

The flying sheet

It was a very hot day, and Leonardo – who had just awakened from a siesta – had no great desire to work. He was having difficulty finishing one of his machines. His chair was facing the window, and, from time to time, he would gaze out, as if looking for inspiration. Laura, his faithful maid, had just washed some sheets, and was spreading them out on the grass to dry them in the sun. It was a familiar scene, but, that day, Leonardo was strangely captivated by the operation. When she had finished laying out the sheets, Laura went back indoors, while her master continued to gaze at the white-and-green vista, pondering ineffectually on the improvements that needed to be made to his invention.

Later in the afternoon, the wind came up. It started as a slight breeze, but grew in strength. The already-dry sheets seemed to have come to life. Their edges flapped, rising up from time to time to form strange swollen shapes. At one point, a piece of cloth that was smaller than the others – perhaps something used by Laura to wipe the dishes – swelled even more and rose from the ground. Before falling back in a little heap, it undulated slowly, as if suspended in mid-air.

Leonardo observed the scene with growing interest. His fruitless musings had given way to intense reflection. He sat at his desk, took a piece of linen and threw it into the air, to see how it would fall back down. Each time, he wrote down what he had observed. His parchment began to fill up with notes and remarks, all in that idiosyncratic hand that only he could read with ease. Sometimes, the piece of linen would fill with air, like the cloth in the garden. “That’s strange! It’s as if it was flying! But its flight is quite unlike that of a bird... Now, where the hell did I put my observations on flight, my sheets with all of those sketches? They were here, in that basket... Where did I put them? They’re a little old. The paper will probably have yellowed... That’s not it... Ah! Here they are! I should have known! I’d rolled them all together in a piece of green ribbon, to distinguish them from my papers on the human body. They have a yellow ribbon... or was it the other way round? Anyway, never mind, I’ve found them!”

Leonardo sat back down in front of the window, and examined his sketches of birds in flight. Now and then, he would look skyward, as if to look for confirmation of what he had drawn. Yes, everything was definitely different... What link, therefore, could there be between the movement of the sheets and that of a bird in flight?

He stood up quickly, grabbed a piece of cloth, threw it out of the window and looked carefully at what happened. That was it! The air went in under the cloth, forming little eddies that seemed to keep it afloat. But what would happen if the cloth didn’t let the air through?

He had long been obsessed with this flight business. Ah! If only he could design a machine that would enable men to jump from a height and reach the ground uninjured! So far, he hadn’t managed to make that dream come true...

The cloth used for the machine would need to stay open, and not change shape all the time because of the wind like the cloth in the garden. It would also need to keep the air in, so as to slow the fall. Maybe that was the solution to his problem!

He looked for a long time to try to see what there might be between the weft and the warp of his shirt, but he couldn’t see a thing. He considered summoning the washer girl. Who knows? Maybe, if he questioned her, he might find out what happened inside the cloth... Once again, he examined what he had written on eddies, and on bird flight. There seemed to be no obvious connections. “In any case, the important thing is that the air must not leak out through the holes in the cloth. I must use very tightly-woven cloth.” Things didn’t look too complicated

after all, and, if someone tried to build the machine, they would probably find a solution before long. But what shape should it be? “Ah, yes! It should be shaped like a pyramid...” His idea was gradually taking shape. Now for the dimensions... The air mustn’t create eddies under the cloth, but, at the same time, it should be possible to steer the machine so that it wouldn’t be carried off God knows where by the wind... “One should be able to jump, attached to the machine, from a large heap of straw or wool, and be able to steer it and control it using a light stick, so that it didn’t turn over during the descent.”

Leonardo looked at his sketch. Not too bad! There was just one thing – he would need to find someone to test the machine... Where could he find such a brave man? He would need to jump from a tower, but how high should it be? He thought and thought, making calculation after calculation. He would need to check the first calculations again. He’d do that in a few days’ time... He would need to be sure of the machine’s dimensions and of the height of the jump. If ever anyone dared to test the machine, there must be no problems. Since his arrival from Milan, the neighbours had considered him a little strange, not to say mad, what with all those machines, his little experiments and his peculiar way of writing. Leonardo knew what would happen if his calculations were wrong and someone got injured. He would check them again, just to be sure. Maybe he would find a volunteer to try this machine that should enable a man to jump from the sky and reach the ground in one piece – a para-chute or “anti-fall device”, so to speak.

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