# Solomon’s Wise Ruling Exercise

The Hebrew Bible records the story of an Israelite king named Solomon who was renowned throughout the ancient world for his wisdom. His insight is famously illustrated in an account known as *Solomon's Wise Ruling*. It begins like this:

Now two women came to King Solomon and stood before him. One of them said, “Pardon me, my lord. This woman and I live in the same house, and I had a baby while she was there with me. The third day after my child was born, this woman also had a baby. We were alone; there was no one in the house but the two of us.

“During the night this woman’s son died because she lay on him. So she got up in the middle of the night and took my son from my side while I your servant was asleep. She put him by her side and put her dead son by my side. The next morning, I got up to nurse my son—and he was dead! But when I looked at him closely in the morning light, I saw that it wasn’t the son I had borne.”

The other woman said, “No! The living one is my son; the dead one is yours.”

But the first one insisted, “No! The dead one is yours; the living one is mine.” And so they argued before the king.

The king said, “This one says, ‘My son is alive and your son is dead,’ while that one says, ‘No! Your son is dead and mine is alive.’”

Then the king said, “Bring me a sword.” So they brought a sword for the king. He then gave an order: “Cut the living child in two and give half to one and half to the other.” (1 Kings 3:16-25)

Note the predicament for the wise judge and king, Solomon. He is dealing with a case of she-said, she-said, with no forensic evidence or eye witness accounts to help distinguish between the imposter and the baby's real mother. How could he ever hope to determine the truth? Game theory, which wouldn’t be invented until thousands of years later, can help us appreciate King Solomon’s intuitive understanding of human rationality and strategic reasoning.

In this exercise we are going to analyze this story from a game theoretical perspective to help predict how it is going to end. To do this, like any game, we need to define the players, the players' choices, and their utility preferences....

**Q1: Who are the players?**

**Q2: What choices did the players have in the moments following the king's verdict?**

**Q3: What would be the results of the players’ choices?**

**Q4:** **What are the outcomes for the players for the different combinations of choices?**

**Q5: How would the players order these outcomes in terms of their preferences?**

**Q6: Draw the normal form game theory diagram that illustrates this game.**

**Q7: Solve the game to predict the ending of the story.**

Once the analysis is concluded, you can read how the story ends below....

**Conclusion**

Remember, when we left off the story above, the king had just announced his verdict:

“Cut the living child in two and give half to one and half to the other.”

The woman whose son was alive [Mom] was deeply moved out of love for her son and said to the king, “Please, my lord, give her the living baby! Don’t kill him!” [Reject]

But the other [Imposter] said, “Neither I nor you shall have him. Cut him in two!” [Accept]

Then the king gave his ruling: “Give the living baby to the first woman. Do not kill him; she is his mother.”

When all Israel heard the verdict the king had given, they held the king in awe, because they saw that he had wisdom from God to administer justice. (1 Kings 3:25-28)

Game theory accurately predicted the women’s choices. It turns out King Solomon had a trick up his sleeve; so happily, the ending was not what anybody would have expected – the real mother received back her baby. The story doesn’t say, but we can assume the ending was not so happy for the other woman.