鸡蛋悬在杯子正中间

盐水浮鸡蛋的实验我做过一次就成功了，鸡蛋浮出水面，像戴了顶帽子。可我在网上看到一张照片，鸡蛋不沉底也不露头，悬在杯子正中间，四周都是水。我盯着那张照片看了半天：鸡蛋到底加了多少盐，才能停在半路？我决定调出这个悬在中间的状态。

方法说起来不复杂：先调一杯浓盐水，鸡蛋放进去会浮；再一点点兑清水，让盐水变淡，鸡蛋往下走；淡过头了就补盐，让它往上走。来回磨，直到鸡蛋不上不下。我拿了两只杯子，一只装浓盐水，一只装清水，还有一根长筷子。第一杯我盐加多了，鸡蛋顶在水面，我拿勺子一点点舀出盐水、换成清水，眼睛盯着鸡蛋，它慢慢往下走，走到一半我手一抖，清水兑多了，鸡蛋出溜一下坐回杯底。我懊悔得直拍桌子，我妈从厨房探头，问怎么了，我说我把鸡蛋弄沉了，像它犯了错。

第二杯我学乖了，兑清水的时候把杯子倾斜一点，让清水顺着杯壁滑下去，不直接砸在鸡蛋头上。补盐也用筷子尖，一次挑一小撮。鸡蛋从杯底升到杯子中间，我屏住呼吸，筷子停在半空不敢碰杯子。它停住了。就在正中间，离杯底三指，离水面三指，一动不动。我绕着杯子走了一圈，从各个角度看，它都钉在那儿。我拿手机拍的时候手抖，拍了五张才有一张清楚。

我在记录里写：鸡蛋悬浮时，它和这杯盐水一样重，谁也不比谁沉，所以谁也不压着谁。它不是被托在水面，是被整杯水抬在怀里。为了证明这杯水真的特殊，我把一根筷子插进去搅了搅，鸡蛋跟着转了两圈，又回到原来的位置附近停住。它待在那儿，像这杯水的重心长在了鸡蛋上。

这个悬浮状态我后来调了三次才稳定，最久的一次它悬了四十分钟才因为水慢慢混合、盐慢慢沉底而落下去。科学老师听说后在课上提了一句：潜水艇和鱼鳔就是这个道理，让自己变得跟周围的水一样重，就能停在任意深度。我坐在座位上心里一动——原来我调了一下午的，是潜水艇。

The Egg Hanging in the Middle of the Glass

I pulled off the floating-egg-in-salt-water experiment on the first try: the egg rose to the surface like it was wearing a cap. But online I saw a photo where the egg neither sank nor surfaced — it hung in the exact middle of the glass, water on every side. I stared at that photo for a long time: how much salt does an egg need to stop halfway? I decided to dial in that suspended state.

The method is simple to say: first mix a glass of strong salt water so the egg floats; then add plain water little by little to weaken it and push the egg down; overshoot, and add salt to bring it back up. Grind back and forth until the egg neither rises nor falls. I set out two glasses, one strong salt water, one plain water, plus a long chopstick. In the first glass I over-salted; the egg rode at the surface. I spooned salt water out and replaced it with plain, eyes locked on the egg as it drifted down. Halfway, my hand jerked, too much plain water went in, and the egg slid straight back to the bottom. I slapped the table in regret. My mother poked

her head from the kitchen asking what happened. I said I made the egg sink, as if it had done something wrong.

On the second glass I got smart: I tilted the glass while adding plain water so it slid down the wall instead of crashing onto the egg's head. For salt I used the tip of the chopstick, a pinch at a time. The egg climbed from the bottom to the middle of the glass. I held my breath, my chopstick frozen in midair, afraid to touch the glass. It stopped. Dead center — three finger-widths from the bottom, three from the surface, motionless. I walked a circle around the glass, looked from every angle, and it stayed nailed in place. My hands shook taking photos; only one of five came out sharp.

In my record I wrote: when the egg is suspended, it weighs exactly the same as this salt water — neither outweighs the other, so neither presses the other down. It is not propped at the surface; it is carried in the arms of the whole glass of water. To prove the water was truly special, I stirred with a chopstick: the egg spun twice and settled back near where it had been. It stayed there as if the center of gravity of that water had grown onto the egg.

It took me three attempts to hold the suspension steady; the longest one lasted forty minutes before slow mixing and salt settling to the bottom let the egg drop. Our science teacher heard about it and mentioned in class: submarines and swim bladders work exactly this way — make yourself as heavy as the surrounding water and you can stop at any depth. Sitting at my desk my heart jumped: I had spent a whole afternoon tuning a submarine.