

Flannery and Major Nightmare Solutions at Bridge

Pete Matthews Jr – Version 6 – <http://3nt.xyz> – © November 6, 2011

A minimum opening hand with three or four spades and five or six hearts presents substantial problems:

1. **Opener's rebid over 1NT:** Over a forcing 1NT response, the 1♥ opener may have to pass, or rebid a 5-card heart suit or a 2-card minor.
2. **Opener strong with 3 spades:** Opener may be in a quandary with 3-card spade support and extra values, especially when holding six hearts, the major suit *nightmare hand* (six of mine, three of yours).
3. **Bad spade fit:** Opener will often raise spades on 3-card support, leading to an inferior contract when responder has a bad suit and either a doubleton heart or a long minor.
4. **Missed spade fit:** Many responders bypass a bad 4-card spade suit, and bid 1NT instead, sometimes missing a spade fit. (In some solutions, a desirable 4-3 spade fit can be missed.)
5. **Missed heart fit or wrong level:** Opening 1♠ with four spades and five hearts distorts the distribution and may lead to playing in the wrong major or at the wrong level.

Solutions

There are basically two **standard solutions**, with variations:

- **Always bid spades:** never respond 1NT when holding four spades. I'll call this Standard, or **Std.**
- **Bypass spades unless strong:** a response of 1NT may include four bad spades. People who play this way may also **open 1♠** with four strong spades and five hearts. This is Modified Standard, or **Mod.**

Below I seriously consider the **Kaplan Interchange**, a game-forcing 2♠ response to 1♥ with the **Tucker 1NT** rebid by opener, the **Flannery 2♦** opening, **Opener's Transfer Rebids**, and the **Gazzilli** convention, a system based on a forcing 2♣ rebid by opener. Continuations after 1♥ - 1♠ from **Kaplan-Sheinwold Updated** are considered as an adjunct to Flannery. See "Notes" at the end for additional methods not considered.

The Kaplan Interchange

After a 1♥ opening, the Kaplan Interchange swaps the 1♠ and forcing 1NT responses. (Bill Flannery recommends this swap when playing the Flannery 2♦ opening, but does not go into any detail.) Without spades, opener rebids as over a forcing 1NT response in both cases:

Kaplan Interchange: after a 1♥ opening	
1♠	Forcing, limited (less than game-forcing values), 0-4 spades
	1NT Promises 4 spades and denies the values to reverse
	Pass To play
	Other Natural
	Other Natural; a minor suit may be three cards (probably clubs)
1NT	Forcing, unlimited, promises 5 or more spades
	2♣/2♦ Natural, denies three spades; may be three cards (probably clubs)
	2♥ Natural, promises 6 or more hearts and a minimum opening
	2♠ Natural, promises 3 or more spades and a minimum opening [alternative: 2 or more]

There's more, but... the Kaplan Interchange does not meet the conditions of the ACBL General Convention Chart (GCC), making it largely irrelevant to most players in North America. Fortunately, the other systems that I describe are all GCC-legal: the ACBL grants wide latitude to responder over opening bids of 2♣ or higher, or starting with opener's second bid.

The Tucker 1NT Rebid by 1♥ Opener and Game-Forcing 2♠ Response

R1	O2	R2	O3	R3
1♠	Holding four or more spades and less than game-forcing values, responder must bid 1♠. Lacking a good minor, responder may also choose 1♠ with a balanced game-going hand without slam interest. With such a hand, responder plans to rebid a natural 3NT or 4♥. Responder's subsequent bid of the <i>fourth suit is natural</i> and non-forcing – 2NT is the prominent game try.			
	1NT	<i>Forcing</i> : opener promises exactly three spades		
		2♣/2♦	Natural, weak, 5+ card suit, four bad spades, singleton or void in hearts	
		2♥	Natural, weak, four spades, doubleton heart	
		2♠	Natural, weak, four good spades or longer (or any 4=1=4=4)	
		2NT	Natural, invitational, only four spades	
		3♣/3♦	Natural, forcing one round, does not promise another bid	
		3♥/3♠	Natural, invitational	
		3NT	Natural, at most 15 HCP, balanced, lacking a good 4-card minor	
		2♣/2♦	Natural, may be only three cards (as over a 1NT forcing response)	
		2♥	Natural, 6+ hearts	
		2♠/3♠/4♠	Natural, four card support	
		3♣/3♦	Natural, forcing to game	
		3♥	Natural, 6+ hearts, invitational	
		4♣/4♦	Splinter: singleton or void, four card support	
1NT	Forcing: [1] lacking values to drive to game, or [2] optionally, may also be a balanced game-going hand without slam interest.			
	Pass	Optionally, with 4=5=2=2, 11-13 HCP, and not playing option [2].		
2♣/2♦	Natural, forcing to game [or, optionally, responder's rebid at 3 of this suit]. May be 4=3=3=3 with 16+ HCP. Responder's subsequent bid of the <i>fourth suit is forcing</i> after a 2/1 and may be artificial.			
	2♠	Every hand with four spades, does not show extra values.		
2♠	Forcing to game with five or more spades and no minor of equal or greater length. [Fit-showing by a passed hand: 5+ spades with secondary spade values, 3+ hearts, and game interest.]			
	2NT	0-1 spades, tell me more:		
		3♣/3♦	Natural, 3+ cards, ostensibly aiming at notrump, may be a shorter side suit.	
		3♥/3♠	Sets trump (3♠: 0-1 loser suit opposite a void).	
	3♣/3♦	Natural, 3+ cards, exactly 2 spades. Responder's 3♦ is ambiguous, 3♥ or 3♠ sets trump.		
	3♥	Natural, 0- or 1-loser suit opposite a void, sets trump.		
	3♠	Natural, 3+ cards, sets trump		
	3NT	Natural, balanced, exactly 2 spades, 18+ HCP. Responder's 4♥ or 4♠ forcing, sets trump.		
	4♣/4♦	Splinter (0-1 cards, 4+ spades)		
	4♥	Picture bid: fine heart suit, doubleton ♠ A/K/Q, no minor suit control		
	4♠	Picture bid: great spade support, no minor suit control		

The 1♠ response is treated as a limited, forcing 1NT response, with four or more spades. With game-forcing values and exactly four spades, responder usually bids two of a minor suit. With game-forcing hand including five spades, respond 2♠ (or a 5-card minor, to save space).

Opener's 1NT rebid shows exactly three spades, and is forcing. If responder is 4=1=4=4 with weak spades, the worst situation, rebid 2♠ over 1NT. Two of a minor promises 5+ cards with bad spades and is non-forcing.

After the game-forcing jump 2♠ response, either partner may set trump in either major with the next bid, which is superior to auctions after a standard 1♠ response. Opener's 2NT denies 2-card spade support, while 3♣ or 3♦ promises 2-card support and shows a solid stopper or a suit.

Interference: If an opponent overcalls or doubles 1♠, Tucker is *off*. Instead, play support double and redouble.

The Flannery 2♦ Opening

The **Flannery 2♦** opening shows an opening hand with four spades and five hearts, but not strong enough to reverse. Everywhere you look, the responses are a little different. In the chart that follows, I present typical responses, plus some alternatives, in two schemes: Bill Flannery's from 1984, and Marshall Miles' from 2005. Miles recommends also opening 2♦ with a bad six card heart suit in a bad hand.

Flannery 2♦ Opening: four spades, five hearts, and an opening hand (not strong enough to reverse).					
		Flannery Responses	Miles Responses (used in explorations)		
Pass		Misfit with long diamonds			
2♥/2♠		Signoff, may not have good trump support. Opener may bid long minor with a max and shortness.			
2NT	Artificial, at least invitational, possible slam in a minor. Opener rebids:		Artificial, at least invitational, no interest in major suit slam, possible slam in a minor. Opener rebids:		
	3♣	3 clubs, 1 diamond	See book, if doubled or not	3♣	3 clubs, 1 diamond
	3♦	1 club, 3 diamonds		3♦	1 club, 3 diamonds
	3♥	4=5=2=2 minimum		3♥	4=5=2=2 minimum for hearts (may accept 3♠)
	3♠	4=5=2=2 maximum		3♠	4=5=2=2 accepts hearts, but minimum for spades
	3NT	4=5=2=2 maximum with Qx or better in each minor		3NT	4=5=2=2 maximum
	4♣	4 clubs, 0 diamonds		4♣	4 clubs, 0 diamonds
	4♦	0 clubs, 4 diamonds		4♦	0 clubs, 4 diamonds
				4♥	4=6, at least ♥QJT9xx
3♣	Signoff, but opener should consider raising with a max and at least 3 clubs.		Signoff, <u>wide range</u> . [Aces: mildly invitational] [Alternative: asks for 3NT with a top honor.]		
3♦	Asks for A/K/Q in majors, starting with ♠, in steps: 1, 2, 3, 0. The next step asks for ♥. See the book for handling competition.		Long diamonds, not forcing, invites 3NT with a fitting diamond card. [Alt: slam in hearts]		
3♥	Natural, 9-11 HCP, 4 card support, honors in both minors.		Natural, forcing, sets trumps for slam. Opener bids a minor suit fragment; otherwise, cheaper shows a better hand. [Alt continuations: cue bidding with serious 3NT.] <u>Competition: competitive.</u> [Aces: an asking bid, in the advanced version.] [Alt: invitational or preemptive.]		
3♠					
3NT	To play.		To play.		
4♣	Transfer to 4♥, so that opener declares.		Roman Keycard Blackwood for hearts. [Aces: Gerber]		
4♦	Transfer to 4♠, so that opener declares.		Roman Keycard Blackwood for spades.		
4♥/4♠	Natural, to play (may be preemptive)				

After a 1♥ opening, responder typically responds 1♠ only when holding five or more. Should a negative double after a 1♥ opening promise five spades? It appears this may not be playable.

If the immediate opponent interferes, which may happen frequently, the Griffey's recommend:

Flannery 2♦ – (double) ... Systems ON	
Pass	Play 2♦
Flannery 2♦ – (overcall) ... Systems OFF	
Double	Penalty
Cue bid	Forcing
Other	Non-forcing

If the 2NT inquiry is overcalled with three of a minor, Bill Flannery recommends:

Flannery 2♦ – (P) – 2NT – (3♣/3♦) ... (same at 4 or 5 level, allowing for discretion)	
3♥	One card in opponent's suit
Pass	Minimum hand (11-14) and two cards in opponent's suit
Double	Three or four cards in opponent's suit
3♠	Maximum (14-16); 4=5=2=2 with honors mostly in majors
3NT	Maximum (14-16); 4=5=2=2 with Qx or better in each minor
Minor	Void in opponent's suit

The immediate **defense to Flannery 2♦** should include only forward-going bids. Here are some of the variations:

	Standard Defense	Flannery 4th Seat Defense	Griffey/Daytona Defense to Flannery 2♦
Double	Values for strong NT	At least an opening bid	General takeout, 14+
2♥	3-suit takeout	3-suit takeout	Both minors
2♠	Natural	Natural	Natural
2NT	Both minors	Strong NT	Strong NT, may have a good minor. 3♣/3♦ advance natural and weak
3♣/3♦	Natural	Natural	Natural
3♥			Asks for 3NT with heart stopper
3♠			Natural, game invitational
3NT			Natural
4♣/4♦			Natural, game invitational
4♥			Both minors, game forcing with slam interest

Often you should **lead a trump** against a Flannery auction – possibly from an awkward holding. Cashing minor suit winners and waiting for majors, a forcing defense, playing for ruffs, and going passive, as always, may serve.

If you are willing to give up a natural weak 2♥, a **Flannery 2♥ opening** is harder to defend against. This approach is not considered here.

Extended Flannery includes hands with six hearts (4=6), and possibly even 5=6. The auctions are necessarily less efficient, since they must also sort out the six-baggers, but more hands are covered. Miles recommends playing the same responses, but opener may bid again after a natural response. After a 2NT inquiry, opener does not show a 2-card fragment, usually choosing a rebid of 3♥, 3♠, 3NT (bad hearts), or 4♥ (playable opposite shortness, my addition).

A decent agreement for a minimum 5=6 opening is to open 1♠ and rebid 4♥ over a 1NT, and possibly a 2♣ or 2♦ response, keeping the reverse for stronger hands.

Opener's Transfer Rebids

If you give up opener's natural 1NT rebid, transfers are reasonable. For evaluation purposes, I have combined two systems of transfer rebids by opener into the framework of the Tucker 1NT system, including the game-forcing 2♠ response. Responder completes a transfer if he would normally consider passing this target bid. Responder's other actions mean what they would, had opener made the target bid. Unlike standard sequences, opener will get another chance over the transfer sign-off, so responder does not strain to do something else.

Opener's Transfer Rebids	
1♠	Std: never respond 1NT to a 1♥ opening when holding four spades. [Alternative: Mod.]
1NT/2♣	Forcing transfer to clubs/diamonds, the suit opener would have rebid over a forcing 1NT response.
2♣/2♦	Accepting the transfer or volunteering diamonds suggests playing here.
2♦	Forcing transfer to hearts, at least moderate values. Over responder's minimum 2♥ or 2♠ bid, opener's subsequent bid is strong and invitational.
2♥	Weak, would pass "two moderate hearts".
2♠	Non-forcing, 6+ spades.
2♥	Single-suited minimum hand.
2♠	Natural, frequently 3-card support, minimum hand.
2NT	Natural, invitational
3♣/3♦	Splinter (4+ ♠, shortness in bid suit), forcing only to 3♠, but may be very strong
3♥	Natural, 6+ hearts, strong and forcing, good suit
3♠	4=5=2=2, invitational
3NT	Solid heart suit (no losers).
4♣/4♦	Auto-splinter: singleton or void, very strong heart suit.
4♥	4=6 majors.
4♠	5=6 majors.
1NT/2♣/2♦/2♥/2♠ – same as when playing the Tucker 1NT rebid.	

Interference: *on over doubles, otherwise off.* Opener's Gazzilli 2♣ Rebid

The Gazzilli convention can be applied to the auctions 1♥ - 1♠, 1♥ - 1NT, and 1♠, - 1NT, although I only consider 1♥ - 1♠ here. This retains opener's natural 1NT rebid, employing a forcing 2♣ rebid. Of the many available versions, this one is by Frederick Staelens:

R1	O2	R2	O3	The Gazzilli 2♣ Convention
1♠	Std: never respond 1NT to a 1♥ opening when holding four spades. [Alternative: Mod.]			
	1NT	Natural, balanced, non-forcing.		
	2♣	A <i>forcing</i> two-way bid showing 16+ HCP, any distribution, or semi-natural, at most 15 HCP.		
	2♦	The only strong response, promises 8+ HCP.		
	2♥	The weak hand, hearts and semi-natural clubs. <i>All other bids are forcing.</i>		
	2♠	Any 16+ hand with 3-card support.		
	2NT	16+ balanced, denies 3 spades.		
	3♣/3♦	Natural, 16+, denies 3 spades.		
	3♥	Natural, 16+, denies 3 spades.		
	2♥	Weak, 2-3 hearts.		
	2♠	Weak, natural, 0-1 hearts.		
	2NT	Weak, minors, 0-1 hearts.		
	3♣/3♦	Weak, natural, 0-1 hearts.		
	3♣/3♦	Two great 5-card suits, but at most 15 HCP.		
	3♥	Long, strong suit, invitational, but at most 15 HCP.		
	other	Standard.		
1NT/2♣/2♦/2♥/2♠ – same as when playing the Tucker 1NT rebid.				

Staelens remarks that you may have trouble when responder has a strong hand, so I have dropped Gazzilli into the Tucker framework, for this evaluation.

Interference: on over doubles, with 2♣ always strong; otherwise off.

Explorations

Let's explore the problems listed at the head of this article in these contexts:

The **Flannery context**: opener has four spades, five hearts and a normal opening hand (not a reverse). Responder's hand is unconstrained.

The **Extended Flannery context**: opener has four spades, six hearts and a normal opening hand (not a reverse). Responder's hand is unconstrained.

The **Tucker context**: opener has three spades, five or more hearts, and a hand normally opened 1♥. Responder has four or more spades, fewer than three hearts, and enough strength to respond.

The **Non-Tucker context**: opener has at most two spades, five or more hearts, and a hand normally opened 1♥. Responder has four or more spades, and enough strength to respond.

In order to demonstrate how the approaches work, I staged a bidding evaluation, for hands in these contexts. This table summarizes the solutions provided by the seven approaches and the scores in the bidding evaluation:

Flannery and Tucker Context Solutions							
● = Full Solution ○ = Partial Solution = No Solution	Std	Mod	Tucker	Kaplan	Flannery	Transfers	Gazzilli
1♥ - 1♠; 1NT: natural	●	●			●		●
1♥ - 1♠; 1NT: 4=5=2=2 rebid				●			
Opener strong with 3♠		○	●	●	●	●	●
Avoid Bad ♠ fit		●	●	●	●		
Find ♠ fit	●	○	●	○		●	●
Find ♥ fit, correct level	●		●	●	●	●	●
Non-Tucker Context Results	<u>87</u>	<u>88</u>	<u>92</u>	<u>91</u>	<u>93</u>	<u>88</u>	<u>96</u>
Tucker Context Results	<u>200</u>	<u>213</u>	<u>250</u>	<u>234</u>	<u>230</u>	<u>229</u>	<u>225</u>
Flannery Context Results	<u>192</u>	<u>186</u>	<u>195</u>	<u>184</u>	<u>199</u>	<u>193</u>	<u>194</u>
Extended Flannery Results	<u>70</u>						
Total Results	<u>479</u>	<u>487</u>	<u>537</u>	<u>509</u>	<u>522</u>	<u>510</u>	<u>515</u>

Bidding system: As applicable, I assumed both pairs were playing Eastern Scientific: a 2/1 response to a major suit is forcing to game if either partner raises or bids notrump; responder indicates a non-forcing hand by rebidding his suit. Also used are 1NT Forcing; Serious 3NT (see notes below); support double and redouble; three-way game tries after 1♥ - 2♥; 2♦ reverse Drury with a fit.

The **Std** approach (never responding 1NT while holding a four-card spade suit) never misses a fit in either major, and opener's 1NT rebid is natural. However, it has the other problems. Playing either Std or Mod, you will need an agreement after 1♥ - 1♠; 1NT: is responder's minor suit to play, or new minor forcing? I assume forcing.

The **Mod** approach, where responder promises at least four good spades for a 1♠ response, lets opener jump raise spades with 3-card support – but this could be the wrong strain on the nightmare hand. Mod also distorts the distribution when opening a strong 4-card spade suit (hoping to find more spade fits). It also erodes confidence – responder gets gun-shy when opener rebids hearts. I play this now, and I hate it. Whenever I open a four card spade suit, a wheel comes off. The last time, we managed to find the correct strain, but missed a cold heart game when responder passed my 2♥ rebid. I don't mind requiring responder to have at least a decent 4-card spade suit to respond, but I don't like opening a 4-card major.

Tucker provides a serious solution to the four most important problems, does not consume the 2♦ opening, and is simpler than Flannery. The Tucker 1NT rebid carries a cost: opener must rebid a minor suit (not 1NT) over a 1♠ response, on a balanced hand. It also consumes the seldom-used 2♠ response to 1♥.

For a year or more, I played the **Kaplan Interchange**, and I liked it. However, in addition to not being GCC-legal, it does not seem quite as good as Tucker or Flannery. The Kaplan Interchange carries the same cost as Tucker: opener cannot rebid 1NT when responder shows spades. It also may lose a 4-4 spade fit in competition. If you only “raise” the 1NT response to 2♠ on three cards, game tries will work better, but you may play some inferior part scores (I only promised two cards for a raise). Three cards are required in the bidding evaluation.

Flannery looks useful, but you will miss some good 4-3 spade fits if responder always requires five spades to respond 1♠; if responder can have a good 4-card suit, then opener’s jump raise is compromised. (In the bidding evaluation, five spades are required.) If you play Flannery without including the extended context, you will miss more spade fits.

Flannery has a cost: it consumes the 2♦ opening, a consideration not shown in the table or considered in the bidding evaluation. I feel the negative aspects of all the other approaches are fully represented.

A Flannery opening is significantly different from the other four approaches. The Flannery opening is better if the opponents would intervene after a 1♥ opening or when responder is weak. Other methods have more bidding room when the opponents are silent and responder is strong. It definitely will produce swings.

The chief problem with Flannery: it’s a complex system that will require work. The summary I provide is not complete. Bill Flannery wrote a whole book about it, and it is not complete either: he neglected to say what to do if the opponents bid over the 2♦ opening, which my evaluation says will happen fairly often. I cannot recommend Flannery for the casual or intermittent partnership.

If an **Extended Flannery** context hand is opened 1♥, the opponents will compete much of the time when responder does not have a 2-level response. This throws all the tested systems out of the window, so the main question on these deals is whether or not a Flannery 2♦ was opened. That opening may keep the opponents out of the auction, or delay their entry – not necessarily an advantage. While the results varied on 11 of the 18 extended Flannery context deals analyzed, the total results were identical for all systems. This limited evaluation indicates no advantage to opening 2♦ on such hands, and does not measure the deleterious effects of doing so upon 4=5 auctions.

Kaplan-Sheinwold Updated (KSU) takes the Mod approach to an extreme: unless strong enough to bid in a minor suit, responder usually bids 1NT over 1♥ when holding four spades. (Either opener or responder may treat a strong four card spade suit as five, e.g. ♠KQJx.) This does not make sense to me, and I did not evaluate it. However, once responder is known to have five spades for a 1♠ response, the KSU continuations are a suitable adjunct to a Flannery opening:

R1	O2	R2	O3	Kaplan-Sheinwold Updated after 1♥ - 1♠
1♠	Five or more spades (rarely a strong four), unlimited.			
	1NT	Natural, balanced, 12-14 HCP.		
	2♣/2♦	Either semi-natural with 15+ HCP, or any true two suiter. Seldom passed.		
	2♥	12-14 HCP, usually a 6-card suit.		
	2♠	12-14 HCP, any three card support, occasionally four if very weak. Responder’s minor GF.		
	other	Standard.		

Accordingly, I added a KSU line to the evaluations of applicable Non-Tucker and Tucker context deals. The net change to the score for adding KSU continuations to Flannery on these deals would be +4. **Opener’s Transfer Rebids** and **Gazzilli** help primarily when opener has extra values, so they are not appropriate when the opening is limited (as when playing a club system). They do not directly address the primary problem: find all 8-card

major fits, while avoiding bad spade fits. On garden-variety hands, you will play the occasional bad spade fit, when combined with Std. (Substitute Mod, if you will.)

Transfer rebids are not in common use, and do not provide a clear advantage over Gazzilli. Many versions of Gazzilli are in use – see the references for some prominent versions – I chose a simple one. You could also play Gazzilli after 1♥ - 1NT and 1♠ - 1NT.

In bidding all these hands with these two systems, I found Gazzilli to be the more comfortable. It's just a tweak to standard, with opener's 1NT rebid remaining natural. Most of the time, opener's rebid of 2♦ will deliver four cards, and if weak, 2♣ should also deliver four. These advantages do not accrue when playing Gazzilli over a forcing 1NT response. Curiously, one author said he did not like Gazzilli after 1♥ - 1♠.

Both these systems employ what I call the **Tucker framework**: all the stuff that I provided around the original idea of the Tucker 1NT rebid: limiting the strength of a 1♠ response, requiring a 2/1 in a minor with a game-forcing hand and exactly four spades, the 2♠ response promising an opening hand with at least five spades, and continuations after 2♠. The Tucker framework adds value, whether or not you play the Tucker 1NT rebid:

<u>Subset summary: all evaluated deals where responder is strong with 4+ spades</u>						
<u>Std</u>	<u>Mod</u>	<u>Tucker</u>	<u>Kaplan</u>	<u>Flannery</u>	<u>Transfer</u>	<u>Gazzilli</u>
<u>100</u>	<u>106</u>	<u>118</u>	<u>111</u>	<u>117</u>	<u>118</u>	<u>118</u>

Conclusion

The system of the **Tucker 1NT rebid and framework** is a winner. It should be simple enough for an intermittent partnership and provides significant value. While Flannery outscored Gazzilli, the cost of consuming the 2♦ opening is not represented in the scores. I'd rather play Gazzilli than Flannery. Since the Tucker framework is advisable for Gazzilli (indeed, responsible for half its superiority over Std), you might as well extend to the full Tucker 1NT system instead.

Notes

In the original version of this article, I asserted that the most likely forward-going response to a Flannery 2♦ opening was 2NT – *natural*. I have refuted that assertion. Of 50 or so randomly dealt normal Flannery hands, and about 40 Extended Flannery hands, only one of each was worth a natural 2NT invitational response. In order to get a natural 2NT to work, I proposed that responses from 3♦ to 4♣ be transfers, setting trumps if into a suit, promising game invitational values or better – opener would complete the transfer to refuse. I do not recommend transfers with an artificial 2NT response.

In the original article, I also touted the Kaplan Interchange as the best solution to the Flannery problem. That was based on personal preference and experience, before I knew about Tucker, and is also refuted.

The second version of this article introduced the Tucker 1NT rebid. (My friend Richard Lee told me about this; he got it from Alan Tucker, a Long Island expert. I'll tag him, since further provenance is unknown.) The original description was brief: *After a 1♥ opening and 1♠ response, opener's rebid of 1NT shows exactly three spades and is forcing. Otherwise, opener rebids as over a forcing 1NT response.* If somebody offers to play that with you, say **NO!** It has major defects:

- After the 1NT rebid, responder has no way to force, to explore a spade slam. I recommended that the 1♠ response deny holding three hearts, so that responder's jump to 3♥ could be used to artificially set spades as trumps. This bidding trick is no longer needed.
- After a 2♣ rebid, the system does not have an obvious way for responder to bid both these kinds of hands: ♠KT864 ♥J8 ♦J54 ♣AK8 and ♠T864[3] ♥8 ♦KJ754[3] ♣K8. You could agree to play 2♦ weak, as after a forcing 1NT response, and play 3♦ as fourth suit forcing, but that jump chews up a lot of space.
- After a 2♦ rebid, the system does not have an obvious way for responder to bid both these kinds of hands: ♠J965 ♥T ♦AKT4 ♣KJ64 and ♠T864 ♥8 ♦K4 ♣KJ7543. Unlike the preceding problem, there is only the one 3♣ bid available below 3NT, leaving an unsolvable problem.

These problems are mostly solved by restricting the 1♠ response to less than an opening bid, possibly including some game-going balanced hands. The new 2♠ response (natural, game-forcing, and at least 5 cards) rounds out the system. My analysis shows this response works better than a standard 1♠ response in many cases.

In the third version of this article, the Tucker auctions changed on Tucker context deals 16 and 21, and on Flannery context deals 9, 10 and 12. 16 non-Tucker context deals were added; in that set, boards 11 and 13 were replaced by deals taken from a practice set. Those are the deals that disclosed major defects in the Tucker 1NT system as described in the second version. The only significant result on all the Non-Tucker deals was board 13, where the standard 1♠ response on ♠J965 ♥T♦AKT4 ♣KJ64 led to an inferior final contract. In this case, at least, being required to respond 2♦ works out better!

Deals with flat results have been omitted from the accompanying spreadsheet, to save space, and from the scoring totals. They are still present in the full analyses.

The fourth version of this article adds the system of continuations after the jump response of 2♠. This was necessary, because opener cannot rebid his hearts at the 2-level. (System designers, watch out for situations like this: 2♠ cannot be “just like a 2/1 response”.) The entire Tucker section was rewritten in tabular format, with a brief summary and notes. All the additional deals have been evaluated, including 16 new Flannery context deals. (I might have done another 16 non-Tucker deals, but the results show these do not make much difference.) My recommendation of Tucker 1NT was dampened slightly as the complexity, especially of the 2♠ response, increased. Here are the bidding evaluation results from the third version of the article:

Results Summary, Version 3	Std	Mod	Tucker	Kaplan	Flannery
Non-Tucker Context Results	49	52	51	50	53
Tucker Context Results	84	93	113	104	101
Flannery Context Results	77	81	79	74	83
Total Results	210	226	243	228	237

The fifth version of this article followed closely upon the fourth. The responses to the jump 2♠ response changed to define opener’s spade holding, while permitting either partner to set either major as trump at the 3-level. All strong responding deals with spades were reviewed. Auctions changed on deals: Flannery 12, 32; Tucker 31, 32, 44; and non-Tucker 8, 10, 32, 35. The results on these deals are, by percentages, in line with the results on other deals, except that Flannery is as good as Tucker on them. You could improve the Std or Mod system by limiting the 1♠ response and using 2♠ game forcing.

22 additional deals were added to the bottom of the non-Tucker deals: opener has no more than two spades; responder has at least 12 points, a spade suit and no more than two hearts. These deals were not scored, but were bid with Tucker methods, as a sanity check: a sensible auction is available for all 22 deals.

Serious 3NT applies after a major suit opening, when an 8-card major suit fit is confirmed at the 3-level (or Jacoby 2NT) in a game-forcing auction. Cue bidding takes place, with the goal of deciding, below the level of game, whether or not to ask for key cards. Each cue bid is the cheapest available first or second round control, except [1] a cue bid in a suit previously shown by the bidder promises two of the top three honors in the suit, and [2] do not cue bid shortness in partner’s suit, an addition of mine you should discuss with your partner. Any cue bid bypassing 3NT is a courtesy only, denying serious slam interest, while 3NT is serious. The cuebid of 3♠ is neither serious nor non-serious. A cue bid after a non-serious cue bid is serious. Finally, the cue bid just below four trumps is **Last Train**, an artificial bid that shows ongoing slam interest, but lacking a control that partner can usually figure out. Obviously, if either partner detects a suit with two quick losers, he signs off in game. A more modern style, **Non-Serious 3NT**, flips the meaning of 3NT; it is technically superior, since no courtesy cue bids are made.

The sixth version of this article resulted from my posting “A Major Nightmare” with a note to the MIT/DL Bridge Club discussion list. That updated posting summarizes the lively responses. Additional approaches surfaced, for example:

Kaplan-Sheinwold Updated (KSU): continuations after 1♥ - 1♠ are now included in the evaluation as an optional adjunct to Flannery. Of the 6 applicable Non-Tucker deals, the score changed on numbers 7 and 23; of the 18 applicable Tucker deals, the score changed on numbers 18, 39, 41, and 43. I do not evaluate KSU methods when not playing Flannery (on Flannery context deals): routinely responding 1NT while holding four spades, possibly missing a 4-4 fit, is unpalatable. KSU defines six ways to bid a hand with four spades and five hearts in section C-8. Details of continuations after 1♥ - 1♠ are in C-11.

The **Mod** system was derived from Kaplan-Sheinwold. As I evaluated the Mod system, ♠KTxx or maybe ♠QTxx is a good enough for a 1♠ response, unlike KSU. So with KSU, you would miss more 4-4 spade fits than with Mod.

Weiss Transfers: David Weiss describe a system of transfer rebids by opener after the 1♠ response. The Weiss system requires another sequence for game-forcing responses with five or more spades. He recommends rolling this into a forcing 1NT response. In this case, the sequence 1♥ - 1NT; 2♣ - 2♠, for example, would now show the strong hand, rather than the customary good club raise. The jump shift used as part of the Tucker system could also be used, but Weiss recommends devoting this bid to an invitational hand with a 6-card spade suit, which otherwise often results in a failing 3♠ contract.

GNATS: Devised by Tom Townsend and written up in *TBW* by Barry Rigal, GNATS stands for G*d Not Another Transfer System. It may be playable without gobbling up another sequence.

Gazzilli: Devised by Leo Gazzilli, 1959 Italian open teams champion, variations of the Gazzilli convention are described in numerous web articles. Frederick Staelens' version is evaluated above. Some of the Gazzilli references mention:

Cole: another method employing an artificial 2♣ rebid for opener after any opening (except perhaps 1♥) and a one level suit response, and

Bart: a method employing an artificial 2♣ rebid for opener after a 1♠ opening and a 1NT response.

Opener's Transfer Rebids and this particular Gazzilli were chosen as representative methods for the evaluation. You may be able to improve somewhat upon the evaluated systems.

10 Tucker-context deals were added, to bring the total to 53 for Tucker and 51 for Flannery. 18 Extended Flannery context deals (previously dealt, but not posted) were added to the evaluation. Scoring was changed on Non-Tucker deal 4, Tucker deals 8 & 25, and Flannery deal 32. Here are the bidding evaluation results from the fifth version of the article:

Results Summary, Version 5	Std	Mod	Tucker	Kaplan	Flannery
Non-Tucker Context Results	75	76	81	79	81
Tucker Context Results	139	150	179	164	162
Flannery Context Results	193	187	195	186	199
Total Results	407	413	456	429	442

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Supporting materials for this article, web.mit.edu/mitdlbc/:

- Spreadsheet summarizing the bidding results for all deals analyzed.
- All scored deals with full analyses in PDF and PBN format, plus 22 additional non-Tucker deals noted above and 24 additional extended Flannery deals.