

TITLE: Romeo and Juliet: Fate, Chance, or Choice. An English Lesson Using Probability

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Romeo and Juliet: Fate, Chance or Choice?

An English Lesson Using Probability

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INTRODUCTION

We have been involved in a National Science Foundation funded project to study the feasibility of integrating fundamental statistics and probability ideas into various subjects taught in middle and secondary school (see Boruch and Zawojewski, 1987). Our interest in a cross-disciplinary approach evolved from our belief that students understand concepts better when the notions are encountered in a variety of contexts, and that learning is enhanced by repeated and distributed exposure to ideas. The topic of statistics lends itself to a cross-disciplinary approach since much of statistics has grown out of needs in non-mathematical areas of study.

Smeeton and Smeeton (1984, 1985) have illustrated that statistical ideas can be introduced into many facets of English Studies, including literature. In this article, we want to share one of the ideas that we have developed for using probability in the Shakespeare masterpiece *Romeo and Juliet*. This particular lesson requires students to use a probability tree and the concept of conditional probability to explore the underlying role of "fate" in the play.

OBJECTIVES

English Objectives

Students will

- understand and discuss the role of fate, chance and choice in the plot line for *Romeo and Juliet*.
- explore alternatives for the story line based on different assumptions about the role of predestination in the play.

Statistics Objectives

Students will

- use a probability tree to represent critical turning points in the plot line.
- use the concept of probability to consider the effect of different assumptions on the likelihood of alternative story lines.
- apply the concept of conditional probability to consider the likelihood of a chain of events.

TEACHER BACKGROUND

Romeo and Juliet was written in a period of time when people believed "the will of the gods" or "predestination" played a major role in the script of life. Today many people believe that life's happenings are usually a result of both chance and choice. Masterpieces such as *Romeo and Juliet* bring the audience into the story in such a way that the

assumptions of the historical period are readily accepted. Shakespeare's story might seem "far fetched" to those imposing today's beliefs in fate, chance or choice on to the plot line. The purpose of this lesson is to examine the various assumptions about predestination by considering the likelihood of the story line if those assumptions were altered.

The instructional strategy uses a probability tree which is set up to reflect some critical turning point in the story. Based on varying assumptions about the role of fate, chance and choice, probabilities are assigned to each branch of the tree. Then final probabilities are displayed to show the likelihood of alternative story lines as the assumptions are changed. While a computer program would be an ideal method of entering any probabilities that students would like, this lesson provides transparencies of examples for varying assumptions.

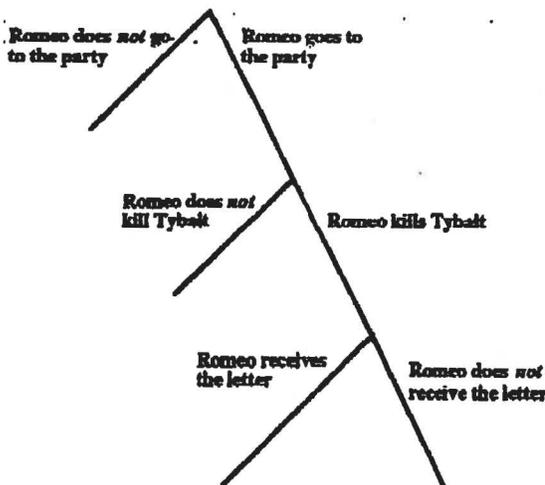
TEACHING THE LESSON

Materials needed: overhead transparencies 1, 2 and 3.

1. Discuss the role of "fate" in our everyday lives. Ask students if they believe their lives are predestined, or whether they have complete control over their actions. (For example, is their future career path already determined?) Ask what the role of chance is in our lives. (For example, when we have a car accident, were we in the wrong place at the wrong time by chance, choice or destiny?) Ask students to list events that occur by choice and those that occur by fate or chance. Ask students how they distinguish between the two.
2. Discuss the role "fate" in *Romeo and Juliet*. Find specific passages that give clues to underlying assumptions about the role of predestination in *Romeo and Juliet's* situation (For example, Act 5, Scene 3, Line 292, states "The Heaven finds means to kill your joys with love", and the reference to "star-crossed lovers" in the opening of the play.)
3. Consider three critical points in the plot line at which the story could have had very different outcomes:
 - a. Romeo went to the party at the Capulet's. Since the two families were feuding, he might well have chosen not to go. Lovesick about Rosaline, he might not have wanted to go out to a party. Why did he go? Was it chance? Was it a conscious choice on his part? Was it fate?

- b. Romeo killed Tybalt. Romeo tried very hard to keep a fight from erupting. If he had tried harder, could he have kept Mercutio and Tybalt from fighting? When he first came upon the groups, perhaps Romeo could have anticipated trouble and simply walked away without becoming involved. After Mercutio died, Romeo could have controlled his temper and simply reported Tybalt to the authorities. Could Tybalt have killed Romeo? Why in the story did Romeo kill Tybalt? What role did chance play? (e.g. Was it by chance that Romeo happened to walk by at the moment?) What role did choice play? (e.g. Why didn't Romeo choose to simply walk away.) What role did fate play? (e.g. Why did Tybalt die and not Romeo?)
 - c. Friar Laurence's letter never got to Romeo. Friar Laurence had carefully planned Juliet's fake death. Yet the letter was held up when Friar John ended up quarantined in a house with infectious pestilence. Was this a chance happening? Was it fate? Did Friar John have any choice in the situation?
4. Display transparency #1, which illustrates these three critical points in a plot line tree (i.e. probability tree). Point out that at each point it was possible that a different direction be taken in the story. Discuss other possible stories that may have happened had the story run down a different branch of the tree. What if Romeo had not gone to the party? What if he had gone to the party but did not kill Tybalt? What might have happened if Romeo had received the letter from Friar Laurence?

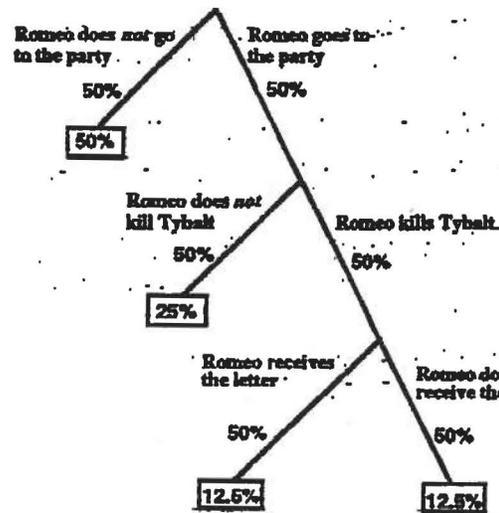
ROMEO AND JULIET: FATE, CHOICE OR CHANCE
TRANSPARENCY #1



- 5. Display transparency #2. Tell students that you want to look at the likelihood that the various branches of the plot line if all the critical points has a 50-50 chance of going one way or the other. Note to the students that if the probabilities were actually calculated, the likelihood of Shakespeare's story line is only 12.5%! See if they can figure out why the branch in which Romeo does not go to the party has a much higher probability. (Answer: Since going or not going to the party has only two possibilities, it has a 50% chance of happening. The actual story line, on the other hand, has multiple conditions: Romeo must choose to go to the party and he must kill Tybalt in the fight and the letter must not get to him. The more conditions we put on the plot line, the less likely it is to happen exactly the way it is stated. This is called conditional probability.)

Ask students to imagine the number of conditions that had led to Romeo's and Juliet's deaths. How likely is it that such a string of events would occur by chance? One can see why audiences in Shakespeare's time (as well as ours) felt it must be destiny and not chance that led to the young couple's deaths.

ROMEO AND JULIET: FATE, CHOICE OR CHANCE
TRANSPARENCY #2



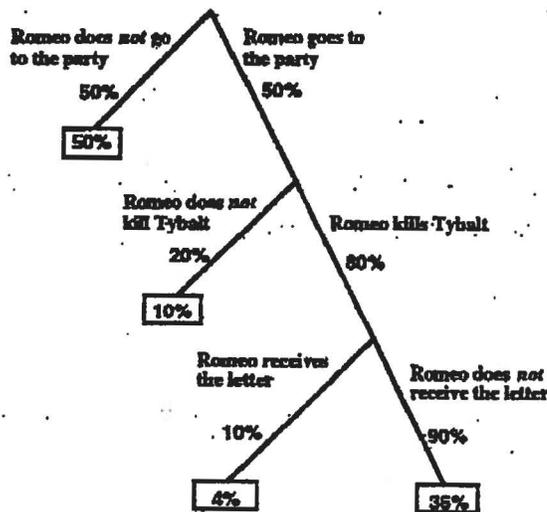
6. Display transparency #3. Consider an alternative for assigning probabilities to the branches of the plot line tree. First, let's say that the likelihood of Romeo going to the party was like tossing a coin (i.e. a 50-50 chance). Romeo did not really care whether he went to the party or not. Second, let's assume that fate, combined with Romeo's emotions over Mercutio's death, played a role in Tybalt's death. Therefore we may decide that there is only a 20% chance that Tybalt would live and an 80% chance that he would die. Finally, let's say that its clear that fate will not allow Romeo and Juliet to live happy lives together, so it is virtually assured that the letter from Friar Laurence will not get to Romeo. So perhaps we believe that there is a 90% chance that the letter will not make it, and only a 10% chance that it will. Now look at the likelihood (probability) that the story line would go the way Shakespeare wrote it. Allowing fate to have more influence on the plot line increases the chances of the existing story line to 36%, compared to the 12.5% on transparency #2.

8. You can experiment with various probabilities by assigning different probabilities to each branch on transparency #1. Convert the percents to decimals and then multiply the probabilities along the various paths with your calculator to find the chances of that story line. The resulting decimal can be converted back to a percent by multiplying by 100.

EXTENDING THE LESSONS

1. Ask students to write a story based on one of the branches of the plot line tree that was not in the original story.
2. Ask students to identify other or more critical points in the plot line. Ask them to create a plot line tree to illustrate the possible diversions from the story line.
3. Ask students to try other probabilities at each turning point and to write a justification for each one. Then they should use a calculator to figure out the probability of Shakespeare's story line based on their new assumptions.

**ROMEO AND JULIET: FATE, CHOICE OR CHANCE
TRANSPARENCY #3**



References

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 Smeeton, N. C. and Smeeton, E. A. (1984). Statistical Ideas in English Studies. *Teaching Statistics*, 6(3), 92-94.
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7. The students can also consider what the probability tree (i.e. plot line) would look like if chance and choice played no role in the story line. In other words, fate determined that Romeo would certainly go to the party (100%), that Romeo would kill Tybalt (100%) and that the letter would not get to Romeo (100%). (These probabilities can be illustrated on transparency #1.) In this case, the chance that the story line went as Shakespeare wrote it is 100%. Ask students to discuss the comparative roles of fate, chance and choice in this play. To what extent do they believe that fate guides the plot line? To what extent do they believe that chance and choice influence the plot line? Assuming the plot line is largely determined by fate, why is the story interesting and suspenseful?