Learning Points – Finessing with 9 Trumps **June 13, 2008**

by Steve Moese; edited by Mike Purcell

W Deals **None Vul**	♠ 10 ♥ AKJ982 ♦ J3 ♣ KQJ10	← Steve
♠ Q98754 ♥ Q105 ♦ 107 ♣ 98	**N** **W 24 E** **S**	♠ AJ6 ♥ 6 ♦ KQ962 ♣ 7532
Kim →	♠ K32 ♥ 743 ♦ A854 ♣ A64	Deep Finesse: NS 5♣, 5♥ 5N

West	North	East	South
Pass	1♥	2♦	3♦
Pass	4♥	Passed Out	

East leads ♦K

June 12, 2008 Thursday Evening Open Pairs, Ms. Annease Comer, Director, Cincinnati Bridge Association Bridge Center, 2860 Cooper Road, Cincinnati, OH 45241 (513) 631-8070 http://www.cincybridge.com My Partner: Kim King

"Eight Ever, Nine Never" is an adage about finessing the trump Queen *when no other information is available about the hand.* Here's a hand from Mentor-Mentee Night that brought the question: "Why did you finesse for the ♥Q holding 9 trumps"? The context of the hand matters whether the adage applies.

The Bidding

North's opening is so sound that game will require little encouragement from South. East's overcall is appropriate, though some might choose a takeout double to involve partner more. (Seeing East's long spades, we're thankful for the overcall). South's cue bid is a common agreement in duplicate: "Partner I have a limit raise or better hand with at least 3 trumps."

The Play

East led the ♦K. Leading from touching honors with length is almost always right, and certainly wins most all post mortem debates. Declarer could count 10 tricks off the top (5♥, 1♦, and 4♣). Declarer might find an extra trick by finessing the ♠A. Leading a singleton toward the ♠K should happen early in the play so that the defenders have not exchanged information about their hand patterns. Without a count, East will have a hard time judging whether to duck the Ace or not. Often a 10 or J makes it impossible for a good player to duck (not wanting to interrupt an apparent losing finesse). Declarer wins the ♦A.

Before touching spades declarer has to eliminate opponent's trumps. "*Eight ever, nine never*" anyone? Declarer played the ♥3 to the ♥A noting the fall of the ♥5 and ♥6. Then declarer led the ♣10 to the dummy's ♣A and played the ♥4 toward hand. West played ♥10 at the moment of truth.

Declarer finessed (Why? *See below*) and later successfully finessed the ♠A. Running all tricks save 1 led to East's guess whether to guard ♠ or ♦. East guessed well so North's ♦J fell to the ♦Q – 4♥ making 6 +680 for 7.5 of 8 match points. The press recap confirms all bid 4 Hearts, but only 2 found 12 tricks.

Pair	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
MP	4	4	7x	4	4	x	7x	x	4
Score	450	450	480	450	450	420	480	420	450

Post Mortem

All else equal, playing for the drop is a better proposition than finessing the queen when holding nine trumps than when holding eight. To understand this question fully, we should review *a priori* odds for suit splits, cashing the ♥AK vs finessing the ♥Q, and how the principle of open spaces alters the odds. Please note that this analysis is beyond the scope of the 90 seconds or so declarer has at the table.

a priori **Odds for Suit Splits**

North/South hold 9 trumps between them. How can the remaining trumps split between the defenders? There's only one way West can hold all 4 trumps. Similarly there is only 1 way for East to do the same. There are 4 ways for East to hold 3 trumps (Same for West) and 6 ways to split trumps 2-2 between them. Except for suits splitting 1-1, when an even number of cards are missing, the even split is LESS LIKELY than the nearest uneven split!

8 Ever 9 Never!! **Cashing vs. Finessing**

Let's look closely. Assume we choose to finesse West for the ♥Q (we'll get the same result if we finesse East). Assume no other information is available to us about the hands (no bidding and no lead inferences). Let's count the losing cases for the finesse and for cashing the AK for both the 8 card fit and the 9 card fit. To avoid confusion we assume that whenever the ♥Q is with West the finesse wins, and with East it loses. Therefore for the 3-1 split with West holding 3, East will have a singleton ♥Q in one case of the 4. Notice that for 9 cards, the expected loss is 6.6% less for cashing the ♥AK than the finesse.

9 Card Fit

				Finesse		Cash AK	
West	**East**	**# Cases**	**Probability**	**# Losing Cases**	**Probability**	**# Losing Cases**	**Probability**
4	0	1	0.0478	0	0	1	0.0478
3	1	4	0.2487	1	0.0622	3	0.1865
2	2	6	0.4070	3	0.2035	0	0
1	3	4	0.2487	3	0.1865	3	0.1865
0	4	1	0.0478	1	0.0478	1	0.0478
Total		**16**	**1.0000**	**8**	**0.5000**	**8**	**0.4687**

8 Card Fit

				Finesse		Cash AK	
West	**East**	**# Cases**	**Probability**	**# Losing Cases**	**Probability**	**# Losing Cases**	**Probability**
5	0	1	0.0196	0	0	1	0.0196
4	1	5	0.1413	1	0.0283	4	0.1130
3	2	10	0.3391	4	0.1356	6	0.2035
2	3	10	0.3391	6	0.2035	6	0.2035
1	4	5	0.1413	4	0.1130	4	0.1130
0	5	1	0.0196	1	0.0196	1	0.0200
Total		**32**		**16**	**0.5000**	**22**	**0.6722**

However for the 8 card fit, cashing AK instead of finessing has a much larger expected loss 67.22% compared to 50%, or a 34.4% greater relative chance that finessing is the right choice.

So you see, it is **always much better** *a priori* to finesse when holding 8 trumps, but it is a closer decision with a **tangible edge for cashing AK** when holding 9 trumps.

The Principle of Missing Spaces

But why did declarer finesse? Declarer's play in ♥ and ♣ was a discovery play to count West's trumps (and avoid a singleton ♥Q off-side). By the time West played the ♥10, declarer knew that East had shown 5-6♦ and 1♥, leaving 6-7 open spaces in hand (13 minus 6 or 7 known cards) for the ♥Q. West had shown 1-2♦ and 2♥, leaving 9-10 open spaces. Assume the cards were distributed randomly. Then the odds that the missing ♥Q is with West is 9/16 or 56.25% - slightly better odds than the 53.13% (100-46.87%) proposition of the playing ♥AK for the drop. 9/16 is the ratio of West's missing spaces to the total number of missing spaces in the East+West hands combined. Likewise the odds that East holds the ♥Q are 7/16 or 43.75%. This advantage is enough to make the finesse worthwhile. If East held 6♦ and 1♥ then the odds favor finessing 10/16 or 62.5%. So you see the ♥ finesse gives declarer a (56/53, 63/53) 5.9% to 11.8% advantage against cashing the ♥AK.

Note that 16 HCP are held by East-West. East's overcall can be on as little as 10. With 5 HCP accounted for by the ♦K lead, the remaining points split 5-6 at best. This has little impact on the odds for the location of the ♥Q unless East holds 15 of the 16 HCP available. We cannot learn this in time.

Now did declarer really compute this at the table? – **NO**. It was enough to know that West had 6-7 spaces and East 9-10 for the ♥Q to make the finesse the odds on choice. If you suspect both opponents have

Possible Splits of Outstanding Cards				
Cards	Split	Cases	Frequency	Probability
2	2-0	2	4992288	0.480
	1-1	2	5408312	0.520
3	3-0	2	2288132	0.220
	2-1	6	8112468	0.780
4	4-0	2	994840	0.096
	3-1	8	5173168	0.497
	2-2	6	4232592	0.407
5	5-0	2	406980	0.039
	4-1	10	2939300	0.283
	3-2	20	7054320	0.678
6	6-0	2	155040	0.015
	5-1	12	1511640	0.145
	4-2	30	5038800	0.484
	3-3	20	3695120	0.355
7	7-0	2	54264	0.005
	6-1	14	705432	0.068
	5-2	42	3174444	0.305
	4-3	70	6466460	0.622
8	8-0	2	17136	1.65E-03
	7-1	16	297024	0.029
	6-2	56	1782144	0.171
	5-3	112	4900896	0.471
	4-4	70	3403400	0.327
9	9-0	2	4760	4.58E-04
	8-1	18	111384	0.011
	7-2	72	891072	0.086
	6-3	168	3267264	0.314
	5-4	252	6126120	0.589
10	10-0	2	1120	1.08E-04
	9-1	20	36400	3.50E-03
	8-2	90	393120	0.038
	7-3	240	1921920	0.185
	6-4	420	4804800	0.462
	5-5	252	3243240	0.312

balanced hands, cash away! **Eight EVER, Nine Never–Until you know better!**

It always pays to attend to what each card is telling you.

Check out Richard Pavlicek's website on Bridge Calculators for more tools on Bridge probabilities: http://www.rpbridge.net/rpbr.htm.

For more on bridge probabilities read Bridge Odds for Practical Players from the Master Bridge Series by Hugh Kelsey & Michael Glauert. Orion Publishing 1988.