



May-June 1993 Volume X, No. 3

41st Indiana Open

McTyeire Repeats & Indy Players Shine! This years Championship Division final was again between two players from Louisville. Second chance challenger Frank Frigo won the double match game in the first match to force a final deciding match with Quint MyTyeire. In the deciding match, luck was on Quint's side. For example, in one bearoff situation, the only way for Quint to win required a 2-1 by Frank, double 2's or better for Quint and non-doubles by Frank. Indy players captured the top spot in the other The Advanced Division winner, Gabe 3 divisions. Stiasny, came close last September at the National Labor Day with a 6-0 record in the Indy Swiss movement format but was unable to cash. This tournament saw no falling down as he won undefeated. Holly Stowe finally won the Intermediate Division after trying for 2 years. Jamie Curtis won his first backgammon trophy by winning the Novice Division and making dad, Jim Curtis, proud. The The Masters Jackpot finalists, Marc Poe and Rick Bieniak. said they came for the experience but were very happy to also walk away with money.

Championship Division (29)

1st..... Quint MyTyeire (Louisville, KY) 2nd..... Frank Frigo (Louisville, KY) 1st Con..... Perry Gartner (Englewood, NJ)

Advanced Division (32)

1st..... Gabe Stiasny (Indianapolis, IN) 2nd..... Jerry Ungar (Cincinnati, OH) 1st Con..... Randall Witt (Antioch, TN) 2nd Con..... Jill Ferdinand (Mt. Prospect, IL)

Intermediate Division (10)

1st..... Holly Stowe (Indianapolis, IN) 2nd..... Lance Jenkins (Hammond, IN) 1st Con..... Javad Farjood (Naperville, IL)

Novice Division (5)

1st..... Jamie Curtis (Indianapolis, IN) 2nd..... Mary Vitale (Brookfield, IL)

Masters Jackpot (16)

1st..... Marc Poe (Plano, TX) 2nd..... Rick Bieniak (Panama City, FL)

Doubles (16)

1st..... Carol Falk/Dean Adamian (MI) 2nd..... Mark King/Randall Witt (IL/TN)

<u>Open MicroBlitz</u>: Tim Mabee (Naperville, IL) <u>Limited MicroBlitz</u>: Judy McHale (Indianapolis) THE MATHEMATICS OF BACKGAMMON The Drop/Take Line by Chuck Bower



In a money game, you reach Position 1 with your opponent on roll and she doubles. Not being sure whether this is a take or drop, you decide to apply some mathematics. You know that your opponent has 10 misses out of 36 possible rolls (all one's except double aces), and that if you survive her roll, you will then have 26 winning shots out of 36. Making use of your ability to do arithmetic in your head, you multiply 10/36 times 26/36 and get 260/1296. Now you round the denominator to 1300 and notice that 1300 = 5 X 260, so that your approximate winning chances are 260/1300 = 1/5 = 20%. At this point you recall from many hours of reading backgammon books that you need a 25% chance of winning to take the cube, and so you drop. Adding insult to injury, your opponent tells you that you should have taken, and an argument ensues. Confident that your arithmetic is correct, you sportingly allow her to explain her reasoning, while you wait to pounce as soon as the error is revealed. And she begins: "If you take and I roll one of my winning shots, the game is over and I collect two points. If I roll any one except double ones, you double me back and I take. From there, on average 10 times in 36 you will roll a losing number and I collect four points, while 26 times in 36 you win four points." Now she brings out pencil, paper, and calculator and your confidence rises another notch since she obviously can't work this out in her head, as you did! She continues: "So your take equity is:

$\left[\frac{26}{36}x(-2)\right] + \left[\frac{10}{36}x\frac{26}{36}x(+4)\right] + \left[\frac{10}{36}x\frac{10}{36}x(-4)\right]$

which is -0.95. Since losing 0.95 is better than losing (continues Page 3)

Hoosier Backgammon Club's Newsletter for HBC members and subscribers. Subscription rate: \$10/year (Canada \$12 and oversea \$14). Let us know if your address changes. Butch & Mary Ann Meese: (317) 845-8435. 7620 Kilmer Lane, Indianapolis, IN 46256-1634

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1993 HOOSIER BACKGAMMON CLUB Gammon Point Standings as of April 30th. HBC Player of the Month for April is Butch Meese with 198 gammon points.

	TIDO Flayer of the month for April is butch meese with 190 gammon points.							
1)	Butch Meese582	Jeff Baker118	Mick Dobratz20					
2)	Ellis Bray 462	Bill Julian94	Dragan Stevanovic20					
3)	Don Woods 460	Mike Marr90	Judy McHale20					
4)	Kevin McLeaster 442	Jan Gurvitz75	Frank Alexander20					
5)	Cyrus Mobed431	Rick Bieniak64	Tom Hendryx					
6)	Larry Strommen	Ray Fogerlund64	Sharon Baker15					
7)	Mary Ann Meese	Gino Agresti60	Richard Heinz 10					
8)	Chuck Stimming	David Smith 50	Stu Whitcomb 10					
9ý	Gabe Stiasny320	Dennis Schulte40	Eric George10					
10)	Ken Bruck	Stu Sherman40	Jon Stephens10					
,	Woody Woodworth210	Brian Nelson 40	Dean Adamian10					
	Bill Gheen 160	Alan Haas 40	Carol Falk					
	Jim Curtis	Tom Helt	Stan Gurvitz					
	Holly Stowe	Jamie Curtis	Marta Hilworth 10					
	Steve Perlman	Eileen Perlman	Len Carmine 10					
	Wendy Kaplan 124	Ali Shahin 30	Ellen Schremp 5					
	John O'Hagan 120	Jay Ward 24	Scott Kaplan 5					

	April 1st	April 8th	April 15th	April 22nd	April 29th
Open 1st	Jim Curtis	Butch Meese	Kevin McLeaster	Woody Woodworth	Mary Ann Meese
2nd	Chuck Stimming	Ellis Bray	Ray Fogerlund	Cyrus Mobed	Larry Strommen
2nd	Butch Meese	Don Woods	Rick Bieniak	Chuck Stimming	Ellis Bray
Interm 1st		Eileen Perlman	Mary Ann Meese		
2nd		Frank Alexander	Jay Ward		•••

BACKGAMMON Tournament Schedule

May 28-31 14th Annual Chicago Open, Sheraton Suite Hotel, Elk Grove, IL	(708)	674-0120
Jun 16-20 1993 Las Vegas Open, Maxim Hotel & Casino, Las Vegas, NV	(708)	470-9491
July 02-04Michigan Summer Championships, Novi Hilton, Novi, Ml	(313)	232-9731
July 09-11College Park Summer Championships, Promenade, Bethesda, MD	(301)	530-0603
Aug 27-2930th Summer Associates Invitational, Cavendish West Hollywood, CA	(818)	901-0464
Sep 03-07 National Labor Day Backgammon Tournament, Radisson Hotel, Indpls, IN	(317)	845-8435
Oct 06-10 3rd Illinois State and 2nd America Cup, Woodfield Hilton, IL	(708)	945-7801
Oct 29-31 New Hampshire Fall Classic, Sheraton Tara Wayfarer, Bedford, NH	(603)	863-4711
Thursdays 7:00 PM at SPATS (842-3465) Castleton Square between J.C.Penneys & L.S.Ayres		.845-8435

The Drop/Take Line continues...

1.0, you should have taken." WHAT?! "Give me that calculator, you obviously miskeyed something," is your reply, but you come up with the same answer and retreat with tail between legs.

Where did you go wrong? It was your belief that less than a 25% chance of winning meant that you should drop. It would be a drop only if you were never going to use the cube! (To verify this, replace the +4 and -4 in the above expression with +2 and -2 and see that the result is worse than -1.) Even though you expect to lose 80% of the time you reach this position, most of your losses only cost two points each while all of your wins are worth four points each. This position illustrates the value of a live cube. A live cube is simply one that can be turned. Likewise, a *dead* cube is one that cannot be turned. If a player possesses the cube in a money game, it is alive only to him. The cube is dead to his opponent. Note that in tournament matches, the cube may be dead, even to its owner, but this article only addresses money games.

Two little-known articles were published in the 1970's (see references 1 and 2 at the end of this article) which generalized the above paradox to backgammon games where gammons and backgammons are ignored (that is, non-contact races). Although these articles are rather technical in their reasoning, we can use the *backgammon football field* (a tool introduced by Danny Kleinman--see reference 3) to illustrate their logic.

Imagine that backgammon is like a football game (see Figure 1) where the ball starts at the 50 yard line (center of the field) and the players alternate ball possession at the beginning of each play.



The first player to reach his opponent's goal line wins the game. (Your goal line is to your back, as in real football.) We assume it is twice as difficult to move the ball two yards as it is to move it one yard. Further expansion on this caveat states that the comparison in difficulty in moving the ball two different distances is in the ratio of those distances. We also assume that the difficulty of moving the ball a given distance is independent of your position on the field. In addition, we assume that your opponent is of equal ability, and therefore it is equally difficult for him to move the ball a given distance as it is for you to move that same distance. The line of scrimmage (yard line where the ball is located) represents your chance of winning the game *if all games are played to completion*. If you are on your own 30 yard line, you are 70 yards from your opponent's goal line, and your chances of reaching his goal line before he gets to yours is 30%. For now, let's assume a non-contact race. (We will consider gammons and backgammons in a future article.)

As in real backgammon, we will use a doubling cube. (Maybe we should suggest this to the National Football League to spice up their game!) The question is: "Over what part of the playing field should you accept a double, and over what part should you drop." We call the dividing line between take region and drop region as the drop/take line. Figure 2 shows the playing field divided into these regions. Since we assume that your opponent is of equal caliber, his drop/take line is symmetric to yours (that is, his drop/take line is the same distance from his goal line as yours is from your goal line).



Now here is the key point of this analogy. If you have access to the doubling cube, you don't have to drive all the way to your opponent's goal line to win the game; just to (or slightly past) his drop/take line. If your opponent owns the cube, you must drive all the way to his goal line in order to win. (Note: if your opponent chooses to accept the cube when the ball is in his drop region, you must drive all the way to his goal line, but you will come out ahead in the long run as will be shown below. Thus for now, we assume he will drop in his drop region and take in his take region.)

At this point, we invoke the 3 to 1 criterion, known to all experienced backgammon players. If you accept a doubling cube in a non-contact race, on average you must win at least one point for every three that you lose in order for you to justify taking the cube. Figure 3 helps to illustrate the following reasoning. If you accept the doubling cube at your drop/take line, you must drive the football to your opponent's drop/take line in order to win, and the distance from your drop/take line to his is three times the distance from your drop/take line to your goal line (because of the 3 to 1 criterion). Likewise by symmetry, your opponent's drop/take line is three times as far from your drop take line as it is from his goal line. So the football field is divided into three regions, as can be seen in Figure 3, and the lengths of these regions are in the proportion 1::3::1. The way to divide 100 yards into a 1::3::1 ratio is (20 yards)::(60 yards)::(20 yards), and now we see that our 20 yard line is our drop/take line. Thus you are justified in taking a non-contact double in a money game (that is, with a live cube) if your chance of winning from this position with an inaccessible cube is 20% or greater.



If your opponent chooses to accept the cube deeper in his territory (inside his drop/take line), then the distance he must move the ball to get to your drop/take line (and thus win the game) compared to the distance you must travel (to his goal line) is greater than 3 to 1, and thus he will lose more than three points for every point he wins: a costly error (and one which you should welcome)!

Let's look at another case. For non-contact races, where is your beaver line? Figure 4 has been constructed to answer this question. You can justify a beaver in backgammon if your equity (including cube Since we are assuming no ownership) is positive. gammons or backgammons, this simplifies to having a better chance than your opponent at winning the game. At the beaver line, the distance to your goal line (the distance your opponent must travel to win) equals the distance to your opponent's drop/take line (the distance you must travel to win). Since his drop/take line is his own 20, that means that your beaver line is your own 40 (which is equidistant from both your goal line and his drop/take line).



Note that the above reasoning was based on some assumptions which are not always correct and thus you need to adjust your doubling strategy accordingly. The assumptions are: 1) Your opponent is of equal caliber in both checker movement and cube handling ability. 2) You will never cross over a drop/take line (or beaver line) without stopping exactly on it. 3) The difficulty in moving the ball a given distance is independent of both the ball's position and who has possession. The corrections in strategy which should be exercised due to the invalidity of assumptions 1 and 2 are covered quite succinctly in reference 3. Assumption 2 is discussed in references 1 and 2. The failure of assumption 3 normally would give the person behind some additional advantage, since he often has a few pivotal sequences (for example, leader leaves a blot and trailer then hits it) while his opponent must grind out the game to the bitter end, usually in painfully small steps.

References

- Emmet B. Keeler & Joel Spencer, "Optimal Doubling in Backgammon", **Operations Research**, Vol. 23, #6, (November-December 1975), pp. 1063-71.
- Norman Zadeh & Gary Kobliska, "On Optimal Doubling in Backgammon", Management Science, Vol. 23, #8, (April 1977), pp. 853-8.
- 3) Danny Kleinman, Vision Laughs at Counting, with Advice to the Dicelorn, Vol 2, (1980) pp 230-64.



HBC Newsletter

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The HBC Newsletter presents a match between Tino Lechich and Ed O'Laughlin from the WORLD CUP III, August 1992.

Instructions: You will need a backgammon board to follow along. The board is numbered 1 to 24 based on the view of the player on roll. Each player will always be moving from a higher to lower point with only the point(s) moved to used. The home portion of the board is numbered 1 thru 6. Bearing off is noted as moving to the zero (0) point. To make it easier to follow, the larger number rolled is noted first. In some situations where the smaller number rolled is forced, it will be presented first. An example: being on the BAR with a roll of 5-2 with the 5-point made and the 2-point open.

Abbreviations used: Closed Board(**CB**), Entry Failure(**EF**), Misplay(**MP**), No Play Possible(**NP**), opponent's piece was hit (x), superscript(5²) denotes 2 or more pieces moving to a point; this example has 2 pieces moving to the 5 point.

In the doubling positions, **Tino** is the dark checkers and **Ed** the light. The positions are shown from Tino's point of veiw; study them first before going through the games.







Editorial: Why Ask Why?

On Thursday before the **41st INDIANA Open**, players gather early for the weekend tournament to join in HBCs weekly play. The discussion centers on the tournament; how many in the Championship, Advanced, Masters, and so on. Randall Witt (TN) asked *"How come more players don't come to this tournament?"* For the last couple of years the economical conditions of the country has decreased the attendance at tournaments in general. Another reason may be the number of tournaments. This year the Costa Rica tournament did cost us some players but not many.

Let us look at the reasons for not staying away. It can't be the prize money: the winner of the Championship Division took home over \$2700 from the players' pool alone. Can't be the money returned to the prize pool: all main events are 85% return which is, we believe, the best return for any nonsponsored regional tournament in the country. It can't be the lack of something to do: the main format of doubleelimination with progressive consolation guarantees three meaningful matches of competitive length. With the optional MicroBlitz side events, players can choose the extra action, or to socialize. Although knock-outs were offered, there were no takers. It can't be the hotel: the Omni North was a very fine host providing spacious rooms and the BEST Sunday brunch in the city. It can't be the format, it's the same one used at the Pittsburgh and Michigan Summer tournaments. This Indiana Open worked like clockwork with the finals in both the Championship and Advanced Division starting at the scheduled time of 2 PM. We have the players who attended to thank for that. We provide personalized trophies to the winners plus souvenirs and door prizes.

Our constant goal is always to provide fair and equitable events and treat all player equally. We received no complaints from the players who return year after year, so we do not know why other players do not attend. If you know of a reason, let us know and we will make every attempt to improve it.

To Whom It May Concern,

I'm an Intermediate/Advanced player who subscribes to most of the major newsletters and has accumulated a large majority of books written on the subject of backgammon. Most of the newsletters speak for themselves (because they must be concise due to limited space), however quite a few of the books leave alot to be desired (I assume due to the fact that the author is given room to roam). One of the 'newsletters' I was extremely sorry to see come to an end was Roy Friedman's Leading Edge Backgammon. I found Roy's effort to be much superior (in terms of approach) to other similar 'newsletters' (not to fault them, I just found Roy's concept better suited to my needs). When I travel to a tournament I always take them with me to read prior to the event. I always seem to wind up dwelling on the acticles written by a single author, Joe Sylvester. He seems to have written about the concepts that are the weakest in my game and explained them in a fashion that, while concise, covers the topic completely. My query is....why doesn't Joe Sylvester write more? I've watched him play at most of the tourneys I've been to and noticed his success in the various 'local newsletters'. He seems at least as competent to write long articles and even a book on the game as some who now do so. Is there any chance he might be persuaded to do a book on the game? Is he considering it?

Just Curious, Jeff Seidel (FL)



Tino Lechich vs. Ed O'Laughlin

Best 3 of 5 - 11 Point Matches - #1

Game I	
Game 1 Tino Lechich - 0 Ed O'Laughlin - 0 roll played 1) 21 11 23 2) 31 5^2 62 18 11 3) 52 8 22 41 18 4) 52 8 20 42 4^2 5) 41 20 5 63 4 6) 43 6 41 2 3 7) 65 2 1 32 3 11 9) 22 16² 21 5^{F8} 11 10 ² F ^{13,11} 9) 22 16² 21 5^{F8} 11 5 8 10) 31 1 ^{F5} 63 5 8 11 53 3 ^{F8} 5 31 5 ^{F8} 7 10) 31 1 ^{F5} 63 61 4 9x 13 32 23x 2 32 EF 14) 23x 2 <th>1</th>	1

Ga	m	е	2
Ju			-

Ti	Tino Lechich - 1			'Laughlin - 0	
	roll	played	roll	played	
1)			61	7 ²	
2)	53	3 ²	21	11 23	
3)	42	4 ²	52	89	
4)	62	16x	64	EF	
5)	d	ouble to 2?		pass	

		Game	3		
Tir	no Leo	chich - 2	Ed O	Laughlin - 0	
	roll	played	roll	played	
1)	52	8 11	11	7 ² 5 ²	
2)	51	3 23	c	double to 2?	
3)		take	64	14x	
4)	65	EF	31	2x	
5)	31	22 24	63	2 11	
6)	54	39	43	6	
7)	22	22 ² 4 ²	65	13	
8)	21	5 ^{FB}	54	4	
9)	41	5 21x	11	23 4x ²	
10)	63	22 2x	43	EF	
11)	41	8	33	EF	
12)	re	edouble to 4?		pass	

		Game	4		
Ti	no Leo	chich - 4	Ed C	Laughlin - 0	
	roll	played	roll	played	
1)	54	8 20	31	5x ²	
2)	31	24 10	31	10 5	
3)	41	92	22	202	
4)	03		52	23 8	
5) 6)	22	4-3-	32		
7)	12	24 28	21		
8)	41	1x	61	24 0 24x-18	
9)	66	ËÊ	01	double to 2?	
10)		take	64	2 ²	
11)	62	EF	65	7 3x	
12)	52	EF	22	1x ² 16	
13)	54	21 EF	41	4x 5	
14)	55	EF	64	109	
15)	43	21x_22	62	EF	
10)	21		65	20 4x	
12)	04 11		51	20 4X	
19)	63	20x FF	43	24 3X FF	
20)	63	22 15	63	FF	
21)	63	6	41	24 16	
22)	62	26	42	16 5	
23)	42	18 4	41	11	
24)	re	edouble to 4?		take	
25)	32	13	33	4	
26)	64	12	64	10	
27)	41	8 5x	42	EF	
28)	53	5'10	21	24 9	
29)	23	O IU FF10	40	13 0F10	
30)	32	J FB	43	6F13	
32)	54	30	43	0 ⊿ ^{F9}	
33)	11	356 5	22	$34^{2}2$	
34)	43	0 ²	54	15	
35)	43	1x ²	31	EF	
36)	61	03	51	EF	
37)	65	0 ²	62	17	
38)	53	0 ²	64	11 ²	
39)	11	03	43	4	
40)	42	0^{2}	33	game	



		Gan	ne 5		
Ti	no Leo	chich - 8	Ed O	'Laughlin - 0	l)
	roll	played	roll	played	
1)	65	13	42	4 ²	
2)	64	14	52	8 <u>1</u> 1x	
3)	21	24_11	63	5 ²	
4)	63	5 ²	42	9 22	
5)	61	6	63	32	
<u>6)</u>	32	3x-1x		Jouble to 2?	
7)	50	take	44	$21^{2} 4 2$	
8)	52	1 11	21	2 /	
(9)	64	18x-14	31	21	
10)	41	102	65	10	
11)	44	9° 2 02 F10(2)	54	86	
12)	11	8-110(2)	05	12	
13)	22	2 5 2	00	0 1	
14)	31	5-	60		
15)	24	51	03	15 18	
10)	32	6 /X	32	22X 13	
10)	42		64	21 10	
10)	42		42	1 1 72	
20)	42 51		43	22	
20)	31		13	1 2	
21)	21		5/	\int_{Ω^2}	
22)	63	16	65	02	
20)	63	10 5	21	O^2	
24)	11	6 ²	32	O^2	
26)	63	name	52	0	
20)	00	gane			

Open Forum

Do you find any doubling positions or plays presented in the match interesting? Your comments are welcomed. Prefer write-ups on DOS disk. How about the doubles 1's for Ed in Game 6, Move 40?

HBC Offers Reprints of Matches

HBC has been presenting quality matches of top players for over 3 years. Each match is complete with all doubling positions. Write to HBC for a list of available matches.

Hoosier Pips...

HBC welcomes new players Len Carmine, Ellen Schremp, and Dragan Stevanovic...Now is the time to check-out flights to up-coming tournaments during the current air fare wars...Hurb Gurland (MA) won the New Hampshire tournament...Best of luck to George Barr (IL) and Don Desmond (IL) who recently joined the ranks of ex-smokers...Tino Lechich (Australia) finished first over Hugh Sconyers (CA) at Costa Rica tournament...Condolences to Jim Curtis and family on the death of his father-in-law April 25th.

Game 6					
Tir	no Le	chich - 8	Ed C)'Laughlin - 2	
	roll	played	roll	played	
1)			52	8 22	
2)	54	3x 20	54	20 ²	
3)	64	7 20	64	74	
4)	32	3 18x	61	18x	
5)	63	22 7x	31	24 3x	
6)	22	$21x 4^2$	65	20 18x	
7)	55	20 16 8518	31	14	
8)	41	11v	62	23 1 /v	
a)	13	22v-18	51	20 TH	
100	31	21	54	20 / A 2 ²	
11	11	162 02	13	102	
12	12	2	62	222 42	
12)	65	20 EE	02	double to 22	
14)	05	toko	51		
14)	50		51	3X-4	
10)	03	20 22	24	14	
10)	31	9	32	5X-3X	
17)	03		01	24 0 1 0F24	
18)	65	20 16	42	18 ⁻²⁴	
19)	51		65	100	
20)	03	6.10	43		
21)	44	EF	62	/ 18	
22)	64	EF	54	3-	
23)	32	EF	54	11	
24)	55	20-5x	64	EF	
25)	64	3_5	53	EF -	
26)	43	9	11	24 9x 7	
27)	31	24 3	42	14 /	
28)	64	14	21	11x	
29)	52	20 1x	41	24x_7	
30)	21	24 1x	53	EF	
31)	31	16	53	EF	
32)	63	7	43	EF	
33)	31	57	65	EF	
34)	43	17	51	24x 2	
35)	54	16	52	15	
36)	21	14 8	32	4 5	
37)	r	edouble to 4?		take	
38)	54	8	re	edouble to 8?	
39)		take	31	1 23	
40 <u>)</u>	32	2x 7	11	23x 5 ²	
41 <u>)</u>	61	19x 6	11	23 4 1	
42)	21	11	43	1 2	
43)	43	12	43	12	
44)	31	7 ^{F11}	52	2 NP	
45)	63	19	65	NP	
46)	42	359	33	1 NP	
47)	64	13	43	NP	
48)	32	5 6	53	15	
491	63	0 ²	43	8	
50)	42	22-0	31	ĒĒ	
51	22	23 0	11		
51)	23	1 2	41 01		
52)	51	10	21		
53)	40		20	1 02	
54)	43	02	33		
33) 56)	42		02	U	
56)	32	U ²	52	game	