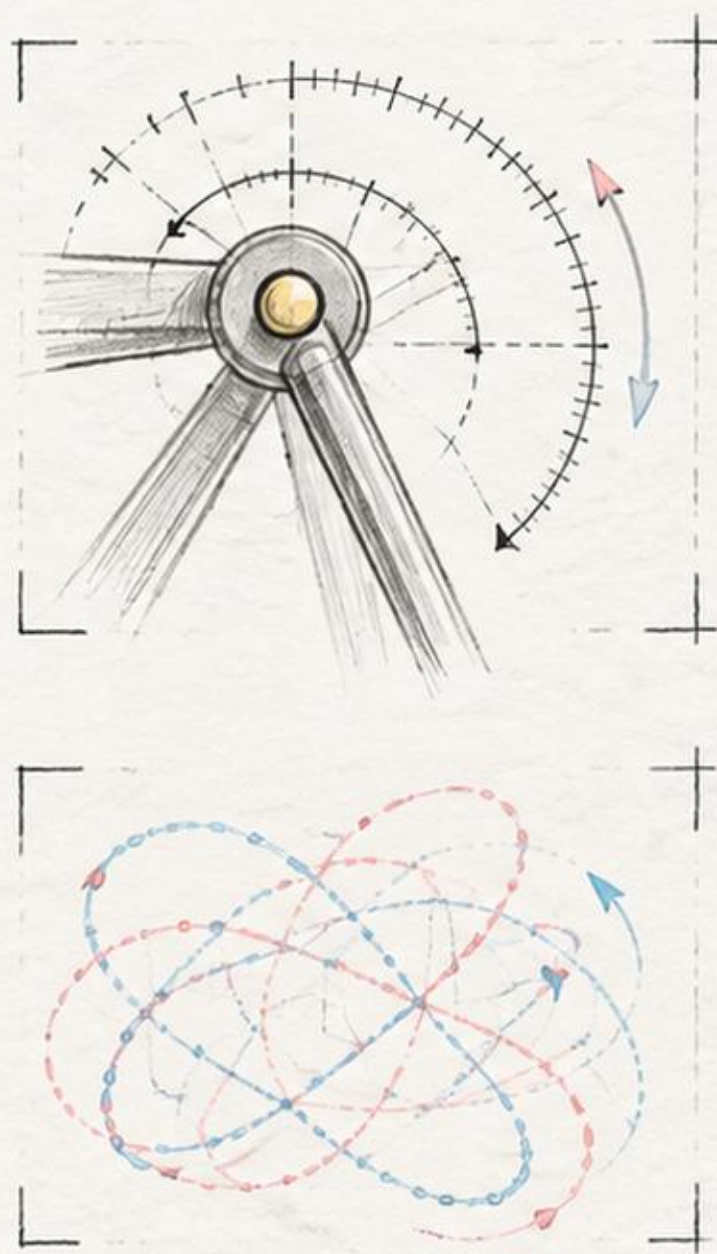
单摆与双摆

多一根棍子, 世界失控



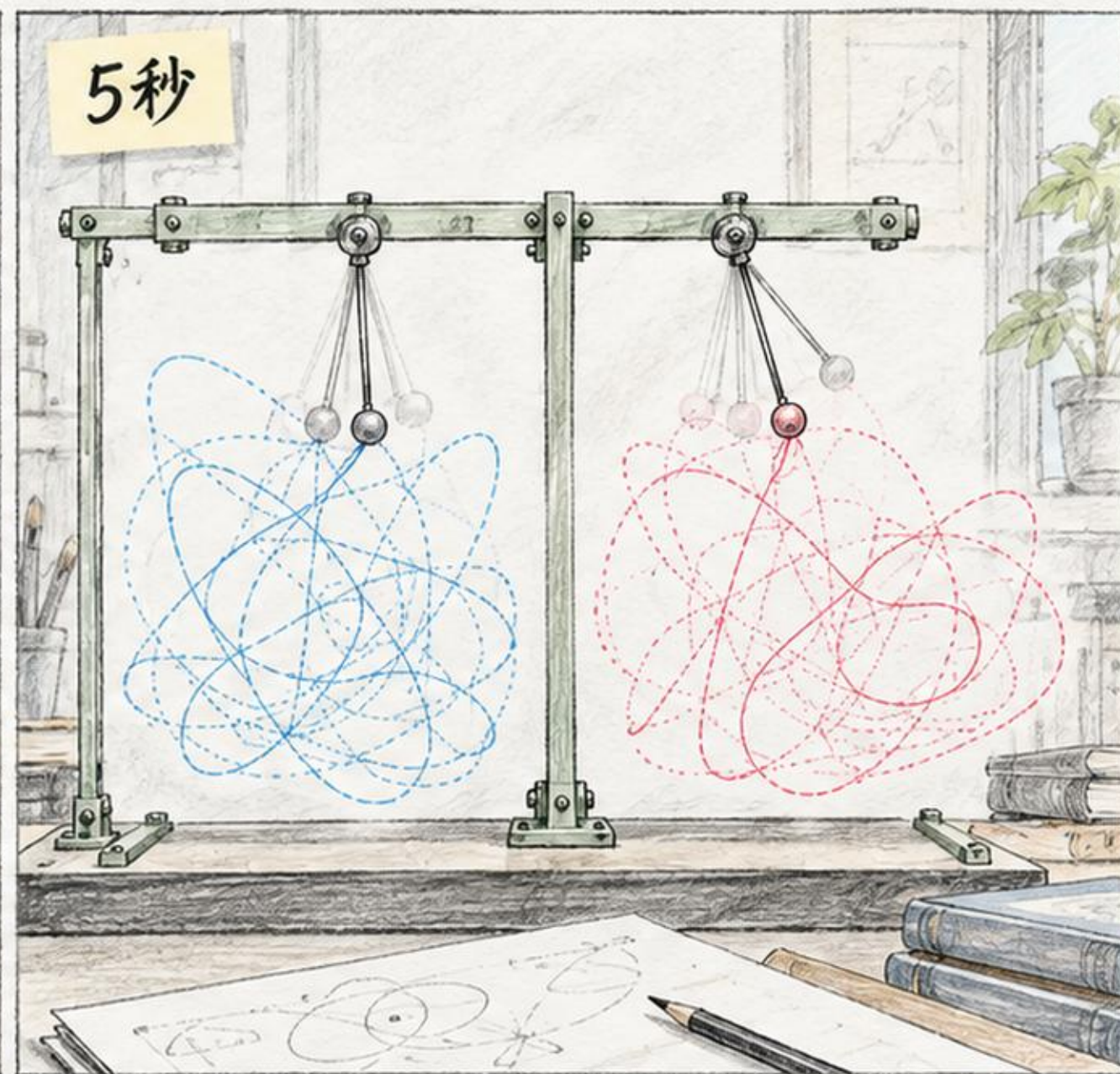
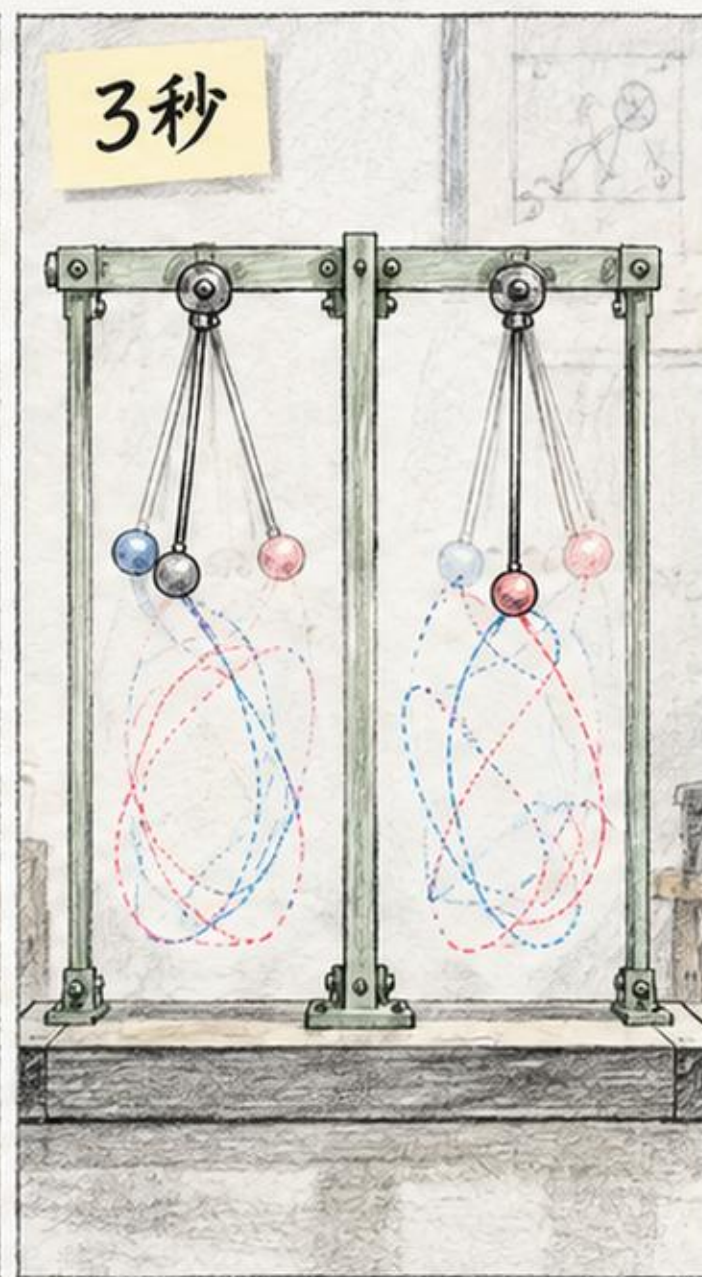
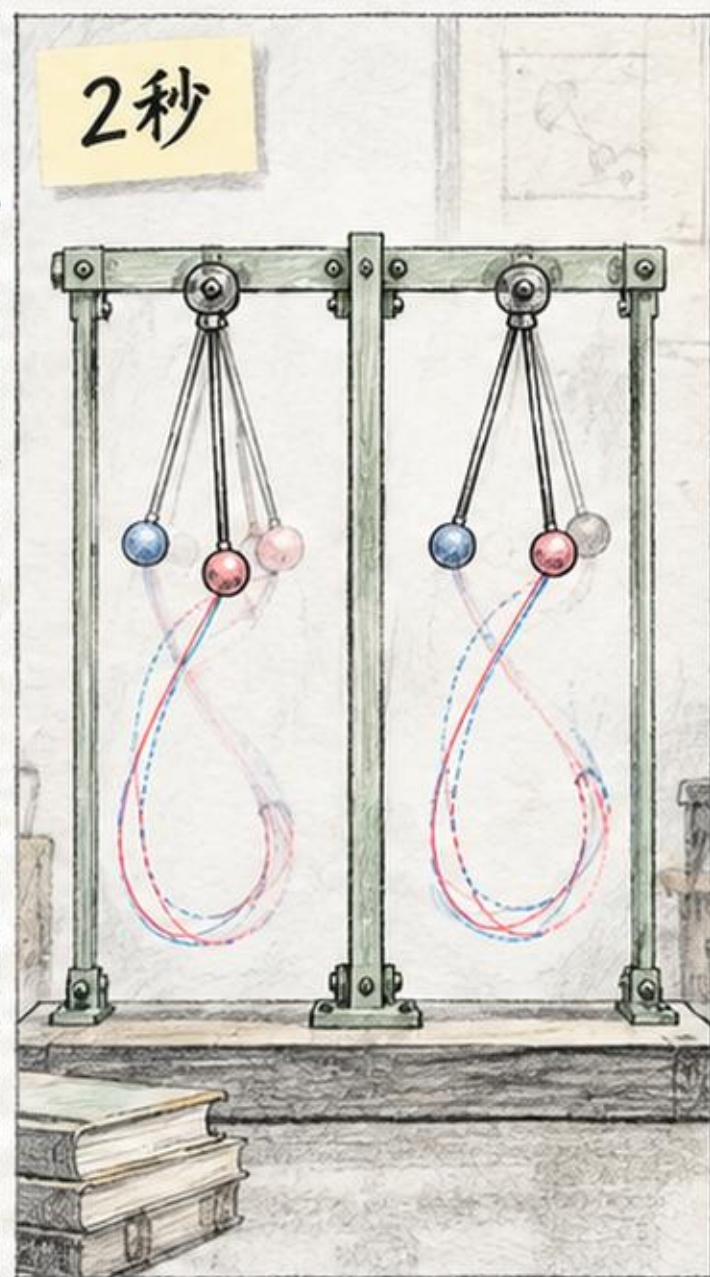
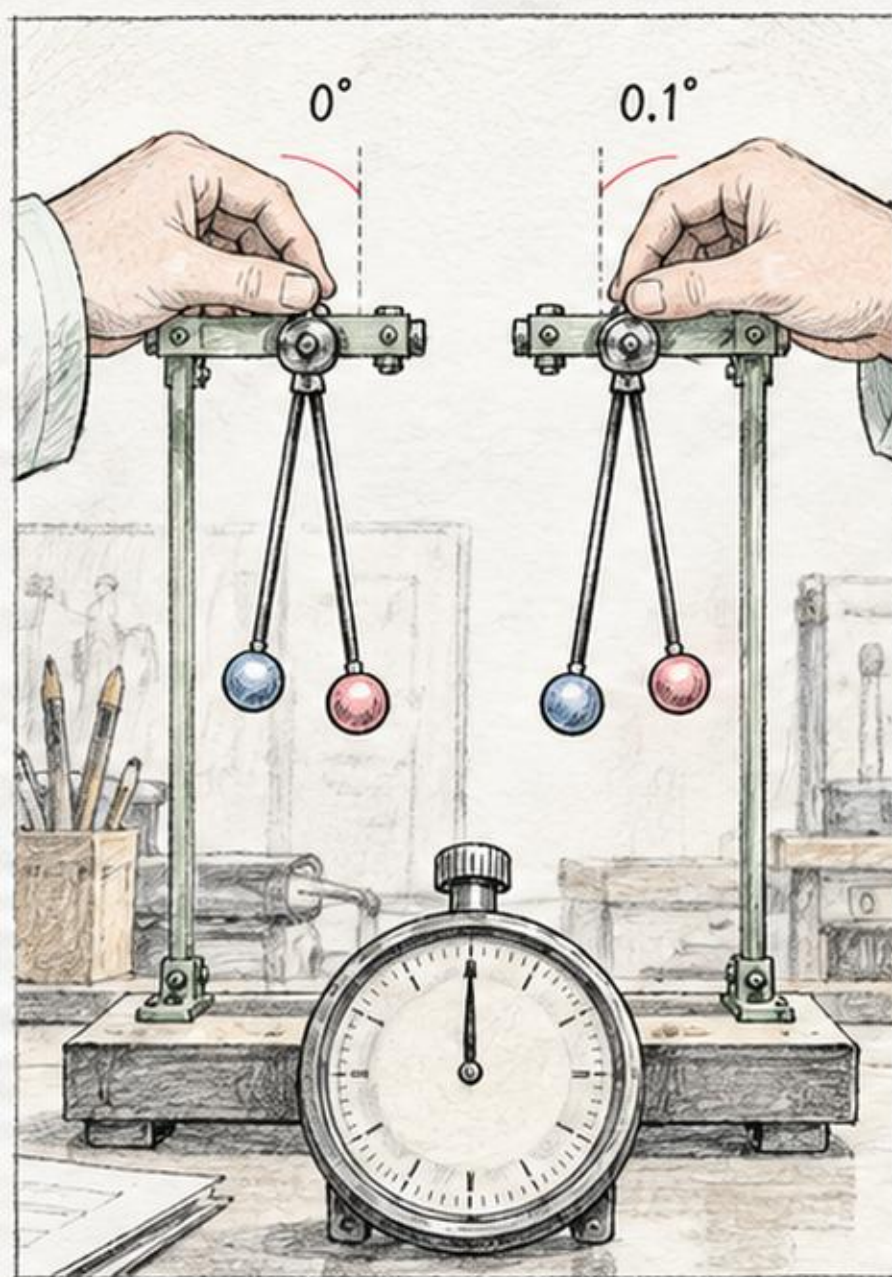
看似发疯，实则守法

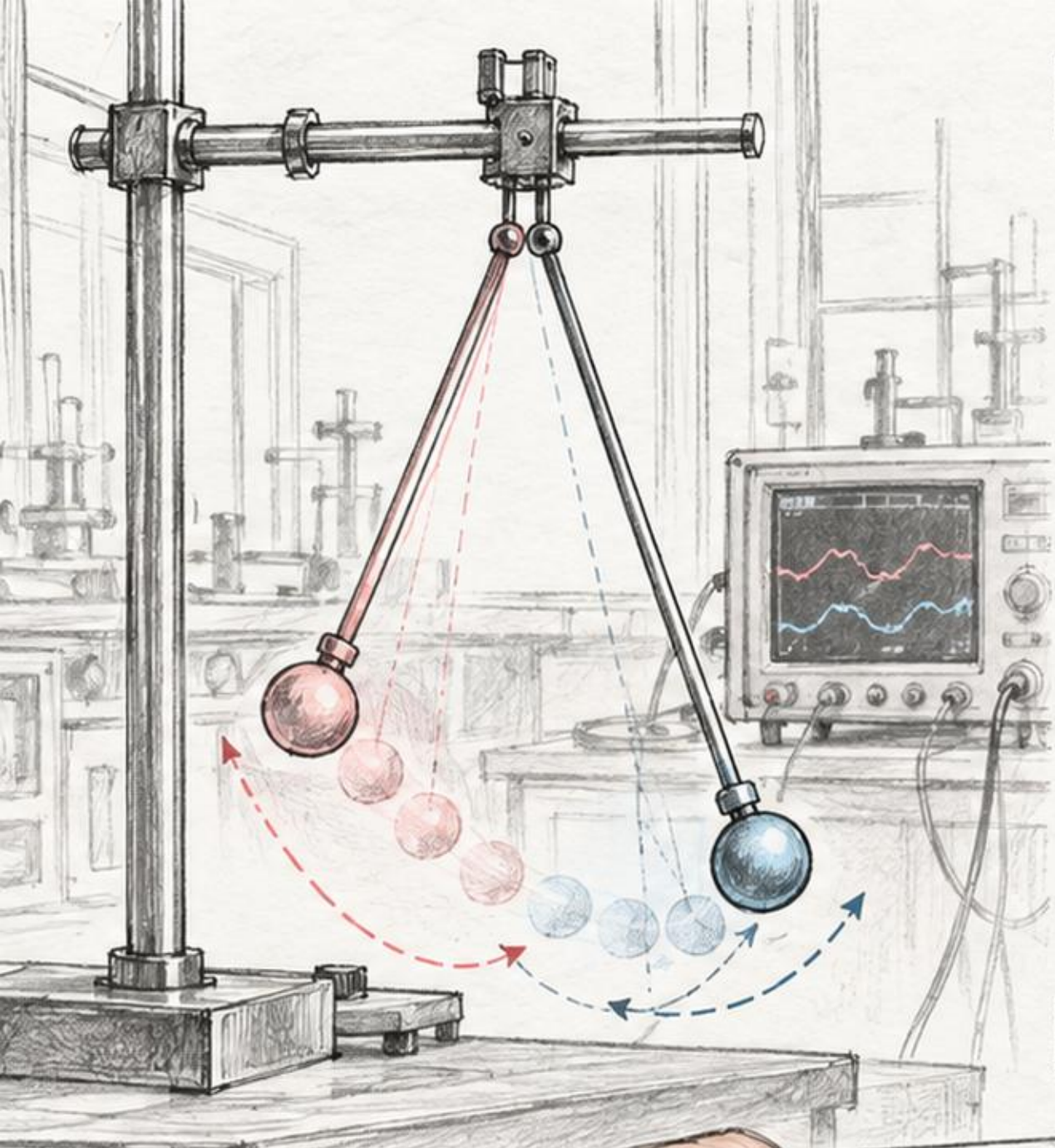
混乱运动背后的方程



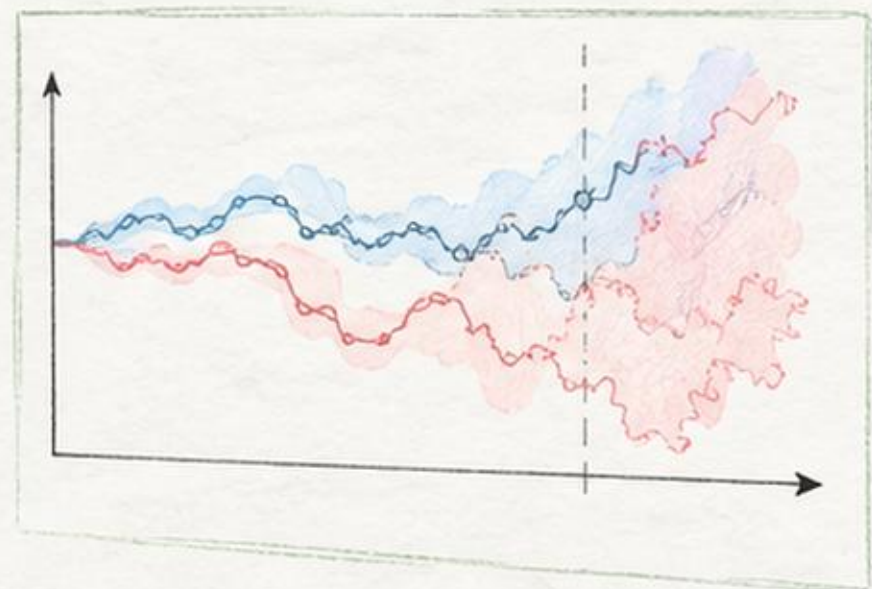
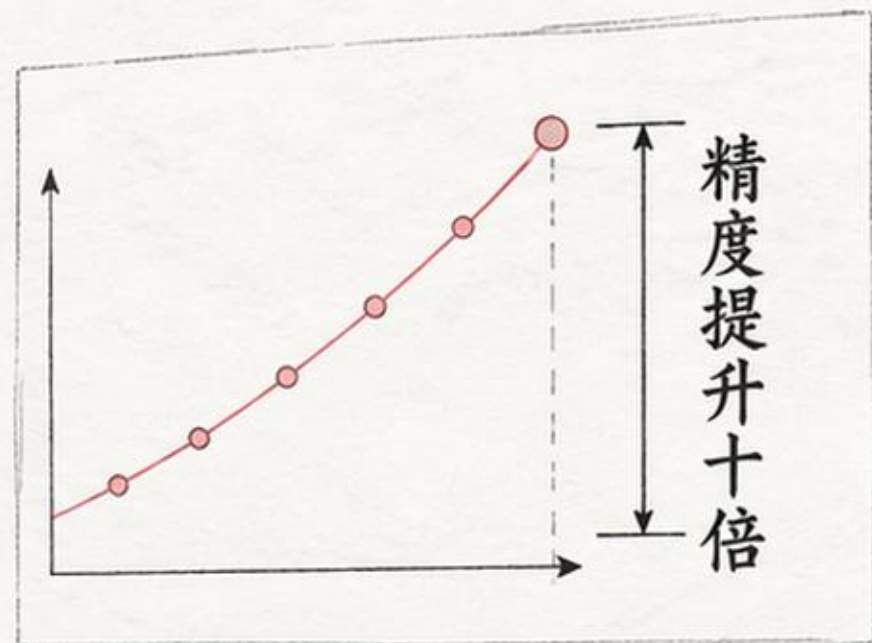
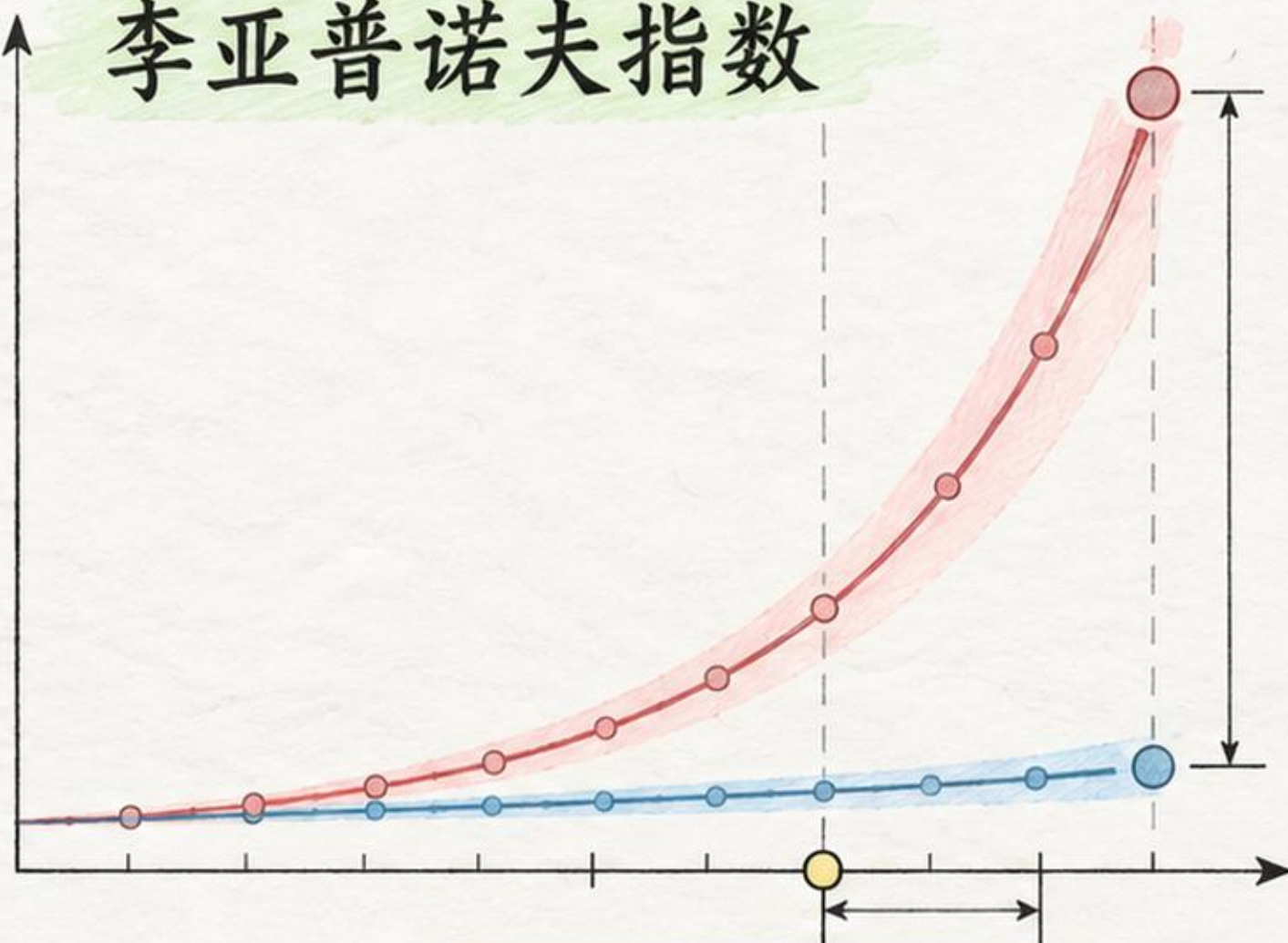
轨迹分离实验

零点一度后的陌生人

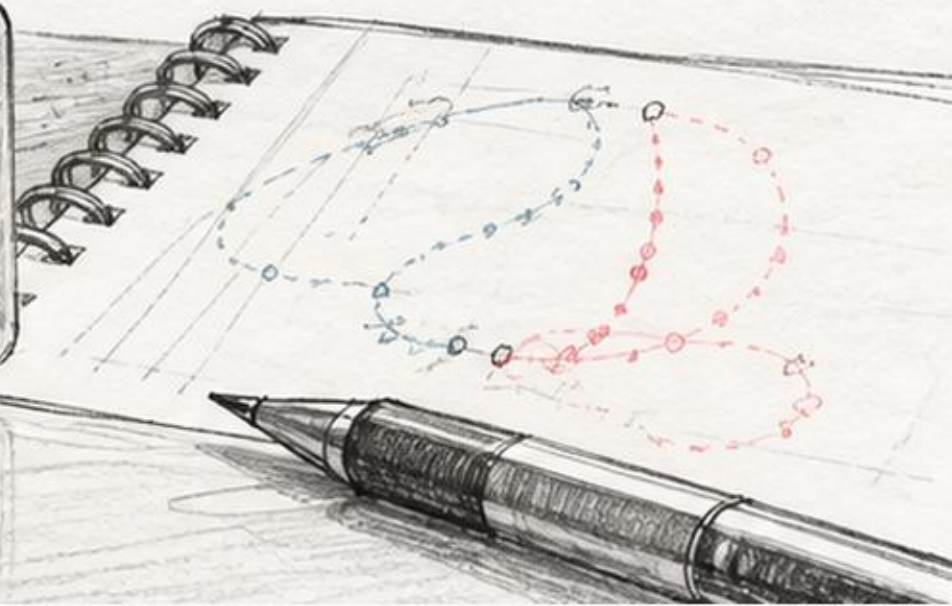
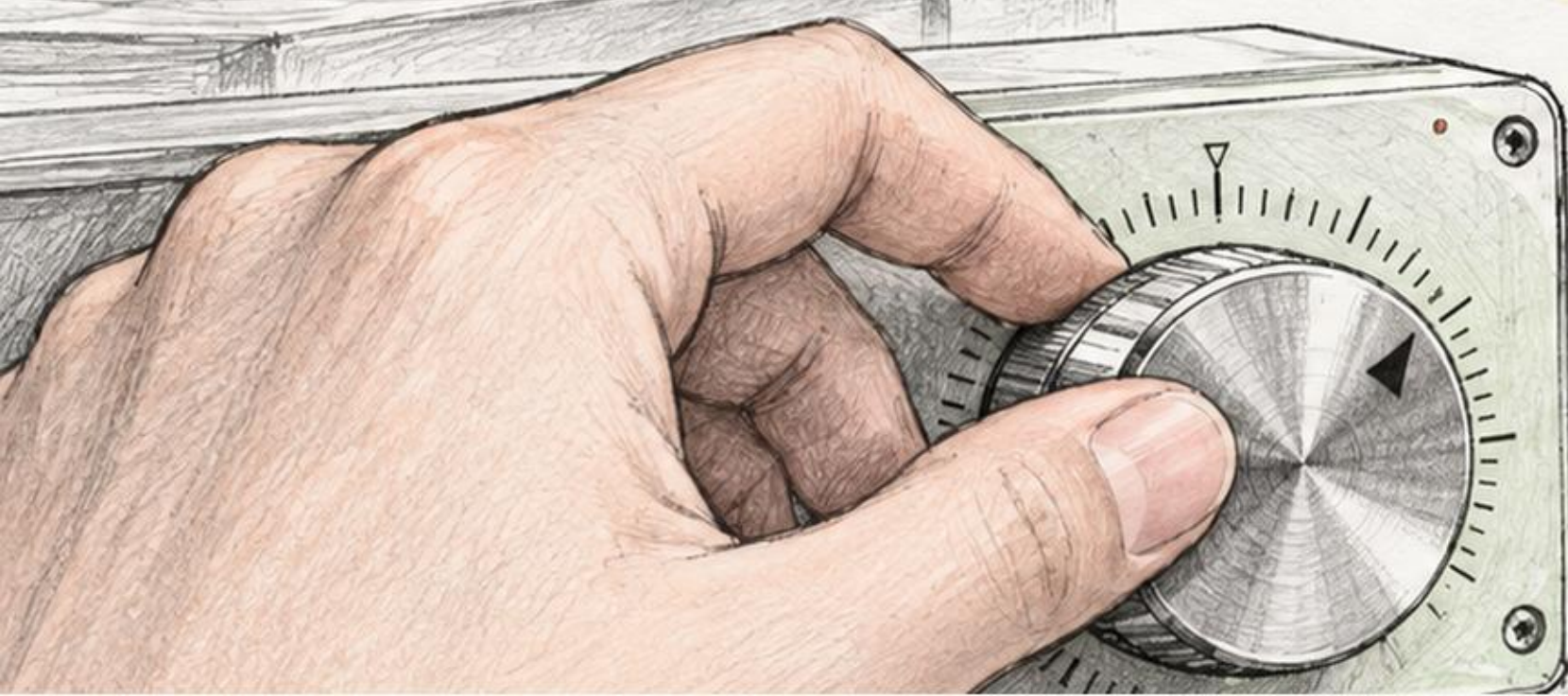




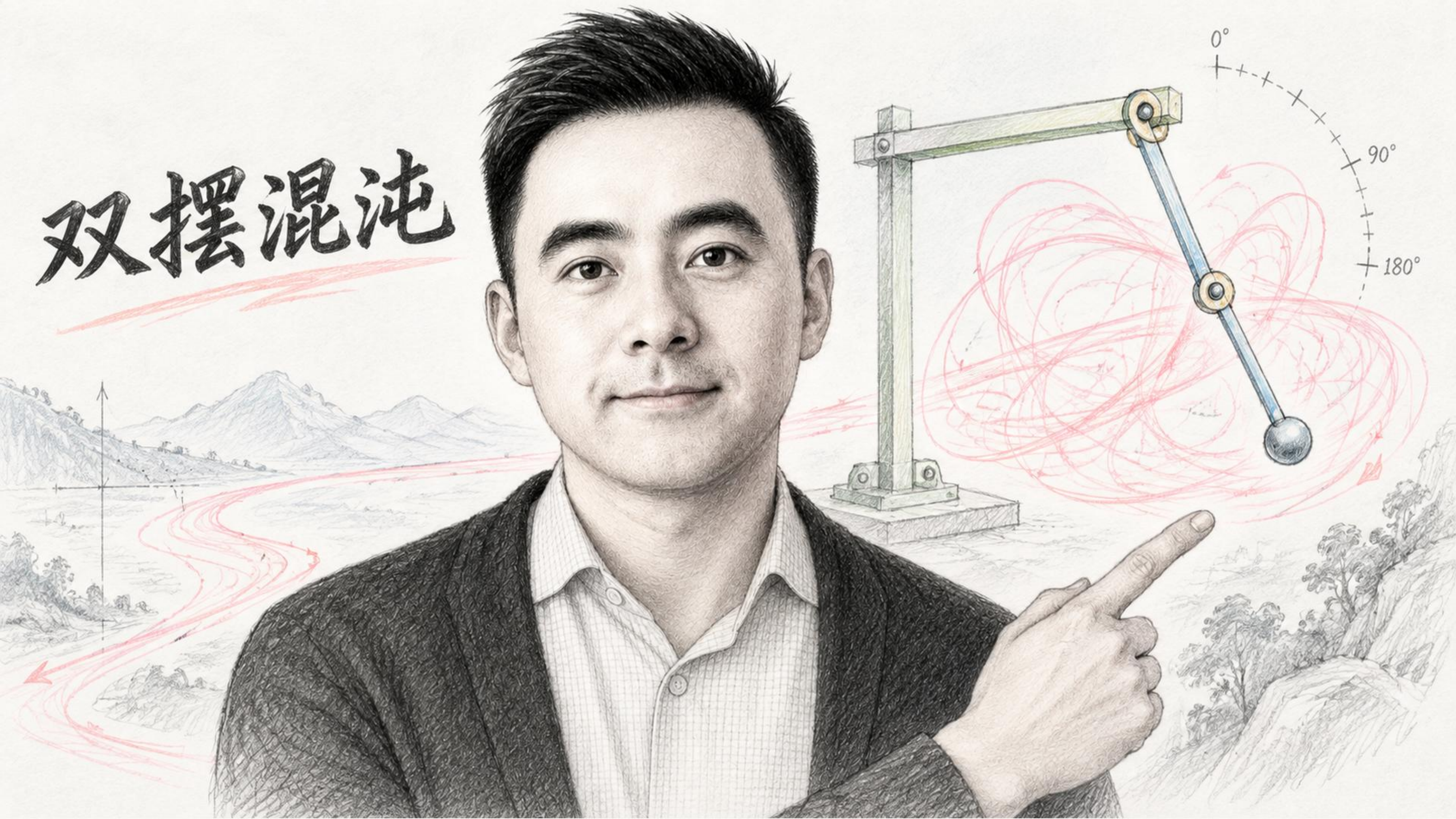
李亚普诺夫指数



预测只多零点三秒

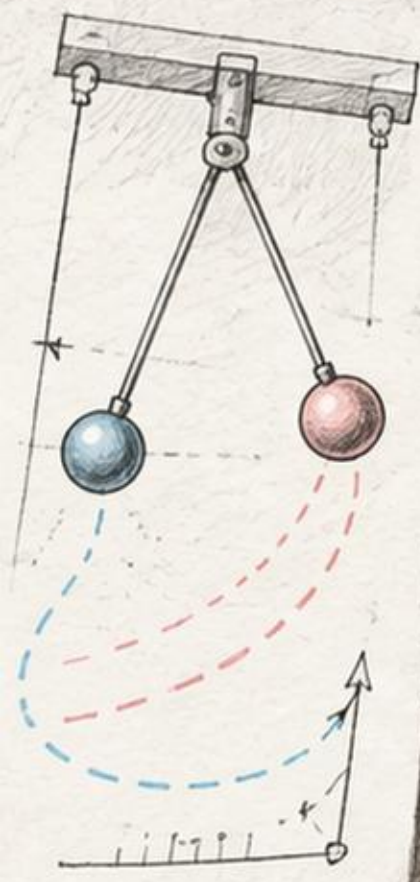
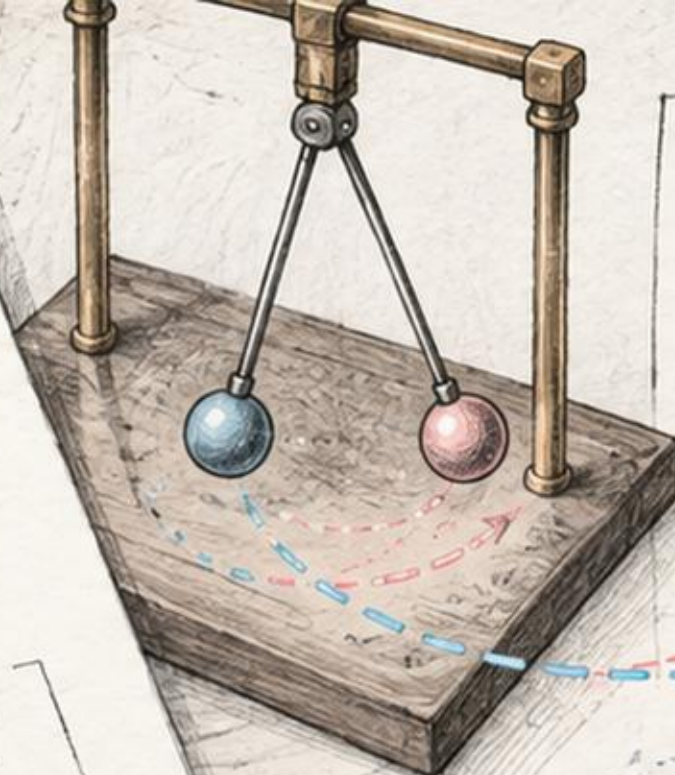


双摆混沌



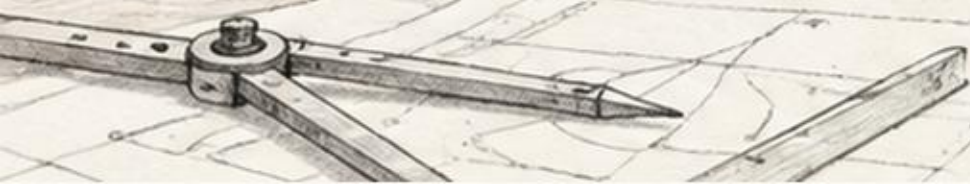
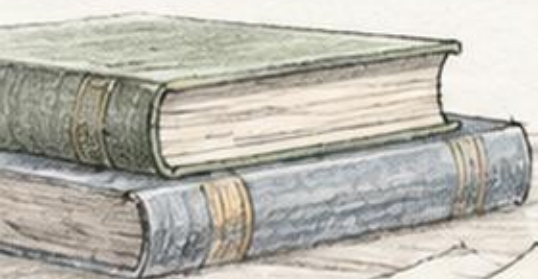
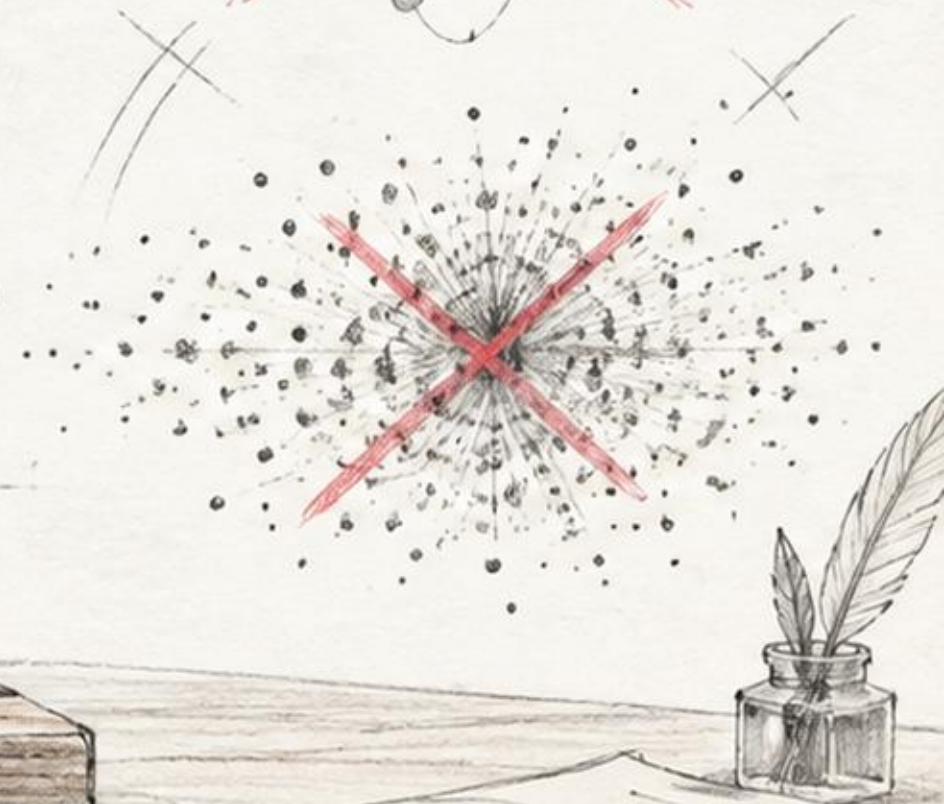
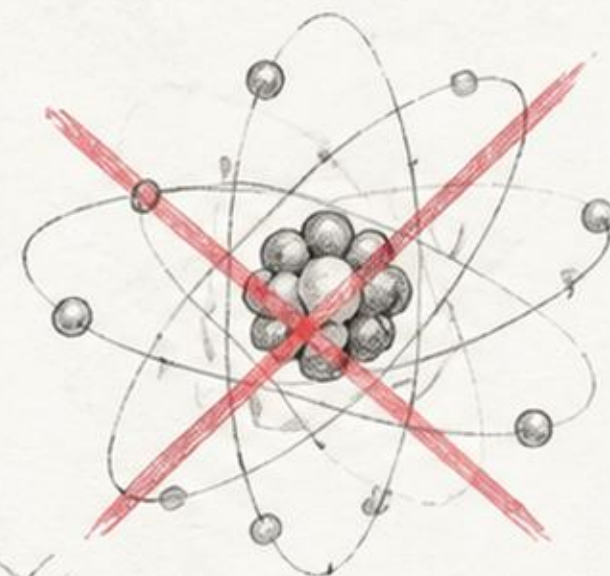
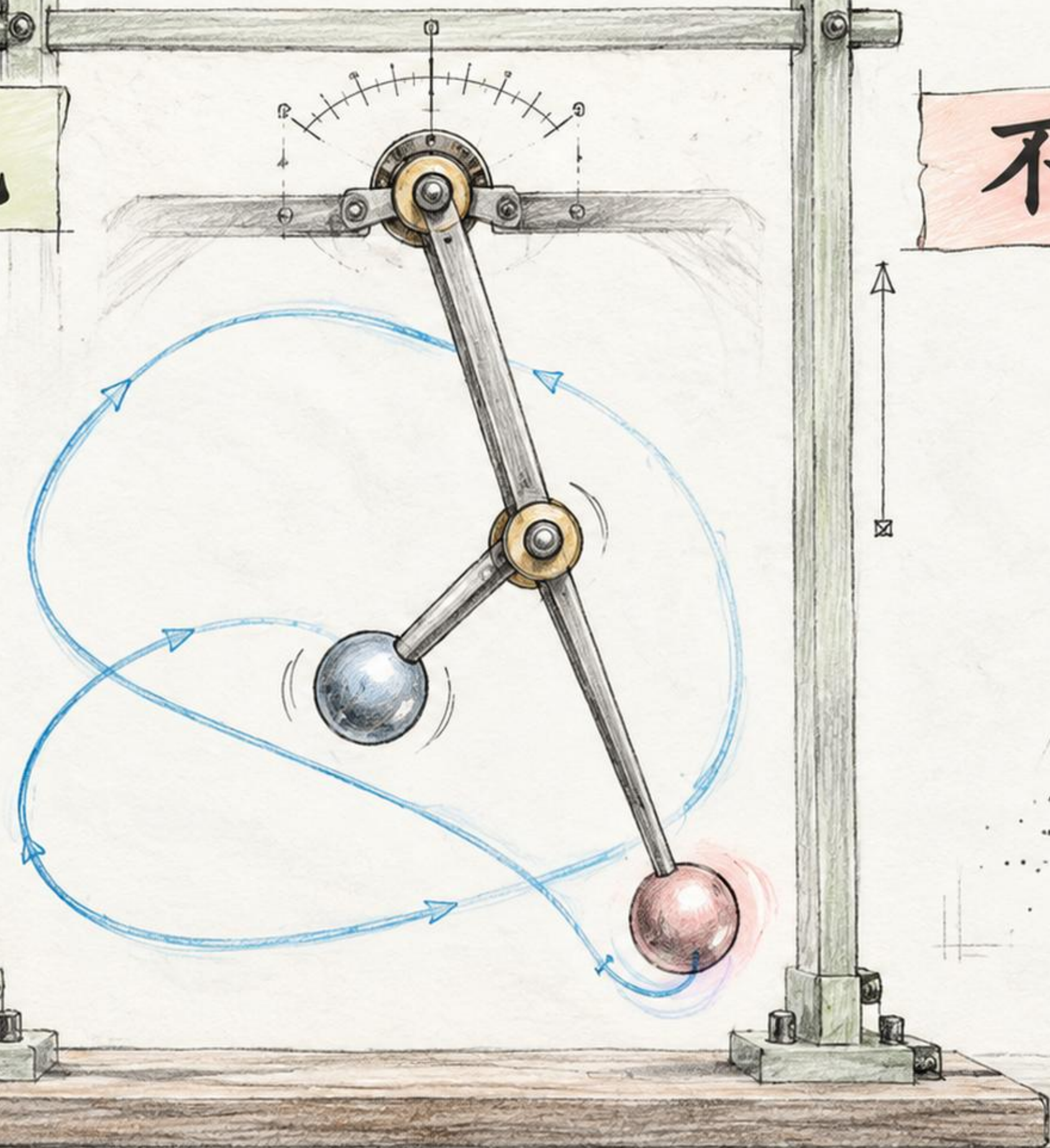
一位观众的宇宙直觉

从双摆聊到量子算法

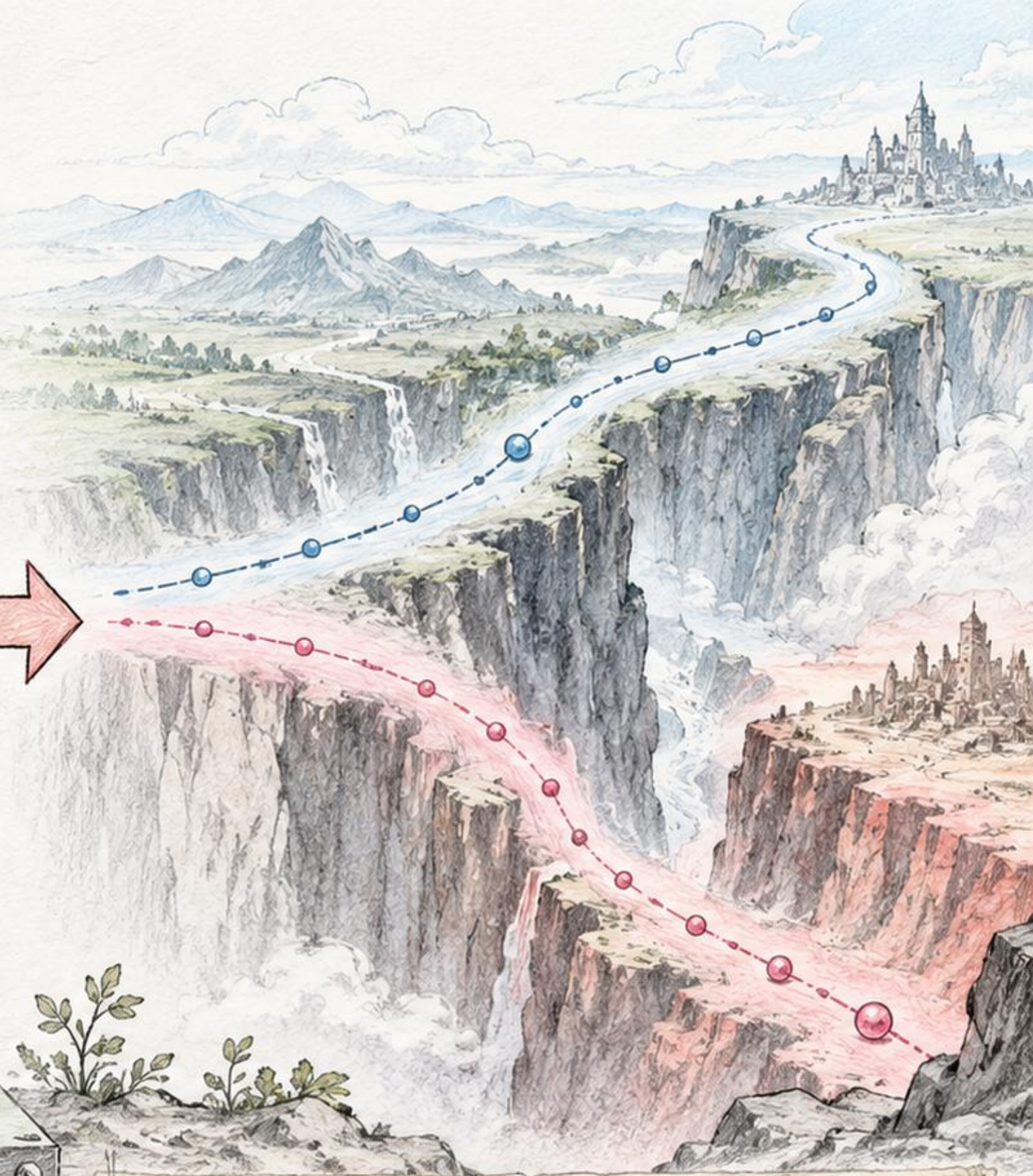
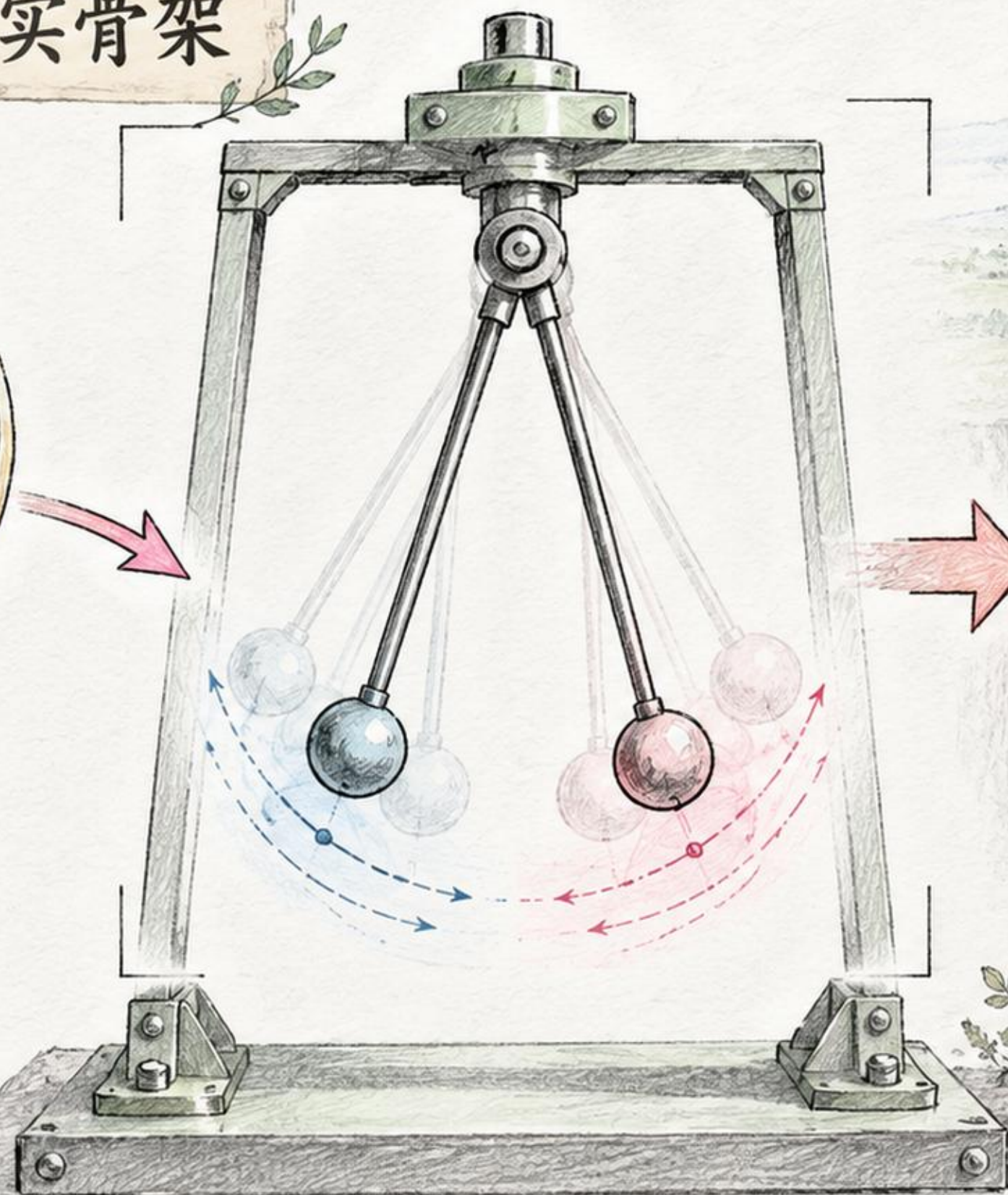
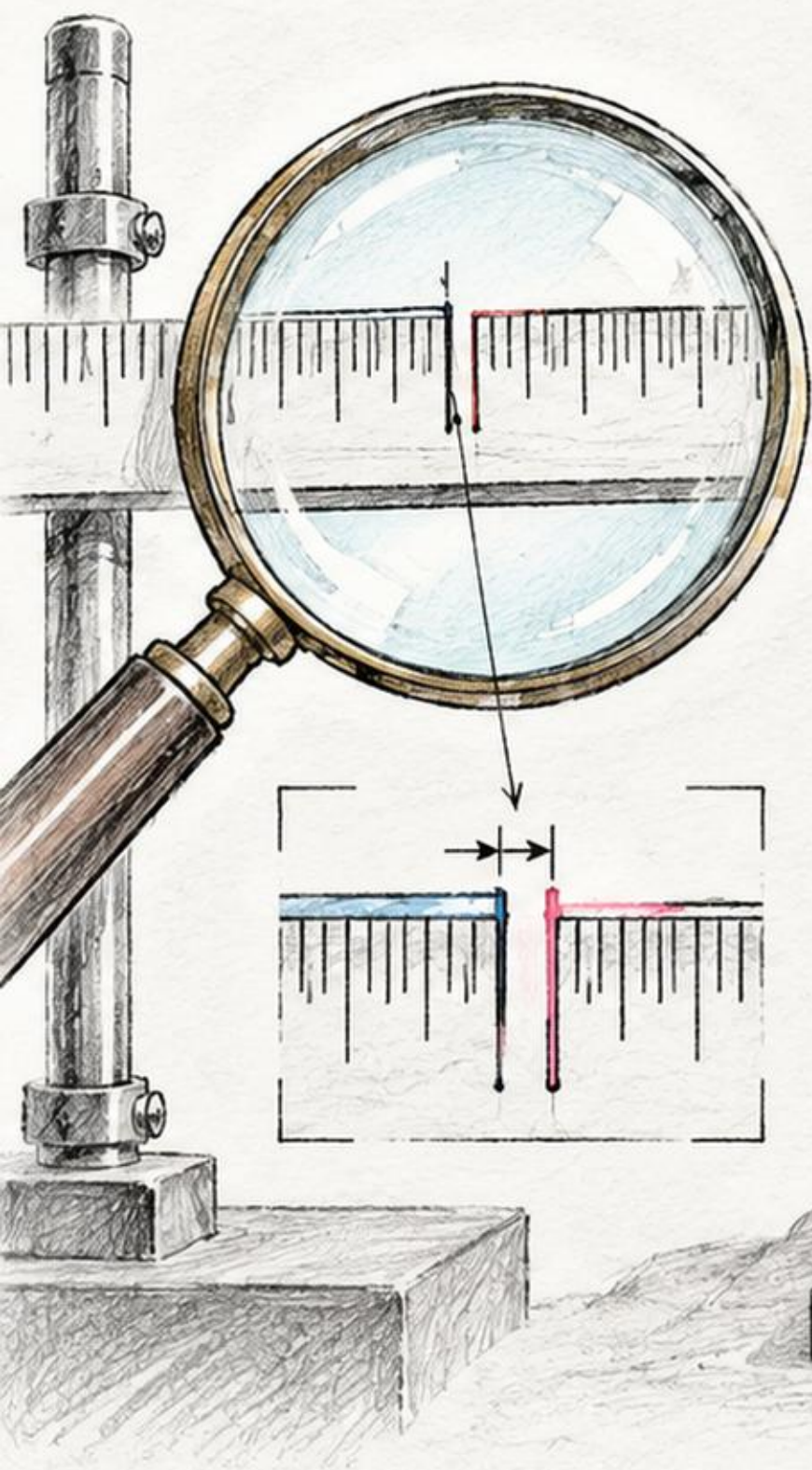


确定性混沌

不是随机



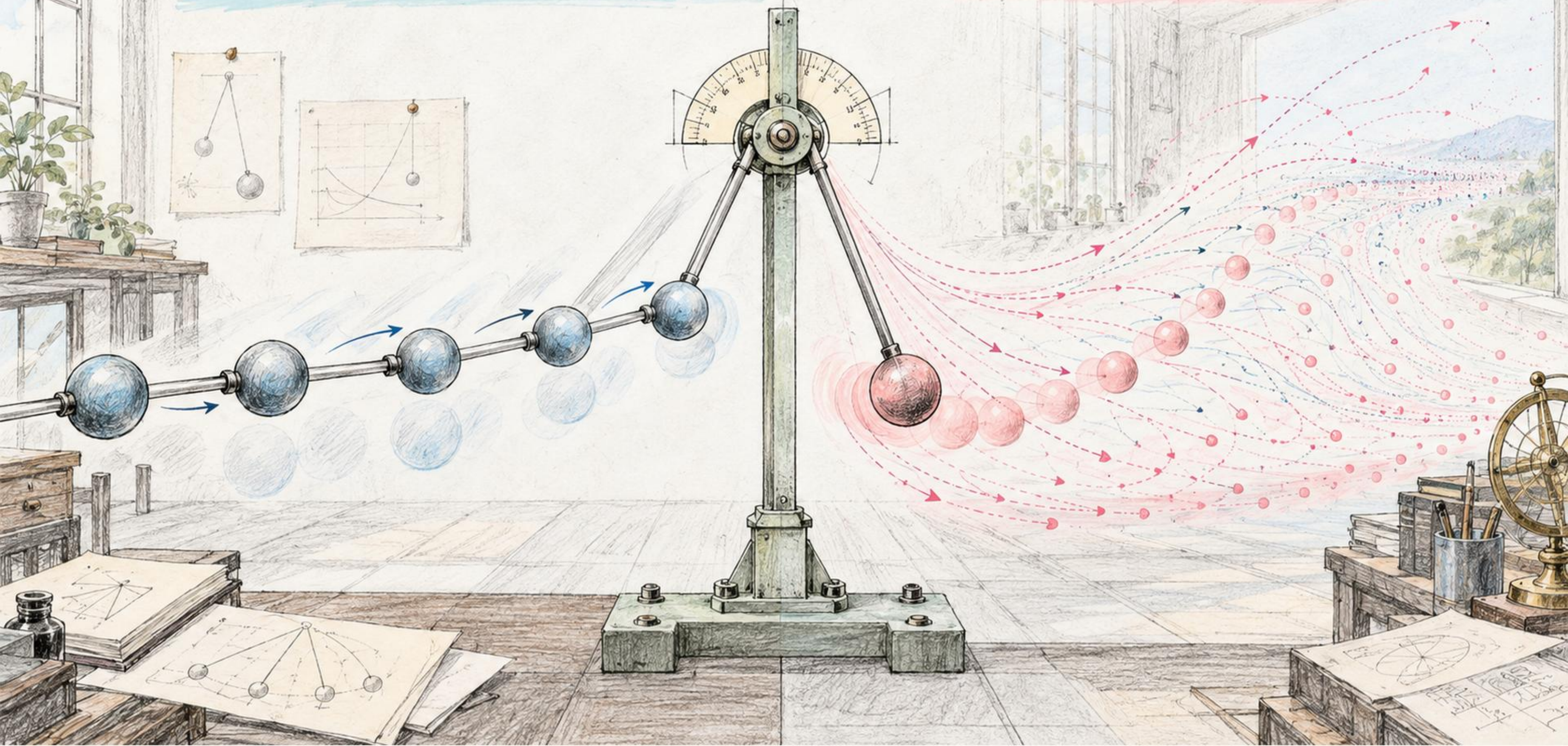
蝴蝶效应的真实骨架



误差终将变成天壤之别

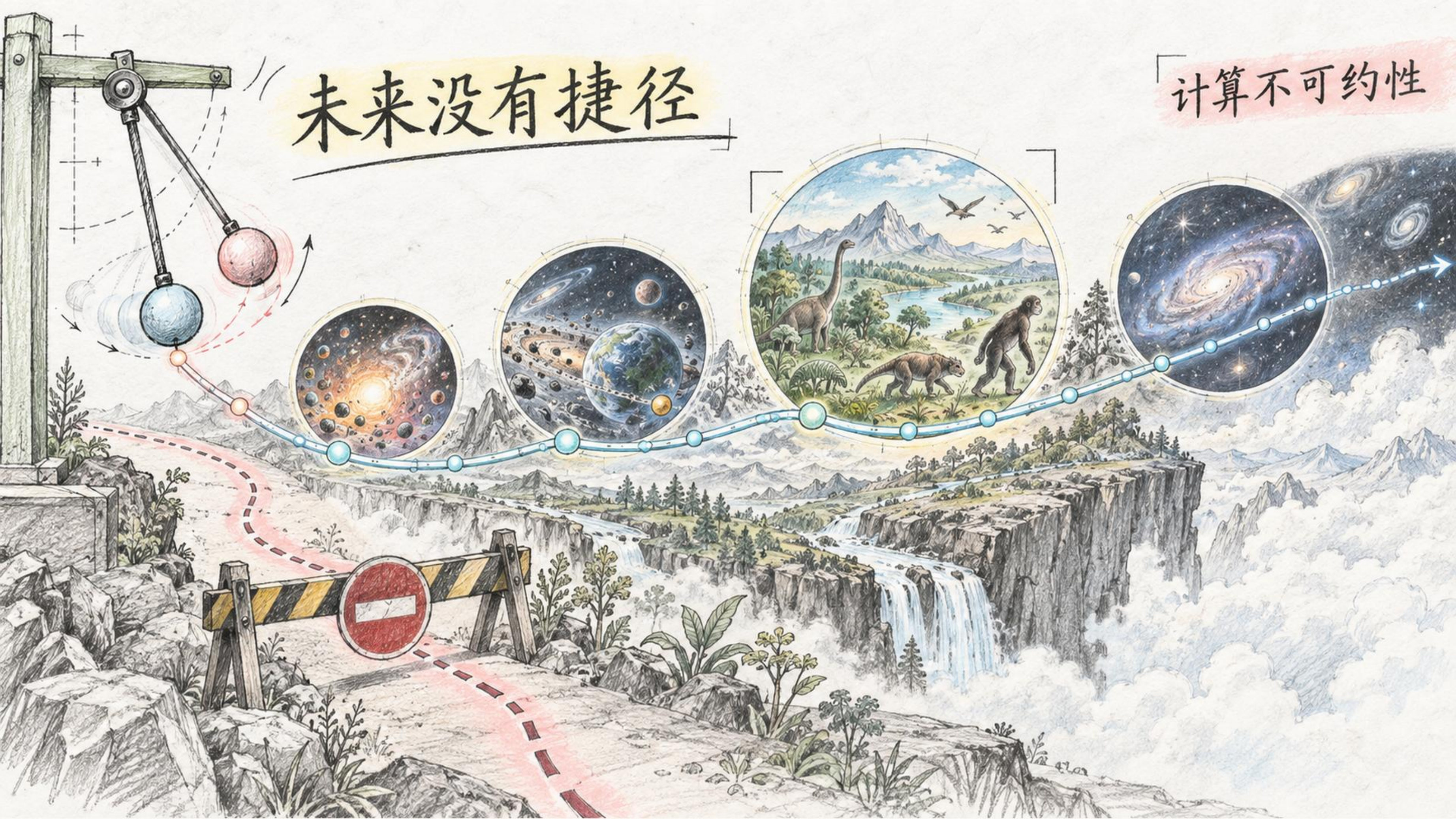
每一步有因果，终点却不可见

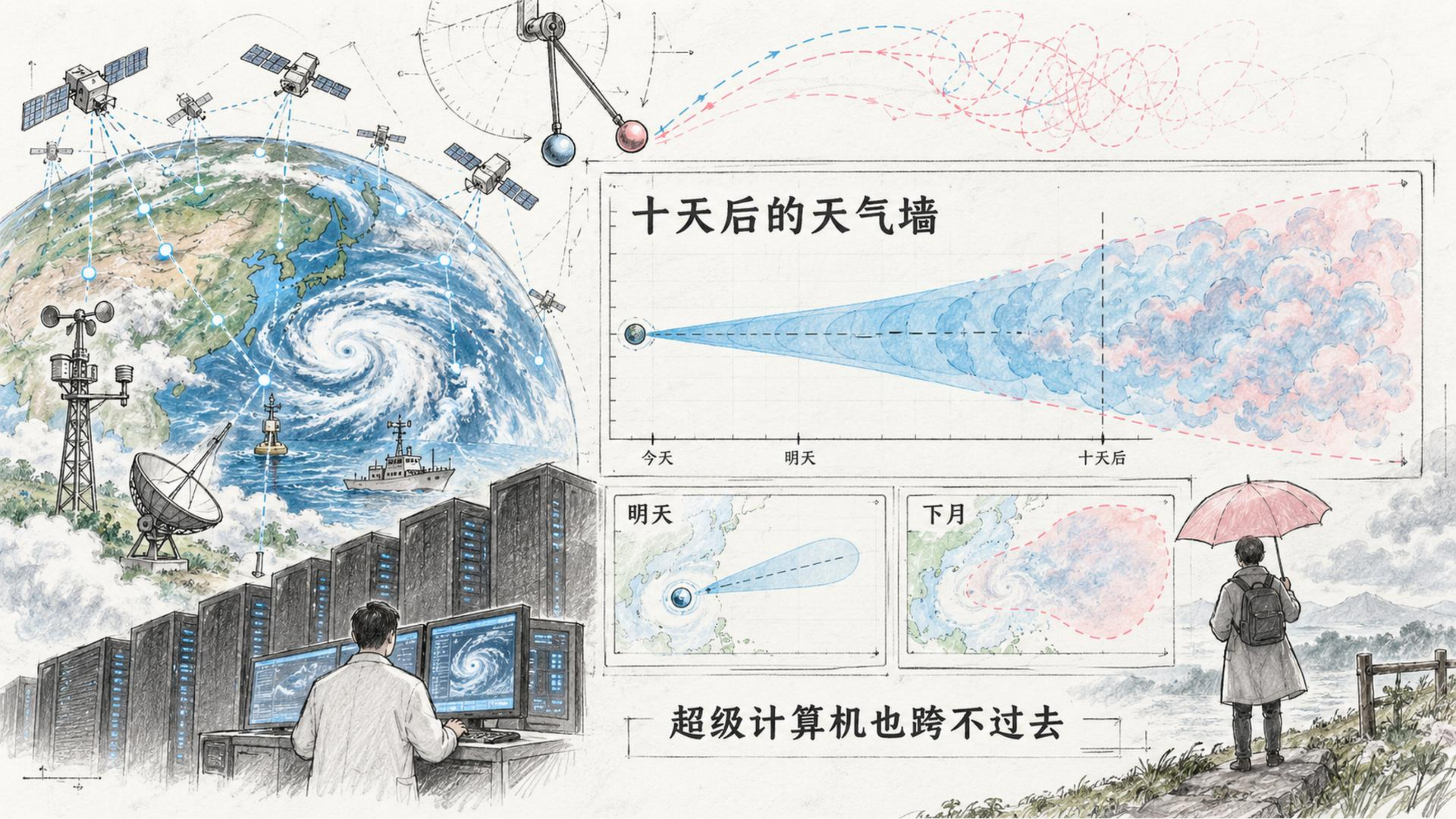
混沌最震撼的矛盾



未来没有捷径

「计算不可约性」





十天后的天气墙

今天

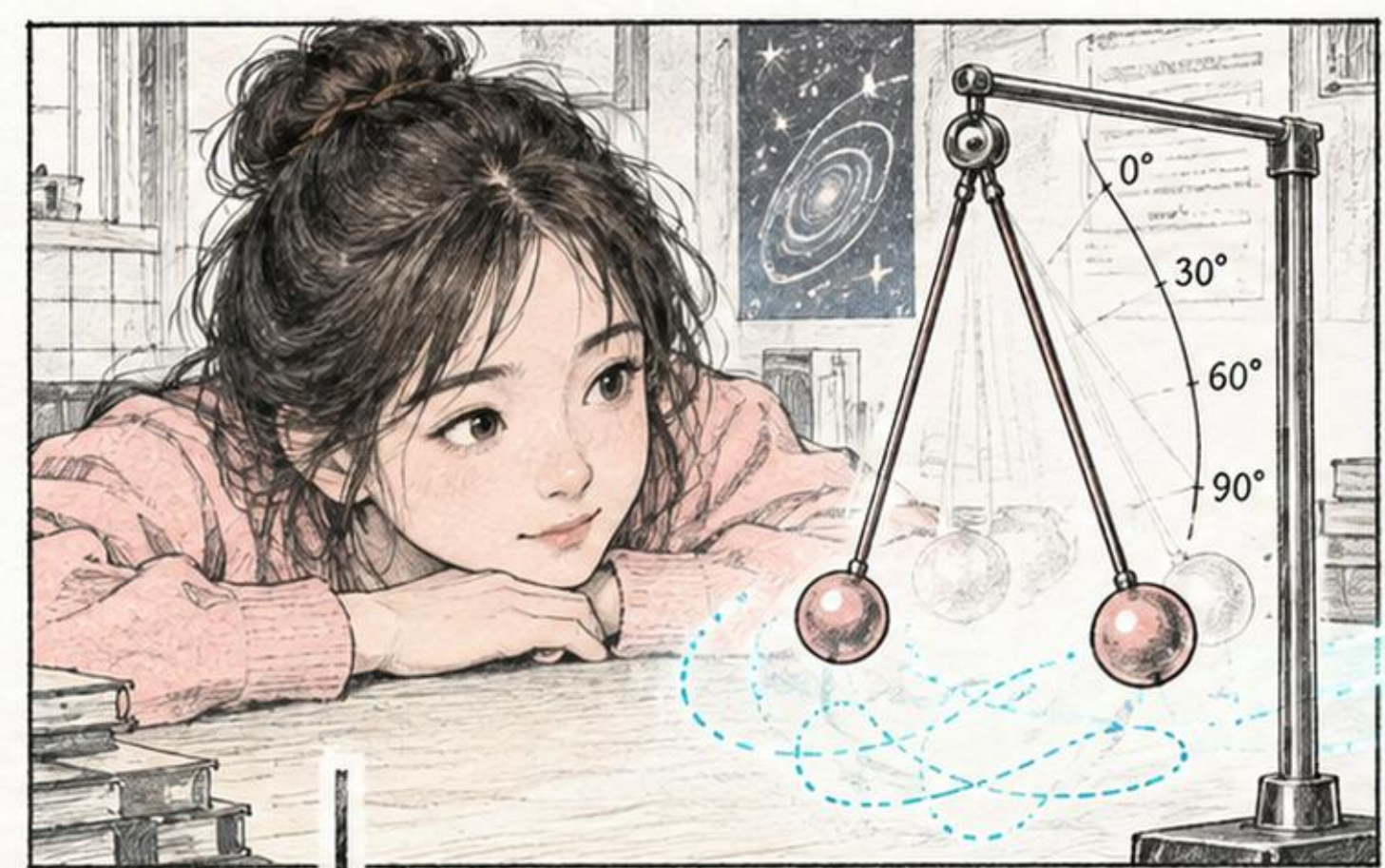
明天

十天后

明天

下月

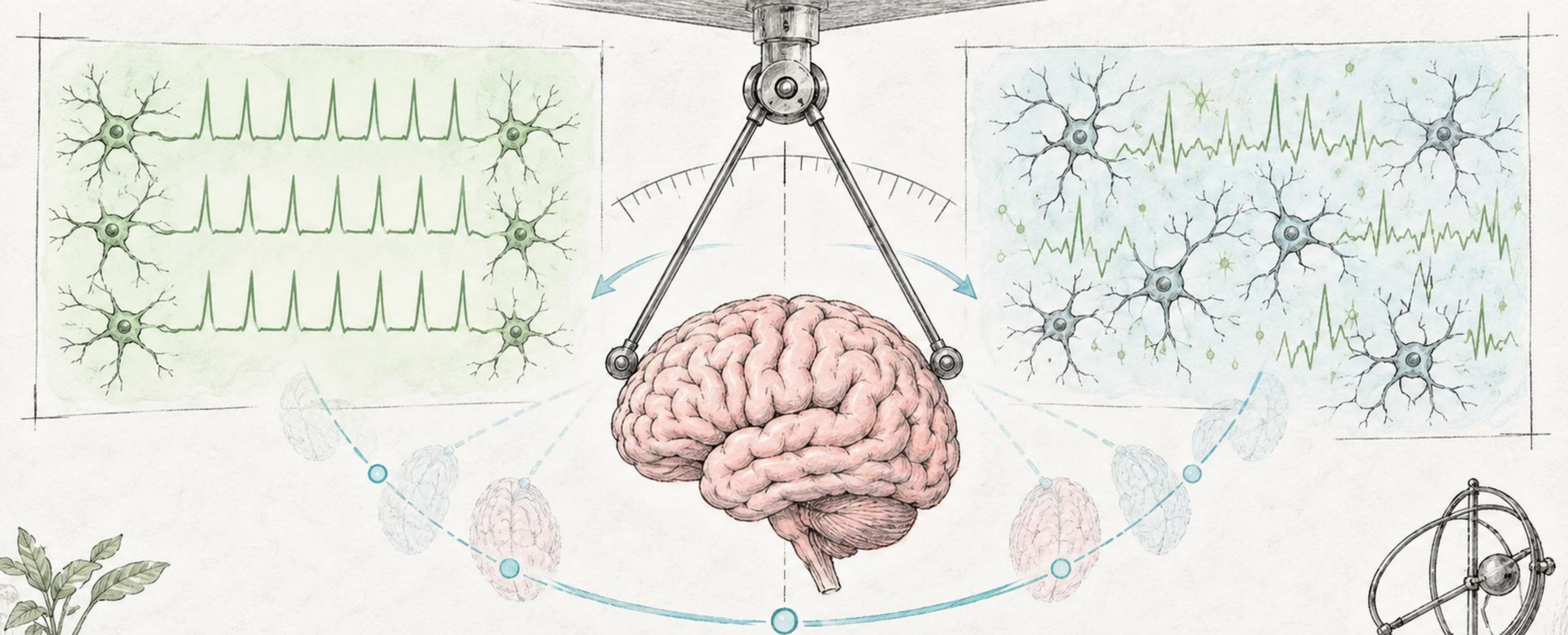
超级计算机也跨不过去



从宇宙无常转向大脑



理解混沌的器官也在混沌边缘



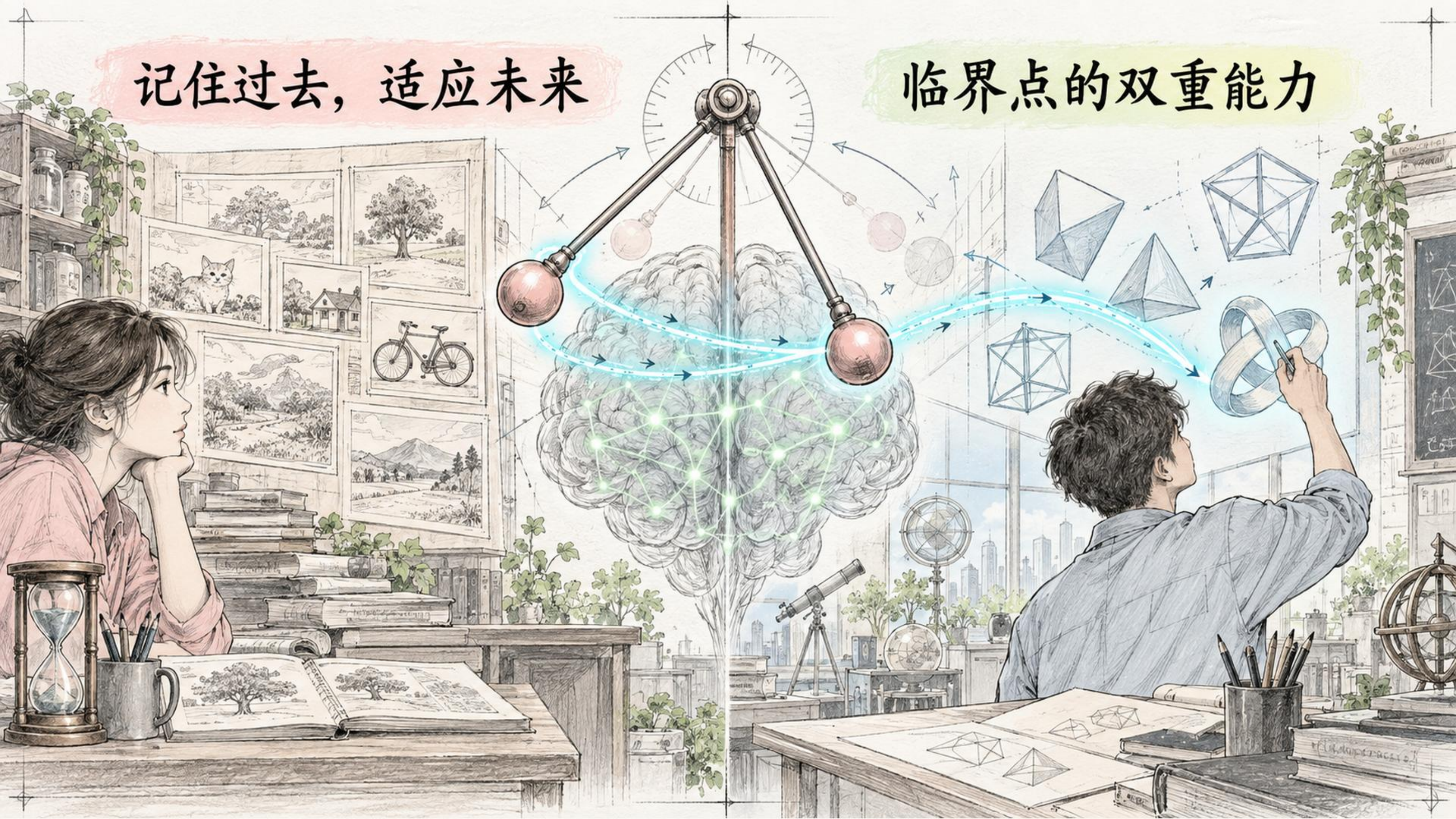
大脑悬在两端之间

—— 癫痫、昏迷与临界点 ——



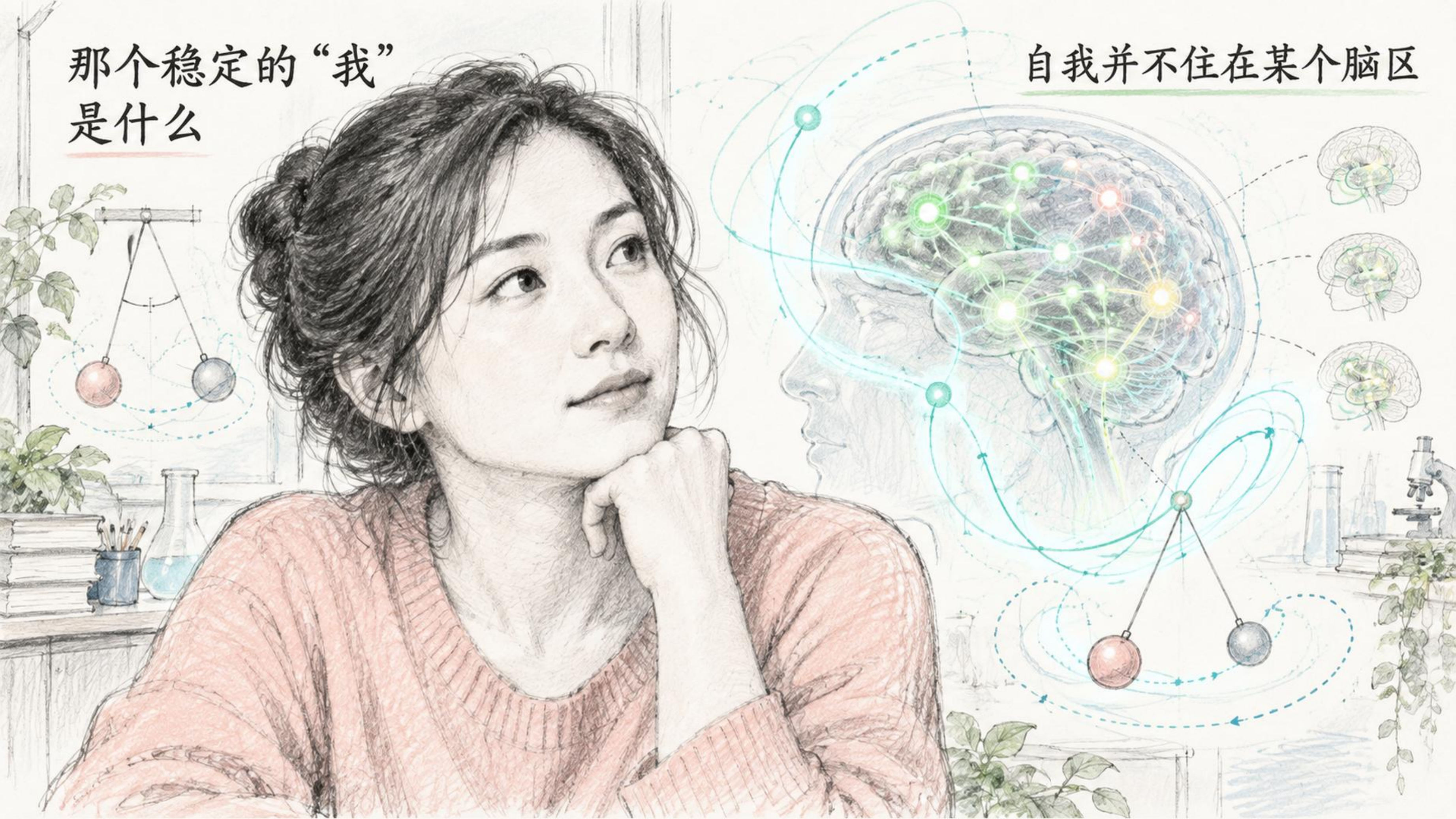
记住过去，适应未来

临界点的双重能力



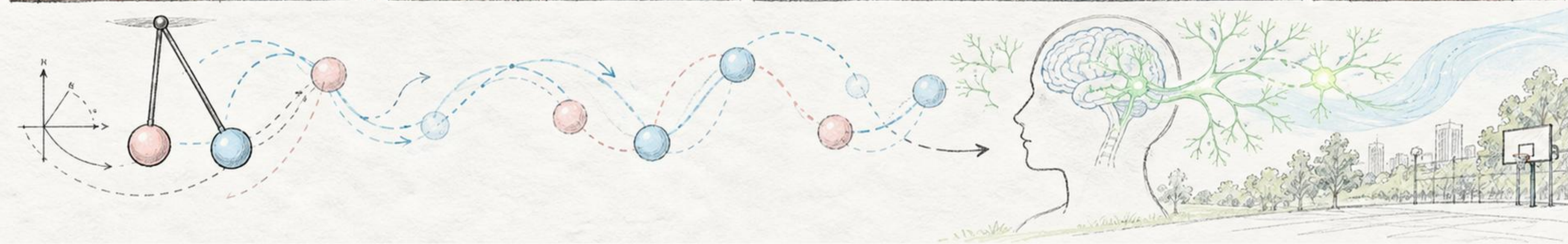
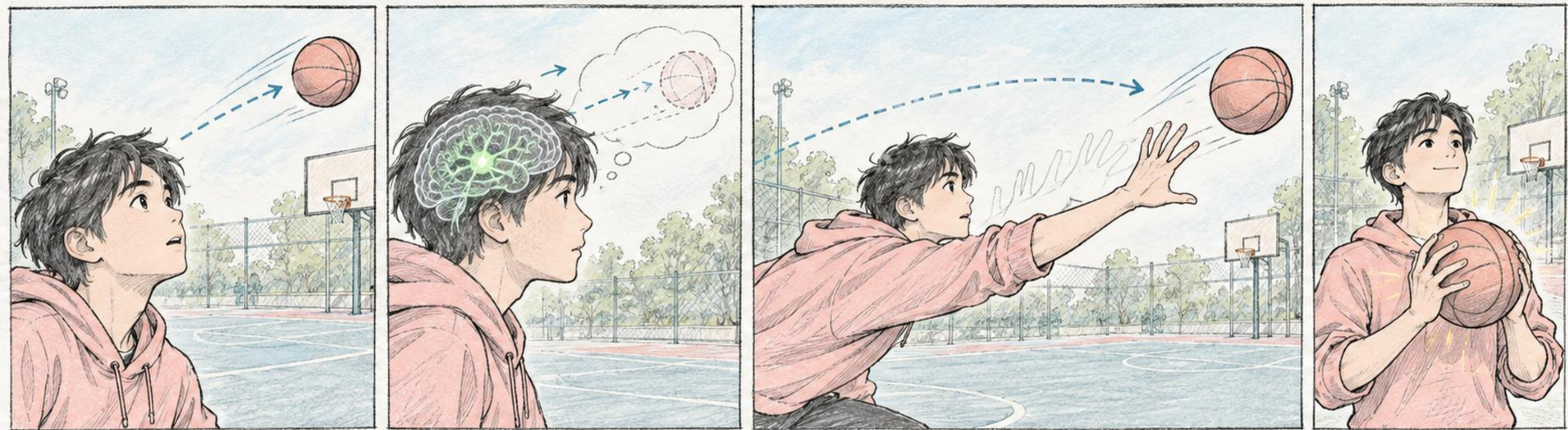
那个稳定的“我”
是什么

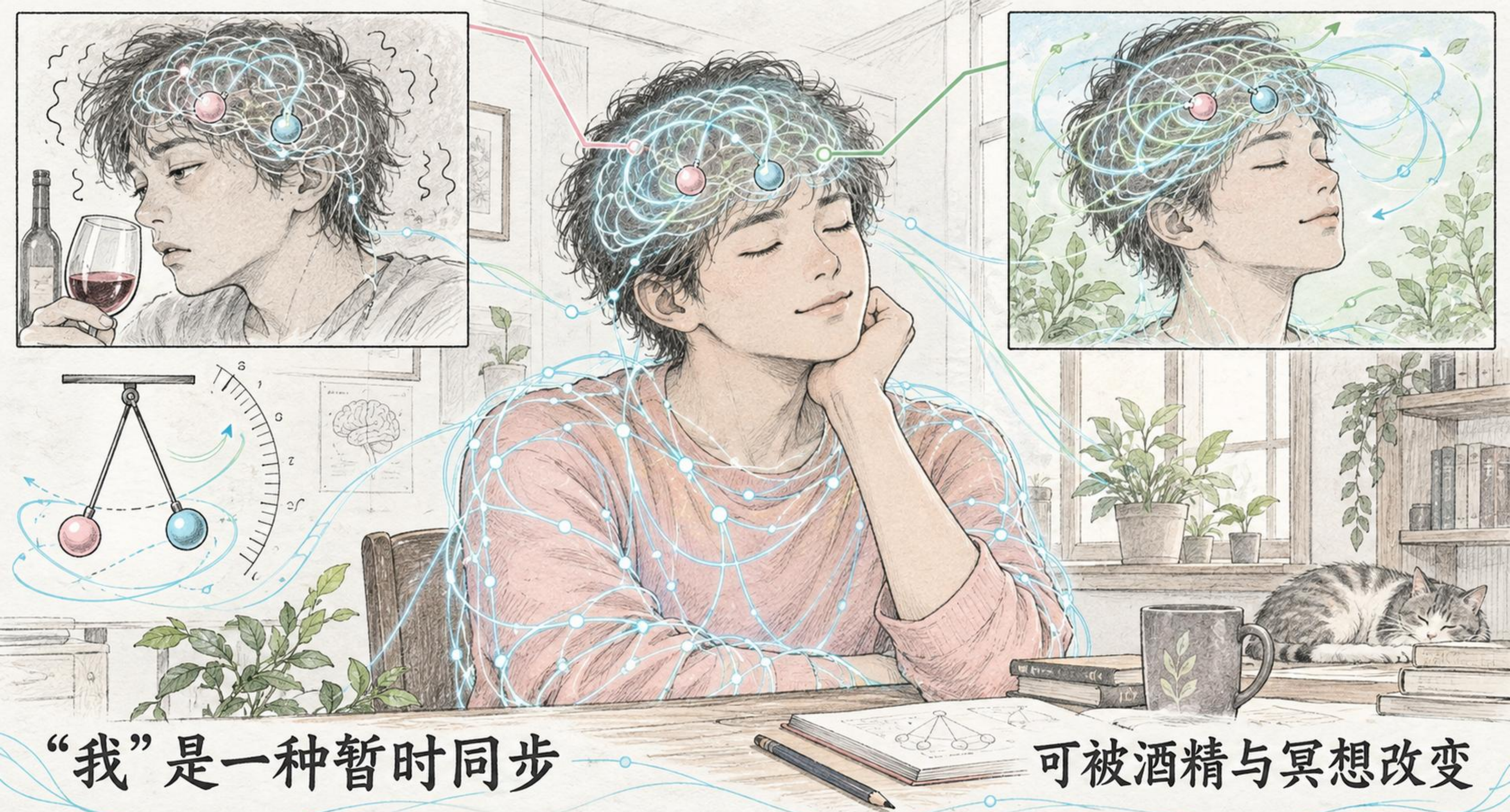
自我并不住在某个脑区



感觉延迟与运动提前

为了接住一颗球，大脑发明了“我”





“我”是一种暂时同步

可被酒精与冥想改变

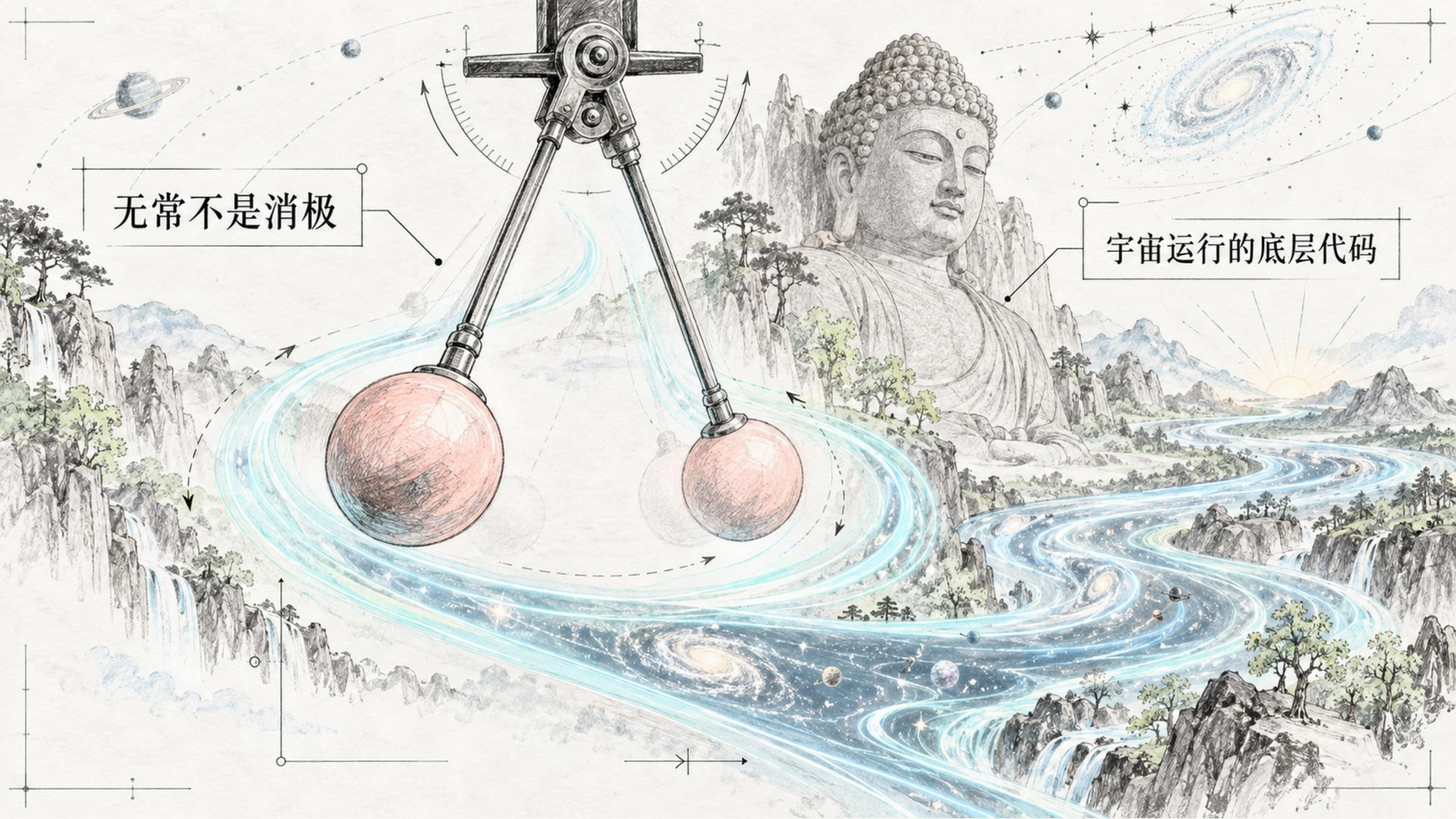


你不是水, 你是河道

连续的是模式

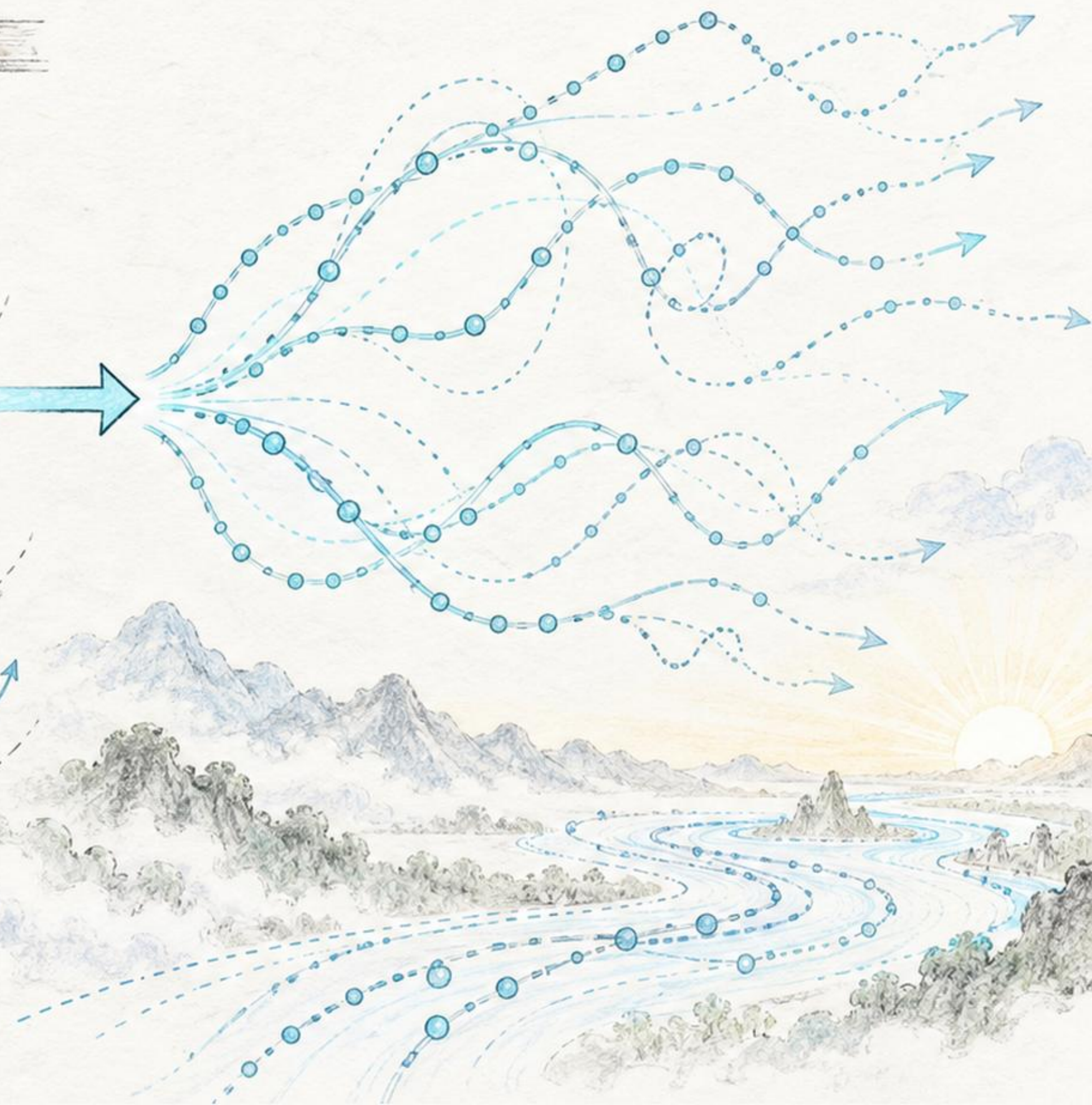
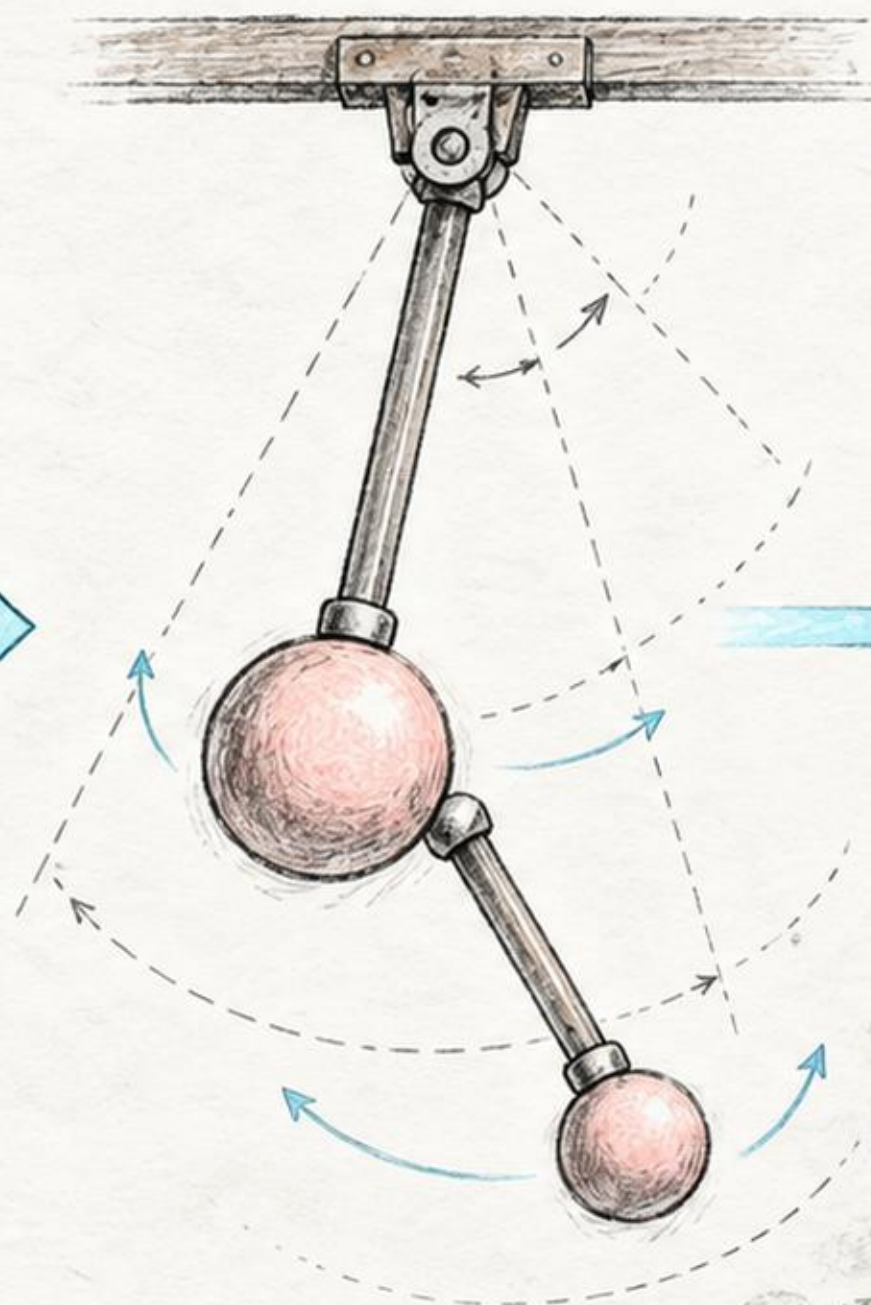
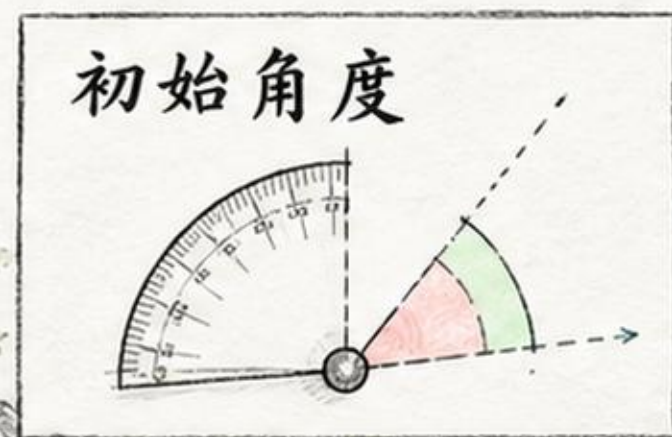
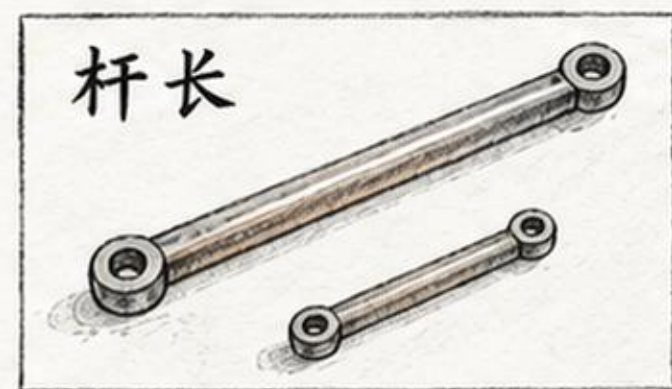
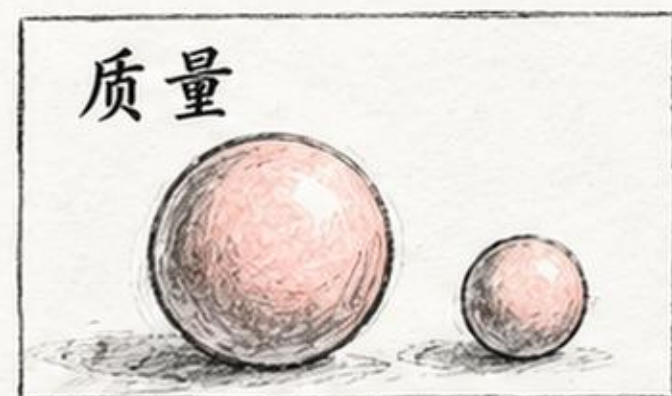
无常不是消极

宇宙运行的底层代码



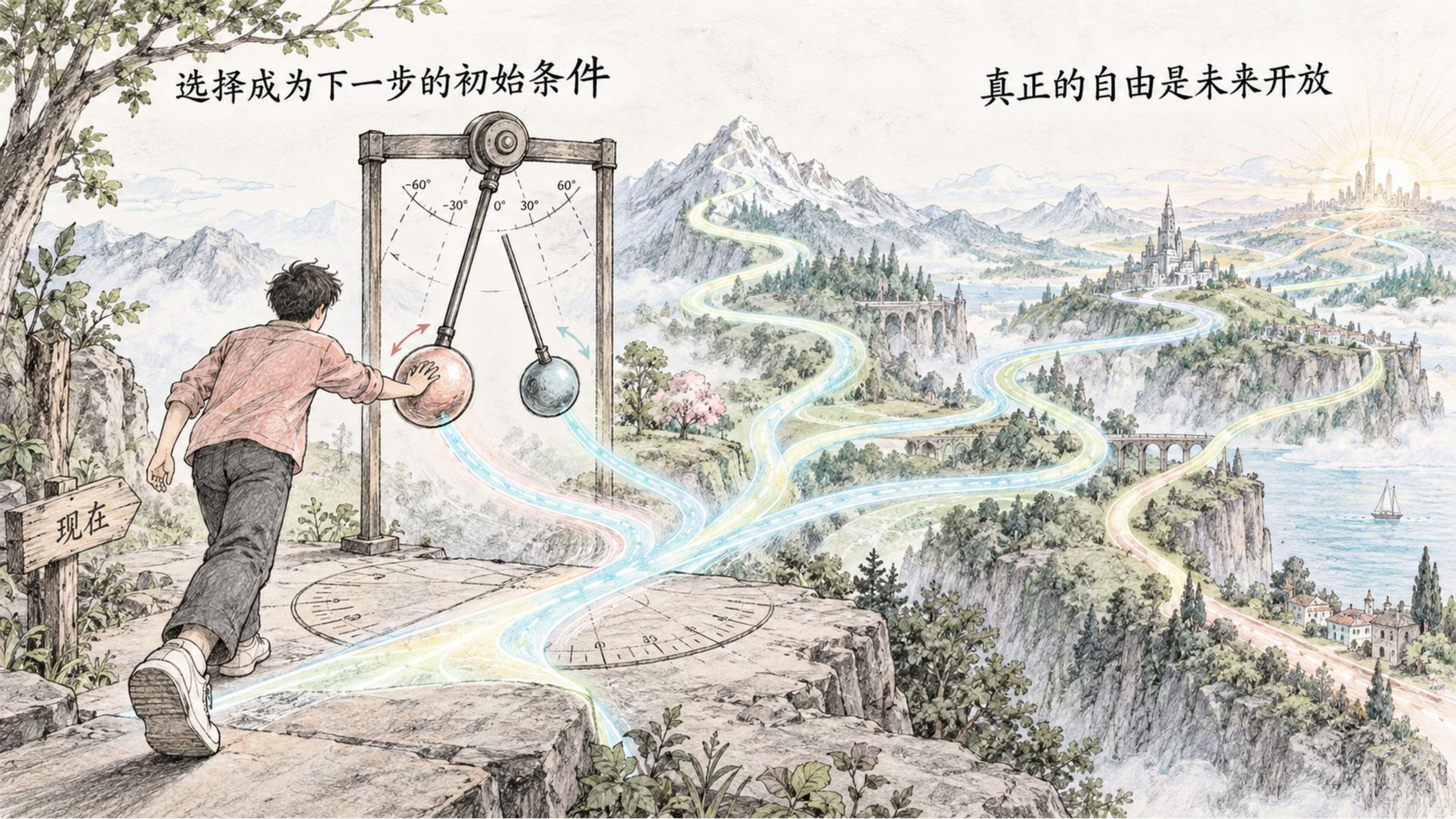
缘起就是条件的因果

无常的现代物理翻译



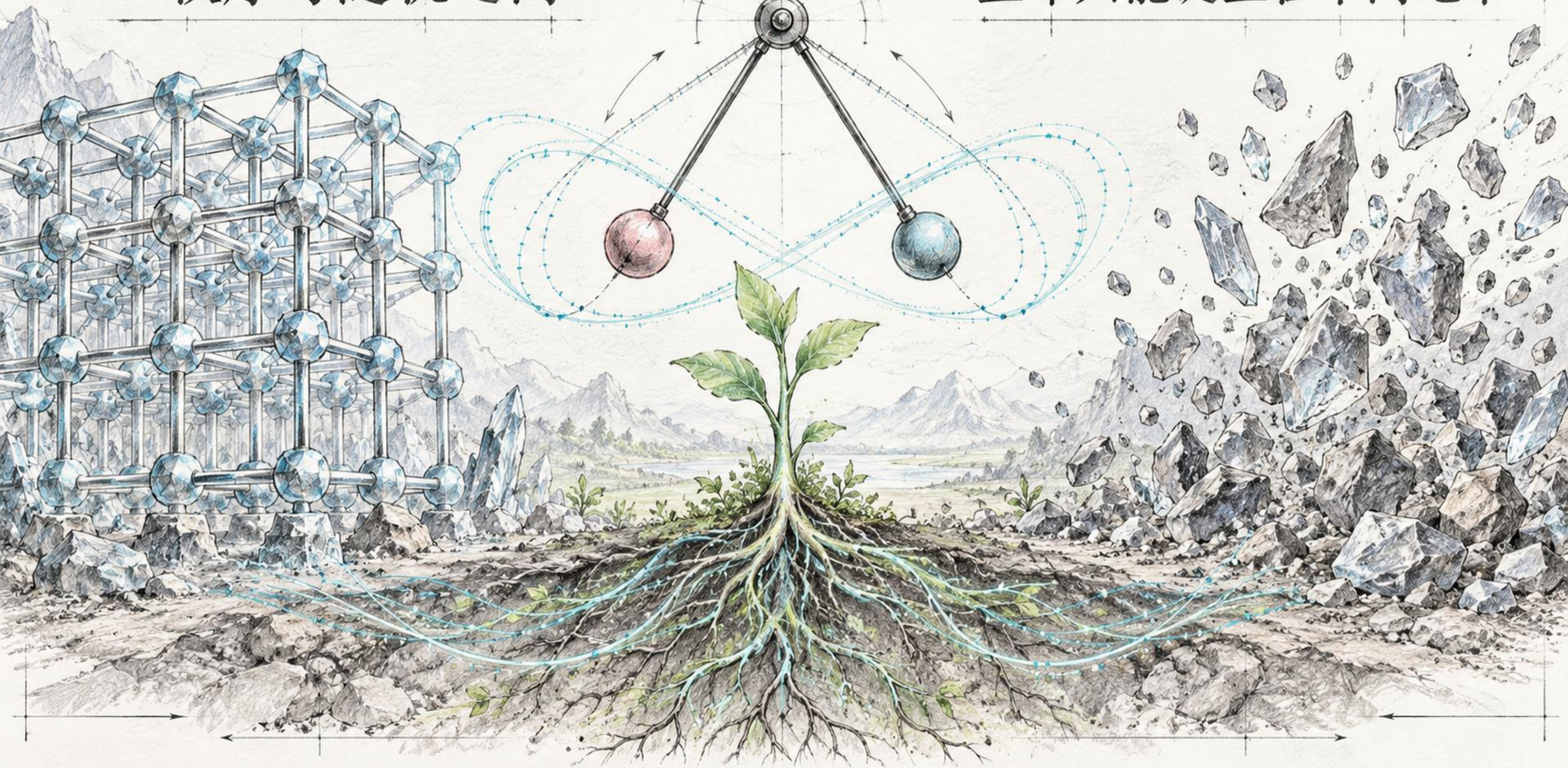
选择成为下一步的初始条件

真正的自由是未来开放

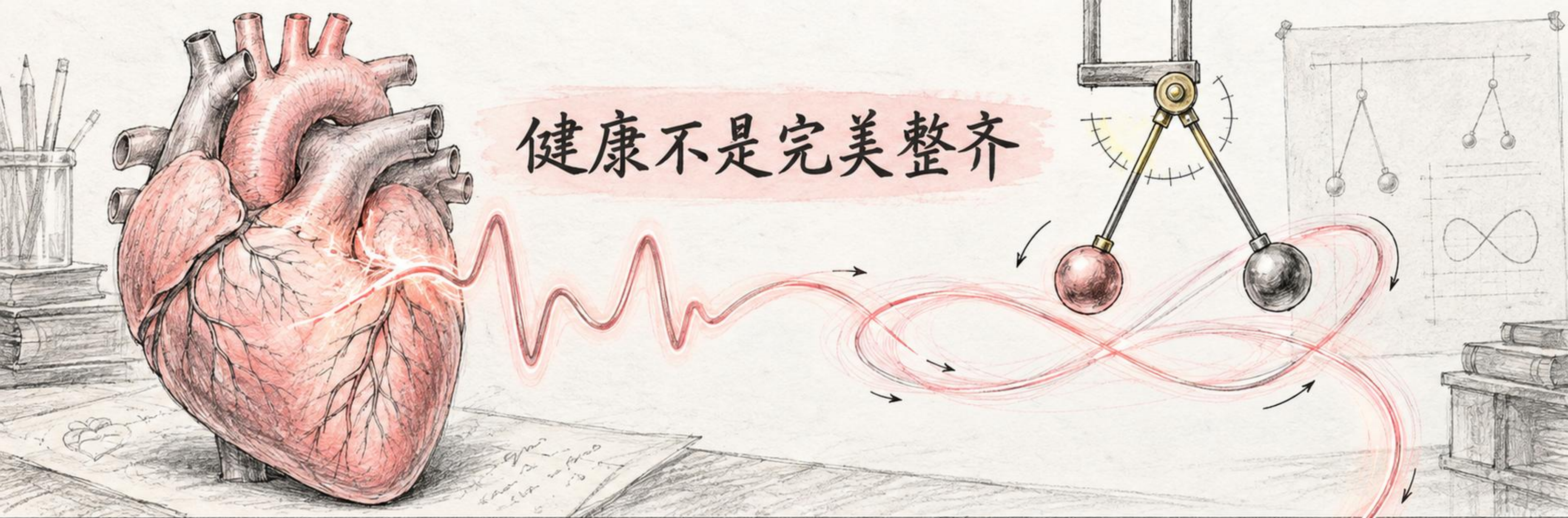


秩序与随机之间

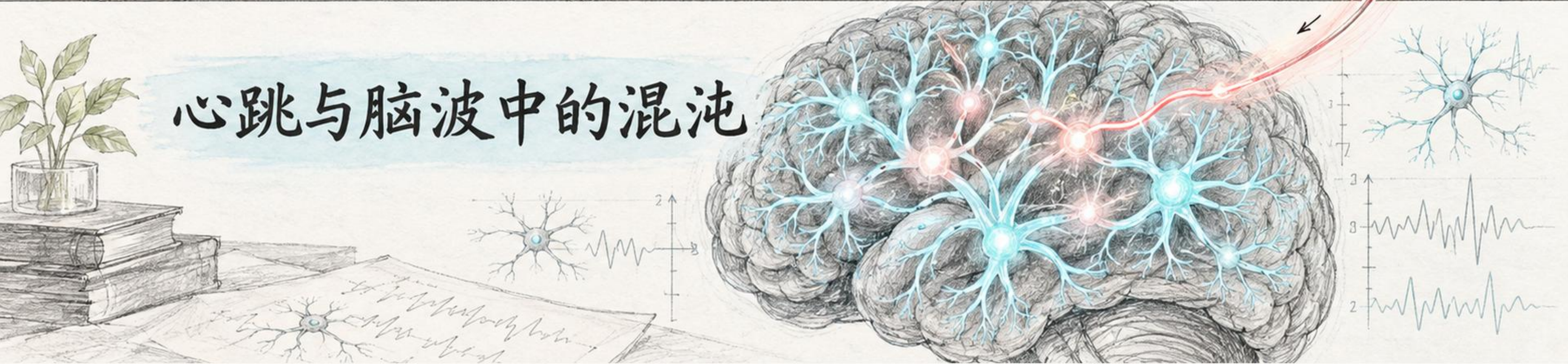
生命只能诞生在中间地带



健康不是完美整齐



心跳与脑波中的混沌



2



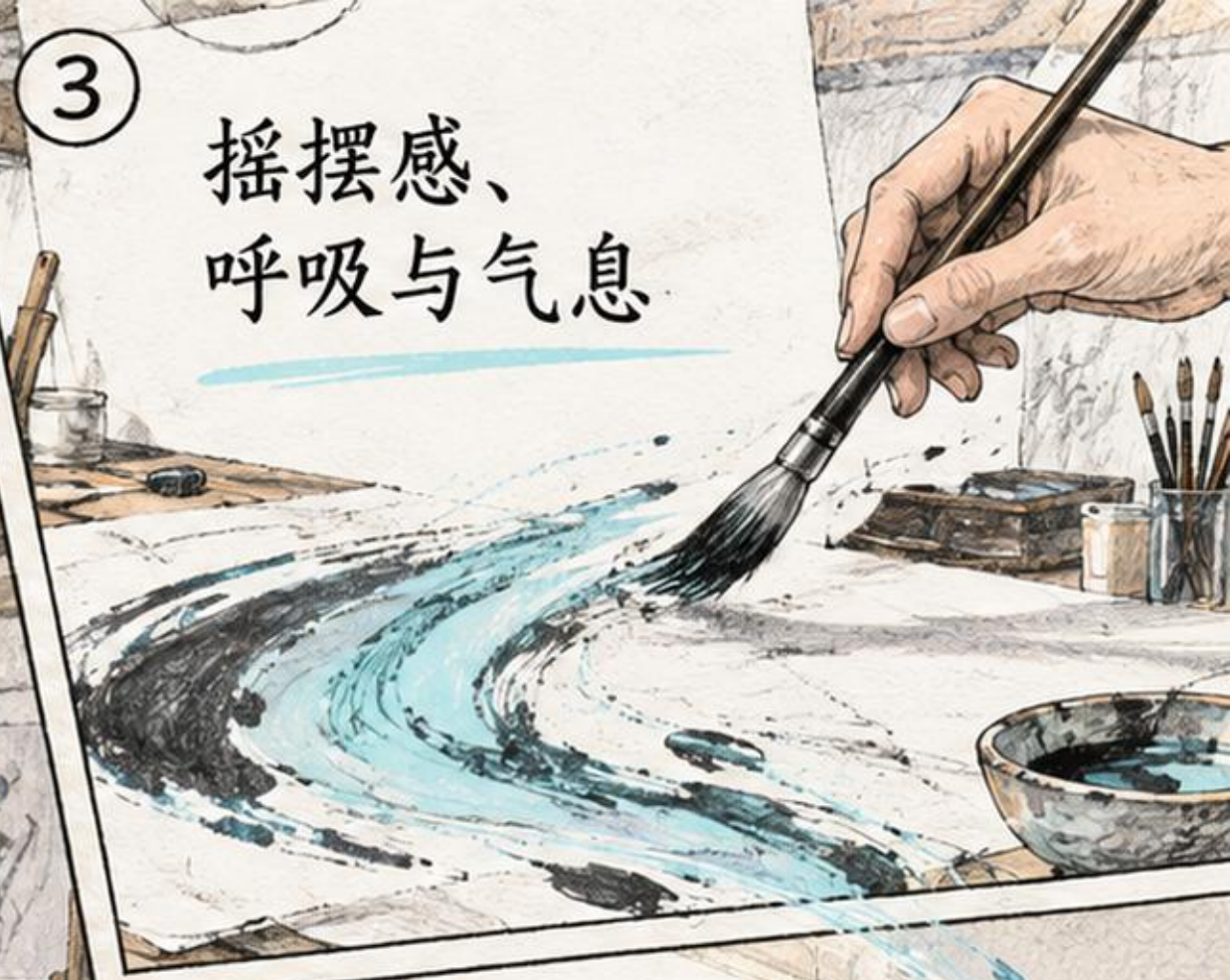
1

艺术活在
规律和意外之间



3

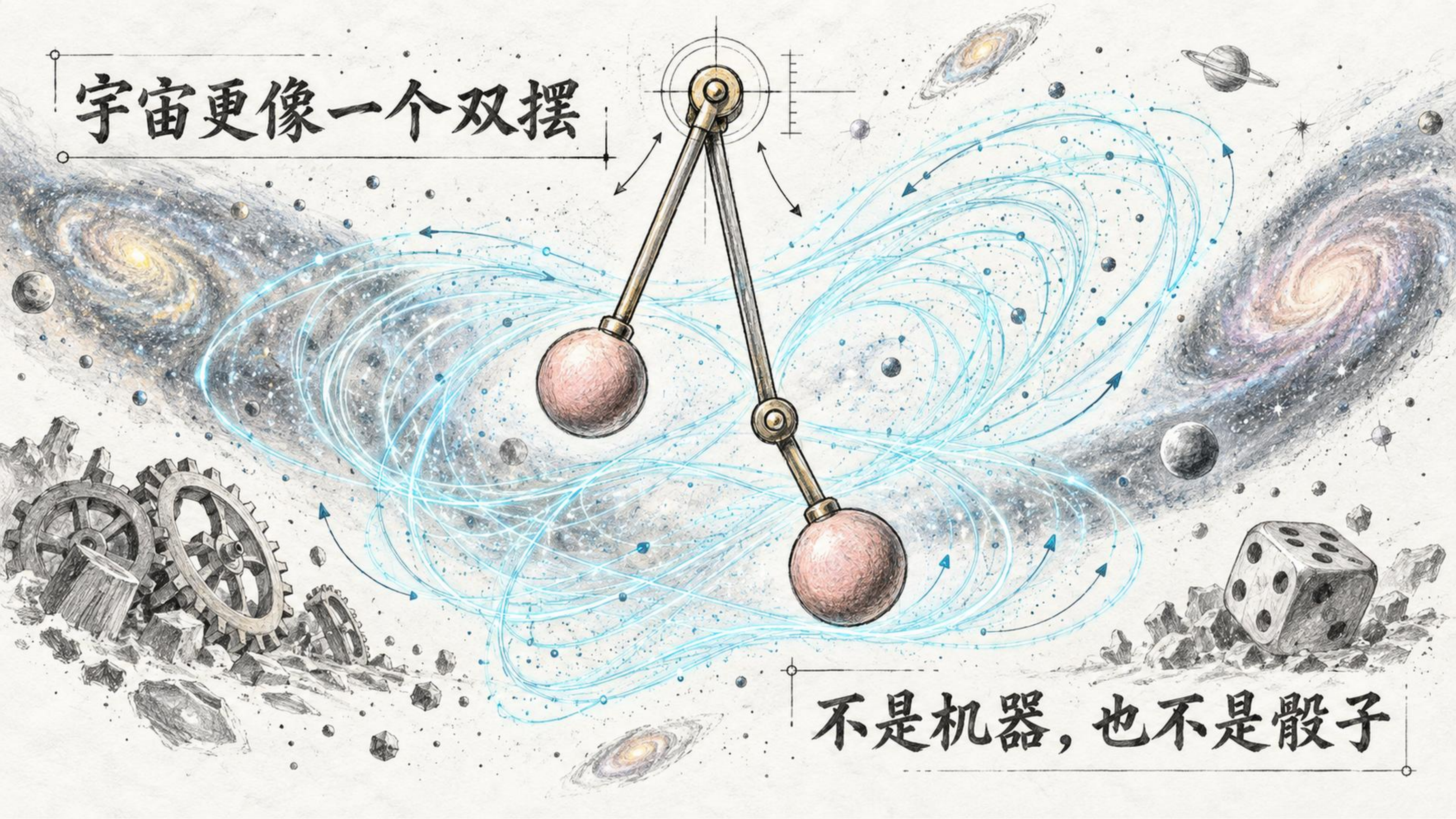
摇摆感、
呼吸与气息



4



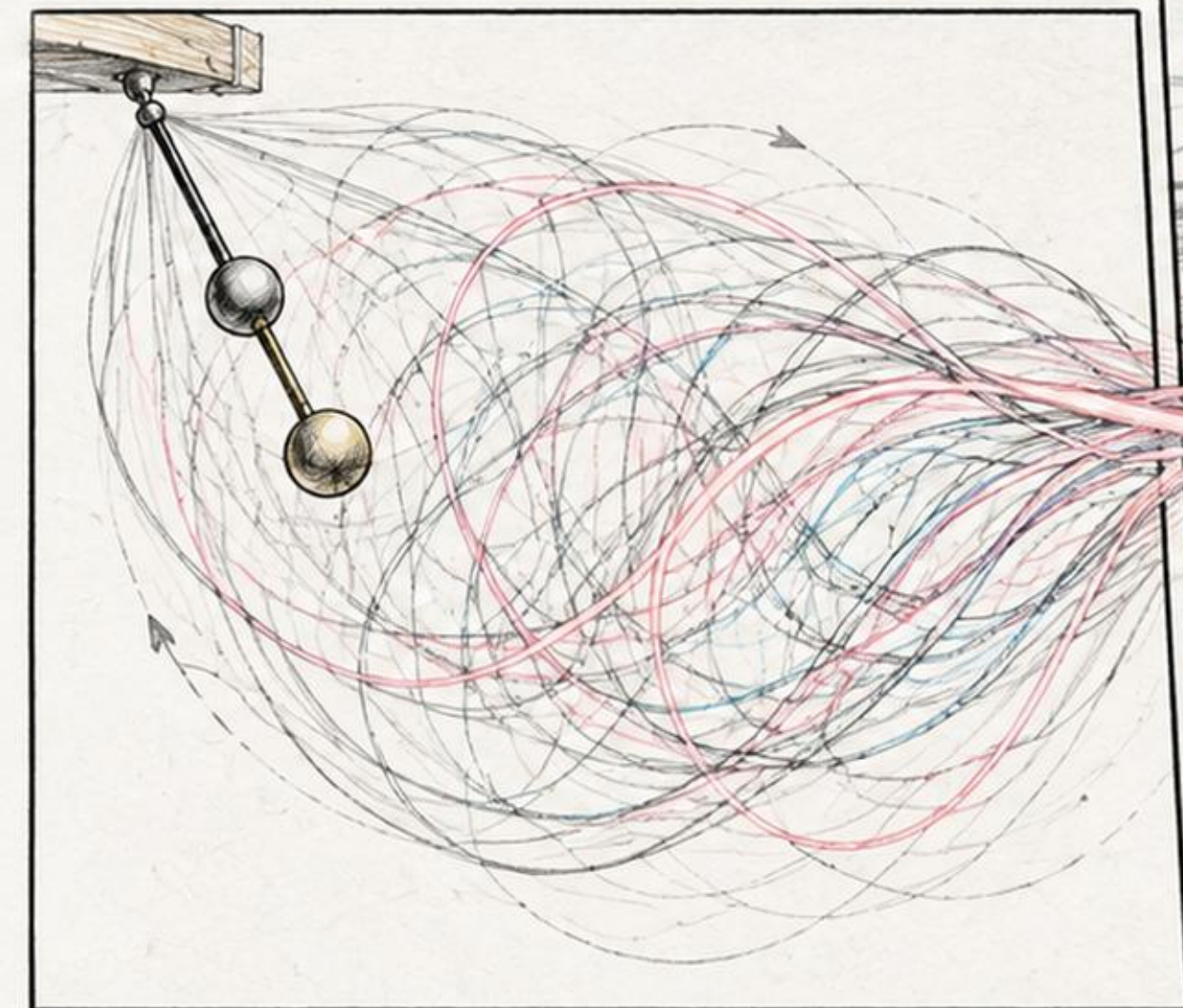
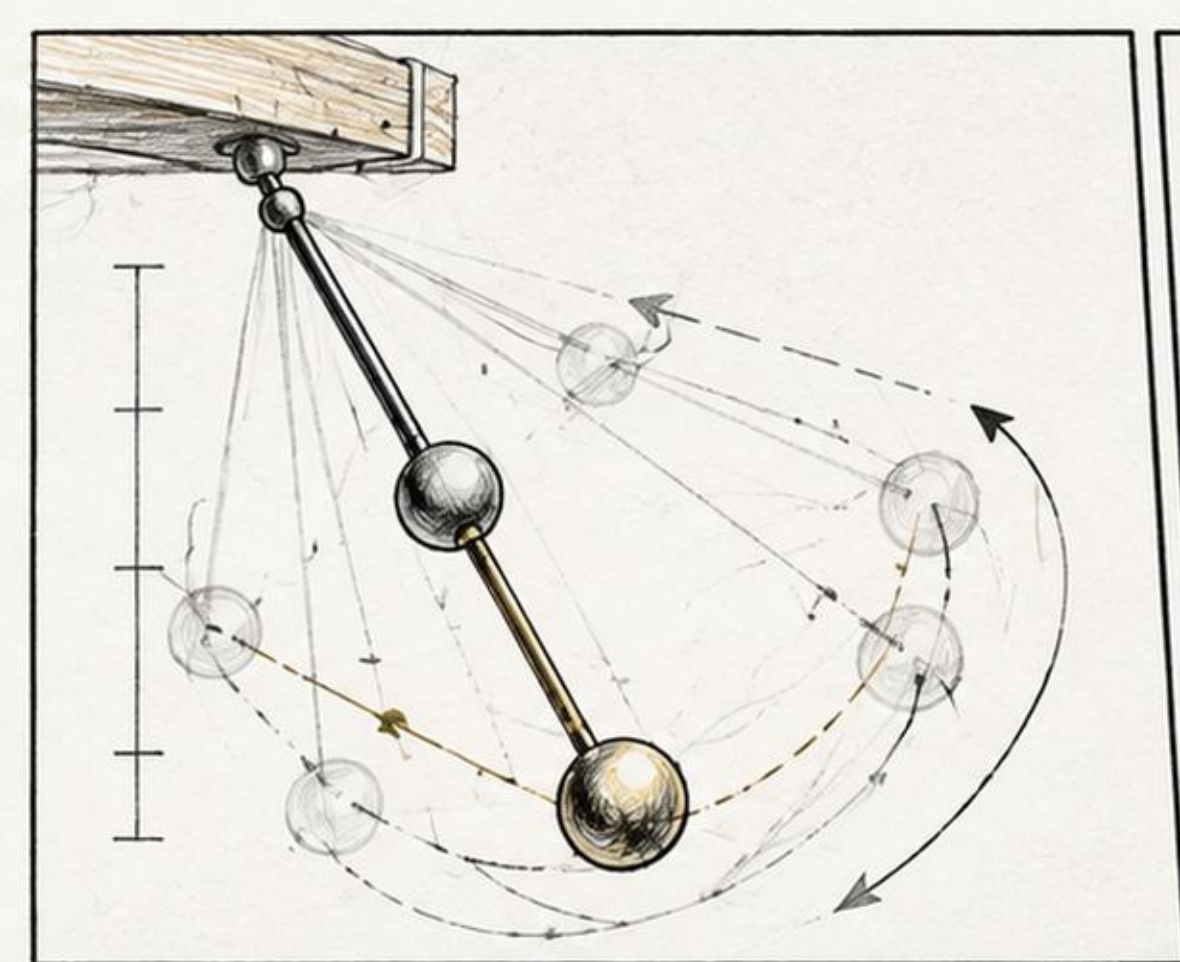
宇宙更像一个双摆



不是机器，也不是骰子

混沌边缘的一次同步

你是长出来的



双摆真正的启示

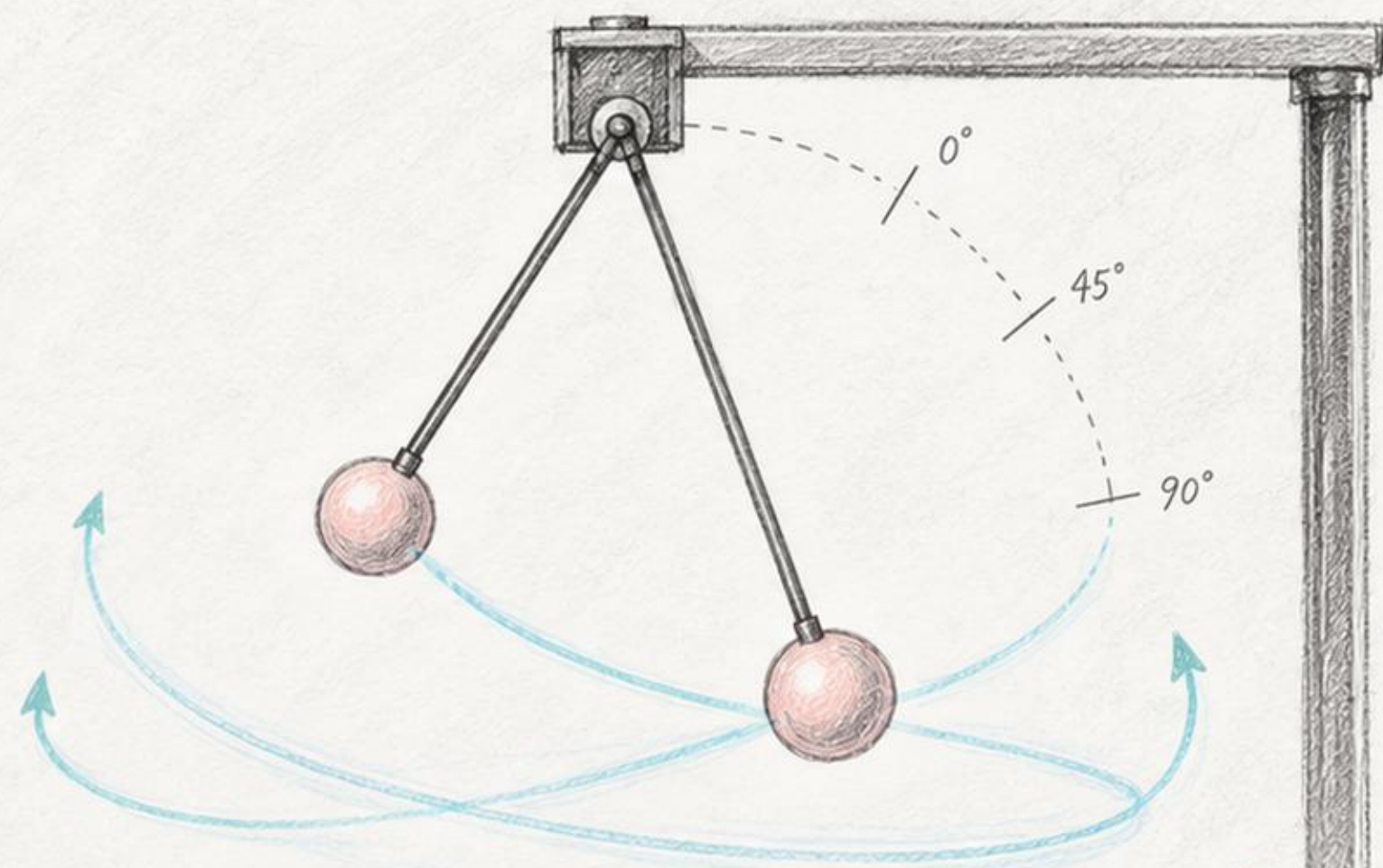


混沌深处，有东西正在成形

确定规则长出不可预测生命

你认出的，是**自己**





我们下期见