Zar Points

Aggressive Bidding Hand Evaluation

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Never miss a game again – Zar Points Bidding

Never miss a game again? That's easy – simply bid a game on every board :-) While Bob Hamman's note that "Bidding is only 3% of the game of bridge" may be true, if you don't bid your games you certainly cannot catch up by making 13 tricks with brilliant play at your 2 ♠ contract, while your not-so-brilliant opponents make only 10 tricks at their 4 ♠ contract. The experts know that, though – and they bid "aggressive" games that "somehow, magically" turn out to be cold. Experts use their expert judgment which advanced and intermediate players just don't have yet. This article presents the tool for the advanced and intermediate players to get this expert-level "aggressive" judgment and never miss a game again – be it a "somehow-magical" or just a "regular, plain" contract, and to stop at a part-score when no game is in sight.

1) The Opening

The Zar-Points theory is a result of exhaustive research of hundreds and hundreds of "aggressive" game contracts bid by world-class experts like Hamman, Wolff, Meckwell, Lauria, DeFalco, Zia, Helgemo, Chagas, Sabine Auken, Karen McCallum (I have great respect for the women experts) and many others at various world-class tournaments.

Following the 80-20 rule, hand evaluation is 80% Initial evaluation and 20% evaluation adjustment as the bidding progresses. The initial evaluation (just as you pick up your cards and have a look at what's in there) captures the three standard important aspects of every hand: the shape, the controls, and the standard (Milton Works 4-3-2-1) HCP. The re-evaluation covers the placement of the honors and the suit-lengths in the light of partner's and opponents' bidding.

Here is the simple quick description of the initial hand evaluation (Zar Points or Zars).

Calculating the Zar Points has 2 parts – calculating the **High-card Points (HP)** and the **Distribution Points (DP)**.

For the **high-card points** we use the 6-4-2-1 scheme which adds the sum of your **controls** (A=2, K=1) to your standard Milton HCP, in the 4-3-2-1 scheme (A=4, K=3, Q=2, J=1). You will see **WHY** we have adopted this HP counting in the second part of the article, but the short answer is: NOT because "we feel that this is the best way" :-)

Calculating **distribution points** is not news in Bridge – Charles Goren introduced the Goren Points more than half-a-century ago. It counts 3 points for every void, 2 points for every singleton, and 1 point for every doubleton. You understand, of course, that indirectly it also holds implicit valuation for the long suits, since the sum of all the 4 lengths is 13 – so, for example, the flat 4-3-3-3 distribution gives you 0 Goren distribution points, while with 5-5 two-suiter you get 3 Goren points (either 2+1 for a singleton and a doubleton or 3 for a void).

As we are going to see, there are only **39** different possible distributions in a bridge hand. To get a feel of the enormous amount of hands these 39 "types" of distribution represent, just asks yourself how many deals are there, in which YOU, sitting in the dealer's position (East, throughout this article) get a **13-0-0-0 distribution**. So – how many do you think?

The answer may surprise you –

337, 912, 392, 291, 465, 600

DIFFERENT deals in which you'll have 13-0-0-0 distribution - the LEAST probable distribution! How about the MOST probable distribution of 4-4-3-2? You guessed it – "a bit more" :-). You probably know by now that the number of all possible deals in bridge is

53, 644, 737, 765, 488, 792, 839, 237, 440, 000

and the goal of the Distribution Evaluation Methods is to put some order in this enormous amount of "material".

If we focus our attention on a single hand, rather than all 4 hands constituting a deal, the numbers certainly are many orders of magnitude smaller. The total amount of hands you can have in bridge is only

635, 013, 559, 600

– a number you can handle much better, I guess – at least in terms of pronunciation :-)

From all the numbers above, the most important one is probably the number **337, 912, 392, 291, 465, 600 –** the number of possible different deals in which you have a 13-0-0-0 distribution. Why, you may ask – because it engenders the importance of **re-evaluation**. Since there are so many deals in which you hold the "stiffest" distribution, you know that the number of deals for a FIXED "more normal" distribution are orders of magnitude bigger and you have to re-evaluate your hand in the light of the guidance given you by the line of bidding presented at the table, thus **adjusting your hand in this enormous space**.

Now that we know what we are up against, let's continue with the way Zar Points are assigned to different distributions. Let's start with the initial evaluation as you pick up your cards. Here is what you do. You add:

- The High-card Zar points (**HC**) you are already very familiar with (Milton **HCP** + **Controls** or 6-4-2-1)

- The **difference** between the lengths of the Longest and the Shortest suits (we call it **S2**)

- The **sum** of the lengths of the Longest 2 suits (we call it **L2**);

That's all: **HC + S2 + L2.**

Why the difference **S2** between the longest and the shortest suit, though? For simplicity, let's denote your longest suit with a, the second longest with b, the 3rd with c, and the shortest suit – with d. This means that the following 3 hands have a 5-3-3-2 distribution with a=5, b=3, c=3, d=2:

♠ A x x x x ♥ K x x ♦ K J x ♣ x x	♠ K x x ♥ A x x ♦ x x ♣ K J x x x	♠ Q x ♥ x x x ♦ A K x x x ♣ J x x

Now, the reality of Zar Points is that we add **ALL the 3 differences** of your suits:

$$(a – b) + (b – c) + (c – d).$$

But wait … look what happens when you drop the parenthesis – both b and c disappear and the expression becomes **very simple**:

$$(a – d)$$

So: **The entire amount of the Distributional Zar Points is:**

(a + b) + (a – d)

It looks like the suit "c" doesn't participate in the Zar Points calculations, but this is illusive, as you can see from the simple algebraic manipulation that lead us to the (a + b) + (a – d). If we continue a bit with the algebraic manipulations, we get:

(a + b) + (a - d) = a + b + c + d - c - d + a - d = 13 + a - c - 2d = (13 - 2d) + (a - c)

If it is easier for you, you may calculate the Distributional Zar Points from the formula (13 – 2d) + (a – c).

Or make some other manipulation that would better suit your memory. To me, **(a+b) + (a-d)** is simple enough.

The flat 4-3-3-3 distribution has the minimum amount of Distributional Zar Points, (4 + 3) + (4 – 3) = **8** points, while the 7-6-0-0 has (7 + 6) + (7 – 0) = 20, for example. If you increase the length of the longest suit, the valuation also increases, of course – 9-4-0-0 has (9 + 4) + (9 – 0) = 22, and the wildest 13-0-0-0 hand gets the max of (13 + 0) + (13 – 0) = **26.**

So you have calculated the **HP portion** first, and then have added the **DP portion** for the Distributional Zars.

Now, if the sum is **26** or better, you have an **Opening Hand**. Here are some examples, to get your feet wet:

11+4+3+8=**26**	10+4+4+9=**27**	8+4+5+9=**26**	10+3+4+9=**26**	9+2+5+10=**26**	7+3+6+11=**27**
11 HCP ♠K J x x x ♥K x x ♦x x x ♣A x	**10 HCP** ♠ x ♥ K x x x x ♦ K x x x ♣ A x x	**8 HCP** ♠A x x x ♥A 10 x x x ♦x x x x ♣___	**10 HCP** ♠Q 10 x x ♥A x x ♦x ♣K J x x x	**9 HCP** ♠K Q x x x ♥K J x x x ♦x x x ♣___	**7 HCP** ♠ K x x x x x ♥ A x x x x ♦ x x ♣___

If Zar Points look a bit aggressive to you, let's have a look at several opening hands from the just-passed First Open European Championship in **Menton, France**.

♠ Qx ♥ AKxxx ♦ Jxxxx ♣ x	**Menton Bulletin 11:** "**Chagas**' light distributional opening bid changed matters". In fact the hand has 4 + 10 = 14 distributional Zars, plus the **9 HCP** (Qx) + 3 controls = 27 Zar Points, well into the Opening Hand range. Nothing special indeed. See the note about the implications of having two 5-card suits below.

♠ Axxx ♥ AJxxxx ♦ J ♣ xx	**Menton Bulletin 9:** **9 HCP**, after you discount the singleton J. Still Both **Duboin** and **Ludewig** opened the hand in the Open Teams. And indeed, the distribution Zars are 5 + 10 = 15 Plus the 4 controls and the 9 HCP(singl. J) = 28 Zars! Well above the opening minimum of 26.

♠ Jxxx ♥ x ♦ KQxxx ♣ KQx	**Menton Bulletin 9:** 11 HCP again, with **only 2 controls** ... but rich on distribution Zars: 4 + 9 = 13 points! The total Zars are 11 + 2 + 13 = 26, an opening hand. And indeed, Both Benito **Garozzo** and Andrew **Robson** opened the hand in the Open Teams event.

Certainly, all "**disability-combinations**" like KQ, QJ, singleton honor etc. discount the standard way.

In the same time, you get 1 "**upgrade point**" if **all** your points are concentrated within 3 suits (if you have a strong hand of 15+ HCP) or within 2 suits (if you have a "normal" opening of 11-14 HCP). In "light" opening you never get this 1-point upgrade. This upgrade actually takes care of the value added by having you honors "**in combinations**" rather than being scattered around the 4 suits.

While we are on the wave of Menton, let's give you one final "touch" in the Initial Hand Evaluation – it concerns holding the **Spade suit** – the so called "President's Suit". In border-cases, when you have **25** Zar Points, you add 1 point for holding the Spade suit. ONLY when you are at the border of opening, holding the spade suit gives you the right to add 1 Zar Point and get to the 26-Zars opening.

If you think that holding the Spade suit is of no importance, let me tell you – it may not be of any importance in cricket, but in bridge it IS ":-). Here is an example of such an opening coming again from Menton, with the To-Be-European-Champion **Eric Rodwell** being in action:

♠ AQxx ♥ Jx ♦ Axxx ♣ xxx	**Rodwell** opened 1D and as the commentator said "EW were talked out of their game by Rodwell's light opening bid...". He actually has 11 HCP (depreciates the ♥Jx but gets 1 pt back for 3-suits concentration of points) plus 4 controls for 15 points, plus the 2 + 8 = 10 **DP** for 25 Zars. When you upgrade the hand for holding the "president's suit" of spades by **1 pt,** you reach the 26.

And if you happen to actually open 1 S with 5 cards in spades, not only you put the opponents on a **defensive-bidding track**, but you also cut the entire Level-one **bidding space**.

So we see that a well-distributed hand with 8-9 HCP and 3-4 controls may easily qualify for an opening. Let's ask the more general question now: "**WHY** is it worth opening a "sub-opening" hand, and **WHEN**?"

We already mentioned that the total amount of hands you can have in bridge is 635,013,559,600. The more interesting thing to note is that all the hands with 12 HCP or more, all the way to 37 HCP, are

221,093,636,000

or 221 BILLION, while the number of hands in the short 8-11 HCP range is ... BIGGER (!) :

232,403,610,336

or 232 BILLION.

You see now that chances are **better** for holding an **8-11 hand** than to have **ANY "normal-opening"** hand. This "discovery" should persuade you to consider "light openings", even if you disregard the merits coming from the very fact that you have entered the bidding effectively **putting the opponents in a defensive bidding track**.

Let's have a closer look at the Opening Hands with 8-11 HCP and determine some **General Rules** you need to follow in case you hold an 8-11 hand, in the light of Zar Points evaluation.

Hand with 8 HCP

4333 = 8	needs10 controls = Pass
4432 = 10	needs 8 controls = Pass
5332 = 11	needs 7 controls = Pass
5422 = 12	needs 6 controls = Pass
5431 = 13	needs 5 controls = Pass
6322 = 13	needs 5 controls = Pass
5521 = 14	needs 4 controls = AA
5440 = 14	needs 4 controls = AA
6421 = 15	needs 3 controls = AA or AK

Hand with 9 HCP

4333 = 8	needs 9 controls = Pass
4432 = 10	needs 7 controls = Pass
5332 = 11	needs 6 controls = Pass
5422 = 12	needs 5 controls = Pass
5431 = 13	needs 4 controls = AA only
6322 = 13	needs 4 controls = AA only
5521 = 14	needs 3 controls = AK or AA or KKK
5440 = 14	needs 3 controls = AK or AA or KKK
6421 = 15	needs 2 controls = A or KK

Hand with 10 HCP

4333 = 8	needs 8 controls = Pass
4432 = 10	needs 6 controls = Pass
5332 = 11	needs 5 controls = Pass
5422 = 12	needs 4 controls = AA or AKK
5431 = 13	needs 3 controls = Any 3 controls
6322 = 13	needs 3 controls = Any 3 controls
5521 = 14	needs 2 controls = Any 2 controls
5440 = 14	needs 2 controls = Any 2 controls
6421 = 15	needs 1 control = K is enough

Hand with 11 HCP

4333 = 8	needs 7 controls = Pass
4432 = 10	needs 5 controls = AAK only
5332 = 11	needs 4 controls = AA or AKK
5422 = 12	needs 3 controls = AK or KKK
5431 = 13	needs 2 controls = ANY 3 controls
6322 = 13	needs 3 controls = Any 3 controls
5521 = 14	needs 1 control = one K is enough
5440 = 14	needs 1 control = one K is enough
6421 = 15	needs 0 control = any

In all PASS cases the decision is made on the fact that the point limitation cannot accommodate the needed controls, e.g. you cannot have 5 controls in 10 HCP since AAK are already 11 Milton points.

This leads us to the following summary, which is worth remembering as a general guideline, even if you are too lazy to count Zar Points because "you are playing for pleasure and fun" :-)

SUMMARY:

1) With **8** HCP - you need AT LEAST **5-5,** 6-4 or 5-4-4-0 distribution with **2 Aces**

2) With **9** HCP - you need AT LEAST **5-4-3-1** distribution with **2 Aces**

3) With **10** HCP - you need AT LEAST **5-4** distribution

4) With **11** HCP - you need EITHER a **5-card suit** OR **5 controls**

Simple-enough guidelines, I hope.

How do you deal with "Normal" opening hands with **balanced** distribution? And how do Zar Points get involved after a balanced opening of 1 NT for example (at the very end of these discussions you'll find some considerations regarding different standard systems like "Two over one", "Standard American", "Strong Club" etc., which will give you a general perspective about how Zar Points fit into **"your" current system**).

Let's consider two boards in which the opener EAST has the same hand with balanced 15 HCP, but the responder WEST holds completely different hands, although with the same amount of 12 HCP:

1)

♠ J x x ♥ J x x ♦ A K x x ♣ K J x	♠ K Q x ♥ K Q x x ♦ Q J x ♣ Q x x

Would East open the bidding to begin with? The answer is yes, because he has more than 12 HCP and it's an opening hand by any system. If the **HCP power warrants an opening by itself**, you open the bidding the way you usually do with the system you are using – most people would open 1 NT with the East hand. NOTE, that counting Zar Points with a balanced hand will NOT help you – with these 15 HCP you collect only 25 Zar Points which "formally" means you should pass.

Zar Points are geared towards **aggressive** bidding with **distributional** power rather than hands with brute HCP force and balanced hands – every pair would bid and make 3 NT on this first board with a natural and simple sequence of 1NT – 3NT (not even a Stayman used :-).

Now, the second example:

2)

♠ A J x x x ♥ A x x x x ♦ K x x ♣ ___	♠ K Q x ♥ K Q x x ♦ Q J x ♣ Q x x

Here the sequence is a bit different than 1NT – 3NT :-). Normally WEST would transfer in one of the majors and then re-bid the second major, allowing EAST to "upgrade" her K Q holdings in both majors and proceed towards the cold slam.

2) Which HCP count is "mathematically correct"

What kind of weight to put on the components you consider valuable is not a matter of "expert judgment", but a simple matter of **solving a series of equations with unknown coefficients** - an obviously overdetermined system of equations (you enter hundreds of equations based on the hundreds of boards you feed in, for finding the value of several of coefficients – the weights you are interested in).

It is a well-known fact that the standard 4-3-2-1 valuation IS the one that solves the system of equations when using any of the standard distribution-points systems (Goren, Bergen, etc.) and it is also known that the HCP + Controls valuation (the 6-4-2-1) is NOT a solution with the standard distribution points.

How do you create the equations for a specific board in order to calculate the “right” weights? We’ll count HCP points and distribution points for void, doubleton, and singleton (kind of Goren style).

X_aces(a) + X_kings(k) + X_queens(q) + X_jacks (j) + + X_void (v) + X_singl(s) + X_doublton(d) = X_total_points_for_game

where a is the specific number of Aces in both hands of this deal, k is the specific number of kings etc.

So for the board:

♠Q 10 x x ♥A x ♦x x ♣K Q x x x	♠K J x x x ♥K x x ♦x x x ♣A x

the equation will be

X_aces * 2 + X_kings * 3 + X_queens * 2 + X_jacks * 1 + X_doubleton * 3 = X_total_points_for_game

You make a collection of hundreds and hundreds of boards that have a game (4 in major) and solve the overdetermined system of equation to find the values of the unknown coefficients. Simple.

For the board above (4 Spades), if we consider the plain 4-3-2-1 Milton Works points, assigning 4 for A, 3 for K etc. and assign Goren distribution points (3 for void, 2 for singleton, and 1 for doubleton), we see that those ARE a solution for our first (and only for the time being) equation:

4*2 + 3*3 + 2*2 + 1*1 + 1*3= 8 + 9 + 4 + 1 + 3 = 25

so you have to “collect” 25 points to get a game with Milton / Goren points. The same way we have run the systems for the Zar Points which have much more variables to calculate.

While on the subject, you may come up with some “igneous idea” that in bridge it’s only the Kings and Jacks that count (because they are the “male cards” :-) and construct the corresponding equations. And you **WILL find** corresponding solutions for the coefficients – so the natural question is “Why not?” The answer is that such a solution will have **much bigger deviation** for the actual equations (well, I’ll stop here :-).

We will do an exhaustive comparison between **Goren** points (of Charles Goren), **Bergen** Points (of Marty Bergen), **Drabble** Points, and **Zar** Points in the second half of this article so you’ll get the picture.

You already might have guessed WHY the 4-3-2-1 valuation solves the equation system for the standard distribution-points systems while it does NOT solve the equations for the Zar points (the 6-4-2-1 is the one that does).

The reason is the relative weight of the distributional points vs. the weight of the honor points. As we have seen, the distributional Zar points range goes to 26 (for the extreme case of 13-0-0-0) while the standard distributional points range goes up to 13 at most (see below) - cannot compensate the weight of the 6-4-2-1.

Note also, that the experts know that **the 4-3-2-1 is a "twisted" solution**, meaning that it undervalues the A and K and overvalues the Q and J - that's why they use fractions to "make it work" (they count A for 4 1/2 while Q for 1 1/2, which makes three Queens equal to one A, **just like the 6-4-2-1 valuation**).

Zar points allow the natural 6-4-2-1 honor count (which experts lean towards) to be the solution of the overdetermined system of equations.

Your judgment

Do you still need to apply your judgment and consider both hands of the partnership in the bidding process? You bet. Here is a simple example which covers both cases - your own hand and the combination of the two hands in the partnership.

Let's consider two different hands in opening position, with the same 26 Initial Zar Points, 10 HCP, 3 Controls, 5-4-3-1 distribution. Which one do you like better?

North A	**North B**
♠ 8 6 5 3 2	♠ A J 10 8 4
♥ 7 5 4 2	♥ K Q 10 9
♦ A Q J	♦ 10 9 6
♣ K	♣ 4

I guess you have a preference here :-). Certainly hand "A" will be greatly downgraded from the initial 26 Zar Points while the second hand "B" will be upgraded for a number of reasons. BUT, let's consider the Partner's hand in both cases and how this dramatically changes the picture. In both cases the partner has 27 Zar points - 10 HCP, 4 controls, 5-4-3-1 distribution.

South A	**South B**
♠ A 10 9 7 4	♠ K
♥ 9	♥ 8 7 6
♦ 10 8 6 5	♦ A 7 4 2
♣ A Q 6	♣ K 9 7 5 3

No comment needed - you'd reverse your "preferences" and you would prefer the set "A". In bridge, you always need your head on your shoulders, at any stage of the game :-)

This brings us to the next section where we consider the adjustments to the partner's and opponents bidding.

3) The Responding

So your partner has already opened, the main consequence being that YOU are in offensive bidding while the opponents **have been already pushed in the defensive** track. How does this affect your hand evaluation?

You first do the Initial hand evaluation that has been covered in "The Opening" section and THEN make certain adjustments - adjustments to the partner's suit and adjustments to the opponents' suit. The minimum point-count that allows you to talk is **16**:

- 1 additional point for the trump honors (trump 10 counts for 1, trump A counts for 5) up to **MAX 2.**
- 1 additional point for the Invitational-second-suit honors (10 counts for 1, A counts for 5), **MAX 2**.

The total allowance here is two, whether 2, 3, 4 or 5 are held (the rest goes away as 'duplication values'). So how do you judge the level you are ready to play at? Here are the **Game calculations:**

- 52 Zars for Game at level 4 (two opening hands make a game),
- 57 Zars for level 5,
- 62 Zars for a slam at level 6.

Plain and simple - 5 points per level. These 5 points may come from an additional K in the partner's suit (3 points from the HCP, 1 from the control, and the premium 1 from the honor in the partner's suit), from an additional outside A (2 from the controls plus 4 from the HCP) etc.

Let's close this section with four of the **most common situations** in game bidding (the **long-suit invitation** has already been mentioned, with the re-evaluation of the responder's hand based on the 2 long suits of the opening hand).

♠Q 10 x x ♥A x ♦x x ♣K x x x x	♠K J x x x ♥K x x ♦x x x ♣A x	East has 26-count = 11 HCP + 8 Long (5+3) + 3 Short (5-2) + 4 Control = 26. West has 21 = 9 HCP + 9 Long (5+4) + 3 Short (5-2) + 3 Control = 24. E opens 1S, W corrects +1 for ♠Q + 1 for ♠10 = 26 (K trump = 4, Q trump = 3, J trump = 2, 10 trump = 1). **1 S – 4 S.** (26-30) - 52 deeded for level 4. Add 10 Zars = AKx in ♦ and you get the slam (5 Zars per level).
♠Q 10 x x ♥Q x ♦x x ♣K x x x x	♠K J x x x ♥K x x ♦x x x ♣A x	East has 26-count = 11 HCP + 8 Long (5+3) + 3 Short (5-2) + 4 Control = 26. West has 20 = 7 HCP + 9 Long (5+4) + 3 Short (5-2) + 1 Control = 20. E opens 1S, W corrects +1 for ♠Q + 1 for ♠10 = 22. **1 S – 3 S.** (21-25)
♠Q 10 x x ♥x x ♦x x ♣K x x x x	♠K J x x x ♥K x x ♦x x x ♣A x	East has 26-count = 11 HCP + 8 Long (5+3) + 3 Short (5-2) + 4 Control = 26. West has 18 = 5 HCP + 9 Long (5+4) + 3 Short (5-2) + 1 Control = 18. E opens 1S, W corrects +1 for ♠Q and 1 for ♠10 = 20. **1 S – 2 S.** (16-20)
♠A Q x x ♥A x ♦x x ♣K x x x x	♠K J x x x ♥K x x ♦x x x ♣A x	East has 26-count = 11 HCP + 8 Long (5+3) + 3 Short (5-2) + 4 Control = 26. West has 30 = 13 HCP + 9 Long (5+4) + 3 Short (5-2) + 5 Control = 30. East opens 1S, West corrects +1 for ♠Q + 1 for ♠A = 32. **1 S – 2 NT.** (32+) - Long raise version of Jacoby 2NT. If E has only Axx in ♦, this will bring 6 additional points and slam (**62 min** for slam)

It is worth noting that initially we had the responding level at 18 rather than 16, but after some additional experiments the responding level was adjusted to 16, which fits perfectly with the "5 points per level" calculations. So, let's say the opener has 26 and opens 1♠, while the responder has 16 and bids 2♠. Now, if you put additional 5 points in each hand, this will bring the point count to the game-level of 52.

Honors Re-evaluation - Your honors are your real estate

During the initial hand valuation when you pick up your cards, it's a standard procedure to depreciate short-suit honors by a point. While the bidding progresses, you do a re-evaluation of the hand, accounting for the suits bid by your partner and your opponents.

Just remember that the three important rules for evaluating the HCP-portion of your hand match the well-known three important rules for evaluating real estate - location, location, location:

1) Location of your honors in partner's suits - add a point for each honor (10 including) to a maximum of 2 (if you have KQ10 add only 2, rather than 3).

2) Location of your honors in opponents' suits – subtract/add a point for the honors in the suits bid by the opponents depending on location of the opponent (chances are you don't have many of these, so no limit here): an AQ or Kx behind (offside) the bidder can be upgraded while QJx – downgraded respectively. The same AQ or Kx should be downgraded if you are in front of (onside) the bidding opponent.

3) Location of your "depreciated" honors in short suits - add the honors bonus points for the partner's suits while further discount the honors in short suits bid by your opponents. Doubleton QJ in the opponents' suit can be dropped to zero while in the partners suit it gets to 4 points, since the 1-point discount for 'blank honors' stays due to the inflexibility it presents in playing the suit by blocking the communications.

As the bidding progresses, you continue re-evaluating the hand in the light of both Partner's bids and the opponents bids. A suit of AQx can be upgraded to AKx if the suit is bid in front of you, while a KJx can be dropped to 1 pt if the suit is bid behind you. You use your head constantly.

Fit Re-evaluation

So for the time being we are quite happy with the **52-count** for game – it works in a vast majority of hands. The fact that we have a 6-card trump suit, for example (a good surprise to the partner who has raised the suit expecting only 5 cards) is already **factored in** via the Distributional Zar Points, calculated on the basis of our 6-card suit. Or is it?

The fact that you have a 6-card suit IS indeed factored in – what is NOT factored in is the fact that partner has raised that suit, believing that we have a **5-card** suit, which means that we have an **extended** fit.

Besides the "real estate", your distribution points also get adjusted depending on the way the two hands of the partnership match. Your initial Zar Points of 13 for a 5431 distribution are worth 13 in the beginning when NO information from the bidding is available, and may stay there if the partner has 1345 and also gets 13 points for distribution.

We have to be able to "calculate" the fact that we have extra lengths in "our" suits and the numbers that fit the calculations are:

- 3 additional HC points for any trump over <u>the promised length</u>, i.e. 3 additional for 5 trumps, 6 for 6 trumps.

- 3 additional HC point for any Invitational Second suit card <u>over</u> the length of 4 (secondary fit).

You know already that the calculations that led us to these point-assignments are based on the overdetermined system of equations with "X_superfit" additional variable, so let's only notice that these re-evaluations are in line with the "**Law of Total Tricks**", besides being actually calculated as coefficients in series of equations.

You may ask "How does it fit **The Law** when you say that 5 Zar Points constitute 1 level and you assign only 3 points for extra length?" And that would be a reasonable question. The answer is that 2 points have already been factored in by the fact that you have a 6-card suit, 1 from the (a + b) and 1 from the (a – d). And you might say "But The Law is only applicable when the **HCP power is relatively-equally divided** between the opponents" – and that's true. In aggressive game-bidding situations, though, the HCP is also divided – it's the distribution and location that makes the aggressive games, so there is no controversy here either.

The second question often asked is "Since we add a lot of points for super-fits, don't we have to change the minimum limits of **52 for a Game and 62 for a Slam**?" The answer is "No", you simply will be able to arrive at more subtle (or "aggressive" if you like this word better) games and slams, while still getting at the more normal "every-day" ones.

The two good things that may happen when evaluating how well the hands match together are:

1) you have one fit, but it is a super-fit, i.e. around 10+ cards in the suit.

2) you don't have a super-fit, but you have double fits, one 8+ cards, and another 7+ cards.

Here is how you re-evaluate the hands in terms of additional Zar Points for the main fit:

9th card - **3** pt;

10th card - **6** pt, i.e. a 10-card fit brings you 3+3 = 6 points total just from the length.

11th card - **9** pt, i.e. an 11-card fit brings you 3x3 = 9 additional points from length.

The same scheme is used for the Secondary Fit, if you have one.

For additional information on The **Law of Total Tricks** see Larry Cohen's excellent books on that subject.

How much is your 6-card suit worth

Having discussed the value of double-fit and super-fit, let's pick the following common hand with a 5-card Major suit:

♠ Jxx
♥ KQJxx
♦ AQx
♣ xx

You open 1H and partner raises to 2H, opponents pass carelessly.

What do you do? And how would your decision change if you hold a 6-card Heart suit? Pretty common question, you would agree.

We hold 13 HCP with 3 controls for a total of 16 points, plus the 11 from distribution (3+8) for a total of 27. An opening hand, as we have already opened it, but nothing more than that – so we PASS.

Let's get ONLY one non-trump card and move it to the hearts, making the Hearts a 6-card suit. How does that change the situation?

Here is how. You guessed it - it depends :-)

Depends on where you get this 6th card from. If you get from the doubleton, you make the hand 6-3-3-1 and the distributional Zars jump from 11 to 14, plus the 3 points for a 6-th trump (1 more than promised by the bid) for a total of 33 points - enough for Game Try since **you support the level 3** alone. So you bid 2S (invitation), asking partner for help in this suit.

If you move the card from the Jxx, the distribution would be 6-3-2-2 for a jump from 11 to 13. Plus you add 3 pt for the 6th suit and drop a point for the resulting Jx which gets your total from 27 to 31 - still most probably PASS, unless pushed in a competitive bidding.

Same if you get the 6-th card from the AQx - you'll need to make 1 point deduction for the AQ blank, adding 3 for the 6th suit, leaving you again with a total of 31 – PASS, unless in competition.

How easy and simple it is - if you can count to 32 - Game try. If you can count to 36 – Game. If you have only a point of two extra – just let it go. You can see how things change if you move 2 cards around and make the hand 6-4-2-1 or 7-3-2-1 and you would act accordingly.

Just one more hand on the 6-card major suit theme:

♠ Jxxxxx
♥ xx
♦ AQx
♣ AQ

Again you open 1 S and partner raises to 2S. The hand is from the exceptional book of **Jeff Meckstroth** "Win the Bermuda Bowl with Me" - this book should be your choice if you are under the severe financial restriction to buy only one bridge book :-)

Jeff's view is that this hand is only worth a game try. Let's see what "the calculator" would tell us. We have 13 HCP and 4 controls, for a total of 17 points, plus the 9 + 4 = 13 distributive Zars (the 1 point for holding the **Spades suit** only counts when you make a borderline decision "to open or not to open") for a total of 30.

When you add the 3 for the 6th suit you reach a total of 33 - enough for game try (5 Zars are 1 level of bidding). To jump directly to 4-level you need 36+, as already discussed.

Turns out Jeff is right again :-)

4) The Aggression

So do you have to be aggressive or conservative in bridge? I hope you know the answer to that question - it's **both**.

Karen McCallum said once "I've never passed a hand with a void in my life", and when you think about it, a hand with a void already has **at least** 14 Zars from the S2 and L2 components (as opposed to the only 8 points that a flat 4-3-3-3 hand would give you – a minimum of **6 points** difference). Put a couple of Aces for another 12 Zars (2 times 4 HCP plus 2 CT) and you have a hand with 8 HCP but with 26 Zars!!! Opening hand with 8 "standard" points!

Here is an example of the "Two opening hands make a game" rule in the old-fashioned HCP style and the Zar-style.

First - the **common question** "to game or not to game" with 24 HCP, with standard bidding (Std) and Zar Points (Zar):

♠Q x x x ♥Q J x ♦Q J ♣K J x x	K J 10 x x K x x K x Q x x	**Std:** East has 12-count with a good 5-card , West has 4-card support in and 12 HCP, both opening hands, but not a chance for either 4 or 3 NT (the defense will switch in sooner or later). **Zar:** East has 12+3+3+8 = 26 points (bare opening) while West has 12+1+2+8=23, not an opening hand even with the correction +1 for the Q of spades.That is support to 3 ♠(49 Zars, 52 needed for a game).

Now, the above mentioned **"Karen-style"** approach to the "to open or not to open" question, again Std vs. Zar:

♠K Q x x x ♥K J x x x ♦x x x ♣___	♠A x x x ♥A 10 x x x ♦x x x x ♣___	**Std:** East has 8 HCP and West has 9 HCP with not-so-wild distribution - nobody has a suit longer than 5-cards! Admit it – you would pass BOTH hands! **Zar:** East has 8+4+9+5 = 26 Zars. West has 9+2+10+5=26 Zars. BOTH opening hands! And two opening hands make a game. The result - Cold 4 ♥

I am sure you have already noticed that if you switch the ♣ and ♦ in EITHER hand (but not both :-) it's a **GRAND**! A GRAND SLAM that you would simply have as an ALL-PASS board!

Wouldn't that be a shame even for Bob Hamman (arguably the most experienced bridge player on Earth) with his 3% on bidding - if only he'd have an ALL-PASS board here, though… I am sure he wouldn't and that's simply because his 3% are NOT your 3%! Now you have the tool to come closer to Bob's 3%.

Looks strange, but … only if you are still judging and evaluating the hands based on HCP and "vague feel" about things like shape, controls, distribution, offensive power, suit-support, etc. – all of which come into account with the Zar Points evaluation system.

You only have to be able to **count to 26** and confidently open the bidding.

To finish the "aggressive opening" subject, we just have to show what **REAL AGGRESSIVE** actually is. Some readers have already noticed the hand in the beginning of the article suggesting opening with 7 HCP. This sounds kind of crazy, I hear you mumbling.

Let's explore this avenue a bit, though - is this the limit? Here are several hands that will provide the answer to that:

7+3+6+11=**27**	6+2+6+12=**26**	5+1+7+13=**26**	4+2+7+13=**26**
7 HCP	**6 HCP**	**5 HCP**	**4 HCP**
♠ K x x x x x	♠ K x x x x x	♠K x x x x x x	♠10 x x x x x x
♥ A x x x x	♥ K x x x x x	♥Q x x x x x	♥A x x x x x
♦ x x	♦ x	♦ ___	♦ ___
♣___	♣___	♣___	♣___

Wow ... **an opening hand with 4 HCP** ????

Well ... you probably like "calmer" hands, like 4-4-3-2 with 8 HCP that anyone in the world (me including :-) will pass:

8 HCP
♠A J x x
♥K x x x
♦x x
♣x x x

Do you see where I am heading?

8 HCP	**4 HCP**
♠A J x x	♠10 x x x x x x
♥K x x x	♥A x x x x x
♦x x	♦ ___
♣x x x	♣___

It's a **GRAND** my friend, if trumps drop 1:1.

Do you play bridge? :-)

5) The Restrictions

What restrictions?

Good question.

Many Bridge Federations, though, impose restrictions on your bidding, some of them to a point where you don't know what kind of a game you are playing anymore ... (hey, it's all 'games' :-)

I don't want to get into discussions about the restrictions ACBL is imposing, but would rather consider a more moderate "average" set of restrictions like the ones the French Bridge Federation - "Fédération Française de Bridge" imposes on the bridge events under its rules:

"An opening of one of a suit can be made ONLY under the rule of 18 (HCP+a+b), 16 in third seat".

That's like Marty Bergen's Rule of 20, only kept to 18 in 1st and 2nd seat, and lowred to 16 in 3rd seat.

Let's see what happens with our "sub-light" openings with 7, 6, 5, 4 HCP respectively.

The 7 HCP hand -> 7 HCP + 6 + 5 = 18

The 6 HCP hand - > 6 HCP + 6 + 6 = 18

The 5 HCP hand - > 5 HCP + 7 + 6 = 18

The 4 HCP hand - > 4 HCP + 7 + 6 = 17

So - **all these openings** are just **fine** and dandy, much to the surprise of some people.

I hope you are not one of them anymore.

6) The Preempts

Now that we know that Level-1 "normal" opening can happen with as low as 4 HCP, you probably think that pre-empts can go to as low as a 1-2 HCP !

Sorry to disappoint you - you are not even close ...

The "general" rules of the "standard" bidding you know about, basically states that for "normal" opening you have to have about 12 HCP while for a weak-2 opening you need 8 HCP and a relatively good 6-card suit.

So, for a weak-2 pre-empt you need 2/3 of the minimum for normal Level-1 bid.

Things with Zar Points bidding are more conservative - you need **between 22 and 25 Zar Points** and a descent 6-card suit.

The main message you communicate there is "I don't have the 26 points for a normal opening, but I have a decent 6-card suit and between 22 and 25 Zar Points."

Here is a typical hand you would open 2 with, basically in any system:

♠ Kxx
♥ KQJxxx
♦ xxx
♣ x

Let's see what happens in Zar Points. You get 9 + 2 = 11 for the HCP and Controls, and 9 + 5 for the 6-3-3-1 distribution for a total of 25 Zar Points - not enough for opening at Level-1.

How about the preempts at level 3 and 4 ...again the main message is "I don't have 26 points, but I do have a decent 7 or 8-card suit respectively, so you evaluate your hand respectively".

But why does the limit of a "normal" opening go as low as 4 HCP, while the preempts virtually do not drop below 7 HCP? The answer is simple - **playing power** and **limitations** of the hand.

With the preempts you virtually declare uni-suit with not much potential for variations and re-evaluation of the hand - you basically say "**That's all I have**".

With the normal opening sky is the limit.

7) The Comparison

We will assess the accuracy of **four different methods** of bridge distribution evaluation via some standard common mathematical approaches.

The first one is the already mentioned Charles **Goren**'s system, known as the "3-2-1" system, named after the points assigned for short-suits holdings.

The second method is the Marty **Bergen's** "Rule of 20" method from his famous book-series "Points Schmoints". The approach of Bergen is to assign points equal to the sum of the lengths of the 2 longest suits of a hand, i.e. (a+b), using our notation.

We will also compare with the newest method from the late 90-ies, the **Drabble** rule of "adding the 2 longest suits, divide by 3, and subtract the length of the shortest suit, rounding downwards. Since Drabble's scale starts with -1 for the 4-3-3-3, we have adjusted it by shifting the entire table with (+1) to eliminate the negative numbers.

In all cases we consider the initial base points, before the "fine tuning" in one way or another.

The fourth method is the **Zar** distribution Points method you are already familiar with - assigning the value of (a+b) + (a-d), i.e. the sum of your 2 longest suits, plus the difference between your longest and your shortest suit (effectively representing the SUM of all the 3 suit-differences of the hand).

As we mentioned, there are 39 different suit-distributions in a bridge hand.

The table below covers them:

Hand Distributions by the longest suit			
4-3-3-3 4-4-3-2 4-4-4-1 5-3-3-2 5-4-2-2 5-4-3-1 5-4-4-0 5-5-2-1 5-5-3-0 6-3-2-2 6-3-3-1	6-4-2-1 6-4-3-0 6-5-1-1 6-5-2-0 6-6-1-0 7-2-2-2 7-3-2-1 7-3-3-0 7-4-1-1 7-4-2-0 7-5-1-0 7-6-0-0	8-2-2-1 8-3-1-1 8-3-2-0 8-4-1-0 8-5-0-0 9-2-1-1 9-2-2-0 9-3-1-0 9-4-0-0	10-1-1-1 10-2-1-0 10-3-0-0 11-1-1-0 11-2-0-0 12-1-0-0 13-0-0-0

It is interesting to know what the probabilities for holding these distributions are, so here they go:

Hand Distributions with their Probabilities			
4-3-3-3 = 10.5% 4-4-3-2 = 21.5% 4-4-4-1 = 3.0% 5-3-3-2 = 15.5% 5-4-2-2 = 10.5% 5-4-3-1 = 13.0% 5-4-4-0 = 1.3% 5-5-2-1 = 3.2% 5-5-3-0 = 0.9% 6-3-2-2 = 5.6% 6-3-3-1 = 3.5%	6-4-2-1 = 4.7% 6-4-3-0 = 1.3% 6-5-1-1 = 0.7% 6-5-2-0 = 0.6% 6-6-1-0 = 0.1% 7-2-2-2 = 0.51% 7-3-2-1 = 1.88% 7-3-3-0 = 0.26% 7-4-1-1 = 0.39% 7-4-2-0 = 0.36% 7-5-1-0 = 0.10% 7-6-0-0 = ~0	8-2-2-1 = 0.19% 8-3-1-1 = 0.12% 8-3-2-0 = 0.10% 8-4-1-0 = ~0 8-5-0-0 = ~0 9-2-1-1 = 0.02% 9-2-2-0 = 0.01% 9-3-1-0 = 0.01% 9-4-0-0 = ~0	10-1-1-1 = ~0 10-2-1-0 = ~0 10-3-0-0 = ~0 11-1-1-0 = ~0 11-2-0-0 = ~0 12-1-0-0 = ~0 13-0-0-0 = ~0

The numbers marked as ~0 are numbers less than 0.01%. It is worth noticing that the 4-3-3-3 distribution is not among the top 3 most probable distributions and that by far the most probable one is 4-4-3-2 – 6% above the second-most-probable 5-3-3-2.

The distributive part of the Zar Points varies from **8 for flat hand** to **26 for the "wildest" hand with 3 voids**. This means that it classifies the hands in **17** categories. Here they go:

Zar Distribution Points for ALL distributions			
4-3-3-3 = 8 4-4-3-2 = 10 4-4-4-1 = 11 5-3-3-2 = 11 5-4-2-2 = 12 5-4-3-1 = 13 5-4-4-0 = 14 5-5-2-1 = 14 5-5-3-0 = 15 6-3-2-2 = 13 6-3-3-1 = 14	6-4-2-1 = 15 6-4-3-0 = 16 6-5-1-1 = 16 6-5-2-0 = 17 6-6-1-0 = 18 7-2-2-2 = 14 7-3-2-1 = 16 7-3-3-0 = 17 7-4-1-1 = 17 7-4-2-0 = 18 7-5-1-0 = 19 7-6-0-0 = 20	8-2-2-1 = 17 8-3-1-1 = 18 8-3-2-0 = 19 8-4-1-0 = 20 8-5-0-0 = 21 9-2-1-1 = 19 9-2-2-0 = 20 9-3-1-0 = 21 9-4-0-0 = 22	10-1-1-1 = 20 10-2-1-0 = 22 10-3-0-0 = 23 11-1-1-0 = 23 11-2-0-0 = 24 12-1-0-0 = 25 13-0-0-0 = 26

We are going to compare the 4 methods by 3 criteria:

1) **span of base**, given by the number of the groups the method classifies the hands in;

2) **separation power**, given by the maximum number of distributions which can fall in a single group;

3) **standard deviation**, which is explained below in the article.

To prepare for this exercise, we will present the following table with the points assigned by all four evaluation methods:

Zar Points	Bergen Points	Goren 3-2-1 Points	Drabble Points
4-3-3-3 = 8	7	0	0
4-4-3-2 = 10	8	1	1
4-4-4-1 = 11	8	2	2
5-3-3-2 = 11	8	1	1
5-4-2-2 = 12	9	2	2
5-4-3-1 = 13	9	2	3
6-3-2-2 = 13	9	2	3
5-4-4-0 = 14	9	3	4
6-3-3-1 = 14	9	2	3
7-2- 2-2 = 14	9	2	2
5-5-2-1 = 14	10	3	3
5-5-3-0 = 15	10	3	4
6-4-2-1 = 15	10	3	3
6-4-3-0 = 16	10	3	4
7-3-2-1 = 16	10	3	3
7-3-3-0 = 17	10	3	4
8-2-2-1 = 17	10	3	3
6-5-1-1 = 16	11	4	3
6-5-2-0 = 17	11	4	4
7-4-1-1 = 17	11	4	3
7-4-2-0 = 18	11	4	4
8-3-1-1 = 18	11	4	3
8-3-2-0 = 19	11	4	4
9-2-1-1 = 19	11	4	3
9-2-2-0 = 20	11	5	4
10-1-1-1 = 20	11	6	3
6-6-1-0 = 18	12	5	5
7-5-1-0 = 19	12	5	5
8-4-1-0 = 20	12	5	5
9-3-1-0 = 21	12	5	5
10-2-1-0 = 22	12	5	5
11-1-1-0 = 23	12	7	5
7-6-0-0 = 20	13	6	5
8-5-0-0 = 21	13	6	5
9-4-0-0 = 22	13	6	5
10-3-0-0 = 23	13	6	5
11-2-0-0 = 24	13	7	5
12-1-0-0 = 25	13	8	5
13-0-0-0 = 26	13	9	5

The table is ordered by the amount of Zar Points assigned, in ascending order. As might be expected, ALL methods basically follow the same ascending line, giving the least amount of points for the balanced distributions and the biggest amount of points for the "wildest" distributions. Since for everyone the **4-3-3-3 case** is the "**base**" to which everybody assigns the minimum points we are going to consider only the rest of the groups in the evaluation methods (taking 4333 distribution as base).

In the table below, the columns of the table are the displacements from the "base", (e.g. +1 means the first group after the base of 4-3-3-3) while the actual number in the body of the table represent **the number of distributions** the corresponding group.

Method	**+1**	**+2**	**+3**	**+4**	**+5**	**+6**	**+7**	**+8**	**+9**	**+10**	**+11**	**+12**	**+13**	**+14**	**+15**	**+16**	**+17**
Zar Points	1	2	1	2	4	2	3	4	3	3	4	2	2	2	1	1	1
Marty Bergen	3	6	7	9	6	7	-	-	-	-	-	-	-	-	-	-	-
Goren 3-2-1	2	7	8	5	6	6	2	1	1	-	-	-	-	-	-	-	-
Drabble	2	3	12	8	13	-	-	-	-	-	-	-	-	-	-	-	-

Marty Bergen's Points classifies the hands **in 6 groups**, the 3-2-1 **in 9**, Drabble **in 5**, and Zar Points **in 17.** This means by the criteria of **span of base** (number of classification groups) Zar points are between 2 to 3.4 times better than the rest of the methods.

The **separation power** of the methods is given by the max number of distributions in a group. In Zar Points this number is 4, while Bergen has 9, Goren – 8, and Drubble – 13. Again between 2 and 3.2 times better results.

When we take into account the number of elements (hands) in each group, we can now find the **Standard Deviation** for each method and see the difference there. Here is what is meant by that.

The root-mean-square (RMS) of a variant x, sometimes called the quadratic mean, is the square root of the mean squared value of x:

$$\begin{cases} \sqrt{\frac{\sum_{i=1}^{n} x_i^2}{n}} & \text{for a discrete distribution} \\ \sqrt{\frac{\int P(x)x^2\,dx}{\int P(x)\,dx}} & \text{for a continuous distribution.} \end{cases}$$

(http://mathworld.wolfram.com/Root-Mean-Square.html).

Scientists often use the term **root-mean-square** as a synonym for standard deviation when they refer to the square root of the mean squared deviation of a signal from a given baseline or fit.

Applying the standard deviation from the basis (the x coordinate) measure to the three hand-evaluation methods (using the number of hands in each group) yields the following:

Recursive Zar Points:	root-square (91/17)	=	rs(5.35)= 2.31
Marty Bergen Points	root-square (260/ 6)	=	rs(43.33)= 6.58
Goren 3-2-1 for void-x-xx	root-square (220/ 9)	=	rs(24.44)= 4.94
Drabble's method	root-square(390/ 5)	=	rs(78.00)= 8.87

So by this 3rd criteria, the **standard deviation** of the evaluation method, Zar Points demonstrate between 2.2 and 3.6 times better results.

The interesting part is that by **ANY** of the applied three criteria:

1) Span of base

2) Separation power

3) Standard Deviation

Zar Points manifests roughly **three times better results** than **any of the three competitors**.

8) The Conversion

The Conversion?

Why would you care to convert Zar Points to Goren Points or Bergen Points when we JUST showed in three different ways that Zar Points are three times better that any other method?

"Why should I convert something 'good' to something 'bad' ?" – I hear you already asking … "I'd simply use the 'bad' directly rather than calculating the 'good' first and then scaling it down to the 'bad'."

First, every method has its own 'base' of people who use it for one or another reason – **familiarity, convenience** and **habit** are some of the reasons that jump right-off your mind. Some people find it easier to calculate 3*v + 2*s + d (where v is the number of voids, s is the number of singletons, and d is the number of doubletons in the hand) than calculating (a+b) + (a-d) or calculating 2*a + (b-d) for example.

Why could that be – ask them :-)

Second, when offered a new method that uses new ranges and spans over new numbers of evaluation metrics, you tend to **"subconsciously" try to convert** or "squeeze" this new range into the range you are comfortable with. Such a conversion would enable you to 'operate' in a familiar context and get better answers without leaving the comfort of the familiar 'dimensions'.

We already mentioned such a 'convenient conversion' when discussing that the experts use the 4 ½ - 3 – 1 ½ - ½ HCP scheme instead of the regular Milton Works HCP point-count of 4-3-2-1 to make the 'good' 6-4-2-1 solution look like the 'bad' 4-3-2-1 HCP solution in terms of 'dimensions' and ranges (this was in the **Which HCP count is "mathematically correct"** section of the this article).

So, how would that translate in terms of Zar Points?

On the HCP side it naturally translates to the above-mentioned HCP valuation of 4 ½ - 3 – 1 ½ - ½ that the experts use in their hand evaluation methods.

On the DP side, let's consider the two most common 'conversions' - to Goren Points and to Bergen Points.

Having a look at the comparison tables in the previous section, you realize that to 'convert' Zar Points to **Goren** Points you have to:

1) **Subtract 8** from the calculated Zar Points count – this "equalizes" or "aligns" the lower ends of the scales while also aligns it with 0, thus preparing it for the second scaling which follows below.

2) **Divide** the result **by 2** - this "aligns" the higher end of the scale (scale it back to 9).

Thus for the 5521 distribution you get 3 Goren Points – just as many as for the 7330 distribution. In Zar Points you get 14 for the 5521 and 17 for the 7330. To 'see' the 14 points in "Goren Terms" we do (14 – 8) / 2 = 3. This means that in "Goren Terms" the 5521 valuation are **the same** in Zar Points and Goren Points..

For the 7330 we "scale down" the 17 Zar Points by (17 - 8) / 2 = 4 ½. This is a **significant difference – 4 ½ vs. 3** for the same hand.

Now, let's turn to the **Bergen** Points – again have a look at the comparison table. Here we have to:

1) **Subtract 8** to align it with 0 in order to prepare the appropriate division (conversion of the higher end);

2) **Divide** the result **by 2** – this aligns the higher end of the scale;

3) **Add 7** to re-align the lower ends (that brings the lower end to 7 and the higher end to 13)

Thus for the 5521 distribution you get 10 Bergen Points – just as many as for the 7330 distribution. In Zar Points you get 14 for the 5521 and 17 for the 7330. To 'see' the 14 points in "Bergen Terms" we do [(14 – 8) / 2] + 7 = 10. This means that in "Bergen Terms" the 5521 valuation are **the same** in Zar Points and Bergen Points..

For the 7330 we "scale down" the 17 Zar Points by [(17 - 8) / 2] + 7 = 11½ . This is a **significant difference – 11 ½ vs. 10** for the same hand.

Just one more example - the 6511 and 8320 distributions to both of which Goren assigns 4 points and Bergen 11 points, but Zar Points vary from 16 to 19. Convert and see the corresponding results.

You can do this 'conversion' for any other distribution of course, and see the distinction in you familiar setting – be it Goren or Bergen.

To finish this section, let's examine a couple of hands and evaluate them at the point of picking up your cards. We'll evaluate them in Goren Points, Bergen Points, Zar Points, Zar Points "converted" to Goren, and Zar Points "converted" to Bergen.

The first hand has a 5521 distribution and relatively low amount of controls, the second one has a 7330 distribution and relatively high amount of controls. Both hands with the same HCP count of 15:

Hand A	**Hand B**
♠ K Q 8 3 2	♠ A K 10 8 7 5 4
♥ K Q J 9 2	♥ A 10 9
♦ A 4	♦ A 9 6
♣ 7	♣ __

Both hands are decent hands with playing strength, yet looking somewhat different …

<u>1) Goren Points Count</u>

Both hands in Goren Points are worth **18 points** - 15 + 2 + 1 for Hand A and 15 + 3 for Hand B.

<u>2) Bergen Points Count</u>

Both hands in Bergen Points are worth **25 points** - 15 + 5 + 5 for Hand A and 15 + 7 + 3 for Hand B.

<u>3) Zar Points Count</u>

Hand A in Zar HCP Points is worth 15 + 4 = 19 (4 pts for the 4 controls). For the 5521 we get 10 + 4 = 14 Zar Points for a total of 33 Zar Points. We add 1 point for HCP concentrated in 3 suits = **34 pt.**

Hand B in Zar HCP Points is worth 15 + 7 = 22 (7 pts for the 7 controls). For the 7330 we get 10 + 7 = 17 Zar Points for a total of 39 Zar Points. We add 1 point for HCP concentrated in 3 suits = **40 pt.**

A **difference of 6** Zar Points between the 2 hands. Note that this is **one level** difference!

<u>4) Zar Points "converted" to Goren</u>

Hand A in "Converted" Zar HCP Points is worth 4 ½ + 6 + 3 + 1/2 = 14 (1 pt less than the 15 if using the standard Milton Works 4-3-2-1 HCP count).

Hand B in "Converted" Zar HCP Points is worth 3 x 4 ½ + 3 = 16 ½ (1 ½ pts more than the 15 if using the standard Milton Works 4-3-2-1 HCP count).

Hand A in "Goren-Converted" Zar Points is worth (as calculated in the beginning of the section) 3 points – the same amount as in the actual Goren Points.

Hand B in "Goren-Converted" Zar Points is worth (as calculated in the beginning of the section) 4 ½ points – 1 ½ pts more than the actual Goren Points.

So, Hand A is worth 14 + 3 = 17 "Goren-converted" Zar Points **– that's 1 point less** than the Goren valuation itself (17 vs. 18).

Hand B is worth 16 ½ + 4 ½ = 21 "Goren-converted" Zar Points **– that's 3 points more** than the Goren valuation itself (21 vs. 18).

In other words, with the Hand A Zar Points are 17/18 = **94% more conservative** than Goren (in "Goren Terms") while with the Hand B Zar Points are 21/18 = **117 % more aggressive** than Goren (in "Goren Terms" again).

<u>5) Zar Points "converted" to Bergen</u>

Hand A in "Converted" Zar HCP Points is worth 4 ½ + 6 + 3 + 1/2 = 14 (1 pt less than the 15 if using the standard Milton Works 4-3-2-1 HCP count).

Hand B in "Converted" Zar HCP Points is worth 3 x 4 ½ + 3 = 16 ½ (1 ½ pts more than the 15 if using the standard Milton Works 4-3-2-1 HCP count).

Hand A in "Bergen-Converted" Zar Points is worth (as calculated in the beginning of the section) 10 points – the same amount as in the actual Bergen Points.

Hand B in "Bergen-Converted" Zar Points is worth (as calculated in the beginning of the section) 11 ½ points – 1 ½ pts more than the actual Bergen Points.

So, Hand A is worth 14 + 10 = 24 "Bergen-converted" Zar Points **– that's 1 point less** than the Bergen valuation itself (24 vs. 25).

Hand B is worth 16 ½ + 11 ½ = 28 "Bergen-converted" Zar Points **– that's 3 points more** than the Bergen valuation itself (28 vs. 25).

In other words, with the Hand A Zar Points are 24/25 = **96% more conservative** than Bergen (in "Bergen Terms") while with the Hand B Zar Points are 28/25 = **112 % more aggressive** than Bergen (in "Bergen Terms" again).

I hope this gives you a good perspective.

9) The Summary

Zar Points enable you to essentially do two things:

- Stop at **part-score with 24-HCP** when no game is in sight but the crowd bids a game "from general considerations";
- Bid **17-HCP games** or slams when the crowd has an "all-pass" board, from the same "general considerations".

Here is how:

Opener:

1) Add your **HCP** and your **Controls** in the hand;
2) Add the **sum** of the two longest suits to the **difference** between the **longest** and **shortest;**
3) If you can count to **26** or more – you can comfortably open the bidding;

Responder:

4) Make the opening-hand calculation mentioned above;
5) Add +1 pt for every **honor** in the partner suit (up to +2) and +3 pt for **extra length**;
6) If you can count to **16**, comfortably raise to level 2; if you count to **26** – it's a game.

Zar Points demonstrate unsurpassed precision in evaluation of the distribution power of a hand – about 3 times better that any other method in the wonderful game of bridge.

I have heard people sometimes complaining that Zar Points are a bit too-complex. But the term "complex" is a relative thing. What do you expect to beat these experts out there with – with bare hands? They'll call the police :-)

If you only see their systems written down, you'd be stunned to see 100, 200, 300 pages! No joke – I have copies of systems with these exact "mileages". And these are systems of world champions, who know that "nothing for nothing" is not a good deal… You have to make an effort – complex or otherwise.

By the time you sit around the bridge table, it's already too complex :-)

So, are Zar Points too complex for you? Think again – and good luck at the table:

Zar Petkov,
October 2003, Toronto, Canada

Questions, suggestions, critique? Please, contact me at: **ZarPetkov@Compuserve.COM**

The Finer arts of Zar Points

Calculating the Zar Points in a hand is straightforward, as you already know:

(HCP + Controls)

+

(a + b) + (a – d)

where **a, b, c,** and **d** are the lengths in descending order of the 4 suits of the hand (ranging from 13 to 0).

To open, you need 26 points. To go to a game – double the opening amount, or 52. You simply count and bid.

NOTE, that you can do just fine without the second part of the article, which gets into somewhat deeper stuff.

Pace yourself comfortably.

How does this fit in the bidding space, though? And what is the bidding space to begin with? How does the fit and misfit affect the bidding and what is a fit to begin with? How often do you have a fit? What are the bid-pips and the foot-prints? What is The Theorem and how you can use it?

Questions like these will be answered in the discussion below.

1) The Bid-pips

Let's now have a look at the entire board and see what the global evaluations would be. Now we will consider the suits in the combined hands and the evaluation formula will be based on the shapes of both hands.

The considerations below have been inspired by a board given to me by Mike Lawrence as a challenge for an initial version of the article - thank you, Mike. Here are the 2 hands of the board:

♠ K J x x x ♥ x ♦ A x x x ♣ K x x	♠ x ♥ K J x x x ♦ K x x x ♣ A x x

The best contract is 2♦ and the question is "Can you stop there?" I will allow myself, instead of this board to consider 2 "almost identical boards" – this will make it easier for me to unveil the point. Here they come:

1)

♠ A x x x ♥ K x x ♦ K J x x x ♣ x	♠ K x x x ♥ A x x ♦ x ♣ K J x x x

2)

♠ x ♥ K J x x x ♦ K x x ♣ A x x x	♠ K J x x x ♥ x ♦ A x x ♣ K x x x

These hands in the 2 boards are "almost completely" identical. They have:

- the same shape;
- the same HCP;
- the same Controls;
- the same top honors;
- the same Zar Points;
- the same offensive power;
- the same suit-support;
- the same level of best contract (level 2).

Still … which of these 2 boards do you like better? I'll make it a bit harder – FORGET that with the first board the best contract is 2♠ and you will score 110 while in the second one it's 2♣ and you'll score "only" 90. Let's pretend for a moment that each of the four suits brings 30 pt, i.e. both boards would bring you 110. NOW which one do you like better? If any – after all they are "almost completely" identical…

I personally STILL like the first one better. FOUR TIMES better! Why? And why four times?

Because it gives me FOUR TIMES bigger **bidding space** than the second one!

Do you see that? Four times is a lot!

Let's introduce the term **bid-pips** (pips is a term we use in backgammon to describe the steps in the backgammon space). A bid-pip is any bid in the bidding space, so there are 5 bid-pips per level, and 35 bid-pips in the entire bidding space (as opposed to only 24 pips in backgammon – that's why backgammon is a simpler game :-) - and why I love it so much). So, there are 2 bid-pips between the bids 1♦ and 1♠, 4 bid-pips between 1♥ and 2♦ etc.

Now you probably see why board 1) has 4 TIMES bigger bidding space than board 2)… In board 1) East opening bid is 1♣ and there are 8 bid-pips to the 'best contract' of 2♠, while in board 2) East opens 1♠ and there are only 2 bid-pips to the best contract of 2♣! Don't tell me that you'll stop at the best contract of 2♣ here – I'll call the Director :-)

Things like bid-pips, bid-space, and what I call the inherent **HCP-inertia** (the fact that it is almost impossible to stop at a contract like 2♣ if you have 25 HCP in the combined hands simply because you need room to express the "additional" and "undisclosed" power of the hands) are all things that you HAVE to keep in mind during the bidding process and in the same time things that can be grasped neither by Zar Points, nor by "Czar" points if they exist :-) As Kozma Prutkov said nearly a century ago, "Nobody can grasp the ungraspable" – that's where the beauty of the game of bridge comes from. Bidding sequences like 1♠ - 2♥ have to catch your attention and to alert you that you have already "eaten-up" 8 bid-pips without communicating that much of information, and to consequently make you more conservative for this board. Let alone the opponents' interventions and even worse – their pre-emptive bidding. It's a jungle out there :-)

To make things more clear, let's consider the following scenario. NOTE how important this hypothetical scenario is in order to recognize that the bidding space is HUGE, contrary to your believes, probably.

So … we are going to consider a "slightly" different game of bridge – a game in which ALL the 4 people are "partners" in the sense that they cooperate towards a common goal – the goal to REVEAL the holdings of EVERY player, ALL the 13 cards of ALL the 4 players. And you can go as high as possible – like bid 9 NT, 13 SP, 21 CL etc. as needed. BUT – at the end you can write down the positions of ALL 52 cards at the table. Interesting …

Remember that the number of all possible deals is pretty large –

`53, 644, 737, 765, 488, 792, 839, 237, 440, 000`

last time I counted.

This hypothetical question has been answered by an old friend and former partner of mine – Manol Iliev. And the answer is pretty surprising. It turns out (mathematically proved, of course) that everything will be clear by the level of 6 Clubs! That's all!

At level 6 you'd know EVERY card of the 52 cards on the table!

How big is the bidding space indeed, or how many different bidding sequences are possible in the regular game of bridge? The answer will surprise you more than the answer about the number of all possible deals – it is

2, 400, 000, 000, 000, 000, 000 TIMES bigger

than the above-mentioned number of deals !!!

The total number of bidding sequences including doubles, redoubles, and passes is a bit more than

128 E+45, that's - 128 times 10 to the power of 45

Not enough room to fit the actual number :-)

So … there is room at the table – you just have to use it wisely.

2) The Misfit

Let's now get back to our original board where 2♦ is the best contract:

♠ K J x x x ♥ x ♦ A x x x ♣ K x x	♠ x ♥ K J x x x ♦ K x x x ♣ A x x

The main concern here is the one of the so-called "mis-fit". And the worst thing about the term "mis-fit" is that it is "mis-leading". Here is why.

Is this a misfit?

♠ K J x x x ♥ x ♦ A x x x ♣ K x x	♠ x ♥ K J x x x ♦ K x x x ♣ A x x

Is this a misfit?

♠ A x x x x ♥ x ♦ A x x x ♣ K x x	♠ x ♥ A x x x x ♦ K x x x ♣ A x x

Is this a misfit?

♠ A x x x x x ♥ x ♦ A x x x ♣ K x	♠ x ♥ A x x x x x ♦ K x x x ♣ A x

Hey, I'll make a slam in the last board if EITHER of the major suits breaks 3-3! (and some minor additional luck :-)

And EACH of these 3 boards has the SAME HCP power and "semi-similar" shape!

What is a fit, what is a misfit, and what are our chances to get one of these?

The answer is in

3) Zar's Theorem – "In bridge, you always have a fit"

Sounds a bit ambitious, so … let's get right down to the proof.

Applying the **Dirichlet's Principle** from mathematics, we see that THE WORST-CASE scenario when talking about fit and misfit is that you either have at least two 7-card fits (the so called "Italian" fits) or one 8+ card fit.

We have 13 + 13 = 26 Dirichlet's Balls (the cards in both hands) and 4 Dirichlet's Drawers (the suits). You can easily see that (13 + 13) – 4 x 6 = 2 and these 2 "loose" cards will have to fall in the one or two of the Dirichlet's Principle Drawers (suits in our case), making the "fit".

This means that you virtually **always have a fit or fits somewhere.**

The best-case scenario is of course a board with two 13-card fits:

♠ A Q x x x x ♥ K J x x x x x ♦ ___ ♣ ___	♠ K J x x x x x ♥ A Q x x x x ♦ ___ ♣ ___

Do you like this board? I don't – it would be a wash on any tournament …Almost everybody will bid a GRAND. Unless someone decides to fish for a top and bids 7 NT, hoping for a favorable lead :-)

The Theorem has **deep implications** on the bidding process simply because you **do know** that your goal is to find the **pre-existing** fit(s) rather than approaching the bidding trying to **find out whether or not** you have fits. Think about it!

The best example is the **balancing**. You have noticed that part of the "aggressiveness" of the experts is that these guys will almost never let you play at low levels, provided that you **wish** to stop there. They will try to push you up or to get the contract in "their" suit.

Do they know they "have" a suit? At least they "hope", that's for sure :-) The Theorem gives you the confidence to shoot for finding your best spot, simply because you know that it exists.

If you get a little greedy and ask the question "How often do I get into the worst-case scenario of 2 7-card fits", I have good news for you. For that to happen, you have to have **special cases** of **only four possible combinations:** 4333 vs. 4333, 4333 vs. 4432, 5332 vs. 4432, and 5332 vs. 5332 distributions. Which special cases? The following ones: 4333 vs. 3433, 4333 vs. 2344, 4432 vs. 3244, 5332 vs. 2335, and 5332 vs. 2434 (and slight variations of these - the unbalanced combinations like 6160 vs. 1606, 7060 vs. 0706 etc. have a negligible probablity ~0%).

So when you run the probabilities, you reach the following form of The Theorem:

In bridge you always have a fit :

- about **85% of the time at least one 8-cardt fit**
- about **15% of the time only 2 or 3 7-card fits**

If you are a careful reader, you probably have noticed that there is a chance for you to have 3 7-card fits (the 4432 vs. 3343 case). This chance is included in the 15% chance for having only 7-card fits. These results were also re-checked with several generations of deals via DealMaker, DealPump, and Deals programs (chuncks of 1,000,000 boards each time).

One last word on this subject, stemming from the fact that if you have only 7-card fits (neglecting the cases with ~0% probability like 7060 vs. 0706) , **both hands are balanced.** In this case the only thing that matters is **brute HCP power**. If you have it - generally play in NT. If they have it - let them suffer, because if you show your head 'above the water', they'll make a salad out of you.

Think twice before balancing with 4333 **despite The Theorem**. Better yet – think twice and then pass :-)

The only exception to that rule would be when in Matchpoints you have to push your opponents out of a non-vulnarable 1 NT - arguably the point in which you have to be most aggressive. But think once before doing it :-)

Let's now get back to the other bridge theory addressing the issue of levels of play – The Law.

4) The Theorem and The Law

Is there any relationship between The Theorem and The Law of total tricks?

As mentioned above, for a comprehensive study of The Law and how it influences your bidding-decision-making process, your best source is the set of Larry Cohen's books on the subject. He also has his own website which you can visit at your convenience.

To see the correlation between The Theorem and The Law, let us apply the **same Dirichlet's Principle** from mathematics (as we did in the proof of The Theorem) to the case when the opponents have one superfit (defined as a 10-11 cards-suit) first, and than to the case when the opponents have a double superfit (at least 20 cards in 2 suits).

In the first case, when the opponents have a single superfit, this leaves you side with 24 cards in 3 suits which means that according to Dirichlet your side has at least **three 8-cards fits** instead of the guarantied minimum of 2 7-card suits (in the worst-case scenario).

In the second case of double superfit on the opponents side, you will be left with max 6 cards in these 2 suits and 20 cards in the other 2 suits – again applying the Dirichlet Principle you would be guarantied at least **two 10-cards fits** yourself in the worst-case scenario!

To summarize:

1) If the opponents have a **single superfit,** The Theorem guarantees you that your side has (in the worst-case scenario) a **triple 8-cards fits**.

2) If the opponents have a **double superfit**, The Theorem guarantees you that your side (in the worst-case scenario) also has a **double superfit.**

Easy-to-remember guidelines, I believe.

To make it even simpler, the finding can be summarized by the principle "**The more they have, the more we have**" :-) And vice-versa, of course – the moment you realize you have a double-superfit you know that the opponents also have a double-superfit, whether they know it or not. This may result in a tactical decision to either:

1) hide your second fit while still account for it, or

2) make a psychic bid in one of the opponents' suits, knowing that partner is "not rich in that suit" anyway and chances that you are going to mislead him are slimmer.

Is the second option perfectly legal and the correct thing to do? I don't want to open this kind of discussions, but the short answer is "oh, yeah …". As long as your partner get's the same information (**or mis-information** for that matter) and acts accordingly, you are fine and dandy. The fact that you **know** that chances are 95% that you will mislead the opponents and only 5% that you will mislead your partner only speaks about your smarts, and if you don't approve of that statement you probably disapprove the bodycheck in hokey and the fact that in boxing the guys hit each other in the face and the referee pretends he doesn't notice :-)

So, now that we know we virtually always have a fit somewhere, and that "The more they have, the more we have", let's get back to the question of misfit.

5) The Footprints

In Zar Points we don't deal with misfits – we deal with **"footprints"** and controls. The "footprint" of a suit is the shorter side of the suit in both hands:

K x x x x	x x	has a footprint of 2
A x x x	x	has a footprint of 1
A x x x	x x x	has a footprint of 3

You see now how easy it becomes to evaluate the immediate losers using footprints (FP) and controls (CT):

If FP < CT,	you have	0 immediate losers.
If FP = CT,	you have	min(1, FP) losers (1 in most cases; 0 with void against xx(xxx)).
If FP > CT,	you have	min(2, FP) losers (2 in most cases; 1 with x against xx(xxx)).

I already hear you screaming "That's too complex, man … That's for a computer…" I am not going to get deeper in the manipulation of the footprints and controls, immediate losers, and their cooperation with the suits where your fit(s) are – it goes beyond the scope of the article, but you get the picture, I hope. Here is a simple example which illustrates the point.

The **same fits** "13 – 7 – 6 – 0", with **same 10 HCP** but with **different footprints**:

1)

♠ A Q x x x x ♥ x x x x x x x ♦ ___ ♣ ___	♠ K J x x x x x ♥ ___ ♦ x x x x x x ♣ ___

This board has 0 losers in any of the 4 suits. The contract - 7♠ (the defenders wouldn't find the killing trump lead :-).

The footprints of all the 3 non-trump suits are 0. Now, the second example:

2)

♠ A Q x x x x ♥ x x x x ♦ x x x ♣ ___	♠ K J x x x x x ♥ x x x ♦ x x x ♣ ___

This board has 3 losers in both ♥ and ♦ suits, since the footprints are 3 and controls are 0. The contract - 1♠. Significant difference by any standard :-).

6) Standard Bidding Systems with Zar Points

As you certainly know by now, Zar Points is a hand-evaluation system rather than bidding system by its own. You can continue using your own conventions and systems, while still constantly evaluating and re-evaluating your hand as the bidding progresses and act accordingly.

Having said that, there are systems and … then there are systems :-) Which ones are suitable for direct Zar Points involvement and which ones are not? Which bidding principles fit the concepts of Zar Points and which don't? This is an important question, which I would like to shed some light on at the end of these discussions.

To answer this question let's state the most important basis on "revealing" the Zar Points in the two hands – the basis is in the suits and fits in both hands, which means that the bidding itself is concentrated around showing the primary and secondary suits of the hands.

Talking about "Standard Systems", the first than comes to mind is **"Standard American"** - no surprises here :-) Is Standard American (and the popular SAYC – Standard American Yellow Card) suitable? The answer is … regrettably not. And the reason for that is in the weakest part of that system – the fact that 1 NT is NOT forcing after the opening 1♥/1♠ by partner. Having 1NT available as a "pass-through" bid allows the partner to reveal his hand and gives YOU the opportunity to re-count your Zar Points and act accordingly.

SAYC's two over one bid is fine, though, as it is with all the other systems. Even if two over one is NOT a Game Forcing (in case the suit is rebid), the important thing is that it is still a round forcing and allows for a variety of hands to be bid through a two over one bid.

The other 2 major "standard" bidding systems are "Two over One" and the Strong Club systems (no room here for "twisted" systems like "Strong Pass" etc. which have their own merits).

Both "**Two over One**" and "**Strong Club**" (this "bag" includes "Precision Club", "Polish Club", Blue Club" etc.) have the sanity of using 1NT as a forcing bid. And the two-over-one is forcing anyway. That's what makes them suitable for Zar Points valuation in practice.

How about popular conventions like **Jacoby 2NT** and **Bergen raises** over 1♥/1♠ opening?

Both of them fit perfectly. There are several modifications on the Bergen raises part (rather than having the original limits of 7-9 and 10-12 in HCP for the 3♣/3♦ bids) which you may or may not wish to make, but this goes beyond the scope of these discussions anyway.

And fundamentally, as you know already I hope, a Bidding System is not a bunch of conventions "collected" from here and there, but a philosophy shared by the two partners in the partnership. Calculations in bridge are important (especially the ability to count to 13 :-), but common philosophy, along with synchronization and imagination make this game "human" - otherwise Zia wouldn't be able to beat The Computer :-)

Talking about computers, I am also finishing a program playing Zar Points so you would be able to play around with it and see how things work. The program is kept in Java script only so you can run it directly from you browser with no server-side operations (it will come free, of course). You'd be able to run it from your own hard drive, distribute it free to anyone, publish it as an HTML page wherever you like, make modifications, additions, improvements (hey, nobody's perfect :-).

I hope all these discussions gave you a **fresh look** at the wonderful game of bridge!

Enjoy it!