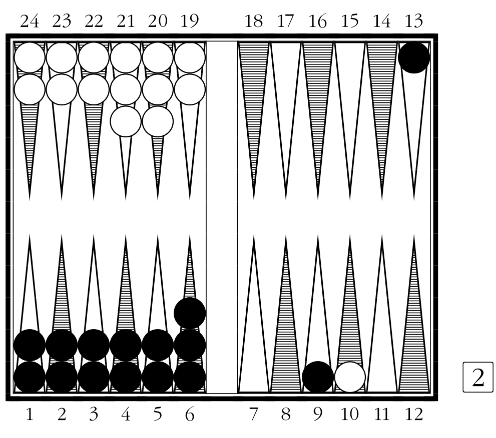
Cubes And Contact

End-Contact Positions

End-contact positions arise when contact between the two sides is on the verge of being broken. They encompass a great variety of sub-types—too many to classify, really—but in essence they are all positions in which one side's chances in the race are enhanced by the prospect of hitting a blot in the next roll or two. Sometimes the equities and cube actions can be calculated easily to a high degree of accuracy, but more often they call for a mix of calculation, judgment, and intuition.

Position 4-1

66

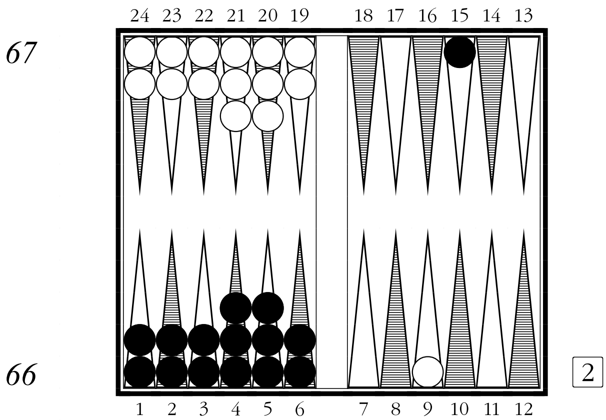


70

Black on roll

Position 4-1 is simple enough. Still, I have seen it muffed from both sides by experienced intermediates: some won't redouble as Black, and some will drop as White. The race is just about dead even. Black is four pips behind, but on roll. He has a direct shot. At a distance of three pips from the blot, fourteen numbers out of thirty-six hit—the eleven direct 3's plus 21 plus 11. Black will win the fourteen games out of thirty-six where he hits (for all practical purposes). That leaves twenty-two games, and since the race is even we can divvy them up between the two sides: Black gets eleven and White gets eleven. Eleven is more than the nine that White needs to take (nine being 25% of thirty-six). And of course Black should redouble, since he is a 25-to-11 favorite with fourteen instant crushers.

Position 4-2 contains a little trap. You might be tempted to generalize Position 4-1 naively, thinking that more shots and a race lead would automatically give Black a much more powerful position. Try to identify the conceptual trap and solve Position 4-2 before reading on.



Position 4-2

Black on roll

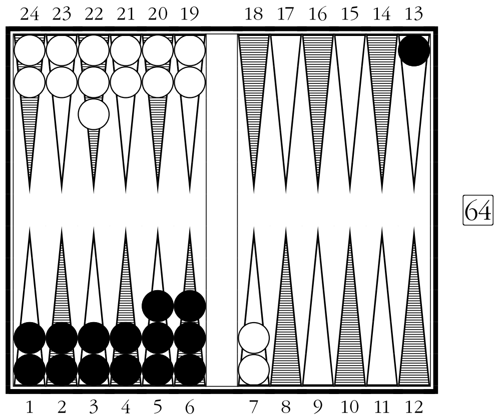
Yes, Black has seventeen shots here, but that's not the end of the story. Some of his rolls will neither hit White nor scoot safely past his blot, so Black may get hit himself. How many and how often? You could recount them, or you could recall from our study of bear-offs a few chapters ago that nine rolls fail to bear one checker off from the 6 point (which amounts to the same thing). So Black fails to get by or hit nine times out of thirty-six, leaving White a direct shot. White will hit about three of those.

So far we have accounted for twenty games out of thirty-six—Black hits seventeen times and "always" wins, and, likewise, White gets credit for three games. That leaves sixteen races to split between the two players. Black is winning the race, with a pip and the shake, but White needs to win only six races to justify a take. White is surely not better than a 2-to-1 favorite with just a one-pip lead. Once again, the take is clear.

Position 4-3 presents a fairly common occurrence. White was playing a holding game. Black rolled a 6-something and had to leave a shot. White missed. Is it all over?

Position 4-3

81



66

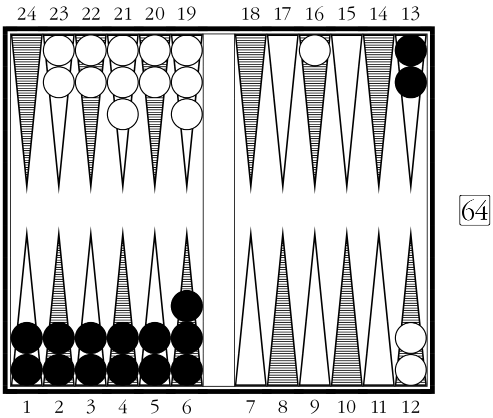
Black on roll

Many will drop this without much thought, thinking something like, "Well the race is hopeless, and I probably won't even get a shot, much less hit it, so I might as well give up." But two slim chances sometimes add up to something considerably better than none. Here the combination of White's chance to hit the Black blot plus the outside chance of winning the race let him take the cube.

Black fails to get home safely with the same nine rolls as in Position 4-2, plus the rolls that are blocked by White's point: 51, 42, 66, 33, and 22. That's a total of sixteen rolls. White will obviously hit more than five times out of thirty-six. An exact calculation yields something close to 5.5 hits (a number worth remembering, since the situation is common). White is reaching for nine wins to take, so the question is whether he can win in the race 3.5 times out of 30.5. Now I don't happen to have any generally reliable guidelines for computing the trailing side's racing chances in a position like this. They all have their own peculiar features that distinguish them from ordinary contact-free races. (Note, for starters, that Black's 66, which would normally gain twenty-four pips, doesn't move at all.) But Position 4-3 makes a handy reference—White has just about what he needs to take in a money game, and not much more.

Position 4-4

85



74

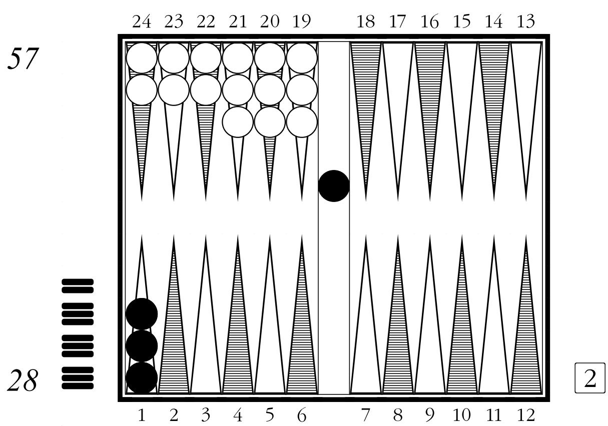
Black on roll

It is tempting to dismiss the midpoint contact as trivial. The fact that it isn't trivial is surprising enough to have resulted in a *proposition* (an extended simulation, played for money) in Boston a few years ago, with a similar position. Black is leading in the pipcount 74 to 85, which would normally make it a solid drop for White. The mere fact that Black could roll 61 and get hit isn't enough to tip the scales. But Black is basically stalled if he rolls any ace whatsoever. 51, 41, 31, 21, and 11 force him to shuffle checkers in his home board, and bring him no closer to beginning his bear-off. As a result, White has a close take.

One-Checker Closeouts

The one-checker closeout positions are an important class for cube action. Positions of this type can arise from deep anchor games and backgames as well as from games in which one player gets closed out in the middle-game, then hits his opponent while the opponent is bearing off, and then closes him out in turn. Almost any game that is decided by contact has the potential for a reversal that will take the shape of one of these positions. Usually, especially in money games, the cube has already been turned at least once, so the stakes are high. A great variety of positions and cube-action problems can arise, but often just comparing them to the first two positions below, and using some common sense and logic, can solve them.

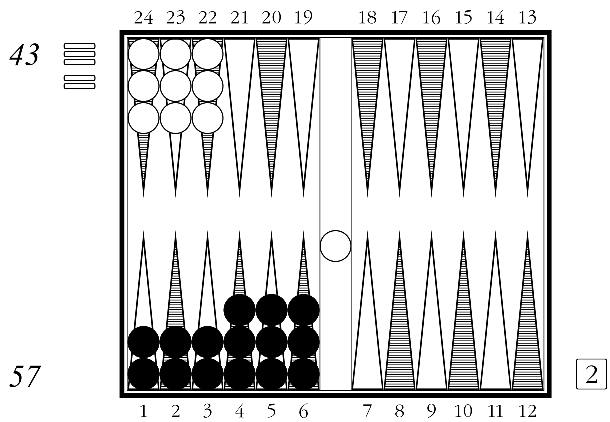
Position 4-5



Black on roll

In Position 4-5, Black bore off eleven checkers before he got hit. Now you may wonder exactly what he's doing having the cube on his side at this point, but there are some reasonable scenarios. Maybe Black got doubled early, turned the game around with a super-joker, and decided to play on for the gammon. In fact, he could have continued to play for the gammon after he got hit—White's last roll might have been a very lucky 55, say, that let him complete the closeout and get a perfect bear-off distribution at the same time. It doesn't really matter—even if Position 4-5 were not possible with perfect play, it would still be very valuable as a reference position.

If Black doubles or redoubles, White has a close take. I was under the impression for years that it was a drop, even though I had rolled the thing out a couple thousand times. Shift White's spares down to the 4, 3, and 2 points and he has to pass. White will be able to take next time unless he rolls 44 or 55, so technically Black doesn't even have a double.



Position 4-6

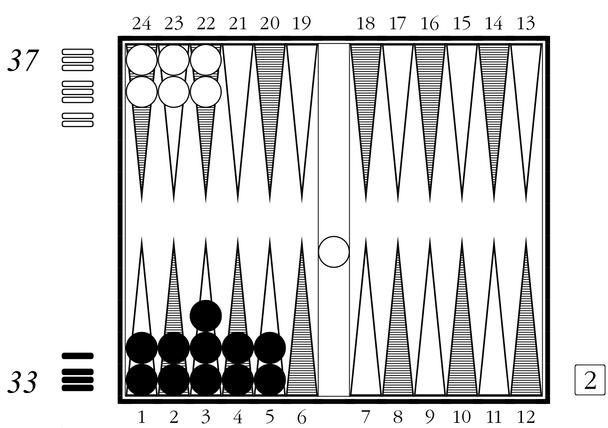
Black on roll

Position 4-6 is the flip side—here, it is the player with checkers off who gets doubled and has the close decision. Black doubles or redoubles, and White should drop—just barely. All you have to do is move a White home-board checker from the 3 point down to the 1, and (according to Snowie) White can take.

If you fill in the gaps from here, these two positions will let you make an educated guess about any similar position, and you won't be totally out of the ballpark. Consider, for example: If eleven off means redouble for the player with men off, and close take, and if five off means redouble for the player with the closed board, and close pass, what should the even-money position look like? Eight off, of course—average of five and eleven. One could even speculate, given the tilt in favor of the closed-board player between our two references, that against eight off, the closed-board player would be a slight favorite. Indeed, he is a slight favorite—set up an otherwise comparable eight-off position and you will find that the closed-board player should win about 51% or 52% of the time.

Tough cube decisions often come up when the closed-board player is bearing off and the other player has more than five off. Many players use a rule of thumb for these positions articulated by Bill Robertie in the first edition of *Advanced Backgammon*: Redouble when you have five fewer men off than your opponent, and your opponent is still on the bar. Now as rules of thumb go, this one is not too bad. Note, for instance, that it works in Position 4-6. But it does ignore some important distinctions—such as whether you have a closed board or, say, a three-point board.

I approach these problems when they come up on a case-by-case basis, from first principles. I want to be pretty sure, before redoubling, that I'll still be a solid favorite if my opponent enters, and I want to be going past the point of market-loss if he dances. The first part of this criterion tends to imply the second, so the stack-and-straggler formula for effective pipcount proves to be very useful. Consider Position 4-7. Black, on roll, is quite likely to give up a point and bear off one checker. A pretty good roll for Black is 63, and let's assume that White also rolls 63. Then Black will be in a 5-plus roll position for an effective pipcount of 36 plus a couple of pips. White will have seven checkers and a 16 point straggler for 7x3.5 + 16 = 40.5. So this position fits the ticket, and Black should redouble. White has a comfortable take.



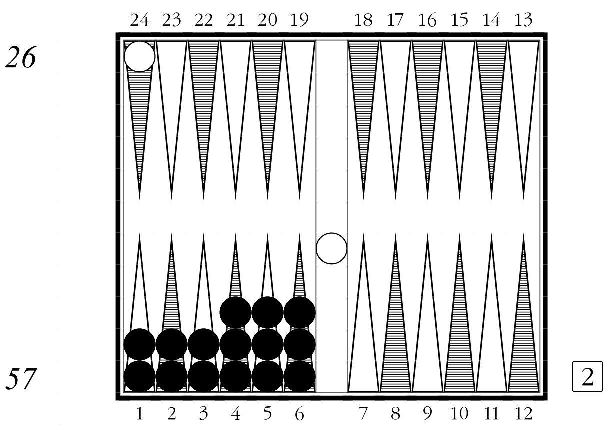
Position 4-7

Black on roll

The extreme cases of one-checker closeouts don't have a lot of significance for normal cube action, but they have some intrinsic interest. It's great fun to beat your opponent (less fun for him, admittedly) by closing out his fifteenth checker after he has borne off the other fourteen. Given that you have a close take, therefore something like a 24% chance of winning, when your opponent has eleven off, what should your probability of winning be when he has fourteen off? A reasonable guess would be three fourths of the way down from 24% to zero, which would be 6%. Actually, with perfect distribution it turns out to be 7%, or perhaps even a bit more than 8%, if you believe Snowie rollout results. These games always seem to come up in tournament matches at double match point (for perfectly logical reasons, if you think about it), and if you're lucky enough on any given day to win against those odds, then you're probably going to win the tournament!

Give the hit player a second checker on his ace point, producing Position 4-8, and the effect is remarkable: the closed board's winning percentage shoots all the way up to 20%. The checkers-off player would prefer, in fact, to have only twelve off with a made ace point.

Position 4-8



Black to play 32

Black should play hyperaggressively in many sequences, leaving blots, in hopes of getting hit and picking up White's other man. The best play of a 32 roll, for instance, is to bear off two men and leave two blots in Black's home board!

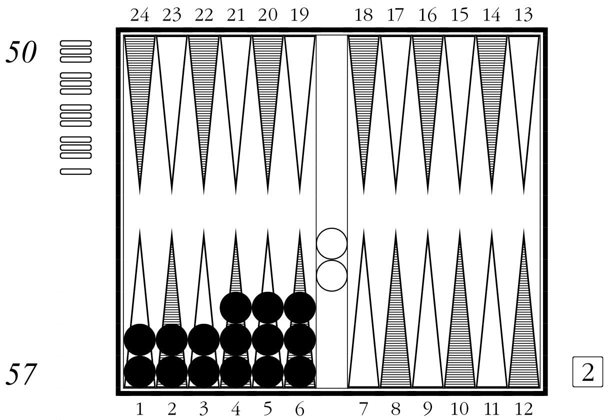
Two-Checker Closeouts

A working knowledge of the doubling cube is much easier to come by now than it was only a decade ago. Before the neural networks appeared, sources of information about the equities and cube actions associated with contact positions were limited and often unreliable.

One could do manual rollouts, setting up the same position over and over again, playing it out, and tallying the results. Tedious? Indeed. I recall rolling out at most one or two positions using a physical board and dice before deciding that there were better ways to spend my time, even if I was going to devote a substantial portion of it to backgammon. A couple of years later, I wrote a rather primitive computer program that would display a board on the screen, generate dice rolls randomly, let me move the "checkers" around, tabulate the results, and play out (or settle) the post-contact positions. Even so, it was difficult to get large enough samples, to ensure that my checker-play was always up to snuff, and to factor in cube value accurately.

Proposition play was always more valuable than rollout results. A take/drop proposition, for example, is a way to settle a difference of opinion about whether a position is a take or a drop. Suppose A thinks a certain position is a take while B thinks it is a drop. Then they can play a series of games, starting each game at the position in question. A plays the taking side, owning the cube at 2 and getting a point added to his score for each game. If the position is indeed a drop, that means that B's equity will be more than a point, which will compensate for the one-point *vig* and give him a profit. But if it is a take, then A will come out ahead. When two competent players have played a *prop* for serious stakes until one of them changes his mind, you can have a degree of confidence that the outcome reflects an underlying truth (though, in retrospect, it doesn't always).

This chapter's positions make up one of the most basic classes of endings. They are simple (at least on the surface) and everyone who plays backgammon with the doubling cube should know them. In 1987 an acquaintance lost a substantial sum defending Position 4-11 as a take, for no better reason than having concluded from his reading of one of Bill Robertie's books that it should be. (Note: If you give Robertie a fair and careful reading, he didn't actually *say* that that exact position was takeable.) I mention this partly to remind you to beware of overgeneralizing the material you are about to read. As always, *caveat lector.*



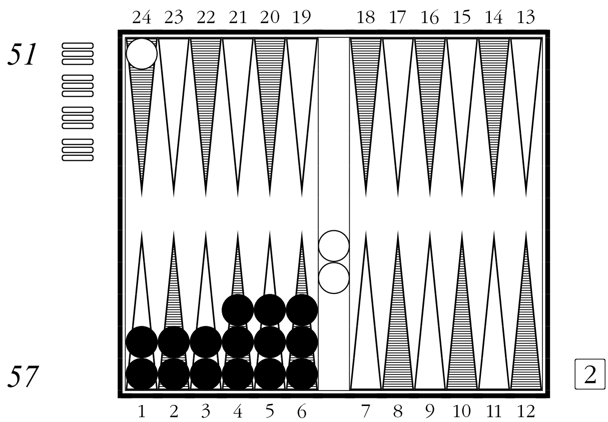
Position 4-9

Black on roll

You may recognize this position as the result of the *coup classique* mentioned in a previous chapter. Black will win about 68% of the time, but should not give even an initial double. Why not? Because Black can lose his market here only by rolling 66 and having White dance. Actually, Black should not double even if he were to know ahead of time that he would roll 66. The gain after a dance by White would then be only about 2/100 of a point, but the loss when White rolls a 6 (much less 66!) would be almost one-half a point.

With the help of a neural net program you can answer the really important questions about positions like the above, which involve the effect of variations. If Black should not double in Position 4-9, when should he? It turns out that there is only one closed-board position that is a double, and that one is also a redouble. It occurs when Black manages to take off all three spares, by a sequence such as 64 followed by 32. Positions where Black clears the 6 point and takes off two checkers (with White dancing in the meantime) will normally be initial doubles.

Most of the time, Black can redouble after he has taken off three checkers, if White remains on the bar with both men. The exceptions involve awkward positions with many blot numbers, and positions with gaps. Some of the redoubles will be takes for White, and some will be drops. With four off for Black, White will usually have to drop.

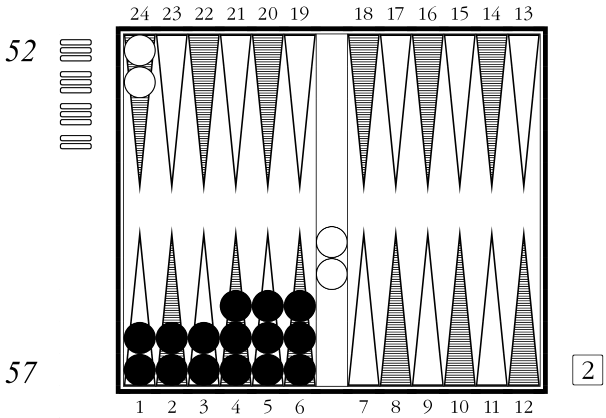


Position 4-10

Black on roll

Position 4-10 falls between Positions 4-9 and 4-11 in spite of the fact that White has a blot. The blot offers Black some extra opportunities, since the variations in which he gets hit give him a chance to hit back. Black's winning probability goes up to 75%. This position happens to be one (of many) for which Snowie changed my opinion about the cube action. A long time ago I had jumped to the conclusion that Black must have a redouble because his cubeless probability of winning is 75%. But it seems that the market-losers just aren't there. If Black takes off two checkers, White will still be able to accept a double. Black *does* have an initial double, though. The only immediate market-losers are 66 or 55 followed by a dance, but those are enough. What makes Position 4-10 a double, while Position 4-9 is not, is the fact that here Black is still doing well after 66/6x. He does not "lose his double" in this variation.

Position 4-11

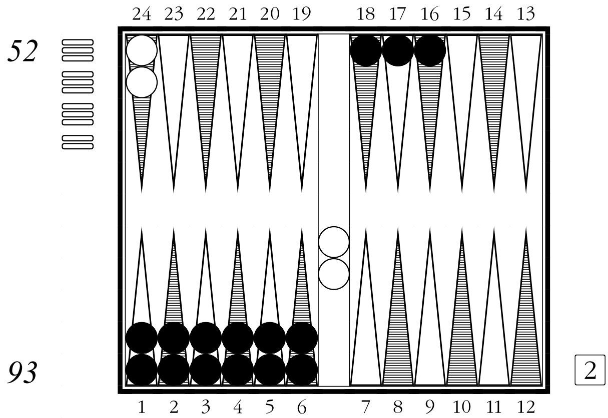


Black on roll

In Position 4-11, Black redoubles and White has an extremely close pass. Snowie rollouts indicate that Black's equity after White takes a 2 cube is about 1.02. Something as close as this, by the way, is a practical take in a money game against a significantly weaker, or sufficiently *steamed*[5], opponent. There is plenty of room in this position for errors in checker-play, or for an incorrect take or drop of a redouble later if White turns the game around. At the same time, it is important to keep in mind that White's results will be significantly worse than the theoretical value if he fails to make the redoubles on time.

Black's spare checkers are perfectly distributed in Position 4-11. Most likely, any change whatsoever in their placement (aside from bearing them off, of course) will let White take the cube. (With spares on the 6-5-3, it is too close to call until Snowie has rolled out at least 10,000 trials.)

[5]*Steam,* verb: To lose one's emotional stability in a gambling context. To take bigger and bigger risks in an effort to recoup previous losses. See: g*oing on tilt.*

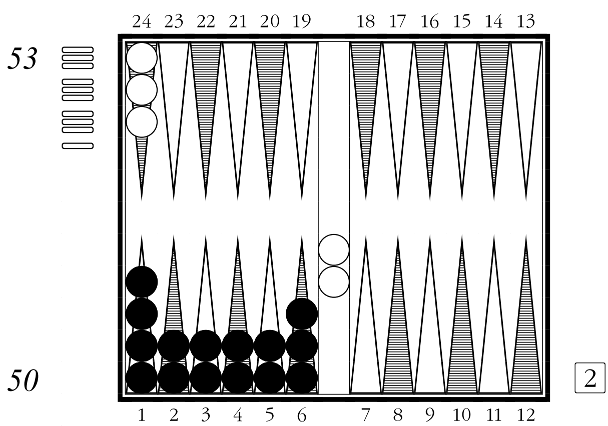


Position 4-12

Black on roll

From Position 4-12, it is difficult for Black to bear in to a perfect position, and even more difficult for him to roll so badly that he never gets to a clear redoubling position. Volatility is minuscule, and it really doesn't matter (theoretically) whether Black redoubles or rolls on. I'd redouble, though. Sometimes they drop!

When we add a third checker to White's ace point, most closed-board positions will be solid drops. Exceptions? Position 4-13 will do the trick. In fact, it seems that White will be able to take any position where Black has two men on the lowest two points. These positions, though takeable, are redoubles for Black.



Position 4-13

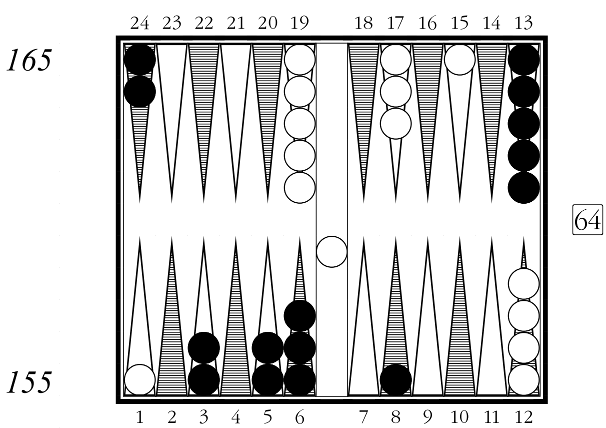
Black on roll

Add a fourth man on the ace point for White, and even Position 4-13 turns into a drop.

33 Opening Blitz Doubles

Doubling-cube decisions arise in every phase of the game, including the opening. Advantages bloom suddenly, with a joker that transforms an even or losing position into a powerhouse—or they may grow gradually and incrementally. Players often miss opportunities to double for no better reason than that they fall into the regular hypnotic rhythm of rolling the dice, moving the checkers, watching the opponent roll and play, rolling, moving . . . forgetting that there's another piece of equipment floating just beyond the perimeter of their mental box. No one is immune. Hence the anti-hypnotic counter-mantra: "Every Roll Is A Cube Decision!"

We began our study of the cube with the last roll of the game. Now let's look at the very beginning. White rolls 43 and chooses a major split—24/20, 13/10. Black rolls 33 and plays 8/5*(2) 6/3(2), making two home-board points and hitting one of White's blots. White dances, and the result is Position 4-14.



Position 4-14

Black on roll

Black has gained several advantages from his 33: three home-board points (and good ones!) to one, a ten-pip lead in the race, and a big initiative, White being on the bar and desperate to anchor. Black's basic game plan is to close White out by making the rest of his home-board points. If White anchors, then Black will still have the better board and a race lead. White's counterplay (if any) will arise after White anchors, and will consist of efforts to contain Black's stragglers as they come around the board; if nothing comes of those efforts, then White may still get a chance to hit a late shot and turn the game around.

From these general considerations we can't really conclude much about the relative likelihoods of the possible outcomes. It should be fairly clear to any player with a little experience that:

(1) Black is the favorite;
(2) A lot of Black's wins will be gammons, especially if he gets a closeout; but
(3) White still has a decent chance to win.

How large should the threat of getting gammoned loom in White's decision to take or drop? The possibility of losing a 4-bagger may seem a rather fearful one when you have the opportunity to evade it for one measly point. It is easy to jump to the conclusion that getting gammoned is twice as bad as losing. But in a very real sense it is only half as bad! Consider: When you lose a doubled game you pay two points instead of collecting two—the difference is four points. But the *additional* cost of a gammon is only two points—the difference between a two-point plain loss and a four-point gammon loss.

For example, suppose White wins 30% of his games and loses 70%, with no gammons for either side. Then his equity with the cube at 2 would be 2 x 30% - 2 x 70%, or -.8. Now toss 10% gammon losses into the mix, leaving the rest of White's losses plain losses. Then White's equity becomes 2 x 30% - 2 x 60% - 4 x 10%, which is –1.0. The effect is the same as if you had changed 5% of White's wins into losses, for an equity of 2 x 25% - 2 x 75% = -1.0. Turning 10% of total games from plain losses into gammons is just as costly as turning 5% of total games from wins into losses.

As a first approximation of the effect of gammons on the take/drop decision, we can estimate gammon losses and add half of them to the basic 25% take-point. For example, suppose you estimate that in Problem 1 you will be gammoned 20% of the time if you take a double. Then half of 20%

is 10%, and 25% plus 10% is 35%, so you might conclude that you need to be able to win 35% of the time in order to take.

The reality is usually more complex. When you own a live cube, the effect of additional gammon chances in the position, relative to losing chances, actually diminishes from 50%, because your ability to get to a redoubling position depends on your current probability of winning, and on how much improvement in this probability is needed before you can redouble. If you assume, for instance, that you can never win the game without first attaining a position in which you are 70% to win, then a current 35% winning probability means that you are no less likely to become a 7-to-3 favorite than to lose the game!

Detailed knowledge of these kinds of theoretical considerations is relatively unimportant, in practice, because all you can really do is to compare the position in front of you to some reference position that you remember (however vaguely), and then use intuition to adjust for the differences. The more positions you have seen and for which you have obtained equity and cube-action information, the better you will be able to make cube decisions in live games.

As for Position 4-14, it is a double and a take, and White's equity after a take is about –0.9. Fifteen years ago I would have dropped as White, because I would have evaluated it as being drastically better than a comparable double 5's blitz, my nearest available point of reference.

When you make checker-plays you are mentally comparing a set of positions and making the play that brings about the one you consider best, out of all the legally available possibilities. Cube decisions really boil down to the same kind of thing—comparing different positions and deciding whether one is better than another. The only difference is that when you make a cube decision you are comparing a reference position to the one you are looking at, whereas when you decide on a checker-play you are choosing among an array of possibilities that you visualize. Thus checker and cube skills overlap to a large degree.

Just knowing that Position 4-14 is worth .9 after double/take tells me quite a bit. .9 is close to 1.0, so any improvement in Black's position is likely to make it a drop. (After all, the game has just begun and Black's equity has already increased all the way to .9 from zero.) .9, in a position with a lot of volatility, makes the double automatic: market-loss is imminent.

In cubeless play, Black wins a plain game 37% of the time and a gammon 30% of the time, for a total of 67% wins. This would make it a drop except for the value of cube ownership, which is very substantial in these blitz positions.

Position 4-15

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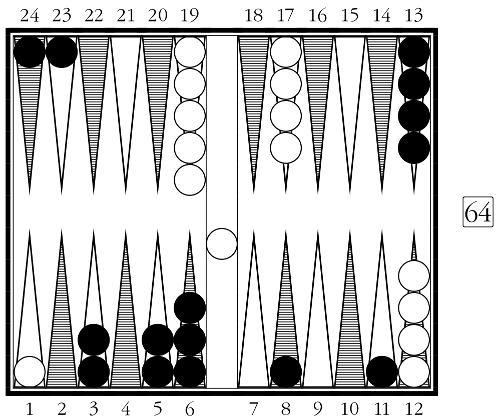

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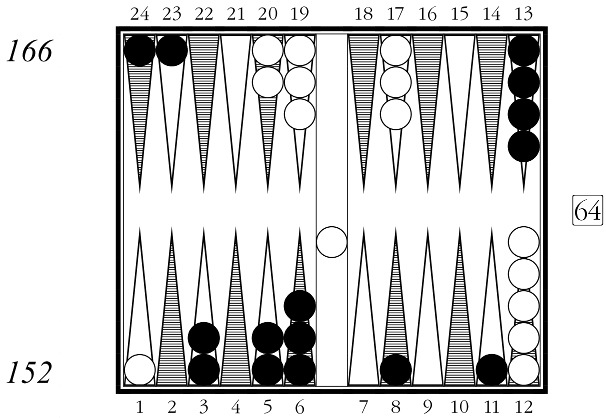
Black on roll

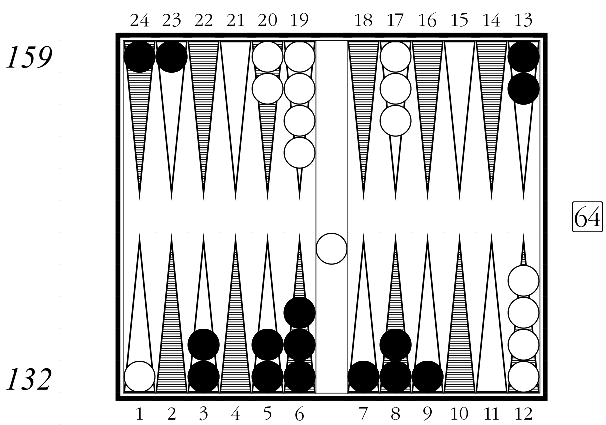
Position 4-15 shows just how imminent: Now it’s a very close drop for White. This position could arise from the following sequence: Black opening 21 (13/11 24/23); White 52 (13/8 24/22); Black 33, White dances. Both changes in Black’s position are significant. The checker on the 11 point is closer to being an active builder for home-board points, and already it adds numbers that Black may want to use for a loose hit if White enters. It may be less obvious why splitting the back men makes a difference; the main reason is that a lot of White’s potential counterplay is against Black’s back men. Visualize Position 4-15 with Black’s back men moved all the way out to the midpoint. Pretty hopeless looking for White, don’t you think? Therefore, every step that Black takes towards getting his back men out represents a substantial improvement in his position, even if it is just the first step. At the same time, the split gives Black extra chances to hit in the outfield if White enters and moves from his midpoint.



Position 4-16

Black on roll

Position 4-16 may snag even a few of the experts who have stumbled into Boot Camp. I know there was a time in my backgammon career when I would have judged that since the action is all on Black's side of the board, giving White his 5 point doesn't really make much difference. Way wrong! The fallacy is to assume that Black is doing all the attacking. But giving White the 5 effectively wipes out more than half of Black's home-board advantage, leaving White just a joker away from turning the tables. In Position 4-16, Black can't even double.



Position 4-17

Black on roll

In Position 4-17, Black regains the equivalent of what he lost between Problems 2 and 3. Three more checkers poised to attack, with extra priming possibilities stemming from the made 8 and the slotted 7, are a huge improvement for Black. Once again White must pass—but just barely.

The Cube And The Ace Point

Good enough to double? To redouble? Good enough to take? Up to now, our survey of the doubling cube has focused on the answers to these three questions. Implicitly we have divided all backgammon positions into four groups: no double, take; double, take; redouble, take; and drop. These categories suffice to classify most positions most of the time, but they do not exhaust the possibilities.

For example, you can be *too good to redouble* in a position with substantial gammon chances. If you redouble from 2 to 4, your opponent has the option to drop and limit his loss to two points. By playing out the game holding the cube, you may win a gammon for four points, or even a six-point backgammon.

Last chapter we noted a 2-for-1 tradeoff between plain losses and gammon losses. A similar criterion applies when deciding whether to *cash* a game for two points or to play on and try to win four. Your baseline is the two points you could win by cashing. By playing on you *risk* four points (the difference between winning two and losing two) to *gain* two points. The 2-to-1 ratio between risk and gain means that you should play on if the odds in favor of success are better than two to one. If playing on makes you more than twice as likely to win a gammon as to lose the game, then playing on is the better choice.

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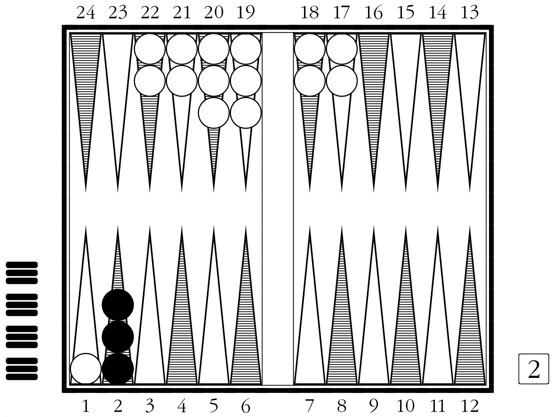

Position 4-18

Black on roll

In Position 4-18, it is not difficult to see that Black is too good. Six rolls (all the doubles) leave no shot, ten rolls (all aces except double ones) leave a double shot, and twenty rolls leave a single shot after bearing off two checkers. Black will win a gammon (and usually a backgammon) on all of the six, a little less than half the ten (whenever he is missed) and about 2/3 of the twenty. This comes to something like 6 + 5 + 12 = 23 gammons or backgammons in a cross section of thirty-six games. The losses must begin with a double shot and a hit, which will happen in about five games out of thirty-six, and Black is by no means lost at that point. Our 23 to less-than-5 ratio is vastly better than the 2-to-1 needed to justify rolling on.

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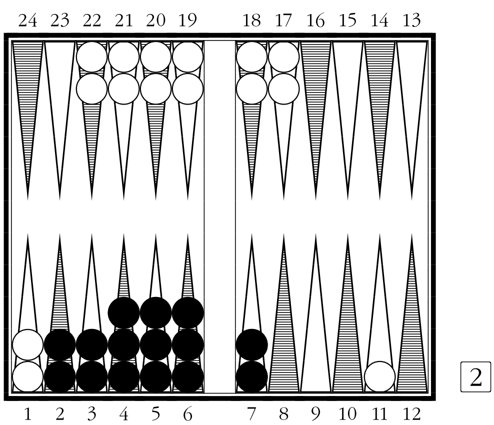


Position 4-19

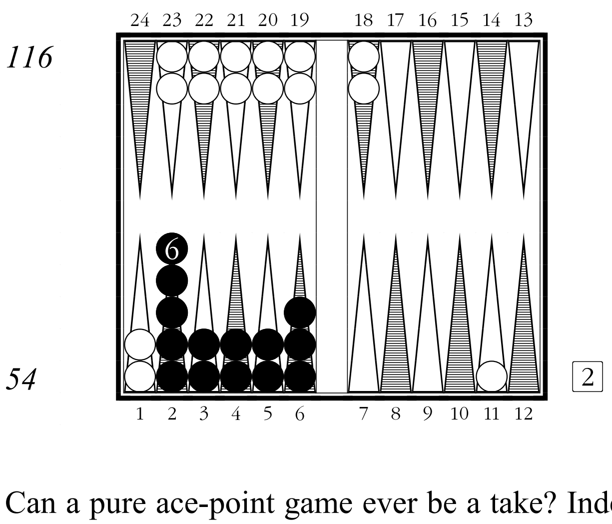
Black on roll

Position 4-19 is a well-timed ace-point game. White rates to be able to keep his priming structure for a few rolls, and should win if he hits an early shot. But he also has a reasonable chance to just run off the gammon if things don't go his way. In cubeless play, Black would win about 64% plain games plus 20% gammons, losing only 16%. Of course it is a huge drop for White if Black should decide to redouble here. The real problem is whether Black is too good.

The simple 2-to-1 rule that enabled us to come to a clear conclusion in Position 4-18 doesn't help much in this case. 20% gammons to 16% losses tells us that Black should not make an irrevocable vow to play this out to the end without redoubling, but that isn't the choice that faces him. The immediate risk of losing stems from the possibility of getting hit after he is forced to leave a blot with 65 or 55. That's three shots for about one hit in thirty-six. So it will be right to play on if Black can get better than two gammons in thirty-six games, given that he will use the cube judiciously and cash it in if his prospects deteriorate.

There is no mechanical rule for decisions of this type. One develops a feel over the board, based on the study of reference positions. And, as it happens, Position 4-19 is a good reference position because the decision is very close—too close to call, in fact. Any significant weakening of White's position—such as moving his outfield blot back or bollixing up his prime—will make it clearly too good. Weaken Black's position a little by giving him more blot numbers or a less flexible home-board distribution and it becomes clearly correct to cash.

Position 4-20



Black on roll

Can a pure ace-point game ever be a take? Indeed it can, though takes are quite rare in practice. Position 4-20 is a take for White, and a rather easy one at that! Black's distribution is atrocious, as a result of either some incredibly bad dice or some incredibly bad bear-in technique. Let's count up the blots and shots. Any 6 but 62 (9 numbers) 54, 43, 44, for a total of fourteen blot numbers. White will hit four of these and win instantly, at least if he owns the cube. Those four wins don't justify a take by themselves, but the really bad news for Black is that only a few rolls (mainly small doubles) substantially improve his position. Thus, he is likely to be facing some serious shot jeopardy roll after roll until he either gets hit or clears several points. White's wins in thirty-six games will be the sum of a gradually diminishing series of numbers that begins with four. Such a series doesn't have to go very far before it adds up to nine (plus a couple more to compensate for the gammons), giving White his take.

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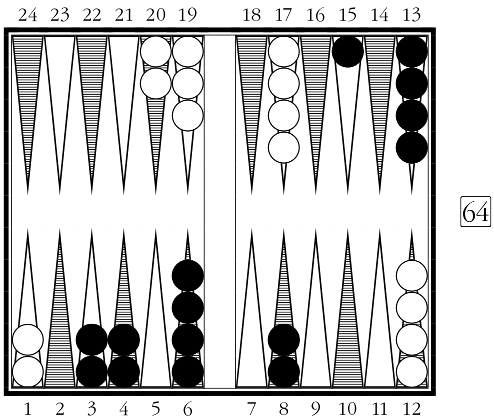

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Position 4-21

Black on roll

If an ace-point endgame is a big drop, it naturally follows that a middle-game cube will also be a drop for the defender unless he has some serious vig in addition to the ace point. In Position 4-21 it isn't there. White is down 39 pips, so he will still be losing if he rolls 66 or 44 for an advanced anchor. His *fly shots* (where he hits an outfield blot with a man from the ace) will be double-edged if he is out-boarded, and at best have the potential to equalize, until he has carried out more construction work in his home board. However, if you move two White checkers from the midpoint to the 6 and 5, reducing White's race deficit while at the same time giving him more material for building home-board points, then he has a close take.

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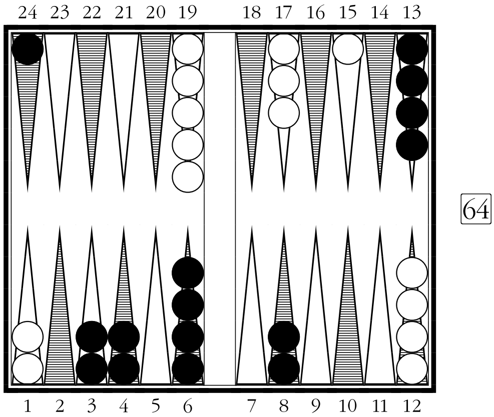

Position 4-22

Black on roll

In Position 4-22, White has the extra vig that he needs for an ace-point-plus take. Black still has a checker back, and White may be able to attack it before it gets away. Black has a clear edge in race and position, and he is one concrete step from getting to a position where White would have to drop. All he has to do is run his back man out and get missed to have something like Position 4-21. "One step away from a drop" very often is exactly the right time to turn the cube. As a fringe benefit, Black has five rolls (63, 54, and 33) to hit White in the outfield, which would (by comparison with the previous problem) be crushing, especially if White danced. Thus the double is very clear.

Position 4-22 also illustrates a cube-handling fault that is common among novice and intermediate players, but that sometimes crops up among the more experienced as well. That fault is the tendency not to double before all the major sources of counterplay for the opponent have been eliminated. Needless to say, it stems from the fear of a quick turnaround after a double. One looks at a position like the one above and imagines the worst—perhaps a 66 for White that leaves Black struggling to escape. Waiting to escape the back man before doubling would be a more "comfortable" approach. But in the long run, if you don't press when you have an advantage, you lose. The reason you lose may not be obvious, because your losses will stem from winning games from which you fail to extract maximum value. Backgammon is a game that rewards risks, and a degree of boldness is an absolute requirement for winning cube strategy.