Learning Points – A Good Slam

August 30, 2011

By Steve Moese. *Edited by Mike Purcell*

Slams Level: Intermediate Advanced

West Deals **EW Vul** **MPs**	♠ ♥ ♦ ♣	
♠AKJ1075 ♥KJ ♦ A5 ♣K95 Ron	**N** **W 16 E** **S**	Steve ♠ 94 ♥ A107 ♦ 762 ♣AQ763
	♠ ♥ ♦ ♣	EW 2♦, 2♥, 7♣, 7♠, 7N

Tuesday Night Club Game, August 16, 2011, Mr. Rob Weidenfeld , Director. Cincinnati Bridge Association Bridge Center, 2860 Cooper Road, Cincinnati, OH 45241 (513) 631-8070 . Ron Babcock is my partner. We play Precision.

Nothing like the thrill of making a slam when no one else bid it – but does that make it a good slam?

	Scores		Matchpoints	
Contract	**N-S**	**E-W**	**N-S**	**E-W**
4 ♠ W		680	6.00	0.00
3 NT E		690	5.00	1.00
4 ♠ W		710	3.00	3.00
4 ♠ W		710	3.00	3.00
4 ♠ W		710	3.00	3.00
3 NT E		720	1.00	5.00
6 ♣ W		1390	0.00	6.00

Postmortem

Here is a hand where a combined 29 HCP and two 8-card fits would enable declarer to bid and make a Grand Slam. Yet as we look at the results only one pair in the field bid a small slam. The 1st question: *Is this a good slam to bid?* The 2nd question: *What is the right strain?*

What is a Good Slam?

A good slam is one with a **positive expected value**. Think of it as maximizing your net score adjusted for the probability of success. The probability of success times the expected Success Score exceeds the probability of failure times expected Failure Score. The necessary success probability is related to the scores for success and for failure (see Appendix II).

$$\text{Success Probability} > \frac{\text{Failure Score}}{\text{Score Range}}$$

Any slam whose success probability is greater than the score ratio is worth bidding. How we score figures into our decision. There are 3 scoring forms: 1) IMPs – usually used for teams but can be used for pairs too; 2) Matchpoints; and 3) Board a Match (Win, Tie, Lose = 1, ½ 0). See Appendix I for detailed discussion of the 1st 2 scoring methods and their impact on success probability. **The better information you get from your bidding the better decisions you will make.**

The Play

In a ♣ slam, since trumps break 3-2, declarer can draw trump in 3 rounds and ruff ♠s twice if necessary to drop the ♠Q. As the cards lie 7♣ will always make.

A ♠ slam boils down to how to manage the missing ♠Q. Playing ♠AK wins when the ♠Q is singleton or doubleton in North or South, a total of 12 cases (The 5 missing trump can be distributed in 6 ways in each of 2 hands with the ♠Q singleton or doubleton). The finesse gains in 6 of those 12 (the singleton or doubleton ♠Q onside) and wins for the 6 cases when South holds ♠Qxx and the 4 cases when South holds ♠Qxxx for a total of 16 cases (6+6+4).

West Deals **EW Vul** **MPs**	♠ Q ♥ Q65432 ♦ 843 ♣ 1082	
♠AKJ1075 ♥KJ ♦ A5 ♣K95 Ron	**N** **W 16 E** **S**	Steve ♠ 94 ♥ A107 ♦ 762 ♣AQ763
	♠ 8632 ♥ 98 ♦ KQJ109 ♣ J4	EW 2♦, 2♥, 7♣, 7♠, 7N

The 1st round finesse solves more cases (16) than playing for the drop (10). **The 1st round finesse is the better percentage play.** Playing 1 round of ♠s then finessing reduces your odds of success because you gain 2 cases (Singleton ♠Q while losing 6 cases (♠Qxxx onside). That play caters to 12 cases and is only slightly better than the drop (10 cases). Double dummy 7♠ requires a lower percentage play in the trump suit. That is NOT good bridge! (but perhaps good luck).

In a ♣ slam declarer must visualize how to bring in the ♠ suit with no loss. This means trumps 1st then cashing top ♠s. No finesses here as Declarer has trumps and tempo to handle even a 5-0 break in ♠s!! (Declarer sees who is void. If North holds 5 ♠s, declarer can develop the suit with a ruffing finesse. If South, then a finesse and 2 ruffs brings the ♠ suit home).

The key to a maximum score is for West to visualize this before the bidding ends.

The Bidding

Here are 3 possible auctions to a small/grand slam (there are more!):

<table>
<tr><th>2/1 GF Version 1</th><th>2/1 GF Version 2</th><th>Precision</th></tr>
<tr>
<td>West – North – East – South
1♠ – Pass – 1N – Pass
3♣[1] – Pass – 4♣[2] – Pass
4♦[3] – Pass – 4♥[4] – Pass
4♠[5] – Pass – 4N[6] – Pass
5♦[7] – Pass – 5N[8] – Pass
6♣/♠ – All Pass

1=18+HCP 3+ ♣s, 2=9-12 HCP 5+♣s
3,4,5 = Control Bids, 6=RKB 1430,
7=3 Key Cards 8 = 5 Keys+♣Q</td>
<td>West – North – East – South
2♣ – Pass – 3♣ – Pass
3♠ – Pass – 3N – Pass
4♣[1] – Pass – 4♥[2] – Pass
4♠[3] – Pass – 4N – Pass
5♦[4] – Pass – 5N – Pass
6♣/♠[5] – All Pass

1=Agrees ♣s, 2, 3=Control Bids
4 = 3 Key Cards 5 = Suggested place to play.</td>
<td>West – North – East – South
1♣[1] – Pass – 2♣[2] – Pass
2♠[3] – Pass – 3♣[4] – Pass
4♣[5] – Pass – 4♠[6] – Pass
5♦[7] – Pass – 5♥[8] – All Pass
6♠ – All Pass

1=Precision:16+ Any shape; 2=5+♣s, 8+HCP
3=Asks fit & Controls (A=2, K=1)
4= Poor fit (<Jxx) and 4+ Controls
5=♣ Fit; asks suit strength; 6= 5 ♣s headed by 2 of A, K or Q; 7=Ask Control of ♦s
8=No 1st or 2nd round control</td>
</tr>
</table>

A simple 2/1 approach 1♠-P-1N –P-4♠-P-4N-5♦ (0 or 3)-6♠ is possible and will ignore ♣s. Opening 2♣ might steer us into 3N as West must risk going past game to show slam interest. A 1♠ opening simplifies communication with little risk. We have more space for our conversation. West needs partner to have enough to respond for a game to be likely. For Precision, West knew slam was possible by East's 2nd bid!

Sound bidding stresses:
1) strain before game,
2) game before slam,
3) controls so that opponents can't cash 2 tricks right away,
4) the ability to visualize 12 or 13 tricks,
5) and the right choice for the event (method of scoring).

Final Thoughts

Good bidding will identify 12 or 13 tricks if we listen closely. Usually one partner and not both has the best information to decide strain and level. Here West knows that there is a good 8-card ♣ fit and a possible 8-card ♠ fit. West also knows that while we are missing no aces, we are missing the ♦K and have a potential ♦ loser. Looking deeper, West knows that if ♣s break 3-2 (68% chance), and the ♠Q can be found (100 % chance) then 13 tricks are available. ♣s seems safer than ♠s because East might have a singleton ♠ and West does not know the whereabouts of the ♠Q. When bidding a grand slam, choose the safer strain.

Should we bid slam at all? Our combined hands have only 29 HCP. Don't we need 32-33 HCP for a small slam in trumps? While the HCP guidelines are good for relatively flat hands, when you have hands where suits are known to run and can count to 12 or 13 tricks, then the slam decision boils down to what the field will do:

1) If you believe the entire field will not bid the slam then bid the safest small slam for all the Matchpoints. Don't even risk bidding the Grand Slam because you gain nothing extra in MPs themselves since no one else even bid a small slam.
2) If you believe the entire field will bid the small slam, then bid the grand slam if you can reasonably count 13 tricks.
3) **NEVER** let the double dummy analysis determine for you whether you should bid a slam. **REREAD THIS POINT**.

What does reasonable mean? That depends on the game you are playing. At IMPs, the potential gain must outweigh the potential loss – the risk weighted decision must be positive. At Matchpoints the answer depends on what the field does. Therefore you need to know if you are in a weak or strong field to know what's best. If no one will reach any slam, bid a NT Game or the least risky slam. If the field rates to be there (or if you really need a top on this board) whether choosing to bid 6 over a game or 7 over a small slam the guideline is the same:

> In a sound field, bid Slam if it is **at worst** on a finesse, and bid game if slam is **at best** on a finesse. The same applies to the Small/Grand slam decision when most of the field will bid the small slam. *Marshall Miles (October 2011 Bridge World Classic Rewind).*

We conclude this small slam is sound and ♣s is right given the field.

Learning Points

1. Regardless of your methods, bid with discipline so partner knows clearly what you have. Strain before Game, Game before Slam. Slam only when likely (at worst a finesse) or when the field will do it (Matchpoints). Bid GAME when slam is AT BEST on a finesse.

2. At MPs, bidding more than the field only makes sense when you need a poor-odds result to win. Even then it's often better to rely on your superior skill in a better scoring contract. Often an overtrick delivers the same MP value that bidding a slam does. Why take the added risk?

3. If you need a slam to win a team match and this one offers a sound chance, by all means bid it. Just be sure you really know the state of your match. You might not!

4. Never let double dummy analysis define your bidding choices or your play strategy. Double dummy is not good bridge, unless you have read the hand yourself and know where everything is!

5. Yes, this was a good slam to bid. In an average field a small slam is enough. In a strong field the club grand slam is indicated.

Keywords: When to bid slam, Grand Slam, Expected value, IMPs, matchpoint field, judgment, success probability, counting tricks.

Appendix I

IMPS

When is this slam right to bid at IMPs? Assume Opponents bid and make game, and the major suits for simplicity. (Adjustments for minors or NT at IMPS are small).

IMP Table

Point Difference		IMPs	Point Difference		IMPs	Point Difference		IMPs	Point Difference		IMPs	Point Difference		IMPs
From	To		From	To		From	To		From	To		From	To	
0	10	**0**	170	210	**5**	430	490	**10**	1100	1290	**15**	2250	2490	**20**
20	40	**1**	220	260	**6**	500	590	**11**	1300	1490	**16**	2500	2990	**21**
50	80	**2**	270	310	**7**	600	740	**12**	1500	1740	**17**	3000	3490	**22**
90	120	**3**	320	360	**8**	750	890	**13**	1750	1990	**18**	3500	3990	**23**
130	160	**4**	370	420	**9**	900	1090	**14**	2000	2240	**19**	4000	+	**24**

When vulnerable if we bid a small slam and make we gain +13 IMPs. If we go down we lose 13 IMPs. There are 26 IMPs riding on our decision [13-(-13)]. 13/26 = 50% is a good estimate of how probable a small slam must be for us to break even over time.

IMP Outcomes Based on Possible Results (major suit contract).

	Vulnerable						Not Vulnerable					
Net **IMPs**	**We They**	**Game +710**	**SS-1 -100**	**SS+ +1460**	**GS-1 -100**	**GS+ +2210**	**We They**	**Game +510**	**SS-1 -50**	**SS+ +1010**	**GS-1 -50**	**GS+ +1510**
Game	**-710**	*0* **0**	*-810* **-13**	*+750* **+13**	*-810* **-13**	*+1500* **+17**	**-510**	*0* **0**	*-560* **-11**	*+500* **+11**	*-560* **-11**	*+1000* **+14**
SS-1	**+100**	*+810* **+13**	*0* **0**	*+1560* **+17**	*0* **0**	*+2310* **+20**	**+50**	*+560* **+11**	*0* **0**	*+1060* **+14**	*0* **0**	*+1560* **+17**
SS+	**-1460**	*-750* **-13**	*-1560* **-17**	*0* **0**	*-1560* **-17**	*+750* **+13**	**-1010**	*-500* **-11**	*-1060* **-14**	*0* **0**	*-1060* **-14**	*+500* **+11**
GS-1	**+100**	*+810* **+13**	*0* **0**	*+1560* **+17**	*0* **0**	*+2310* **+20**	**+50**	*+560* **+11**	*0* **0**	*+1060* **+14**	*0* **0**	*+1560* **+17**
GS+	**-2210**	*-1500* **-17**	*-2310* **-20**	*-750* **-13**	*-2310* **-20**	*0* **0**	**-1510**	*-1000* **-14**	*-1560* **-17**	*-500* **-11**	*-1560* **-17**	*0* **0**

SS-1=small slam is down 1; SS+ =small slam makes; GS-1=Grand Slam down 1; GS+= Grand Slam Makes

Should we bid slam or not?

Estimating Success Probability

	Vulnerable				Not Vulnerable			
We make : They make:	**Gain**	**Lose**	**Range**	**p_s**	**Gain**	**Lose**	**Range**	**p_s**
small slam : game	13	13	26	0.50	11	11	22	0.50
grand slam : game	17	13	30	0.43	14	11	25	0.44
grand slam : small slam	17	17	34	0.50	11	11	22	0.50

Nonvulnerable the table shows 22 IMPs are at play and the minimum probability is 11/22 or 50%, a coin flip. So if we are certain opponents will bid and make game, we need at least 50% success for a small slam vulnerable or not. Vulnerability affects the score, but here it does not affects the odds.

Match Points

Scores are based on relative results, that is, what the field does. If a making small slam is not bid by anyone else (Field P), simply bidding a slam gets a top. If everyone bids slam then a top score will depend on the strain. Here's a Matchpoint table showing several different make believe fields for this hand. Notice how what others do strongly influences our score, and therefore what we choose to do!

Field P		Field Q		Field R		Field S		Field T		Field U	
Score	**MP**	**Score**	**MP**	**Score**	**MP**	**Score**	**MP**	**Score**	**MP**	**Score**	**MP**
710	3	1460	9.5	1460	7	1460	6	2210	8.5	2210	10
710	3	1460	9.5	1460	7	1460	6	2210	8.5	-100	3
710	3	710	3	1460	7	1460	6	1460	3	-100	3
710	3	710	3	1460	7	1460	6	1460	3	-100	3
710	3	710	3	1460	7	1460	6	1460	3	-100	3
720	9	720	6	1470	10	1470	9	1470	5.5	-100	3
640	1	1390	8	1390	4	1390	1	2170	7	2170	8
640	1	640	0.5	640	0.5	1390	1	1390	0.5	2170	8
640	1	640	0.5	640	0.5	1390	1	1390	0.5	2170	8
720	9	720	6	720	2.5	1470	9	1470	5.5	-100	3
720	9	720	6	720	2.5	1470	9	2220	10	-100	3

Field P – No one bids slam	A small slam brings a top board
Field Q – 3 pairs bid a small slam	♠s pays better than ♣s, but even ♣s brings an 80% board. Bidding the GS improves your score by either 0.5 or 2 MPs. Not a worthy payoff for the additional risk
Field R – 8 pairs bid small slam	Now strain plays a larger role. A ♣ slam is a below average result in this field. Any GS would add 0-6 MPS to your score – still a poor risk!
Field S – all pairs bid and make a small slam.	The ♣ slam is a bottom. A GS figures to raise your score 3-9 MPs and for club bidders is worth the risk.
Field T – 4 pairs bid a GS, all others bid a small slam.	A small slam in ♣s is a bottom score. Bidding a grand slam adds 5 – 7.5 MPs to your score. Odds appear favorable.
Field U – everyone bids a grand slam.	Sound players will go down 1 in ♠s and NT GSs. ♣s – the safest strain will score well. A lucky pair is rewarded for short odds.

Let's take a look at how fields affect the MP slam decision Expected Value. A possible score is across the top of the columns. Here's how that scores in each of the field.

MPs	**+640**	**+720**	**+1390**	**+2170**	**+1460**	**+2210**	**-100**
P	1	9	10	10	10	10	0
Q	0.5	6	8	10	9.5	10	0
R	0.5	2.5	4	10	7	10	0
S	0	0	1	10	6	10	0
T	0	0	0.5	7	3	8.5	0
U	7	7	7	8	7	10	3

In **Field P**, the maximum non-slam score (strain) is 9 MP. If we succeed at slam we net +1 MP. If we fail at slam we lose 9 MPs. Therefore the success probability is 9/10 or 90%. Slam must be better than 90% sure for this to be a good choice. Notice this fields emphasizes getting to the best scoring strain below slam is enough for a very good board. If we are going to bid slam then choosing the safest slam strain maximizes our score. Since getting to 3N guarantees a 90% board, slam is far fetched unless you are very sure it will come home.

In **Field R** the maximum score for game is 2.5, the score for a small slam is 7. If we succeed at the small slam we net 4.5 MP. If we fail we lose 2.5. The necessary success probability is 2.5/7 or 36%. Here getting to Grand Slam is necessary for a top board.

Field T shows bidding game is a bottom. Indeed bidding the ♣ slam is a bottom too, and so is going down in any contract. Here bidding 6♠ earns a 3 while bidding 7♠ earns 8.5 (+5.5) and going down loses 3. Therefore the success probability in ♠s is 3/8.5 = 35% or better. Notice this assumes that all slams make. If the grand slam goes down with good defense then you are fixed by the pairs whose defenders did not play best. This changes the probability argument substantially. -100 in Field T (or any field where you are the only pair going down in a Grand Slam) is a bottom score. In match points we must avoid bottom scores at all cost because we need 2-4 good boards to make up for that one bad result. That's too high a price to pay.

Field U shows any plus score is worth 7 MPs. A Grand slam adds 3 to that but risks losing 7. Therefore the success probability for a grand slam is 7/10 = 70%.

Matchpoint Summary
We need perfect information about what the field does to accurately estimate the success probability we require to bid a slam. **The field differences cause the success probability ranges from 35-90%!!!. We cannot know the exact answer ahead of time. Best MP players know to play the field, not just their cards.** One way to handle complex situations at the table is to have a rule.

> In a sound field, bid Slam if it is **at worst** on a finesse, and bid game if slam is **at best** on a finesse. The same applies to the Small/Grand slam decision when most of the field will bid the small slam. *Marshall Miles (October 2011 Bridge World Classic Rewind).*

Appendix II

Success Probability (An exercise in algebra)
GOAL: The likely positive result minus the likely negative result is greater than zero.

(Success Probability) x (Success Score) – (Failure Probability) x (Failure Score) > 0
Note: Success Probability + Failure Probability = 1

(Success Probability) x (Success Score) > (1-Success Probability) x (Failure Score)

$$\text{Success Probability} > \frac{(1 - \text{Success Probability})x(\text{Failure Score})}{\text{Success Score}}$$

$$(\text{Success Probability})x\ (1 + \frac{\text{Failure Score}}{\text{Success Score}}) > \frac{(\text{Failure Score})}{(\text{Success Score})}$$

$$\text{Range} = (\text{Success Score}) + (\text{Failure Score})$$

$$\frac{(\text{Success Probability})x(\text{Range})}{(\text{Success Score})} > \frac{(\text{Failure Score})}{(\text{Success Score})}$$

$$(\text{Success Probability}) > \frac{(\text{Failure Score})}{(\text{Range})}$$

Failure Score is the absolute value, not the negative value.