上升的形状

我在讲台后倒好一杯透明的液体，等它安静，像等一个班级安静。然后我放入那粒粉末，杯底升起一串气泡。我故意没有说话。气泡替我说话：它们从深处出发，圆着，亮着，沿着液体的身体往上走，越走越快，像终于相信了上升这件事。灯的光斜插进杯子，气泡经过光的时候，每一个都亮成一小枚月亮。三十几个学生屏住呼吸，三十几道目光跟着气泡往上，往上，然后在破裂的那一秒，三十几个人轻轻地、不约而同地，呼出一口气。

我在这一秒里看见科学之美落成。它不在课本的加粗字里，在气泡与目光相遇的地方：液体是沉默的，光也是沉默的，气泡把两种沉默连成一条上升的路。学生们看见的并不只是现象——他们看见轻可以穿过重，看见慢可以抵达高，看见一个圆在破裂之前，把光认认真真地举到了水面。有个平时最坐不住的孩子，那天盯着杯子看了很久，课后问我：气泡为什么不怕破？我没有答。我想，让他再想一个学期，比我说出口更珍贵。

后来我年年演示这个实验。液体换过清水，换过盐水，气泡换过大小，光换过角度，上升的形状始终一样：从看不见的地方出发，一路变亮，在水面把一切交出去。我有时想，教育大概也是这种形状——把一个问题放进杯底，看一串气泡在年轻的眼神里升起，看光在液体里折腰，看三十几个人屏息，再轻轻地呼出来。

下课铃响，杯子收走，液体倒掉，气泡散了。可上升的形状留了下来，留在黑板上我写下的三个字里：会上升。也留在那些孩子后来的某一天——当他们各自从深处出发，圆着，亮着，沿着看不见的液体往上走，越走越快，终于相信了上升这件事。

The Shape of Rising

Behind the podium I pour a cup of transparent liquid and wait for it to settle, the way I wait for a class to settle. Then I drop in that grain of powder, and a string of bubbles rises from the bottom of the cup. I deliberately say nothing. The bubbles speak for me: they set out from the depths, round and bright, climbing along the body of the liquid, faster and faster, as if finally believing in the act of rising. The lamp's light slants into the cup, and each bubble passing through it glows like a small moon. More than thirty students hold their breath; more than thirty gazes follow the bubbles upward, upward, and at the second of bursting, more than thirty people softly and without any plan breathe out together.

In that second I see the beauty of science land. It is not in the bold print of the textbook but where bubbles meet gazes: the liquid is silent, light is silent too, and the bubbles join the two silences into one rising road. What the students see is more than a phenomenon—they see that lightness can pass through heaviness, that slowness can reach height, that a circle, before it bursts, earnestly lifts light all the way to the surface. One child, usually the least able to sit still, stared at the cup for a long time that day and asked after class: why are bubbles not afraid of bursting? I did not answer. I thought: letting him ponder for another semester is

more precious than my saying it aloud.

Since then I have demonstrated this experiment every year. The liquid has changed—plain water, then salt water; the bubbles have changed in size; the light has changed its angle—yet the shape of rising stays the same: setting out from an unseen place, growing brighter all the way, and giving everything up at the surface. Sometimes I think teaching is probably this shape too—placing one question at the bottom of the cup, watching a string of bubbles rise in young gazes, watching light bend its waist inside the liquid, watching more than thirty people hold their breath, then breathe out softly.

The bell rings. The cup is taken away, the liquid poured out, the bubbles scattered. But the shape of rising stays behind—in the three characters I wrote on the blackboard: it rises. And it stays behind in some later day of those children—when each of them sets out from their own depths, round and bright, climbing along invisible liquid upward, faster and faster, finally believing in the act of rising.