

STUDY GUIDES

The **Chicago Humanities Festival** is committed to creating and fostering interest in the humanities. To this end, the Festival provides study guides to help teachers to bring the humanities into the classroom. Every year, the CHF brings an amazing array of authors, thinkers, and artists to Chicago. We hope you will seize the opportunity to bring the excitement of their works and knowledge to your students.

The **brainteasers** on the following pages were prepared for the 2003 Chicago Humanities Festival: *Saving + Spending*.

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500 North Dearborn Street
suite 1028
Chicago, IL 60610
tel 312.661.1028
fax 312.661.1018
web www.chfestival.org

Saving + Spending *Brainteasers*

The Missing Dollar

Three men have come to Chicago to attend a convention. Unwilling to spend a lot of money on a Michigan Avenue hotel, they ask people on the street where they can find an affordable hotel. Several people recommend one just around the corner. Within minutes, they enter the hotel's lobby and ask at the desk what the rate is for a triple room. "\$30," responds the desk clerk. The three men are delighted—they will spend less money on accommodations, and will have more to spend on dining and entertainment. Each man gives the clerk a \$10 bill. Then, with key in hand, they go to see their room.

Meanwhile back at the desk, the clerk realizes she has made a mistake and overcharged the men. The rate should have been the convention special: \$25. She tells another employee about her error, and gives him five \$1 bills, requesting that he give the refund to the men and apologize for the error.

On the way down the hallway, the dishonest employee pockets two of the \$1 bills! After knocking on the door he explains that an error was made, and says the room should only have been \$9 each, not \$10 each, returning \$1 to each of the men. They thought the room was a bargain at \$30, but at \$27 it's even better!

The moral of the story? Who knows. But there is a question to be answered: If the room cost the men \$27, and the employee pocketed \$2, where is the other dollar?



This brainteaser was suggested by John R. Ray, an artist and art educator from Park Forest, Illinois. He got it from one of his students.

The Prisoner's Dilemma

A Paradox of Saving Ourselves

The Prisoner's Dilemma was discovered in 1950 by Melvin Drescher and Merrill Flood, who both worked at the RAND Corporation. Albert W. Tucker gave it its name and wrote the first article about it. It's since been well studied in philosophy, game theory, and many other fields, because not only is it an intriguing problem, it has many parallels and applications in everyday life.

The set up is this:

You are a criminal, and you and your partner (for whom you have no feelings one way or the other) have committed a crime. Unluckily, you've both been caught, and you're being held in separate cells in a jail, with no way to talk to each other.

The district attorney comes to talk to you, and says he's willing to make a deal. He's also offering the same deal to your partner, and you both know that. He says, "We have some circumstantial evidence on both of you. As things stand right now, if neither of you tells me anything we can still send both of you to jail for a year. But if you confess, and admit your partner was with you, then we'll let you off free because you were helpful, and he'll get three years in jail. Of course, if he confesses and you don't, then you're the one who gets the three years and he walks free. Now, if you both confess, then we've got you both and you both get two years in jail."

The district attorney leaves and goes back to his office, after telling you he'll be back in half an hour to get your answer. What do you do?

You can either "co-operate" with your partner—that is, not confess. Or you can "defect," and confess. If you defect, you either get 0 or 2 years in jail, depending on what your partner does. If you co-operate, you get either 1 or 3. Clearly, defecting is the better strategy.

Of course, the other fellow is thinking exactly the same thing. And when you both defect, you guarantee yourselves two years in jail. If only you had both co-operated, and gotten only a year! But if you co-operate with your partner and he defects, you get three while he goes free.

This is the dilemma. Both people, by following their "best" strategy, do worse than if they had used another, apparently illogical plan.

The dilemma and its consequences can easily be adapted for the classroom. After explaining the scenario, ask two volunteers to leave the room—separate locations, so that they cannot communicate with one another. After a short period in which the class discusses the situation, the two are brought back into the room and make their decision. The discussion that follows can concentrate not only upon why each made a particular decision, but the overarching fact that each, by seemingly acting in his or her own best self interest, made a decision that was in fact not in his or her best interest.