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Herald T

## Can a 'Formula' Beat Blackjack?

### A Casino Dares Professor to Try

By Ralph Chapman

The question is whether you "hit" thirteen.

The answer is that you do on a fresh deal because there are only twenty cards that can beat you and thirty that can improve your hand.

This has to do with blackjack (twenty-one), a mathematics instructor by the name of Dr. Edward O. Thorp at M. I. T., and another professional mathematician by the name of Edward Levinson, who runs the Hotel Fremont and its casino in Las Vegas.

Dr. Thorp is under the impression that, as a result of feeding data into an IBM-704 computer, it is possible to beat the game 99 per cent of the time.

"We will welcome him with open arms if he wants to come out here," said Mr. Levinson in a telephone interview yesterday. He was unimpressed with any theories about cards which suggest that it is possible to beat the percentage.

Blackjack is one of the simplest games dealt in casinos where gambling is legal. Each player must make his bet before he gets any cards. Then he is dealt two cards face down. The dealer's first card is down

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Associated Press wirephoto

**CAN BEAT THE ODDS**—Dr. Edward O. Thorp, mathematics instructor at M. I. T., with electric computers (background) he would like to test at Las Vegas gambling casinos.

## Blackjack

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but his second card is face up. The object is to get closer to twenty-one than the dealer. Tens and face cards count ten, an ace may be scored as either one or eleven and all other cards count their face value.

If the player goes over twenty-one by drawing additional cards, he loses his bet. The same is true of the dealer but his play is automatic. He must take at least one more card if his hand is sixteen or less; he cannot draw a card if he has seventeen or more.

In some casinos, the "house" wins all ties but Mr. Levinson is scornful of this. Ties at the Fremont are a "push" (stand-off) with nobody winning. He said also that the normal limit in Las Vegas is \$500 but that this could rise to \$1,000 under certain circumstances.

Twenty-eight-year-old Dr. Thorp admits that there are a lot of "ifs" in his system. First of all, he suggests that a player should begin with a stake of \$3,200. Mr. Levinson does not believe that there are more than a handful of blackjack players who start out with anything like that amount.

In any event, Dr. Thorp says that this amount, split into eighty units of \$40 each, should bring winnings of \$10 an hour. If you happen to have \$40,000 and bet it in units of the maximum \$500, you can make \$125 an hour, Dr. Thorp says. Mr. Levinson gave the impression on the telephone that Las Vegas would greet blackjack players possessed of \$40,000 with great joy.

The Thorp "fortune formula" requires that the player memorize what cards have been played and also a chart of "favorable" and "unfavorable" hands. Most important, according to Dr. Thorp, is to keep track of five-spots. When all of these have been played, he says, the remainder of the deck favors the player.

Neither Mr. Levinson nor this reporter, an inveterate blackjack player from way back, was able to figure out what difference the presence or absence of fives could make.

Dr. Thorp, whose reported salary is \$7,000 a year, admits that he hasn't tried his system with real money.

Mr. Levinson is awaiting his arrival in Nevada.