DAVID SKLANSKY'S NATIONAL GAMING IMPACT TESTIMONY

Before one can determine the impact of gambling in this country, I
believe it is important to distinguish among the various "games." The
fact is, different games of chance contain different aspects.   To put
it bluntly, some games are significantly worse than others. Of course I
might be biased. As a semi-retired professional gambler I am displeased
with any game that doesn't offer the opportunity to get an edge over the
"house." However, even those games which are destined to beat the player
in the long run can be categorized along a spectrum ranging from a very
acceptable and enjoyable gamble, to an absolute rip-off.
   In my opinion there are four factors that should be considered when
evaluating a game's position within this spectrum:
   1. The house percentage
   2. The degree of skill, if any
   3. The expected hourly loss
   4. The amount of deception inherent in the game
   In a moment I will run through many of the various games with regard to
those four factors. But first I would like to elaborate on them in
general.
   House Percentage. Clearly, the larger the percentage edge, the worse it
is for the person playing that game. To be precise, your percentage
disadvantage is your expected loss compared to the total amount of money
bet. For example, if a game has a 5 % house edge, it means that your
expected loss, at the end of your gambling session, will be 5% of the
total amount of money you have bet. Currently, the house percentage
varies from as much as 30% to as little as 1/10th of 1%. In fact, there
are some games where expert players can even have up to a 1% advantage.
Those games with the biggest house edge are generally the ones with
which I have the most problem. However, using house percentage edge to
determine how "bad" a game is, has some flaws. It is not fair to use
only this criteria when evaluating games that offer a chance for very
high rewards compared to amount risked. I will elaborate on this concept
a little later on.
   The degree of skill. Again, I may be biased, because it is only
skillful games that give the professional gambler the opportunity to
make a living by gambling. Still, in my opinion, games requiring a high
degree of skill are not as open to criticism. The fact that a game
forces you to learn sound reasoning skills, develop discipline, and also
encourages dedication cannot be entirely discounted. Poker being the
obvious example. In fact, many members of the Forbes 400 paid their way
through college with their poker winnings. Of course, when facing a
terrible house edge, no amount of skill can overcome it.
   The expected hourly loss. Percentage edge by itself is not always the
best way to evaluate a game. One reason, as already stated, is that
games with high odds "deserve" to extract a higher edge from the player.
Another factor that can mitigate the negative circumstances of high
percentage edge is if the game is played slowly. At least that game will
not beat the player out of all that much on an hourly basis.
Specifically, I am thinking of keno. The odds are horrible. But the
typical player is betting small and only playing ten or so games per
hour. Thus, his expected hourly loss is small. Contrast this with
roulette, whose percentage edge is far smaller than keno's, yet which
figures to beat the player out of at least as much money per hour, since
there are so many more decisions in that hour. The expected hourly loss
concept also shows why poker machines are almost always much better for
the player than slot machines. More on this shortly.

The amount of deception inherent in the game. Regardless of the house edge I believe one thing that should be frowned upon are deceptive games. By that I mean games where the edge is greater than it appears. This, for instance, is not the case in the game of roulette. Clearly, the edge comes from the green zeros, which are there for all to see. And I have little sympathy for those who choose not to look. The edge in other games, however, is not often as obvious. For instance, in Caribbean Stud, you cannot simply read the rules and immediately realize the player has the disadvantage. The only way you can know is if you are quite familiar with mathematical probability. Still, anyone can study probability if they choose to, and certainly anybody should assume that if the game exists in the casino, it is because the casino has an edge. Thus, even if the edge is hidden to the non-mathematician, you can't really call it deceptive.

There is one category of game that I believe is deceptive. I speak of some (but not all), of the more modern gaming machines. An example would be those machines that have some sort of wheel above them, that occasionally spin and reward the player varying amounts. It is not generally known that this wheel is not equally likely to stop in any position. The lower pays come up much more frequently than the higher ones. And nothing indicates this is the case. There is a similar problem with the actual reels of some slot machines, and I will speak more on this shortly. An easy fix would be a sign on the machine disclosing this aspect of their inner-workings.

I want to state a few things before going into each game in more detail. One is that the games in Nevada are almost always the most liberal in the country. In other words, the player's disadvantage is usually the smallest right here. So any criticism I may have about any particular game would be that much stronger in other parts of the country.

Secondly, I do not consider myself a consumer advocate. I am not the Ralph Nader of gambling. Everyone must drive a car, so we need people like Ralph Nader to make sure cars are safe, and to speak out when they are not. But no one is forced to gamble. And certainly no one has to gamble foolishly. There are plenty of opportunities to play games with minuscule house advantages, and it is not that difficult to learn which games those are and how to play them. Some even give the player a small advantage. I have little sympathy for those people who choose not to educate themselves enough to distinguish the good games from the bad. (The exception being those who are deceived by the deceptive games, which is to be discussed shortly.) The purpose of this testimony is simply to lay out the facts.

On the other hand, while I have no sympathy for gamblers too lazy to do the proper studying, the fact is casinos count on the stupidity of their customers. Actually, I should say they count on the stupidity of some of their customers. I can use the health club business as an analogy. It is well known that health clubs can charge a reasonable yearly membership rate because the vast majority of members quickly lose their discipline and don't show up. This allows you, the dedicated member, to pay a lot less than you would have otherwise. The situation is similar for casinos. If everyone played only the lowest house percentage games and played properly, casinos would have to close their doors, or at least offer a lot less amenities. Just as health clubs need no-shows to keep the prices down, casinos need "suckers" to allow them to maintain lower prices elsewhere.

There is, however, a difference between health clubs and casinos. Health clubs can freely admit what they are doing, while casinos cannot. The health club can tell a prospective customer that their rates are cheap because many people don't have the discipline to stick to their program. Casinos cannot admit that they count on at least some people's stupidity.

An unforeseen benefit to these hearings may be greater public awareness of the importance of studying probability. While I am not an anti-gambling crusader, I am a pro-probability crusader. Probability is a key component in making good decisions, and I don't just mean in the

area of gambling. It is a valuable tool in evaluating questions of everyday life. Yet probability is normally studied only by college math and science majors. This is a shame, because the subject is actually rather simple, and very important. If everyone fully understood probability, it would undoubtedly have a major impact on the gambling industry. Gaming would not go away, but it certainly would change to the degree that it would cause fewer problems. If everyone understood probability, some gambling operators would go out of business. But that would be a small price to pay when compared to the benefit the country would gain from a more educated populous.

Let us now look at various games in a little more detail.

Roulette. Almost all bets on roulette have a house advantage a bit above 5% (the one exception is a bet that is even worse). For instance, if you bet on red, you will win if any of the 18 red numbers show up, and lose if any of the 18 black numbers show, as well as the green zero or double zero. Thus you have 18 winning and 20 losing numbers. On average you will be down $2 after making 38 such bets. Two divided by 38 is how I get 5%. If you bet on a single number you will be paid 35 to1 if you hit. A $5 bet would return $175 profit. But the fair odds are 37 to 1. It should take you an average of 38 spins to hit a number. At that point you will be down 37 bets. Since you are paid 35 bets when you do hit, you will once again be down 2 bets after 38 spins.

There is no skill in roulette. Some people think they can devise winning systems based on manipulating their bets in a way that relates to their previous wins and losses. Other people think they can find an edge by picking up patterns. Both ideas are utterly wrong. Some casinos encourage this fallacious thinking by posting an electronic board to show the past 20+ results of the wheel. But this information is completely useless and casinos know it.

As far as hourly loss is concerned, it works out to a bit more than 1 bet per hour. But that is if you are making only 1 bet per spin. People who cover the roulette layout lose a lot more. Still, the fact there is only one decision every couple of minutes can keep the players' losses down.

As far as deception is concerned, there is none. Everyone can see those two zeros and can read the payoff schedule. Thus, that 5+% disadvantage is something glaring out at you. (There are some roulette wheels that have only one zero and therefore have about a 2.5% house advantage. However, they are usually only offered to high rollers.)

Craps. The house edge depends on which bet you make. The most common, called the pass line bet, is a 1.4% disadvantage to the player. But if you back that up with what is called an "odds" bet, the disadvantage can be substantially reduced. The amount of reduction depends upon how much the casino allows you to bet in comparison to your pass line bet. In any case, betting pass (or don't pass) along with these odds is a very "inexpensive" gamble. Casinos would not be happy if their patrons stuck only to this bet. However, there are many others on a craps layout with far greater house edges. These are known as "proposition" bets. For example, you can bet that the very next roll will be a total of 7. The true odds of rolling a 7 are five to one against you. The casino pays four to one. This results in a 16 2/3 % house advantage, and is thus a terrible sucker bet. Many of the other craps proposition bets are almost as bad.

As far as hourly loss is concerned, this is again dependent on both how many and what types of bets you make. Injudicious gamblers easily have a mathematical expectation of losing many bets during any particular hour. On the other hand, the educated craps player who restricts himself to the best bets will lose far less than one bet per hour over time.

There is no skill in craps. As in roulette, each decision is independent of the previous one. And only misinformed individuals think there are methods to overcome the house edge with their so-called systems.

As for deception, the house edge in craps is not as obvious as in roulette, but it is still based on mathematics. Thus, anyone who knows simple probability ought to be able to figure out their disadvantage,

especially on the simple proposition bets. There is, however, one bet on
the layout that is both deceptive and a disgrace. I speak of the "Big 6"
and "Big 8". If you put your money on either one of these two spots you
are betting that a 6 or an 8 will appear before a 7. The payoff is even
money. First of all, this is a terrible bet. You win 5 out of 11 times,
which is 9.1% house edge. But what makes the bet really unacceptable is
that you can make the exact same bet on a different spot in the layout
(called the "place" bet), and get 7 to 6 odds. This is only a 1.5%
disadvantage. Thus, the Big 6 and Big 8 spot on the layout will only
attract the completely novice gambler who isn't aware of the same exact
bet with better odds elsewhere. Though it is a traditional part of the
craps layout, I would recommend that it be eliminated. If a casino
ignored this recommendation from this point forward, they would be
flagrantly admitting that they seek to take advantage of beginners and
ill-informed players.

The Big 6 Wheel. This is a disgraceful game. More than any other it
takes advantage of total beginners. Most casinos have one or two Big 6
Wheels (not to be confused with the Big 6 bet on the crap table),
situated near their entrance, and they are obviously targeting the
beginner. The fact is no one but a novice would play this game. The odds
are both horrible and self-evident. For instance, if you bet on the $20
bill you are paid 20 to 1. But with 54 numbers on the wheel, and only
two 20's, the true odds are 26 to 1. Every bet on the Big 6 wheel has a
disadvantage well over 10%. This is far more than any casino needs to
make an adequate profit. It would be a simple matter to adjust the wheel
so the house edge is reasonable. It amazes me that any casino would
offer such a terrible game, especially considering the bad name it gives
them and the small amount wagered on the wheel.

As to the issues of skill, hourly loss and deception, there is no
skill; the hourly loss is horrible; but there is no deception. It is a
silly game that may be fun for a moment or two, but the edge arises from
factors that all can see. Again, whether the government should protect
people from obvious stupidity is not for me to say.

Blackjack. Some people actually "beat" blackjack. Expert players have a
small edge against the casinos. That edge can reach 1%. Though not
large, that 1% edge is enough to make a living at the game. There are
those who do, until they are caught that is. The vast majority of
people, however, have a disadvantage when they play 21. Depending on
their skill level, that disadvantage is usually between 1% and 4%.
Players with good common sense will lose at a rate equal to the pass
line bettor at craps or the baccarat player. To go beyond this however,
requires some study. By memorizing computer derived "basic strategy" you
reduce your disadvantage to below ½ of 1%. It should take only a few
days to attain this level of expertise, and if you want to take it
further, you can learn how to "count" cards. This is not as hard as it
seems. I will not go into details here, but suffice it to say that if
you spend a couple of weeks learning and practicing card counting, you
will have an edge over the casino. This edge comes from varying your
bets depending on the cards that are out, and also possibly varying your
decisions from basic strategy.

Besides skill level, another factor that determines the house edge in
blackjack is the house rules. Some casinos' rules are more liberal than
others. However, even the least liberal casinos offer rules that give a
basic strategy player less than a 1% house edge. So I have little
sympathy for gamblers who don't do at least this amount of study.

On the other hand, casinos should not really be commended for offering
this game. For one thing, when it was first offered they were not aware
that the possibility of beating it. They were taken by surprise when
Edward Thorp first demonstrated that fact in 1962. Ironically, after an
initial period of paranoia, they realized that the publicity surrounding
the beatability of the game helped more than it hurt. Furthermore, if
they know you have an edge over them, they won't let you play. I suppose
this is understandable. The fact is if they did not "bar" counters or at
least "shuffle-up" on them, they would get destroyed. Still, casinos
exhibit a bit of hypocrisy by promoting good rules, single decks, and

other aspects of their game ostensibly to skilled players, while simultaneously barring those who are truly experts. It is illustrative to note that while casinos are happy to provide you with the past winning numbers in roulette or baccarat so you can devise fallacious systems based on those numbers, they would never provide you with help as to what cards have been played previously in blackjack. In that case, you could actually use that information to win.

There is plenty of skill to blackjack and no deception (unless you are deceived into believing they will let you play, even if they know you can beat them). And the hourly loss is small or non-existent.

Blackjack is a game that may not be with us long in its present form. Too many people have learned how to play it fairly well. Casinos cannot survive if all of their customers played basic strategy blackjack. I have recommended to some of my casino clients that they change the rules such that natural 21's pay only even money, rather than 3 to 2 odds. This gives the house 2% more of an edge. We may very well be seeing this change soon.

Keno. For every dollar you bet on keno, your expected loss is about 30 cents. Technically, that is a terrible disadvantage. However, it is not as bad as the lottery. And because of their high payouts, neither is quite as bad as they seem. For instance, if you were trying to multiply your stake by a factor of 1000 by betting on red or black in roulette, you would have to win 10 consecutive bets and let the money ride every time. But your chances of doing that would be about 1 in 1750. This means that a dollar bet on roulette would lose well over 30 cents if you didn't pull it back unless you had reached your goal. The details of the mathematics are not important. The point is that games offering very high odds can have a large percentage house edge without being any more unfair than short odds bets with a much smaller "percentage." By no means does this mean keno is a good game for the player. It just isn't quite as bad as some people say.

As to skill, hourly rate and deception, once again there is no skill. But hourly loss is small despite the terrible percentage disadvantage. A player who is betting one $1 ticket per game will lose an average of 30 cents per game and about $3 an hour. This may be an acceptable price to pay for that slight chance of winning $25,000 or more. As to deception, keno is not an easy game to figure out without knowledge of permutations and combinations. Thus, many people may not realize how large a disadvantage they have. But, there is nothing hidden. Ironically, the one keno bet that is easy to figure is also utterly horrible. It is called the "One Spot." Here you are picking one number and getting 2 to 1 on a 3 to 1 shot. The disadvantage is a monumental 25%, in spite of the fact that the payoff is not the typically high keno pay. This is probably the worst bet in all of gambling. Why anyone would make it is beyond me. But this bet cannot be called deceptive. Surely anyone should know that when the casino picks 20 numbers out of 80, the odds against their chosen number being picked are 60 to 20 or 3 to 1. I doubt it would do much good protecting someone from this bet. Anyone who is willing to make it will find some other way to get himself in trouble.

Lottery. Basically, the same things that I said about keno can be said about the lottery. The disadvantage is even greater. In most states the player loses an average of 50 cents for every dollar bet. Again, it is not fair to compare that 50 percent disadvantage to the 1.4% disadvantage at the crap table because of the giant payoffs involved, but that doesn't change the fact that 50 percent is an awful lot. The concept of hourly rate does not apply to this game. Although the odds are hard to calculate for the non-mathematician, they are usually stated right up front, thus there is no deception. As far as skill is concerned, there actually is some regarding the lottery. One piece of skill is to choose some numbers above 31, thereby making it less likely you'll have to share the prize, since many people bet birthdays. Another skillful aspect comes up if you are betting multiple tickets. The idea is to bet them in a way that decreases your chances of having to share with yourself. However, neither of these tactics is enough to

significantly reduce your disadvantage. There is a third tactic that can actually give you a theoretical advantage. That is to play the lottery only when the "carryover" has reached an amount gigantic enough to give you an edge. Theoretically, the more tickets you buy in this situation, the better off you are, although it would be almost impossible to buy enough tickets to guarantee a profit.

Poker. Please leave this game alone. Unquestionably, poker has the most positive aspects to it of any gambling game. It is a game of skill. There is a short term luck factor which allows weaker players to beat those more skilled, but in the long run, those who are talented, dedicated and disciplined will get the money. Thus, there is a major incentive for those who like to play poker to improve their game. Getting good at poker requires learning things which I believe will also help you in other areas of your life. Reading people, analyzing risks versus rewards, calculating probabilities, and developing willpower under adversity are just a few of those attributes. In poker the house does not make its money from losers. It charges a set fee or rakes the pot. Usually that rake or fee is reasonable. It is typically between $5-$15 per hour per player. Nothing more need be said.

Poker Machines. Poker machines are a lot different than live poker. There is skill involved, although not nearly to the same degree. Still, poker machines are one of the best gambles for the casual player. In most parts of the country the edge against you is small. In some places it is non-existent. On the other side of the coin, poker machines have been known to be quite addictive. Ironically, I believe this is mainly because of the very small house edge. Games where you lose quickly and obviously are not going to hook you. Whether the small percentage of people who become addicted to poker machines is a reason to stop, or regulate them in some way is another story. That is not for me to decide. But I can say that aside from this addiction problem, poker machines are one of the cheapest ways to entertain someone who enjoys playing them.

There are two things which determine the payback percentage of a poker machine. One is the skill of the player, the other is the odds the machine pays for various poker hands. There are many machines in Las Vegas paying good enough odds that skilled players have no disadvantage. In fact, there are some that offer about a ½ of 1% advantage to those who playing optimally. To learn optimal play one can purchase any of a few good books on the subject. They will provide you with correct strategy for each particular machine. Like basic strategy in blackjack, it will take a couple of days to learn perfectly, but there is no good reason not to. Common sense play will be 2 or 3% worse than the computer derived optimal play.

Of course, casinos are aware of the laziness of the vast majority of their customers. That is why they can offer blackjack, and liberal poker machines. They know few will play perfectly. They count on it. In spite of this, only a few casinos offer games that are above 99% return. (A 99% return is the same as a 1% house edge. They are simply two different ways of saying the same thing. Typically machines are categorized using this 90 something percent method, while table games are categorized the other way. But they mean the same thing.) Those casinos are usually what are called "local" casinos. Casinos that cater to tourists tend to pay back somewhat worse; usually about 97% against optimum play.

Poker machines are a game of skill. But you could make the argument that once you memorize the chart the skill becomes automatic and now you are down to complete luck again. (This would not be true of poker or blackjack since you constantly encounter new situations which take some thought.) Still, no matter how you look at it, there is more skill in poker machines than in many other gambling games.

As for hourly loss, this is where poker machines tend to be pretty good. A typical quarter machine player expects to lose less than $10 per hour. This is fairly cheap entertainment, especially when you consider the chance of hitting a $1000 royal flush. On the other hand, that royal flush only figures to show up about once every 100 hours of play. And without it, the player will lose closer to $20 an hour. Still, this is a

lot better than a quarter slot machine.

As far as deception is concerned, there is none. The computer deals the cards in exactly the same proportion as they would be dealt using a real deck. In other words, the 9 of clubs will show up once out of 52 times in any particular position. Furthermore, the payoffs are posted for all to see. Thus, any mathematician, upon reading the pay table, can very quickly calculate the payback for any machine, assuming optimal play. He needs no further information about the inner workings of the machine. This is not so with many slot machines, as we are about to find out.

Slot Machines. I am not too thrilled with slot machines. Though many pay back as much as 98%, that is not the whole story. First of all, most pay back quite a bit less than that. 90% machines are not uncommon, especially outside of Nevada. And 90% machines are far worse than 98% machines. The number 90 is fairly close to the number 98, but if you turn things around you see that a 90% machine has 5 times the house edge as a 98% machine. But even 98% machines aren't that great. The main reason is the speed of play. It is a simple matter to play ten hands or more per minute. A dollar slot player, playing $3 per pull, thus wagers at least $30 per minute, or $1800 per hour. This results in a $54 an hour loss. If it is a 90% payback machine, that is $270 per hour. And these figures do factor in the high jackpot pays. If you don't get lucky and hit one of them, your hourly loss will be much greater.

As for skill, clearly there is none. The only exception are those players who wait for progressive jackpots to reach profitable levels and then jump on the machine at that point. Lately there have been many new machines that have mini-progressive jackpots offering opportunities for professional slot players, but their existence makes it even worse for the typical tourist. The professionals lock up the machines whenever they are good, leaving the worse than average situations to the unwary.

Now we come to the area of deception. In the old days slot machines were purely mechanical. This meant that any position on a reel was just as likely to come up as any other position. There may have been four oranges on a reel, and only one 7, which made the orange more likely to show. But only four times as likely. This is no longer the case. Some of the new slot machines now use what is called virtual reels, with the net result being that some positions on the reel are much more likely to show than others. Thus, even though there are only 20 positions on a particular reel, and one of them is the jackpot symbol, that jackpot symbol may only show up once in 200 times. When you consider that a jackpot will only be awarded if three jackpot symbols show, this means the probability of that jackpot is 200 x 200 x 200, or 1 in 8 million. This is a lot worse than the 1 in 8,000 it would be if we multiply 20x20x20. Undoubtedly, many customers are aware of this new type of slot machine and realize that jackpots are harder to hit than they may appear. But some aren't. That is why you may want to consider requiring machines to post a sign announcing the true probability of a jackpot. Another reason for consideration is that the symbol next to the jackpot icon comes up quite a bit more often, which means the jackpot symbol frequently does show in the window, but just above or below the pay line.

Recently there is a new aspect to slot machines. It is called a "secondary" game. This secondary game kicks in occasionally when certain symbols appear on the main game. And this secondary game is also something that could be considered deceptive. Again, this is because the varying results and payouts are not equally likely, but there is nothing to indicate this is so. The most obvious example are the wheels that appear above some slot machines and have various payouts when activated. They look a little bit like the Big 6 Wheel. However, the Big 6 Wheel, as bad as it is, is a random game where each slot will come up as often as any other. Not so for the wheels above the slot machines. In these the higher pays are much less likely to hit. Of course, it is not possible to make those high pays as likely without bringing the machine up above 100% payback. However, a sign mentioning these lesser probabilities for the higher rewards would remedy any accusations of deception.

Baccarat. To me baccarat is a silly game. It also seems immoral to bet $100,000 or more on the turn of a card. However, that is outside my field. The percentage against the player in baccarat is a little bit more than 1%. That is, if you bet on the player or the bank. If you bet on a tie, the house edge is much greater. A 1% disadvantage used to be considered tiny. However, now that people are playing basic strategy blackjack with a 1/2% disadvantage, or taking 10 times odds in craps, giving them a .2% disadvantage, baccarat is no longer such an enticing game. (Remember also that just as big percentage disadvantages are not as bad as they appear when high payoffs are involved, small percentage disadvantages are worse than they appear when the payoffs are only even money as they are in baccarat.) That may be one reason it has lost some popularity. Other reasons could be the lack of skill or simply the realization by wealthy people that there are better ways to spend their money. Still, baccarat is a cheaper way to gamble than roulette or unskillful blackjack, or many of the newer games such as Caribbean Stud or Let it Ride.

With a 1.2% disadvantage and 100 decisions an hour, a player expects to lose about a bet an hour, and no amount of skill will change that. I once investigated the possibility of counting cards in this game, but discovered that an edge existed only in theory. Advantageous situations simply did not arise often enough. As far as deception is concerned, there is none.. All in all, baccarat is a decent game for those players who want to relax in an opulent atmosphere and not tax their brains. Professional gamblers look down their noses at baccarat players, but if all you desire is light entertainment, I suppose there is nothing wrong with it.

Sports Betting. Typical sports bets have a 4 ½ % disadvantage to the player. That is because most bets involve putting up $11 to win $10, or some multiple thereof. This means for every $22 bet I figure to be down $1. Of course, this assumes I have a monkey picking the games for me. If I have any skill at all I ought to win more than 50% of my bets. If I can win 53%, I will actually beat my bookie. Then again, there are probably fans who do worse than monkeys. There are other bets besides the 11 to 10 variety called parlays and teasers, which tend to have a bit more of an inherent disadvantage. Baseball betting works a little bit differently than other sports and usually has a smaller disadvantage. In any case, sports betting is a very nice way to gain some wagering excitement at a low cost. If you bet $110 to make $100 and then watch the game, you are paying about $1.67 per hour to add to your enjoyment. I arrive at this amount by taking your theoretical loss of $5 and spreading it over the three hours of the game. Clearly, if you use hourly rate to evaluate the price of gambling entertainment, betting on sports cannot be topped, short of actually having an edge.

Add to this the fact that there is definitely skill in sports handicapping. I won't go into the details of how to beat sports here, but suffice it to say that it takes both mathematical and psychological skills to correctly evaluate a sporting contest, and that many people are successful bettors. As far as deception is concerned, as long as the games are not fixed the sports better knows exactly what he is getting into. Everybody knows that $11 is more than $10. The bottom line is that unless you are entirely against all gambling as a general principle, sports betting has to be considered one of the most innocuous ways to have gambling fun.

Horse Racing. Many of the same things I said about sports betting can be said about horse racing. It can be harmless fun, if not done to excess. However, there are many more negative aspects. For one, the inherent disadvantage is greater. If you bet randomly you will eventually lose 18 to 20% of your total action. If you bet only favorites, you will lose about 10%. Secondly, it is much harder for skill to overcome these inherent disadvantages. Professional horse players do exist, but they are few and far between. Furthermore, horse races go off every 20 minutes, making your hourly loss that much greater. This is especially true if you are betting horses at a racebook offering multi-track wagers(where you can bet many tracks at once). In

fact, this form of horse betting could become destructive, since watching a race you have bet on can become very addictive and it's easy to exaggerate your handicapping ability, if you are addicted. Thus, going to the track on a beautiful day once in awhile to enjoy the sun, watch the horses and make a few bets, is a lot different than religiously going to a public racebook and betting on 20 tracks at once.

Hopefully this presentation has shed new light on the vast disparity between the various gambling games available to the public. I know this report contains some technical information, so I will be glad to explain or elaborate further should you have any questions.

A NOTE ON CASINO ADVERTISEMENTS
The vast majority of casino advertisements are not deceptive. Their description of the liberal games that they offer are basically accurate. However, these ads are similar to department store ads advertising a great buy on one item. The casino uses a liberal game as a sort of loss leader. They hope it gets you to come into the casino, but then play some other game (or play that game, but less than optimally). The fact is it does them little good to bring in customers who play their liberal advertised games properly. If everyone did only that, they would go broke. In that sense the advertisements could be considered not quite what they appear.