Craps is the fastest, most thrilling table game in the casino. When you pass by a noisy craps game, you can almost smell the adrenaline as the dice fly through the air. The game induces the giddiest highs and the most miserable lows in its players.

Craps once ruled the roost at the casino. This was the game of choice for invertebrate gamblers and thrill-seekers. Unfortunately, the game has steadily lost its popularity over the last 20 years, most likely because new players don’t want to take the time to figure out the game. The problem with craps is that it’s not a game that a newcomer feels comfortable joining; the intimidation factor is very high. The layout is complex, the jargon incomprehensible, and the chaotic activity calls to mind the floor of the New York Stock Exchange.

Relax. It’s really not that scary. If you stick to the simple bets—which, happily, are the ones with the best odds—you can quickly get a grip on craps and discover its incredible appeal. You won’t find a spot in the casino with more personality and camaraderie: Players let it all hang out at the table as they celebrate and despair together. If you give this exhilarating and streaky game a try, you may find yourself hooting, hollering, and high-fiving like an old pro. However, if you become part of the craps clique, you’ll also experience the doldrums and lifelessness of a “cold” table.

One must approach craps with some caution—not because it’s innately difficult, but because it’s a fast and volatile game. Money can be won and lost very, very quickly at these tables. The game also has a split personality—there are a few excellent bets (with a low house edge) and a whole array of awful ones. After you’ve read this chapter, you’ll be able to distinguish the savvy wagers from the sucker bets.

HOW CRAPS IS PLAYED

THE SCENE

You can’t miss the craps table in the casino. It’s large—about three times the size of a blackjack table—with high sides and a sunken layout. Take a look at the craps table on page 125. Kind of makes you dizzy, doesn’t it? Have no fear—all will be explained soon. Two quick notes to reassure you: 1) Notice the layout is the same on the right and left, allowing bettors on both sides of the table; 2) The bets in the middle of the table are all lousy and should be ignored. See, it’s already less intimidating!

The table can accommodate 10 to 12 players—and they’ll all be standing. Generally players don’t get a seat unless they have a physical impairment or untold wealth.

A craps table is usually run by four casino employees known as the crew. Two dealers stand on the inside of the table (bordering the pit). They are each responsible for changing cash into chips and collecting and paying off bets on their half of the table. In between the two dealers sits the boxman. He oversees all the actions, settles any disputes, and keeps an eye on the other three employees. He also examines any dice that go off the table. The stickman stands across from the boxman on the other side of the table and handles the dice with a long, curved stick, pushing them toward the player who’s rolling and retrieving them. The stickman controls the tempo of the game, calls
out the rolls, attends to the center bets (the lousy ones in the middle), and maintains dice security. The stickman also acts as a salesman, using entertaining patter to hawk some of the worst bets on the board. (Find out what he’s talking about in “Dice Dialogue” on page 138.)

You should be able to find $5 minimum craps at just about any casino. Sometimes you’ll find tables at $3 or even less at the less ritzy casinos. Find an open area on the rail to set up shop. If you need to buy in for chips, put your money down on the table. It can’t go directly into the dealer’s hand. You should wait until the dice are at the center of the table before taking any actions. It’s considered unlucky and bad form to have the dice hit your hands while you’re fussing over the table. It’s almost time to introduce you to the table action, but first let’s take a quick look at dice and the not-so-awful mathematics needed to really understand craps.

**DICE 101**

The easiest way to get comfortable with craps is to get comfortable with the dice. In case you’re dropping in from Mars, a die is a cube with one to six dots (pips) on each of its sides. Thus, there are six possible outcomes for the roll of a single die (1, 2, 3, 4, 5, or 6). Craps is played with a pair of dice; this makes for $6 \times 6 = 36$ possible combinations on each roll. Since only one combination of the dice can give you a total of 12 (6–6), the probability of this occurring on any given roll is $\frac{1}{36}$. On the other hand, you have six ways to make a total of 7 (1–6; 2–5; 3–4; 4–3; 5–2; 6–1); this gives you a probability of $\frac{6}{36}$ (or $\frac{1}{6}$) to get a 7 on any roll.

Get acquainted with the chart on page 126—it summarizes all the combinations for two dice and supplies just about all the “dice sense” that you’ll need. (Note: One white die and one black die are used to distinguish between different combinations. In other words, a roll of 1–2 is distinguished from a roll of 2–1.) Looking at the chart you’ll see that everything is symmetric around the number 7. A 6 is as likely to come up as an 8, a 5 is as likely as a 9, etc. This “pairing off” will make figuring the odds and probabilities for different rolls twice as fast. For instance, the odds against rolling a 10 are 33–3 (3 ways to make 10, 33 ways not to), which reduces to 11–1. The odds against rolling a 4 are the same: 33–3, or 11–1.

Even more essential for craps is the ability to calculate the odds of any number being rolled before a 7. The odds against rolling a 5 before a 7 are 6–4 (six ways to make the 7 versus only four ways to make the 5). A little further on in this chapter, I’ll give examples of how this chart can be used to calculate the house advantage on
**THE ACTION**
Although there’s always activity at a craps table, the best place to begin to understand the game is with a new “round” of play, which begins when one of the players is offered five or so dice by the stickman. If the player wants to roll, he selects two of them, and becomes the **shooter**. This player then generates all of the action in the game, and the other players will bet on.

In order to roll the dice, the shooter is required to make a line bet—on either the **pass line** or the **don’t pass** line. (See the diagram on page 127.) The other players at the table will also be placing bets on the layout. Shooters most commonly bet the pass line; most of the other bettors will make this bet as well, in “support” of the shooter. The alternative is to bet don’t pass, which is a bet against the shooter’s success. The payoff for either a pass bet or a don’t pass bet is even money, meaning if you bet $5, you’ll win $5 plus get your original $5 bet back.

In order for any roll to be considered legal, the shooter must fling/throw/roll the dice so they rebound off the opposite wall. The shooter’s first roll of the dice during a round is known as the **come-out roll** and there are various ways for players to win and lose on this roll.

Let’s look at the rules governing a come-out roll. These rules never vary, no matter what bets are placed on the layout.

- If the come-out roll is a 7 or 11 (a **natural**), the pass line wins and the don’t pass loses. The round is over.
- If the come-out roll is a 2, 3, or 12 (collectively known as **craps**), the pass line loses and the don’t pass line wins or ties. The don’t pass bet will be a tie when the come-out roll is 12 (sometimes 2); the don’t pass line will “bar” the

<table>
<thead>
<tr>
<th>Roll</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1/36</td>
</tr>
<tr>
<td>3</td>
<td>2/36</td>
</tr>
<tr>
<td>4</td>
<td>3/36</td>
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<tr>
<td>5</td>
<td>4/36</td>
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<tr>
<td>6</td>
<td>5/36</td>
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<tr>
<td>7</td>
<td>6/36</td>
</tr>
<tr>
<td>8</td>
<td>5/36</td>
</tr>
<tr>
<td>9</td>
<td>4/36</td>
</tr>
<tr>
<td>10</td>
<td>3/36</td>
</tr>
<tr>
<td>11</td>
<td>2/36</td>
</tr>
<tr>
<td>12</td>
<td>1/36</td>
</tr>
</tbody>
</table>
roll that is treated as a tie. The round is over.

- If the come-out roll is a 4, 5, 6, 8, 9, or 10, then that number becomes the shooter’s point. The dealer will then take a puck (button) that says off on its black side and on on its white side, and place it on side up on top of that number on the layout. This reminds all players what the point is. The outcome of the pass line and don’t pass line bets is yet to be determined. The shooter will keep on rolling until one of two things happen: He rolls the point number (makes the point) or he rolls a 7 (sevens out). If the point is rolled first, pass line bettors win and don’t pass bettors lose. If the 7 is rolled first, the reverse is true—pass loses and don’t pass wins. In either case, the round is over.

A new round always begins with the same shooter until he sevens out. If the shooter rolled a natural or craps on the come-out roll, or if the shooter made his point, he gets to roll again. Only when the shooter sevens out are the dice offered to the next player clockwise at the table. And the process begins anew.

Here are a couple of points to spare you confusion:

1) Yes, 7 is a winner on the come-out roll for pass line bettors and 7 is a loser for those bettors on any subsequent roll. The reverse is true for don’t pass bettors.

2) The numbers 2, 3, 11, and 12 have no meaning for pass or don’t pass bettors after the come-out roll.

The above sequence is the crux of craps and the engine that drives the game. Of course, there are many more options to cover—some essential, most worthless—but if you grasp the come-out roll and its various outcomes, you’re well on your way to becoming a smart craps player.

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**THE BETS AND THE ODDS**

Where you bet your money is what will make or break you at the craps table. The house advantage can range from less than 1% to over 16%. For the mathematically inquisitive, the analysis of the bets below will provide some calculations for the house advantage. It would be repetitive to do this for all the craps bets, but you can try it yourself if you’re so inclined.

**THE PASS LINE BET**

Let’s refresh our memories about the mechanics of the pass line bet: It is placed immediately prior to the come-out roll. If the come-out roll is 7 or 11, you win. If it’s 2, 3, or 12, you lose. Any other number becomes your point. If your point rolls before 7, you win. If 7 rolls before your point, you lose.

This is the bread-and-butter bet for most players. It’s readily accessible to all bettors around the whole length of the table. Most players bet the pass line because it means they are going “with” the shooter, hoping that she gets a pair of hot dice and rolls all night.

Keep your eyes on the point markers, which
indicate the come-out and point rolls. If the current roll is a come-out roll, the disks are on
OFF and off to the side of the betting layout. When a point is established, the disks are
placed in the appropriate point boxes (the numbers above the come line). These point markers
cue you in to whether the next roll is a come-out roll or a point roll.

The house edge for pass line bets is 1.41%. This is one of the best bets in the casino—
especially because it requires no skill. Rarely do you find such a low house advantage on bets
that are pure luck.

Bets on the pass line cannot be removed or reduced after a point is established; they can,
however, be increased. You do not want to increase the bet. The biggest advantage for the
pass line player is on the come-out roll where you have a better chance of winning than los-
ing (9/5 chance to roll 7 or 11; 4/5 chance to roll 2, 3, or 12). Once a point is established, the
odds are against the pass line bettor. Along the
same lines, the casinos, in their never-ending
generosity, will let you bet on the pass line in
the middle of a round, after you have missed
the come-out roll (this is called a put bet). Again, it would be foolish to do this because
your advantage has been sacrificed.

DON'T PASS LINE
We also covered this bet above. In summary: This is an even-money bet that must be placed
before the come-out roll. It's the opposite of
the pass line. On the come-out roll, don't pass
bettors lose on the 7 and 11 and win on the 2
and 3. If a 12 (or the 2 in a few casinos) is
rolled on the come-out, it's a push—no money
is won or lost. On point rolls, the bet wins if 7
appears before the point; it loses if the point
number appears before a 7.

Some players are drawn to the don't pass bet
because of an enticing bit of faulty logic. They
figure, "If the house has an advantage on the pass
bet and this is the opposite, then I must have the
advantage over the house." Uh-huh, and casinos
are run by independently wealthy philanthro-
pists. The catch is the "bar" number indicated by
a pair of dice on the don't pass line on the layout.
All it takes is for this number to result in a tie
and the house magically gets its edge back. Let's
take a look. We can assign a value to the don't

pass bet winning by subtracting the chance of
getting a 12 (assuming that's the bet that ties)
from the chance of a pass line bet losing. The
chance that a pass line bet loses = 0.507071 (see
page 129 to learn how this is calculated).

\[
\text{Chance of rolling 12 on come-out roll} = \frac{1}{36} = 0.027778
\]

\[
\text{True probability of winning don't pass} = 0.507071 - 0.027778 = 0.479293
\]

\[
\text{House edge} = P(\text{pass win}) - P(\text{don't pass win}) = 0.492929 - 0.479293 = 0.013636
\]

Thus, the house edge for the don't pass is
1.36%. It's another excellent wager that is
slightly better than the pass line bet, but only
marginally. If you bet $2,000 an hour, the don't
pass bet would save you $1 an hour over the
long run compared to the pass bet.

Despite the allure of a quality bet, don't pass
bettors are rare birds in the casinos. Why?
Because most bettors crave the action of a hot
shooter. They want to see naturals and points
made, not craps. It takes some fortitude of
character to withstand social pressures and
make what is often referred to as the "wrong"
bet; of course, there is nothing inherently
wrong with the bet. Occasionally, you'll see a
pessimistic shooter bet the don't against him-
self. (Of course, it's not really "against" himself
because if he wins, he wins. Why should it
matter how he does it?)

For the don't bettor, the hard part is the
come-out roll. The odds are against him with
the 7 and 11 as winners. Once a point is rolled,
however, the odds are always in favor of the
don'ts. Remember: There are six ways to make
7 and fewer to make any of the other numbers.
It won't surprise you to learn that the casino
will gladly let you remove (take down) or
decrease a don't bet after a point has been
established. Never do this unless you realize the
last $20 to your name is on the table (in which
case, you have bigger troubles). When you have
the edge, don't let the casino off the hook.

THE COME BET
If craps only offered up the pass line bets, even
the greenest novice could walk over to a table
and be confusion-free after a few minutes of

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INSIDE THE NUMBERS

You can win a pass line bet in one of two ways—winning the come-out roll or making your point—and both ways need to be factored into the total probability of winning this wager.

<p>| Probability of Winning Come-Out Roll |
|-------------------------|---------------------|</p>
<table>
<thead>
<tr>
<th>Roll</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>$\frac{4}{18}$</td>
</tr>
<tr>
<td>11</td>
<td>$\frac{2}{18}$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probability of Making a Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Establishing</td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>Point</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>4</td>
</tr>
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<td>5</td>
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<td>10</td>
</tr>
</tbody>
</table>

P(win pass line bet) = P(win come-out roll) + P(win by making point)
= ($\frac{4}{18}$ + $\frac{2}{18}$) + ($\frac{1}{14}$ + $\frac{1}{6}$ + $\frac{5}{12}$ + $\frac{5}{11}$ + $\frac{25}{196}$ + $\frac{25}{196}$ + $\frac{25}{196}$ + $\frac{1}{90}$)
= 0.492929

Once we have the probability of winning a pass line bet, we can find the probability of losing the same bet.
P(lose pass line bet) = 1 - P(win) = 1 - 0.492929 = 0.507071

The house edge is then calculated by subtracting the probability of winning from the probability of losing.

House edge = 0.507071 - 0.492929 = 0.014142 = 1.414%

The craps veterans would be bored to tears. Dice players want betting action and, in that regard, the casino always aims to please.

Thus, we have the come bet. The come bet (note the large betting box marked come on the layout) allows a bettor to make a "virtual" pass line bet even after a point has been established. The come bet turns the next roll of the dice into a come-out roll and starts its own round of play, separate from the original pass line activity of the shooter. To clarify: If the shooter is rolling the dice in pursuit of a point and you place a come bet, the next roll of the dice will affect your come bet as if it were the come-out roll for a pass line bet.

The same rules apply to the come bet as to the pass line bet. If a point is rolled, the come bet is moved to the point box of the specific number rolled. This will be resolved just like a pass line point number: If the specific number is rolled first, the bet wins; if 7 is rolled first, the bet loses. The dealer orients your come bet in the place bet box so that it corresponds to your position at the table.

Let's look at an example. You have a $5 bet on the pass line and the shooter establishes 8 as the point. You take another $5 chip and place it in the come box. Here are the possible outcomes of the next dice roll: