

# U-M Studies Stakes, Odds In Vegas Gambling Casino

ANN ARBOR — A computer and modern techniques from psychology and mathematics are being used in a scientific study of risk-taking and decision-making at a gambling casino in Las Vegas, Nev.

The University of Michigan, the Oregon Research Institute, and the Four Queens Casino are involved in the experiments at the Four Queens, in downtown Las Vegas.

Casino customers who volunteer use a standard roulette wheel and a PDP-7 computer to play a new research game called Stakes and Odds.

PROF. WARD EDWARDS,

head of U-M's Engineering Psychology Laboratory, explained: "This project is not going to be a study of gamblers or gambling. It studies risky decisions in a realistic setting. The idea behind the study is that every human decision depends on judgments of the stakes and odds. The stakes are the values of what can be won or lost. The odds depend on the probabilities of each possible outcome.

"Human beings do not always think in numerical or financial terms. But some idea of what we may gain or lose enters into every decision, whether it be buying a house, getting mar-

ried, investing in stocks, passing another automobile on a hill, or placing a bet.

"Gambling situations permit precise specification of the actual stakes and odds, and precise measurement of customers' judgments about them. That is why many scientific investigators, at universities and elsewhere, have studied choices among bets.

"This will be the first set of experiments to use bets that permit gain or loss of as much as \$300 each. Obviously, for the findings to be meaningful, the decision makers must bet significant amounts of their own money."

THE STAKES-AND-ODDS game and project receives no University or public funds. The costs of the project are being borne by private foundation interested in supporting basic research on human-decision processes.

The experiments were first discussed in 1964 when professors at Michigan began to consider whether such a research program could be placed in the setting of a casino, and operated with scientific precision. This project is managed by two research institutions, U-M's Engineering Psychology Laboratory and the Oregon Research Institute of Eugene, Ore.

Gambling in Nevada is legal and closely regulated. This research project has been approved by the Nevada State Gaming Commission and the county and city regulatory authorities.

On a balcony in the Four Queens Casino, in space that was formerly part of a snack bar, while other more conventional games are played at the tables on the main floor, the players are volunteers, fully informed that they are involved in an experiment, and of course aware that the bets are real. Players are not asked to give their names. Only one person at a time can play the research game. The complete experimental procedure takes from two to four hours, but the player may quit at any time.

AN ATTRACTIVE FEATURE of the game, from the volunteer's point of view, is that if he plays wisely, the game will have no house percentage. If all players were to play their best, then over the whole experiment each player would be just as likely to win as to lose.

Like many traditional games, winning depends in part on a player's judgment and in part upon pure chance.

Neither the project nor the casino will make any money from the cash players' wagers in the experiment. All money from the experimental game is being handled separately and if there is any excess of house wins over losses at the end

of the experiments that excess will be given to charity.

"The casino management through its cooperation is making a sizable contribution to research," said Prof. Edwards.

"We are indebted to it for taking a great deal of time and trouble to make arrangements. Since this project is not a study of gambling, the gambling industry in Nevada does not stand to gain any direct benefit from this research. Those concerned with the management of the gambling casino view this as a public service."

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THE GAME of Stakes and Odds uses a standard roulette wheel but is not roulette. It is basically a kind of auction. The subject has the opportunity to buy bets. He competes against a random method of determining whether his bid for a bet is high enough, and the situation is designed so that he will make the most money if he states the highest price he is willing to play the bet.

If his price is high enough, he buys the bet and immediately plays it. If not, he goes to the next bet. Some of the bets are unfavorable. For those, the subject's bid is the amount he must be paid to induce him to play the bet.

From the subject's bids, complex mathematical analyses can infer his assessment of the stakes and odds. The computer keeps track of the game and also makes a complete record of all plays.

## U-M Has 'Shadow Hospital'

ANN ARBOR — Administrators at the University of Michigan Hospital have been operating a 200-bed "shadow hospital" for more than seven months in preparation for the opening next year of the C.S. Mott Children's Hospital here.

The shadow hospital — all on paper — has been occupied by real patients with real diseases; youngsters actually admitted and discharged in the pediatric wards of University Hospital.

Through techniques of computer management, the hospital staff keeps track of the age, sex, illness, and the type of treatment and nursing care given each youngster, and then projects these figures against the facilities and services to be available when the Mott Hospital opens its doors.

Richard J. Hinds, assistant director of University Hospital and administrator of the Mott hospital, maintains the records that will foreshadow its actual performance.

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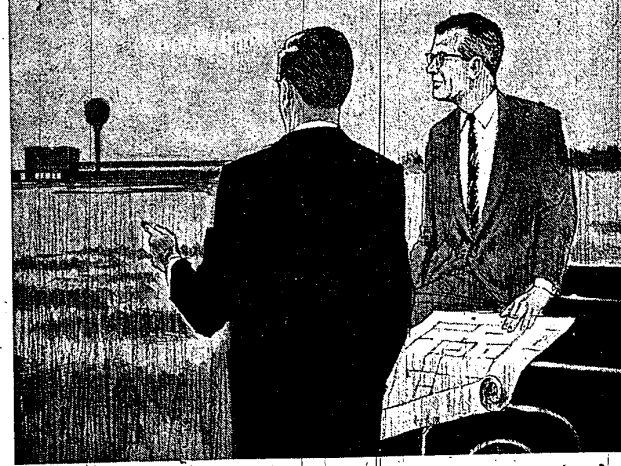
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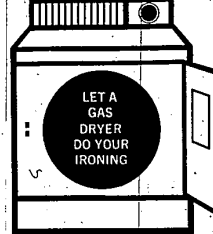


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