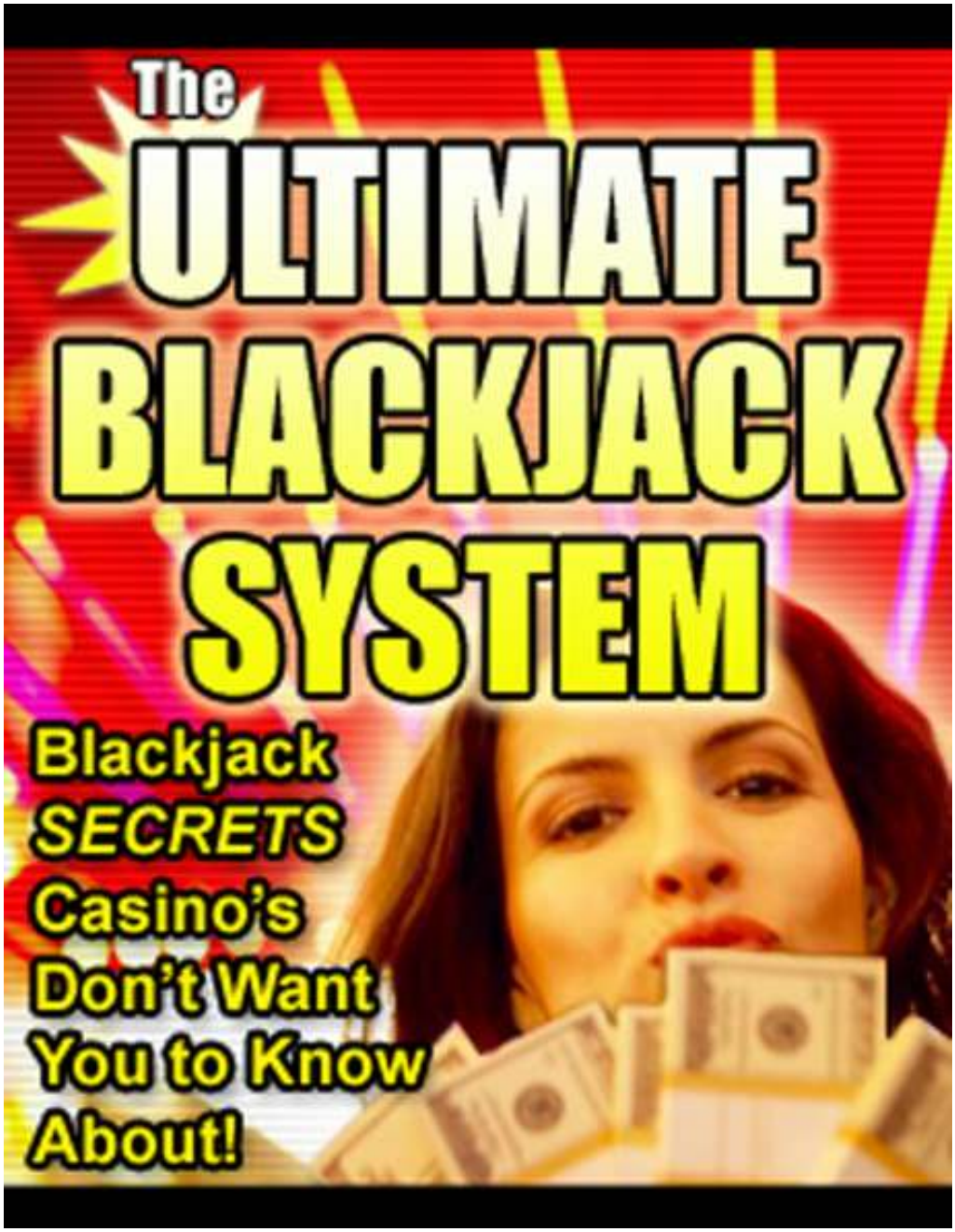
The
ULTIMATE
BLACKJACK
SYSTEM
Blackjack
SECRETS
Casino's
Don't Want
You to Know
About!

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Introduction to Blackjack

A Brief History

It is generally believed that playing cards was invented in China in about 900 AD. Chinese people began to shuffle paper money into various combinations and in China today the term for playing cards means paper tickets.

The 52 card deck as we know it was originally called the French Pack. The origin of Blackjack is somewhat unclear. Some people believe that Blackjack originated in French casinos in the early 1700s where it was known as "vingt-et-un" ("20 and 1").
The game became known as Blackjack because if a player held a Jack of Spades and an Ace of Spades as the 1st two cards, the player was paid out extra. So with a Jack being a vital card and Spades being black, the game was called Blackjack.

This game has been played in the United States since the 1800's. Gambling was legal out West from the 1850's to 1910, at which time Nevada made it a felony to operate a gambling game. In 1931, Nevada re-legalized casino gambling where BlackJack became one of the primary games of chance offered to gamblers. In 1978,

New Jersey became the second state to legalize gambling and since then casinos have sprouted up in about 20 other states.

Blackjack remains one of the most popular card games in the world. Let’s see why.

Is Blackjack a "Winnable" Game?

When blackjack first became a casino staple, it was assumed that it was rather like baccarat, where the house, by virtue of the rules determining play, had a statistical edge. All players and students of the game assumed that this advantage existed based on two simple facts. One, the player had to act first. Two, all busts (hands totaling over twenty-one) were losers no matter what the dealer later drew. These two rules seem to give the house an incontrovertible edge.

Conventional began to change in 1956 when a paper by Baldwin, Cantey, Maisel, and McDermont was published in the _Journal of the American Statistical Association_. This paper and a black-jack strategy manual published by Baldwin et al. the following year both attracted very little interest among non mathemati-cians, but it would prove to be the first step toward determin-ing that blackjack is a "winnable" game.

Edward O. Thorp, a scientist at MIT, did understand the implica-tions of the work of Baldwin and his colleagues and began to ex-amine two elements of the game that were previously unexamined. One, the composition of a deck of cards changes with every card dealt. Two, some deck compositions favor the player and other favor the house. In 1962, Thorp published his now famous book,

Beat the Dealer, which contained a simple yet profound message. Unlike dice, roulette wheels, and slot machines, decks of cards have "memory."

Blackjack, unlike Roulette for example, is a winnable game because of this "memory." Let's look at an example. You are sitting at the Roulette table and the dealer throws the ball and it comes to rest on the number 9. Now, when he throws the ball again for the next round, what are the odds the ball lands on 9 again? Assuming the wheel is not rigged or the dealer is not trained to "fix" the outcome, the odds of the ball landing on 9 again are exactly the same! Let's take it a step further. Assume that the ball does indeed land on 9 again - twice more. Now the ball has landed on the 9 three times in a row! What are the odds this happens a fourth time? Exactly the same! There is no statistical reason that the ball should "avoid" landing on 9 again.

Blackjack is different. Let's look at a similar situation in blackjack. You are at the table with two other players. The dealer deals a 9 to each of the players at the table. Now the odds of dealing another 9 have been significantly reduced. In a six deck game the odds have been reduced from 3:49 to 7:104. This fact alone makes blackjack a winnable game. We will learn later how to take advantage of this.

How to Play Blackjack

Setup

Blackjack is played at a table with a single dealer and from one to seven players. The layout gives a few basic rules, such as the payoff for blackjack; for insurance; and whether the dealer hits on soft seventeen. There will usually be a small sign to one side of the dealer that gives the table stakes and any special rules, such as whether surrender is allowed. You must ask to discover the other unposted rules and regulations. You will need to know, for example, whether doubling down after splitting is allowed, whether a player may double down on any two cards, whether pairs may be split a second time, and whether aces may be resplit. Such rules determine whether the basic game is favorable or unfavorable.

Rules

The game itself is simple. You, the player, attempt to accumulate cards with a numerical total closer to (but not more than) twenty-one than those accumulated by the dealer. If you do so, you win. If the dealers' total is closer to twenty-one than yours, you lose. Winning hands are paid off at even odds. If you and the dealer both arrive at the same total, the hand is a "push," and nobody wins. All bets must be made before any cards are dealt, and no bet may be changed once the first card has been dealt.

Each player is initially dealt two cards; they may be face-down or face-up, depending on the rules of the casino. The dealer gets two cards, one face-up and one face-down. The value of the cards is given by their face value except that the ace (A) counts as either 1 or 11 and the 10, jack (J), queen (Q), and king (K) all count as 10.

The combination of an A and any 10 on the first two cards is a blackjack and is an automatic winner (unless both dealer and player have it, in which case it's a push). A player blackjack is paid at 3 to 2. When the house has a blackjack the player merely loses his bet and not one and a half times that bet. Any combination of cards that exceeds 21 is a bust and a loser. The player always goes first, so if the player's total exceeds 21

the hand is lost -- even if the dealer also busts later. If the dealer busts, all remaining players are winners. The dealer has no options; play is fixed by the rules.

After the first two cards are dealt, the player must decide whether or not to take additional cards based on two pieces of information: the cards held and the dealer's upcard. This is where the game begins to get interesting. A wide variety of options offer themselves, and unless the player understands the principles of the game there are numerous ways to go wrong. Let's review the options first; correct play will be discussed later.

Player Options

Standing

The player elects to "stand" with the current total and not to draw any additional cards. If you are in a game where the cards are dealt face-down, you slip your cards under your chips. The dealer will understand the message. If you are in a face-up game, wave your hand back and forth in a wiping motion just above your cards, which is the signal for standing. All casinos insist on some form of hand signal; verbal statements are not accepted. Casinos can get rather noisy, and it is easy for a dealer to mishear a player. Also, the cameras hidden in the ca-

sino's ceilings can be used to resolve disputes only if hand signals are used, since they do not have an audio component.

Hitting

The player elects to draw an additional card or cards. If you are in a face-down game, draw your cards toward you with a quick scratching motion against the felt once or twice. In a face-up game, make a similar motion with your fingertips or , preferably, point to your cards with your index finger.

Splitting

If your first two cards are of the same value, you may split them and play each as a separate hand. To indicate a desire to split your cards, place an additional wager equivalent to the original one to the side of it. If you are playing in a face-down game, you must expose your cards. After splitting a pair, various other options become available. You can re-split if a third like-valued card appears. Or you can double down on the split hands should an appropriate card be drawn. For example, if you have split 8's and catch a 3 on the first 8, you may now double down on this total of 11. Both re-splitting and doubling and doubling down after a split are to the player's advantage.

Doubling Down

The player may double the size of the original bet and elect to draw only one additional card. The typical doubling situation

is where you have a hand that stands a chance of becoming a _very_ good hand with one additional card; for example, your first two cards total 10 or 11. To indicate a double down bet, slide a second wager to the side of the original bet. This wager may be as much as but no more than your original bet. If you are playing in a face-down game, you must expose your cards. Virtually all casinos permit doubling on 11 and 10; most on 11, 10, and 9, and many will allow it on any two cards. The latter rule is the most advantageous to the player.

Insurance

When the dealer shows an A, players are given the option of taking insurance against the dealers' having blackjack. Calling this "insurance" is a bit misleading. Actually, it is nothing other than a side bet that is paid at 2 to 1. If you wish to take insurance (which is only recommended in very specific circumstances recognizable by an expert card counter only), place a bet equal to half your original bet in the semicircle running just in front of the your betting spot. If the dealer has blackjack, you will lose your original bet but win the insurance wager and break even on the hand. If the dealer does not have blackjack, you will lose the insurance bet and the hand will be played out normally.

Surrender

If your hand looks particularly unpromising against the dealers' exposed card, you have the option of surrendering half of your bet and retiring from the hand. For example, should you have 9, 7 against a dealer 10 and your chances of winning the hand are slim -- less than .5 -- and it would be to your advantage to give up half your bet. There are to forms of surrender: "late" and "early." In the late form, the player may surrender after the first two cards provided that the dealer does not have blackjack. In early surrender, the player may surrender after the first two cards even when the dealer is later revealed to have blackjack. Both forms of surrender are to the players' advantage, with early surrender being most beneficial. Not all casinos permit late surrender, and those that do don't necessarily post it at the tables. Except for the occasional promotion, no casino offers early surrender any longer.

Surrender, by the way, is the only play at the table that requires a verbal response; there is no hand signal. If you wish to surrender you hand, just say "Surrender." The dealer will remove half your bet and return the other half.

Balancing the Odds

When you sit down at a blackjack table to play, the house will have a small advantage over you if you do not implement some kind of strategy to balance the odds. This section will teach you how to do that. Do not skip this section and rush off to learn how to "beat the odds." Learning basic strategy is the first step toward becoming an expert blackjack player.

Remember our friends Baldwin, Cantey, Maisel, and McDermont? They worked out -- painstakingly, since they lacked access to a high-speed computer -- a set of recommendation for the play of the game that were surprisingly close to today's basic strategy.

Edward O. Thorp, the MIT scientist who essentially invented card counting, had computational power at hand that Baldwin and his coworkers lacked. He used this power to carry out what is known as a "Monte Carlo" simulation of the game. A computer was programmed to play out tens of millions of hands of blackjack. It was then used to analyze the outcomes and determine which circumstances tended to produce wins for the player and which tended to produce losses. He refined and sharpened the Baldwin et al. basic strategy based on these simulations.

Basic Strategy Play

Since the essential features of basic strategy were developed, a number of refinements have given us the current optimal set of principles for standing, hitting, doubling, splitting, and surrendering. These, along with the other more sophisticated forms of play were worked out by using Monte Carlo techniques based on the analysis of literally billions of hands. If I tell you that you should hit a total of 16 against a dealer's 7, there is no specific mathematical proof behind this recommendation. It emerged from an analysis of the several million times this situation emerged in the Monte Carlo analysis of the game. Hitting a 16 against a 7 loses less often than standing. Sure, following this advice produces a bust on a lot of these hands, but analysis shows, utterly compellingly, that if you don't hit his hand you are more likely to get beat by a higher total -- like 17.

When possible, I will give a logical analysis of particular aspects of basic strategy, but there are going to be situations where the reader is just going to have to accept the outcomes of the Monte Carlo analysis. The following description of basic strategy is based on the multi-deck game found in several Atlantic City and Las Vegas casinos, where the dealer stands on a soft seventeen, pairs may be re-split once, doubling down is

permitted after a split, and the player may double down on any two cards. Other games require some minor adjustments that I'll note where appropriate. However, you should never give up an edge against the casino. I highly recommend playing only where the rules are more favorable to the player.

"Soft" & "Hard" Hands

A hard hand is a hand without an A where the payer's total is given by the face values of the cards, or a hand with an A that can only be counted as 1. A soft hand is a hand with an A which can be counted as either 1 or 11. For example, A, 4 is a soft hand because the A may be counted as a 1 or 11; but A, 4, 7 is not, since counting the A as 11 would be a bust.

Hit or Stand

The guidelines for hitting are rather straightforward. If the dealer shows a 2 or 3, you continue to take a hit until you have a hard 13 or a soft 18. If the dealer shows 4, 5, or 6, you continue to take a hit until you reach a hard 12 or a soft 18. If the dealer shows 7 or 8, you continue to take a hit until you have a hard 17 or a soft 18. It the dealer shows anything higher than 8, you continue to take a hit until you have a hard 17 or a soft 19.

Dealer Shows	Hit Until You Have
2 or 3	hard 13 or soft 18
4, 5, or 6	hard 12 or soft 18
7 or 8	hard 17 or soft 18
9, 10, or A	hard 17 or soft 19

Though there is no mathematical "proof" of these principles there is actually some simple logic to them. Don't forget that you are also playing the odds based on billions of simulations of blackjack hands. Let's look at some of the logic.

- If the dealer shows a 7 or above, then the most likely two-card total is 17 or above (with a 10 or an A in the hole), so you are going to have to take a card on any total under 17 or likely lose.
- When the dealer shows a card less than 7, the two-card total will likely be less than 17 (it can be exactly 17 with a 6 and an A), and the dealer will be forced to take another card. Since there are more 10's in the deck than any other denomina-

tion, the dealer will have a fairly high probability of busting and you will win.

- If you were to take a card with a total between 12 and 16 you would be likely to bust. In situations like this the proper play is to let the dealer pull. If the high card shows up and there is a high card in the hole, you will win.
- Hit a total of 12 against a dealer 2 or 3. I've seen books that tell you to stand in these situations. They are wrong. You must take a card.
- Hit a 16 against a dealer's 7. Many inexperienced players have trouble believing that this is the proper play but it is. Countless computer runs have proved it again and again. From the players point of view a total of 16 is no better than a total of 12; you can win with such totals only when the dealer breaks. Besides, there are still five cards that can help out a 16 (A, 2, 3, 4, 5).
- You take a card whenever you have A, 6 (unless you double down) and you hit an A, 7 against a 9, 10, or A. It's true that you will sometimes find yourself going "backwards" and have a hand that is "weaker" than you just had. However, computer simulations consistently show that this is the proper play.
- It may come as a surprise to inexperienced players, but 18 is not a strong hand when facing a dealer 9, 10, or A.

When to Split

The guidelines for splitting are best described in a table.

Split	If Dealer Shows
A , A	Any Card
10 , 10	Never
9 , 9	2 - 9 except 7
8 , 8	Any Card
7 , 7	2 - 7
6 , 6	2 - 6
5 , 5	Never
4 , 4	5 or 6
3 , 3	2 - 7
2 , 2	2 - 7

Again, when there is some logic behind these guidelines.

- Always split A's. The totals of 2 or 12 are not nearly as good as hitting 11's.
- Never split 10's. Two 10's is a great hand -- don't screw it up!
- Never split 5's, but you may want to double down!
- Splitting 4's is a close call. Don't do it in one or two deck games. Do it in multideck games when the dealer shows a 5 or 6.
- Split 9's against a dealer card of 2 - 9 except 7. The reason for this exception is simple. You have 18. The dealer's most probable total is 17. Don't screw up a good thing.
- Splitting 8's, like 4's, depends on casino rules. Always do it when the dealer shows 2 - 9. If the dealer shows 10 or A and you happen to be lucky enough to be playing in a game that allows early surrender, you should surrender. If surrender is not an option, split.
- Splitting 6's and 7's is straightforward. If the dealer's card is higher than your card, don't split.
- Always split 2's or 3's if the dealer's card is less than 8.

You should also note that the "value" of splitting is increased if you are playing in a game that allows doubling down after a split.

When to Double Down

The principle behind doubling down (and splitting) is that it increases the amount of your money in play when the conditions of the hand are in your favor. These are both very important parts of expert blackjack play and must be mastered. Once again, the best way to present the guidelines is in a table.

Double Down	If Dealer Shows
11	2 - 10
10	2 - 9
9	3 - 6
A, 7 or A, 6	3 - 6
A, 5 or A, 4	4 - 6
A, 3 or A, 2	5 or 6

When to Surrender

Late surrender is still permitted in some casinos. The guidelines are straightforward. Use the table below to decide when to surrender.

If Dealer Shows	Surrender If Holding
A, 10, or 9	any 16 except 8 , 8
10	15

Early surrender provides a tremendous advantage for the player which is why you may never find a game that allows it. If you are lucky enough to find one, use the table below to decide when to surrender.

If Dealer Shows	Early Surrender if Holding
A	All hard 5 - 7 and 12 - 17
10	All hard 14 - 16
9	10, 6 and 9 , 7

When to Take Insurance

Never! Next topic.

"Wait a minute!" I can hear many players saying. Don't you always take insurance when you have blackjack yourself? That's what everyone tells me.

Well, let's stop and take a look at that situation more closely. Many people do believe that this is a "no lose" situation. The logic goes something like this. If your original bet is $10 and you have blackjack and you take insurance ($5), the hand will play out in one of two ways. Either the dealer will have blackjack or he will not. If he does, the hand is a push but you will win $10 because of the insurance. If he does not, you will win the hand but not the insurance bet and you will still win $10.

While taking insurance when you have blackjack seems like a "win" in every case (because it is), it is *not* your best play. What most inexperienced players fail to realize is that the insurance is a side bet. It is completely unrelated to the original bet. Let's take a closer look.

You are guaranteed a "win" when you take insurance, but you are missing the opportunity to play the odds for a larger win. Assume you are playing alone with the dealer in a six deck game and you bet $10 on your hand and bet $5 on insurance. A six deck

shoe contains 96 10's and 214 non-10's. After you and the dealer have been dealt your cards, you have blackjack and the dealer shows and A, so there are 95 10's and 214 non-10's left. There are 95 ways for the dealer to have a 10 in the hole, and if you take insurance, you will win $10 on each of them for an income of $950. However, there are 214 ways for the dealer to have a non-10 in the hole, and on those occasions you will lose $5 each, for a loss of $1,070. This is an expected loss of $120 -- 7.8 percent -- on 309 possibilities. A very bad bet!

It should be noted that there are certain times when taking insurance is advantageous to the player, but these circumstances can only be detected by the best card counters.

Tipping the Odds in Your Favor

Up until this point you have learned how to bring the odds to just about even in most casino games. Following the rules of basic strategy presented to this point will essentially remove the casino's advantage over you while you play. This is no small achievement. This will allow the recreational player to play as much as he wants without fear of losing his life savings.

If you are like most players though, you want to find a way to give yourself the advantage over the house. After all, most players enjoy the game for the possibility of winning. If you want to take the advantage, you will need to learn how to count cards.

Counting Cards

Many inexperienced players have a misconception about card counters as mathematical geniuses who can keep track of every card in a multiple decks of cards. While there may very well be people who can do this kind of thing, card counting is not about keeping track of every card. The idea behind counting cards is to keep track of the players statistical likelihood of winning a hand and then adjusting betting and playing accordingly.

The idea behind card counting is simple gambling strategy. Any professional gambler will tell you that the way to win at gam-

bling is to bet more when you have the advantage and bet less (or not at all) when you do not. It is that simple. In blackjack, certain cards remaining in the deck are good for the player and certain ones are not. If you "count" these cards, you will always know when you have the advantage.

Edward O. Thorp's work confirmed that 10's and A's remaining in the deck were good for the player, while 5's and 6's remaining in the deck were bad for the player. He worked out the circumstances under which particular combinations of cards remaining in the deck gave the player and advantage over the house. He also presented the first two card-counting systems, Thorp's five-count and Thorp's ten-count. The latter, which is more powerful, was based on determining the ration between 10's and non-10's remaining in the deck. Card counting was born from irrefutable logic: Keep track of the cards: make small bets when the deck favors the house and large bets when it favors the players.

Thorp's analysis was later improved upon by the work of many others, notably Julian Braun, Lawrence Revere, Peter Griffin, Stanford Wong, Ken Uston, Arnold Snyder, and Lance Humble. Today the game is understood at a rather deep level, and sophisticated systems exist that give the knowledgeable player a distinct edge over the house.

Which Cards Matter?

The object of card counting is to keep track of cards that are advantageous to the player. The simple question is, then, "which cards matter?"

The card most beneficial to the player is the 10. 10's are advantages to the player for several reasons. One, they will cause the dealer to bust since he is required to take cards based on the rules of play. He may not take other factors into account while playing (like you do!). Two, they turn hands that you double down on into very strong hands (which is why you double down on those hands, by the way). Three, they are used to create blackjacks. Remember that blackjacks are more beneficial to the player since getting one pays 3 to 2 but losing to one only costs the original bet! Another important card for the player is the A. Aces present soft doubling (and hitting) opportunities and they create blackjacks. Remember - blackjack is more important to the player than the house!

The worst cards for the player are the 5 and the 6 (and 2, 3, and 4 to a lesser degree). The reason these are not good for the player is simple - they are beneficial to the house. Since the house is forced by the rules of play to take cards on any hand lower than 17, the 5 and the six present the possibility of very

strong hands for the dealer (remember that 10's are not advantageous to the dealer since they make "busts" of these hands).

Before we begin to learn how to count we should talk about how this will help us. You should remember that the purpose of counting is to know when the player has an advantage and when he does not. This knowledge will do nothing for you unless you do something with it. What you want to do is adjust your betting and your play based on your advantage.

Adjusting Your Bets

Adjusting your bets is very straightforward. When the composition of the deck is in your favor, you bet more. When it is not, you bet less. Very simple. Learning just this can give you as much as a 2% advantage against the house. If that advantage does not sound like much, keep in mind that many casino slot machines only produce a 2 - 3% advantage for the casino and that is enough to make billions of dollars of profit for the casino. Granted, this is at a much higher volume than you will play at but remember that bet sizes are much smaller.

Adjusting Your Play

Learning to adjust your play based on deck composition is not an easy task, but the rewards are phenomenal. Taking this step can increase your advantage by another 2% for a total of 4% against the house. The good news is that you can learn this with a lot

of practice. The principles are simple but mastering this level of play takes many hours of practice.

An expert card counter will adjust play in many different ways depending on the composition of the deck. It is common for an expert card counter to do things that "break the rules" of basic strategy like:

1. Standing earlier if the deck is very 10 rich -- if the dealer can bust, so can you!
2. Standing later if the deck is very 10 poor.
3. Splitting 10's when the deck is extremely 10 rich.
4. Doubling down on A, 9 when the deck is extremely 10 rich.

Of course, the most important play adjustment can be deciding when to start playing at a table and when to stop.

A Simple Card Counting System

Let's start with a very simple system. After you have mastered basic strategy play, this system should only take a couple of dozen hours play to learn but it will dramatically increase your results. This system will involve a simple count, a running count, bet progressions and a few minor adjustments to play.

First the count. Our count will keep track of 10's and A's on one hand and 2's, 3's, 4's, 5's, and 6's on the other. Start by keeping a running count of your advantage or disadvantage. In the interest of simplicity we will start with a single deck. A deck of cards has 4 A's and 16 10's (4 each of 10, J, Q, and K) for a total of 20 cards that benefit the player. The deck also contains 20 cards that are advantageous to the dealer (4 each of 2, 3, 4, 5, and 6). As noted earlier, 5's and 6's are "better" for the dealer than 2's, 3's, and 4's but this is a simple count. Much more sophisticated counts exists and the reader is encouraged to master this one first and then begin to look at more complex systems.

So, we know we start with a running count of zero. Twenty cards for the player, twenty for the dealer - no advantage - zero. As play begins, you will add 1 to your "count" for every 2, 3, 4, 5, or 6 that is dealt. For each 10 or A, subtract one. The idea

is simple. If a 5 is dealt, the deck now contains 20 "10s" and 19 of the "other" cards. More tens is to your advantage so you add one. If a 10 (or J, Q, K, or A) is dealt next, the advantage is back to 0 (19 to 19). Now you have a running count. As long as play continues with the same deck you will add 1 for every 2, 3, 4, 5, or 6 you see and subtract one for every 10 or A you see.

The next step is to adjust the running count so that you have a "real" count for the entire shoe. In a one deck game (which is rare), this is simple; but in a multi-deck game the advantage will be significantly different (though still an advantage). Compare our one deck example with a six deck game. Let's assume in our one deck game you have seen 11 "10s" and 14 of the "other" cards. This gives you a running count of +3 (0 plus 14 minus 11). In a six deck game you will have the same running count but the advantage is not as great.

Looking at the actual number of cards we will see the difference. In our one deck example, there are 9 "10s" left and only 6 of the others. If there are six decks in the shoe, and the same number of cards have been dealt, you have 109 "10s" and 106 "other" cards. It is clear that a 9:6 advantage is much different than a 109:106 advantage.

The easiest way to adjust for multiple decks is to divide your running count by the number of decks. In our example, you would have an advantage of +3 if there were only one deck, but an advantage of +0.5 if there were six decks. ALL OF YOUR BET ADJUSTMENTS NEED TO BE BASED ON THE "REAL" COUNT. If you have a real count of +0.5, you have an advantage. If you have any number less than +0.5, you do not have an advantage.

Now that you have counting down, we will discuss what to do with that knowledge. Let's take a look at a simple bet adjustment strategy that can be mastered by anyone. Start with a base unit for your betting. Your bet on each hand should be calculated based on this base unit of betting as follows. Your "default" bet is 2 times the base unit. When your "real" count drops below 0, drop your bet to the base unit. When your "real" count is greater than or equal to one, you should increase your "default" bet by the amount equal to your base unit times the count.

Let's look at an example. If you base unit is $5, play would go as follows. When the count is positive but less than one, you will bet $10 (2 times $5). When the count is below zero, you will bet $5 (base unit). When the count is +1, you will bet $15 ($10 + $5 times count). If the count is +3, you will bet $25, etc.

Is Counting Cards Illegal?

In a word, no! Many people think that casinos implement rules to try and deter card counters, but the truth is that the rules are usually implemented to deter cheating and many times these rules do put counters at a disadvantage. A simple example is the face down game. Casinos implemented the face down game to stop real cheaters but obviously a face up game would be better for a card counter.

That being said, casinos do not like card counters. You will learn as you get better at counting that some of the best betting opportunities arise when you can join a game only after the deck is in your favor. Unfortunately, most casinos will resort to all sort of tactics to keep you from standing around a table and studying play at the table. Don't ever walk up to a table and watch a game with a pen and notebook in hand, for example.

Playing Blackjack Professionally

Can you play blackjack professionally? Of course you can. As we have seen, blackjack is a winnable game and anyone willing to invest in hours of practice will consistently have an advantage over the house. Once you have mastered the techniques presented up to this point, you may want to learn some of the more advanced techniques.

How to Practice

Take a deck of cards and deal off one card at a time while trying to keep a running count. After all cards are dealt, your count should be zero. If you get good at this at increasing speeds, you should move to dealing off the cards in pairs and learn to count two at a time. This will train you to look at cards in groups which will leave you more time during games to calculate your bet, make play adjustments and "act natural."

A More Complex Betting Adjustment Scheme

The most efficient betting scheme is called the *Kelly Criterion*. This system, named for the mathematician J. L. Kelly, is much more complex than the system we learned earlier but it is much more efficient. This system dictates that the player should bet the percent of his bankroll that corresponds to the probabilis-

tic advantage you have on that hand. If your bankroll is $1,000 and you have a 1% edge, you will bet $10. If you have a 2.5% edge, you will bet $25.

This system relies on knowing your edge at any point in the game. This can be calculated using the following formula:

edge = expectation + (0.5 * real count)

We did not talk about expectation in this book but it represents the player's expectation of a win if following basic strategy and it is dependent on the rules of the casino. A player who follows basic strategy in a single deck game where the dealer stands on soft seventeen, doubling down is permitted on any two opening cards (but not after splitting) and there is no surrender will have an expectation of 0%. He will be even with the house. Use the chart below to get an idea of your expectation based on rule differences.

Rule Variation	**Impact on Expectation**
Early Surrender*	+ 0.62
Late Surrender (1 or 2 decks)	+ 0.02

Rule Variation	Impact on Expectation
Late Surrender (4 or more decks)	+ 0.07
Doubling on three or more cards*	+ 0.20
Drawing more than one card on split A’s*	+ 0.14
Doubling on split pairs	+ 0.10
Re-splitting of A’s	+ 0.03
Re-splitting of pairs	+ 0.05
No doubling on 11*	- 0.89
No doubling on 10*	- 0.56
No doubling on 9	- 0.14
No doubling on soft hands	- 0.14
Two decks	- 0.38

Rule Variation	Impact on Expecta-tion
Four decks	- 0.51
Six or more decks	- 0.60
Dealers hits soft 17	- 0.20

*Rarely found these days

Conclusion

Blackjack is a winnable game!

You cannot expect to become an expert over night, but you can win consistently. Spend time memorizing basic strategy guidelines and practicing your card counting and you will undoubtedly have an edge against the dealer.