

Every two years, Kent Goulding and Bill Robertie stage a backgammon tournament called The WORLD CUP. It attracts the best players from all over the globe for a week of grueling backgammon. Sometime during the week, all attendees are treated to a free lecture. At WORLD CUP IV, Joe Sylvester and Kit Woolsey lectured for two hours. What follows is a ten minute segment by Kit Woolsey.

I'm going to talk about an area in which I think a lot of backgammon players make a serious mistake. Let's say you are playing chess. It doesn't matter if you don't know how to play. What you can do when you play chess is calculate quite accurately exactly what is going to happen. If I make this move and then he might make that move or if I do this move and then he does that, I will do this and he will do that. In fact, all good chess players calculate very accurately what is going to happen for the next few moves.

Backgammon is not quite like that, because we have the uncertainty of the dice. That makes it basically impossible to calculate and compute

## "I can honestly say that anyone

who takes over 30 seconds to work out some play...for any middle game situation is kidding themselves."
everything. It's more a matter of probabilities or feeling about what's going to happen.

A lot of players I have seen try to attempt to calculate everything. They get a roll and they start counting shots, counting pips, counting this and counting that and God knows what. Quite often they get confused, don't know what they are doing, lose the forest for the trees and spend 5 minutes on some move where they should just be making the play. They instead end up making the wrong play.

When you watch most experts, you will notice on most of their moves, that as soon as the dice hit they make the move very quickly. The moves are not a real problem. And the reason these experts can do this is because they are not human calculating machines. They know conceptually what they are trying to do with a position. They know that here I want to hit a blot...here I want to make a prime...here I want to escape my back checkers. When those numbers come up on the dice, they choose which priority is best to carry out.

For example Black is on roll in this position:


As Black, before you even roll, what are some of the nice things you would like to do be able to do?

1) Hit the checker on the 10 -point.
2) Build a board.
3) Escape or split your back checkers.
4) Play reasonably safe.

## 1996 HBC Gammon Point Standings.

 Player of the Month for January was Woody Woodworth with 154 gammon points. Player of the Month for February was Larry Strommen with 254 gammon points.1) Larry Strommen............... 338

T2) Butch Meese..................... 250
T2) Dave Groner.................... 250
4) Gabe Stiasny................... 242
5) Sean Garber.................... 212
6) Chuck Stimming............... 202
7) Woody Woodworth.......... 164
8) Mary Ann Meese.............. 162
9) Ellis Bray......................... 150
10) Don Woods...................... 146

Jim Curtis......................... 120
Kevin McLeaster.............. 120
Jan Gurvitz...................... 120
Neil Ezell............................. 94
Jamie Curtis....................... 80
Bill Gheen.......................... 64
Janice Newman................. 40
Shimi Dadon...................... 30
Brian Nelson...................... 20
Keith Jackson...................... 20
Alan Haas.......................... 20
Stan Gurvitz....................... 10
Chuck Bower..................... 10
John Nelson........................ 10

## Awards Tournament

 February 25th1st..... Butch Meese<br>2nd..... Bill Gheen<br>2nd.....Dave Groner

## Hoosier Pips

Congratulations to HBC author, Chuck Bower, who has won the Inside Backgammon Quiz of the

Month for 1995. He will join the Inside Backgammon Master's Panel for 1996...This issue is a little late for a couple of reasons. The first is that the Meeses' moved to a condo in early March (note new address and phone number on Page 1). The second was that Butch was changing jobs - now employed by Thomson Consumer Electronics after losing his job with AT\&T due to down sizing...Ask Chuck Stimming how he enjoyed his cruise to the Antarctica with wife Maggie in January ...Condolences to Jim and Helen Curtis in the death of Helen's mother February 20th ...Condolences to family and friends of Darl Brooks of Dublin, OH who was killed in an auto accident on March 30th.

## Email

From: itaewon@interaccess.com
To: hbc@ix.netcom.com
Subject: Mika's letter

## Butch:

Oops! Mika makes a small error in his calculations - he didn't notice that the gammon totals include the backgammon totals - but he is correct that Mike's play is also correct in the match. I cannot find my original notes, but since $0.534+0.46=0.994$, a number suspiciously close to 1.0 , I suspect I simply failed to carry the one while adding up my match winning percent after the two point move. My real shame comes in not rechecking carefully enough. Just looking at the numbers should have warned me that something was amiss. Of course, all this means is that Mike Fujita's play was even better than it seemed, which was the point of my article.

Best, Jake Jacobs

Backgammon Tournament ScheduleApr 19-21.... Spring Gran Prix, Embassy Suites Hotel, LaJolla, CAApr 19-21.... Spring Gran Prix, Em Bass Championships, Riviera Hotel, Las Vegas, NV.
Apr 23-28..... Srd Worldwide Twin
May 10-12.... 1996 Georgia Championships \& Peach Cup, Atlanta, GA................(619) 294-2007
May 10-12... 1996 Georgia Championships \& Peach Cup, Atlanta, GA ..... 770) ..... (770) 441-2074
May 24-27....17th Chicago Open, Woodfield Hyatt Regency Hotel, Schaumberg, ..... 708) 674-0120
Jul 4-7.......... Michigan Summer Championships, Novi Hilton Hotel, Novi, MI. ..... (301) 299-8265Aug 11-18.... World Cup V, Harvey's Hotel Addison, Dallas, TX
Au30-Sep2...44th Indiana Open, Radisson Hotel, Indianapolis, IN ..... (317) 255-8902

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## Losing the Forest for the Trees by Kit Woolsey World Cup IV Lecture

...continue from Page $1 . .$.
With those priorities in mind, let's run through the array of numbers and see what Black should do.
11) make the 5 -point and split the back checkers
21) easy...hit
31) we have conflicting priorities...make 5 -point or hit and split
41) not great but bring down a builder and split or split both checkers in back
51) bring a builder down and split a back checker or move to the 18-point with a back checker
61) bring down a builder and split a back checker or move both back checkers
22) make the 4-point and split the back checkers
32) hit and split
42) make the 4 -point, nothing better
52) down and split
62) a little awkward...do a little duplication with coming to the 18 -point and down to the 11 point putting pressure all over.
33) nice roll...hitting with 2 checkers and making either the 5 - or the 3 -point
43) hit with the 3 and split, that's fairly easy.

53 ) hit with the 3 and bring the 5 down or may consider hitting on the 1 -point...not to sure if that feels right.
63) hit and split satisfies our conditions
44) two options: making the 20- and 9-points or making two inside points.
54) split and come down, don't see much of anything else.
64) same as 54 with split and come down.
55) make the 1 -point hitting and make the 3 -point, there doesn't seem to be a whole lot else.
65) run one of the back checkers or bring two builders down
66) make the 18 -point and bring two checkers down.

I'm not trying to tell you what the best play is. Some moves will be controversial and some fairly clear. As I was running through each roll, at no point did I do any calculations as to return shots, what's duplicated or what have you. All I was looking at is what am I trying to do and how can I do it with the rolls involved. This is my thinking process when I'm playing a match. I can honestly say that when I'm playing a match, I almost never count anything and I can virtually make any move within a couple of seconds. Because conceptually, I know what I'm trying to do and work on where I'm trying to put the pieces. I know what my goals are for a particular position. I know what my priorities are...this is my first priority, this is my second priority and so on. Learning your priorities and how to weigh them takes a lot of time and experience and we are going to get some of them wrong.

Those are some of the concepts you should be thinking about. Do not try to calculate and compute anything. I can honestly say that anyone who takes over 30 seconds to work out some play, unless it is a situation where the only thing that matters is the number of shots, for any middle game situation is kidding themselves.

They are just afraid to make the decision or something like that. You have to find all the candidate plays and see what the possibilities are. Once you have done that, then you make the play that looks best to you given what your priorities and conditions are. It not a question of calculating how many shots your opponent has, how many this and how many that. That is not going to work. More often than not if you try to do that, you are going to wind up losing the forest for the trees and making some very bad move for the wrong reason. Rather than doing just what your instincts say is right.

I'm not trying to tell you not to think. That's probably what it sounds like. But that's not what I'm trying to say. What I am trying to say is concentrate on the broad overall picture of what you are trying to do and not on specific counting this and calculating that.

## Problems of the Month

by Chuck Bower

Position 1 - Money Game Black to play 6-3?


Playing a friendly money game, you reach Position 1. With cash and pride on the line, can you find your best play with this $6-3$ roll?

There are two potential scenarios; hit a blot or outrun White. You will be behind by two pips (76-74) after playing this $6-3$, so that should cause you to try for a hit. However, with your menacing home board, White will be going out of his/her way to avoid leaving a shot, so the chances of succeeding along the blot hitting route are slim. No roll forces a direct blot this turn, and White is likely to patch his/her home board, and then contact won't be as advantageous to you as it is currently. It looks like a racing win is your best chance.

Now that you've assessed your position, you need to find a play. How many potential moves can you find? I see six, which break roughly into two categories. 1) Hold tight to your outpost on the 17 point, or 2) break it. If you choose to keep the point, then $9 / 3$ is your six and you have a choice of breaking the 6,5 , or 4 point with the 3 . If you decide to keep your board intact, then I see three plays:
a) $17 / 11,17 / 14$ (fewest shots);
b) $9 / 3,17 / 14$ (maximum contact), or
c) $17 / 11,9 / 6$ (a little of both).

You may be thinking that since I said above that a race win is your best chance, that I prefer the break outpost with fewest shots ( $(17 / 11,17 / 14$ ) play. If so, you are wrong. And if you think the best way to lose this race is to get your own blot hit, so you should keep the 17-point, I feel you are taking the wrong approach here, too.

In backgammon, as in most adversarial games, you must always be looking for chances to exploit your strengths and your opponent's weaknesses. In Position 1, your home board is menacing, and White's (for the moment) needs some repair. So make the racing move which leaves your side efficient for the bearoff and which is likely to cause White to make an inefficient (stacking) play. 17/11, 9/6 accomplishes both goals. The most efficient (with respect to the upcoming bearoff) place for your checker on the 9 point is the 6 point. Leaving a single checker as far back as possible ( 17 point) hinders White's next roll. Most of the time s/he'll keep both checkers on your 12 point and burn some pips inside.

What evidence do I have that my choice is correct? Jellyfish Note1 Analyzer 1.0 sees $17 / 11,9 / 6$ as best both for rollouts (performed at level 5) and at evaluation level 6. 20,736 sequential, cubeless trials (settlement limit set to 1) were performed per position. The best play (in JF's opinion, anyway) beat out it's nearest competitor by two percent ( $38 \%$ versus $36 \%$ ) in cubeless wins for the rollouts, and $3.4 \%$ ( $41.0 \%$ versus $37.6 \%$ ) at level 6 evaluation. JF says the second best play is the maximum contact $9 / 3,17 / 14$. In equity units, (that is, including gammons) the relative results remain unchanged.

Position 2 - Money Game Black to play 3-2?


## Position 3 - Money Game Black to play 3-2?



Now look at Positions 2 and 3. How should you play 3-2? Again, find all candidate plays. I see four:
a) safest $=6 / 3,6 / 4$;
b) riskiest $=3 / 0,2 / 0$;
c) safe for now, but get a checker off $=3 / 0,3 / 1$;
d) get a checker off, but keep board strong $=5 / 0$.

As you may have guessed from the fact that I have given two problems, the correct answer is different for the two positions. For Position 2, where White's home board is blot-free, the safe play proves best, according to Jellyfish Analyzer 2.0№TE1. Level 6 rollouts say that clearing the 6 point is better than clearing the 2 point by $56.4 \%$ to $54.0 \%$ (statistically significant at the $98 \%$ confidence level). Level 7 evaluations also make a similar relative evaluation, by a $56.4 \%$ to $52.6 \%$ margin. The two plays which left blots for Black were not as good. See Table 1 (bottom of Page 8) for the results of the four candidate plays.

In Position 3, Black can again take advantage of White's blotty home board. Jellyfish (level 6 rollouts and level 7 evaluation) says best is $5 / 0$, which takes a checker off, leaves a strong board (5 points) and if White should happen to roll a 5 without a 1, Black will have a chance to boot another White checker onto the rail. Second best for Position 3 is clearing the three point, just edging out the safest $6 / 3,6 / 4$.

Some insight can be gleaned by cross comparison of the two similar problems.

1) Jellyfish says that after playing the 3-2, White is better off in Problem 3. If this were not the case, then the correct answer for both problems would surely be the same (that is, playing safe). Thus we have a sanity check that gives us some confidence that Jellyfish results are consistent.
2) The order of Jellyfish's choices (from best to worst) are the same for level 6 rollouts and for level 7 evaluations.
3) Clearing the 3 point $(3 / 0,3 / 1)$ gives Black more than $4 \%$ better chances for Problem 3, where White's home board checkers are split. One would expect very little diffence. Apparently, Black can leave a blot on the NEXT roll, possibly picking up a second White checker, and still retain a four point board.

## Annotated match Kit Woolsey vs Jeremy Bagai FIBS - 9 Point Match

In February 1994, Kit Woolsey and Jeremy Bagai played a match and then annotated it for FIBS (First Internet Backgammon Server) players so they could see the thought process of the more experienced players. They played a fairly interesting match, logged it, and then annotated it independently. You will see reasons for their plays and cube decisions, as well as their second thoughts upon later analysis which often came to a different conclusion than their original choices.

Gerry Tesauro also volunteered TDGammon's valuable help. TD-Gammon analyzed the whole match and listed its top 3 choices for each play along with its estimated equities. These equities are always assuming a 1 -cube and they do not take into account cube ownership. Thus on a pass-take decision an equity of -0.50 would be a break-even decision (not taking cube ownership into account -- that would probably make it a little higher), since that would translate to an equity of -0.100 on a 2-cube. TDGammon was also nice enough to comment on the game, giving its reasons behind its choices as well as getting in a few snide remarks about their mistakes. Mark Damish (MA), first formatted the commentary for the Internet.

## Game 7 continues

Jeremy: You shouldn't play for safety with two checkers in the air -- this is better than $16 / 7 \mathrm{x}$ because it still attacks my outfield blot and provides a better builder up front.

TD-Gammon: Things just aren't the way you guys think. It is Jeremy who has the stronger board. This means that if he gets both checkers in quickly, Kit will be scrambling to tidy up his blots. This could be costly, since Kit also wants to escape his back checker if he can. Therefore, he shouldn't be leaving too many blots. Scooping up the other outfield blot really isn't all that important. I like 16/7x, which leaves fewer things to worry about if Jeremy enters.

| $16 / 7 x \ldots \ldots \ldots \ldots+0.119$ |
| ---: |
| $13 / 8,11 / 7 x \ldots \ldots \ldots+0.077$ |
| $11 / 7 x, 11 / 6 \ldots \ldots \ldots+0.036$ |

White (Jeremy) dances with 64.

Black (Kit) to play 41?

$16 / 15 x$ 13/9
Kit: The idea behind this play is to get an extra builder for the three point. I felt that with Jeremy having three checkers on the bar I could afford to be this loose. In retrospect I think I should have played the more solid $16 / 15 x, 11 / 7$. My play gets hit immediately if he rolls 2-2, and if he brings both checkers in I will be scrambling to avoid leaving a shot. Considering that I have the further problem of liberating my back checkers, I don't want too many complications up front.

Jeremy: I don't know if this is better than making the bar point with $16 / 15 x, 11 / 7$. I have three on the roof so it seems like Kit should diversify in order to make points rather than to button up. But his play does pay off immediately to double $2^{\prime}$ 's, and if Kit rolls an escaping number next turn he may not want to have to worry about all those blots. I really don't know. TD-Gammon?

TD-Gammon: At least you guys are starting to wake up. Kit's actual play is very wrong. $16 / 15 x, 11 / 7$ is much better. The reasons are all the same. Kit doesn't want to have a nightmarish cleanup problem if Jeremy gets in quickly. Kit realized it in his analysis, and Jeremy wasn't sure. Next time, maybe you'll know how to handle this one.

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16/15x, 11/7........ +0.388
    16/15x/11 ..........+0.331
    16/15x,13/9\ldots......+0.297
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Jeremy plays $B / 20 B / 24$ with 51 .

Black (Kit) to play 63?


15/9 7/4
Kit: This is a good illustration of the defect of my play last turn. I roll the perfect number to escape the back checker, but must use it to tidy up in front. At least I was able to to do, although there is still the gaping hole on my bar point which should have been filled. I could make the three point, of course, but this would give Jeremy several combination shots at the blot on my bar point and getting hit now would be disastrous.

Jeremy: Choices. Escaping all the way leaves 22(!) shots, so it probably isn't right. Escaping part way with 24/21, 15/9 looks safer but still leaves 21 shots because all 3's and 1-1's now hit on my four point. Making the three point leaves 15 shots (double 5's now hits in the outfield). Kit plays safe. He's probably right, but l'll bet he wished he had made his bar point last roll.

TD-Gammon: Sanity finally prevails. Kit's play is quite correct.

| $15 / 9,7 / 4 \ldots \ldots \ldots .+0.270$ |
| ---: |
| $24 / 21,15 / 9 \ldots \ldots \ldots+0.242$ |
| $9 / 3,6 / 3 \ldots \ldots \ldots+0.145$ |



Kit: Jeremy is treading on some thin ice here. His checkers are pretty well blocked in, and he could have some problems if he rolls awkwardly next turn. I think he should strive for more air with $B / 10,20 / 15$. The blot on the 15 point is virtually immune, and he will be able to handle almost anything from then on. In addition, if I escape my back checker he won't have anybody in the outfield to pick me off. His plan is to bring the ammunition in quickly, but since the checker on the ten point covers his four point his play is not necessary for that purpose.

TD-Gammon: Jeremy's play is awful, much worse than might be imagined. He needs breathing room badly. Kit's analysis is quite correct.

| $\mathrm{B} / 10,20 / 15 \ldots \ldots \ldots+0.013$ |
| ---: |
| $\mathrm{~B} / 15,20 / 15(2) \ldots \ldots \ldots-0.108$ |
| $\mathrm{~B} / 5 \ldots \ldots \ldots \ldots . .0 .149$ |

Black (Kit) to play 52?


11/9 11/6
Kit: I don't like giving up the 11 point, but I can't afford to leave a shot now. At least my position is reasonably flexible.

TD-Gammon: This is a tough one to find. After all l've been preaching about the importance of flexibility, keeping checkers in front of the enemy anchor, and playing safe when the opponent has the stronger board, I now recommend hitting loose on the ace point and stripping the whole position. How can this be right? The answer is the extreme value of the blocking 11 point. Jeremy's position is completely stripped, and blocking him from escaping with a six may cause him to collapse his whole board. This is so important here that everything else takes a back seat.

| 8/1x. | 06 |
| :---: | :---: |
| 11/9, 11/ | -0.037 |
| 6/4, 6/1 | .0.046 |

White (Jeremy) to play 42?


Kit: Correct. Jeremy gets a badly needed checker into the outfield, while hanging back with the back checker to make life difficult for me.

Jeremy: My five prime is worth too much to play $7 / 1 \mathrm{x}$. Instead I cover the outtield and wait.

TD-Gammon: No other play is even worth thinking about. Jeremy MUST get out into the outfield.
$20 / 14 \ldots \ldots \ldots \ldots . .+0.086$
$24 / 18 \ldots \ldots \ldots \ldots . .0 .001$
$20 / 18,5 / 1 x \ldots \ldots \ldots+-0.028$

Black (Kit) to play 54?


9/4 8/4
Jeremy: This is pretty ugly, to put it mildly, but it is the only safe play. The alternative is $8 / 4,6 / 1 x$. I'm not sure which is better.

TD-Gammon: I am, of course. Safety it is, now that the reason for hitting loose has vanished.

| $\begin{aligned} & 8 / 4, \\ & 9 / 4, \end{aligned}$ |
| :---: |
|  |  |
|  |  |

White (Jeremy) to play 42?


Kit: Jeremy stops on the ten point in order to cover more territory if I roll 3-4 or 3-5. However by advancing the back checker he makes it easier for me to play behind him, and also takes more of a risk of being pointed on. I think he should make a stronger effort to force me to leave a shot and play 14/8.

Jeremy: Very interesting. Alternatives include $14 / 12,5 / 1 x ; 24 / 22,5 / 1 x ; 24 / 20$, $14 / 12 ; 24 / 18$; and 14/8. About the only things I am sure of are that I shouldn't break my five-prime and I shouldn't break my anchor. After that I have no idea. Interestingly, this is a position for which I would trust a good computer rollout. An awful lot depends on the next two rolls, and the checker play after that might be pretty clear. TDGammon?

TD-Gammon: What kind of a play is this? Moving the back checker to exactly where it is blocked and can be pointed on? Yuck! Kit's plan of forcing a shot at another blot is equally bad. The theme here is to get that back checker out of there before something bad happens. Jeremy needs to control the outfield. By far the best play is 24/18. The checker is safe, and in good position to patrol the outer boards if Kit is able to spring his back checker. Both of your plays are way down on the list. You both lost the thread here.
$24 / 18 \ldots \ldots \ldots \ldots+0.312$
$24 / 20,14 / 12 \ldots \ldots \ldots+0.247$
$20 / 14 \ldots \ldots \ldots \ldots+0.228$
$24 / 22,14 / 10 \ldots \ldots \ldots+0.156$

Black (Kit) to play 53 ?


24/16

Jeremy: More choices. Kit can make the three point on my head, make the ace point behind me, or come out. Making the three point leaves a lot of shots -- 22 of them if you count 4's and 6 's to hit on my ace point, which I would do because of the blot in the outfield. Making the ace point smooths out his position for later attack, but does nothing to escape. Escaping gives me 13 hitters, but gains a lot when it works. I like his play.

TD-Gammon: What choices? This isn't remotely close. Kit's play is a standout.

| $24 / 16 \ldots \ldots \ldots \ldots \ldots+0.111$ |
| ---: |
| $6 / 1,4 / 1 \ldots \ldots \ldots \ldots \ldots .0 .206$ |
| $8 / 3 x, 6 / 3 \ldots \ldots \ldots . .0 .259$ |

White (Jeremy) to play 21?


Kit: Jeremy's last play sure was a success. Now he properly gets off the 22 point, which is the point which is blocked on fives and sixes.

TD-Gammon: Not quite. Jeremy is no longer blocked on sixes after his play, but what about fours, twos, and aces. Kit's prime may not seem like much, but bad things could happen. Jeremy should play 20/18, 10/9x. What if Kit rolls 1-1 or 4-4? Well, maybe he won't. We computers look at the big picture and don't concern ourselves about the freak occurences.

| $20 / 18,10 / 9 x \ldots \ldots \ldots+0.307$ |
| ---: |
| $22 / 20,10 / 9 x \ldots \ldots \ldots+0.264$ |
| $10 / 9 x / 7 \ldots \ldots \ldots+0.222$ |

Black (Kit) to play 41?



Kit: I don't think this is right. Jeremy needs fives to escape, while fours are his worst number. Therefore I think he should play $9 / 3,7 / 4(2) x$, so his fours go to the ace point.

Jeremy: I can't see any difference between this and $9 / 3,7 / 4(2) x$.

TD-Gammon: Kit is correct. His reasons are quite valid.
$9 / 3,7 / 4(2) \times \ldots \ldots \ldots+0.637$
$9 / 6,7 / 4(2) \times, 5 / 2 \ldots \ldots+0.596$
$7 / 4 x / 1(2) \ldots \ldots \ldots+0.384$

Black (Kit) dances with 42.


Black (Kit) dances with 65.


Kit: This time Jeremy properly shifts to the five point so his good numbers are not duplicated. It would not be correct to slot the ace point. If I roll an ace, he would be one checker short with which to attack. His goal is to keep building up the pressure, so that when I do roll that ace he is in position to pounce.

Jeremy: I see that I need fives to escape so I diversify with the ace, giving me fours to help close my board. The same concept as duplicating your opponent's numbers but in reverse.

TD-Gammon: Back to the technical stuff. I have 14/10 a slight winner, but it is tough to argue with the experts' analyses so I suppose they are right. But, maybe slotting the ace point isn't all as bad as Kit says it is.

| $14 / 10 \ldots \ldots \ldots \ldots \ldots+0.783$ |
| ---: |
| $14 / 11,6 / 5 \ldots \ldots \ldots+0.781$ |
| $14 / 11,2 / 1 \ldots \ldots \ldots+0.780$ |

Black (Kit) to play 61?


B/18
White (Jeremy) to play 11?


Black (Kit) dances with 62.
White (Jeremy) to play 22?


Black (Kit) dances with 52.
White (Jeremy) to play 31?


Black (Kit) to play 31?


B/24 6/3


Black (Kit) to play $66 ?$


9/3(2) 8/2(2)

Kit: Not a happy situation. My position is awkward and I am unlikely to get a shot, but I am so far behind in the race that running seems worse. Maybe he'll be nice enough to roll a 6-4, the only number which leaves me a shot next turn.

Jeremy: Kit sees that he will be 22 pips and three crossovers down if he runs, so he stays back to make things more complicated. 6-4 is the only number which leaves a shot.

TD-Gammon: Looks pretty close to me, but Kit's play comes out best.

| $9 / 3(2), 8 / 2(2) \ldots \ldots \ldots . .0 .848$ |
| ---: |
| $24 / 12,9 / 3,8 / 2 \ldots \ldots \ldots .0 .850$ |
| $24 / 6,8 / 2 \ldots \ldots \ldots .0 .854$ |



Jeremy: I think this is right, but I'm by no means sure. 6/0, 6/2 looks easier to clean up next turn if not hit and Kit may be forced to leave with a six anyway. My play however, keeps Kit behind a fiveprime so that when he does hit he isn't home free. This needs a rollout.

TD-Gammon: Personally, I doubt if it is even close. Jeremy's play looks by far the best to me.

Black (Kit) dances with 43.

White (Jeremy) to play 41 ?


Black (Kit) dances with 22.
White (Jeremy) to play 11?


Kit: Correct. Nothing leaves a shot next turn, and Jeremy probably won't have to leave anything at all. 6/4(2) or 6/5(2), 2/0 would risk leaving a shot if he rolled large doubles next.

Jeremy: Generally I want to be clearing points instead of keeping contact, but 6/4(2) would be very wrong in that double 6's, 5's, and 4's become blot numbers, and Kit gets two large doubles to get back in the race instead of just one.

Black (Kit) dances with 31.
White (Jeremy) moves 5/0 5/2 with 53. Black (Kit) dances with 21.

White (Jeremy) moves 4/0 4/2 with 42. Black (Kit) dances with 31.

White (Jeremy) moves 3/0 3/1 with 52. Black (Kit) concede game with 51.

Jeremy Bagai wins the game and the 9 point match.

| Table 1 candidate | Position 2 |  | Position 3 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | level 6 | level 7 | leve 6 | leve |
|  | rollout | evaluation | rollout ${ }^{\text {e }}$ | valuation |
| a) $6 / 3,6 / 4$ | 56.4 (0.7) | 56.4 | 57.6 (0.3) | 59.6 |
| b) $3 / 0,2 / 0$ | 34.2 (0.6) | 39.7 | 52.1 (0.6) | 58.2 |
| c) $3 / 0,3 / 1$ | 54.0 (0.9) | 52.6 | 58.4 (0.3) | 59.7 |
| d) $5 / 0$ | 51.5 (0.7) | 50.5 | 60.5 (0.3) | 61 |
|  | re perce | age winn | nces |  |

NOTE1: Written by Frederick Dahl of Norway. Version 2.0 have just been released and is available from Larry Strommen at (317) 545-0224 (diceman@indy.net) or Carol Joy Cole at (810) 232-9731 (carlcole@alumni.sils.umich.edu).


[^0]:    Thursdays..... 7:00 PM at SPATS (842-3465) Castleton Square (between J.C.Penney's \& L.S.Ayres)... 845-8435

