

The glue pot: a computational thinking tale

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Once upon a time there was a carpenter who was very skilled. He made the finest furniture in the land. Each of his chairs was both strong and beautiful. They each had an elegantly carved picture on the back. Word soon spread of his skill, and people came from all over the city to buy them.

Now the carpenter had four sons and a daughter. His wife had died giving birth to their youngest son. Heartbroken, he had devoted himself to his children, his work, and little else. His daughter, who was the eldest child, now looked after the house in her mother's place. His first three sons meanwhile learned his trade. Their skill improved with every chair they made and in time they were able to make chairs that were almost as fine as his. While the first three sons helped, sadly something had happened to the youngest son at birth. Though strong and with a good heart, he was very clumsy, and struggled to learn anything new that was at all complicated. His father loved him, though and spent hours trying to teach him carpentry. Despite endless days of trying, he could not even start to make a simple stool.

While the three older sons worked together in the workshop with their father, the younger son was left with his sister in the kitchen, helping her whenever she could find something simple for him to do, like stirring the cauldron or collecting wood for the fire. Once her chores were finished, and while the stew for their dinner bubbled over the fire, filling their home with a rich aroma, the daughter would often sit in the corner of the workshop with the youngest brother and watch the others work. She loved the smell of the wood shavings, and watching the way her brothers worked, seeing the beautiful chairs emerge from the raw wood.

As the family's fame grew, more and more orders for chairs came in from far and wide. So many people wanted their chairs, that soon they just couldn't keep up. The sons were making chairs now, which helped, but they took too long to make each one, and so even with their help the carpenter struggled to keep up with demand. They needed more help, so once more his father tried to teach the youngest son, but yet again got nowhere. Exacerbated the carpenter, threw his hands in the air, shouting,

"I give up! You will never be able to help the family! You will never be able to make furniture!"

The son desperately wanted to help, and tearfully slunk away, while his furious father went back to the chair he had been working on. The other three brothers just kept their heads down continuing with their own work, saying nothing.

Now, his daughter happened to be sitting quietly in the corner watching when this happened. She saw how unhappy her brother was and how much he wanted to help so she started to think. That evening, after her father had finished his most recent chair, and so was in a much better mood, she went to him:

"Father, I know a way that my younger brother can help. I even know how to help all my brothers make chairs both as fast and finely as you. Take a week off to visit our aunt and uncle, and leave me in charge. Tell my brothers they must do as I say, and when you return, see whether you still think my brother is of no help."

Now the carpenter loved his daughter and, having already been angry with his son, wanted to do better and at least to show his faith in her. He didn't believe in fairy godmothers, though, so couldn't imagine how she could make a difference. He thought, though, of how angry he had been with his youngest son and realised he needed a break, to rid himself of the stress that he was taking out on his son. He also thought of how they

were now so far behind with orders that he had little to lose. He, therefore, resolved to give his daughter and youngest son the chance to prove him wrong.

The next morning he left, giving instructions as his daughter had asked. As soon as he was gone, his daughter gathered her brothers together. She told them how she had watched them day after day, and had seen they all had special skills. She spoke to each in turn. To her oldest brother she said,

“Brother, you are wonderful on the lathe. The strong and beautiful legs you turn are even finer than father’s.”

To the second brother she said,

“Brother, your chairs are by far the most comfortable. You are incredible at crafting the seats and the backs.”

To the third brother she said,

“Brother, the pictures you carve are exquisite. The detail is as fine as anyone could imagine.”

To all three she then explained,

“We can make more chairs that are even finer than at present. Instead of each making complete chairs, you should work together and each concentrate on the parts you are best at. While father is away that is what you shall do.”

Finally, she turned to her youngest brother:

“You are the most important of all. Come to the kitchen and I will show you your job.”

As her brothers got to work, she led her youngest brother away, taking with her the parts of a chair that the eldest brother had not quite finished the previous day. She put on the kitchen table a pot of glue from the stove that she had made earlier.

“You”, she said, “are the Chief Gluer, and your job is the most important of all. However finely turned or exquisitely carved, a chair is useless if it falls apart when you sit on it!”

She showed him where the glue had to go and how the pieces needed to be held in place long enough for the glue to start to set. As he completed the first one, the boy beamed with pride. He may have been clumsy but he was patient. He practiced all morning and by lunchtime was able to do it well. The next day, his sister explained that since he had done so well she was promoting him and that now he would be “Chief Varnisher” too. She showed him how to apply the varnish to the chairs from a second big pot. By the evening he was starting to do that well too. Meanwhile, his brothers, concentrating on the jobs they were good at, were soon quickly turning out the parts of chairs.

By the end of the week, when their father returned, they had made twice as many chairs together as they had been able to do working alone. All were beautifully crafted. Their father was amazed, and even more so when told that his beaming younger son had played a crucial role.

From then on the sons continued to make chairs together, each getting better and better at their own role as time went on, and together making finer and finer chairs. The daughter took over running the business from her father, her first job being to hire a housekeeper to do her previous chores. This left her father to focus on what he was good at: designing and making new furniture fit for royalty. As a result, the family’s fame continued to grow and grow, and soon they became very wealthy. They lived, and worked, together happily ever after.

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