THE PARTY-LIST SYSTEM REVISITED: UNCOVERING HIDDEN PITFALLS IN PRESENT REFORM PROPOSALS[*]

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> *"Just as one cannot grow Washington apples in the Philippines or Guimaras mangoes in the Arctic because of fundamental environmental differences, neither can the Niemeyer formula be transplanted in toto here because of essential variances between the two party-list models. … It is now obvious that the Philippine style party-list system is a unique paradigm which demands an equally unique formula."*
>
> —*Veterans Federation Party v. COMELEC*[1]

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[*] *Cite as* Oscar Franklin Tan, *The Party-List System Revisited: Uncovering Hidden Pitfalls in Present Reform Proposals*, 82 PHIL. L.J. [*page cited*] (2007). This article updates the author's freshman year article written in 2002 while interning in the House Committee on Suffrage in a program pioneered by Professor Ibarra Gutierrez. *The Philippine Party-List Experiment: A Tragedy of Flawed Mathematics and Policy,* 78 PHIL. L.J. 735 (2004) (First Awardee, Justice Vicente V. Mendoza Prize for Best Critical Analysis of a Supreme Court Decision, 2005).

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SYNOPSIS

Introduction

1) The party-list system's context has evolved. Some feel that it is tied to the problem of extrajudicial killings, allegedly because the military fears militant groups' access to pork barrel funds via the party-list system. Some now seek to abuse the system as an easier means of gaining House seats, whether by attempting to buy a seat as a genuine party-list group's nominee or by putting up front groups to win seats that can be used as buffers against an impeachment attempt. (I.A.)

2) The party-list seat assignment formula remains a failure because it does not fill up the 20% of House of Representatives seats constitutionally reserved for the party-list system, but present reform proposals uncreatively focus on modifications of the German parliamentary formula. I emphasize that these more recent discussions fail to credit Justice Vicente V. Mendoza, who wrote the original dissent in *Veterans* that explored the German formula. (I.A.)

3) It has become fashionable to criticize *Veterans* wholesale. However, despite its problematic formula, *Veterans* presented valid principles regarding the party-list system, particularly its assertion that the Philippine context is completely different from parliamentary systems around the world and that the Philippine context demands its own unique approach. (I.B.)

4) My central criticism of *Veterans* is that the Court was faced with a choice between the Party-List Act's mathematically impossible 2% threshold – simplistically speaking, 2% multiplied by 55 seats demands 110% of the vote to fill up the party-list seats – and the Constitutional provision allocating 20% of House seats to the party-list system, and the Court upheld statute over fundamental law. (I.B.)

Expansion of party system or social justice tool?

5) The Constitution's text regarding the party-list system appears confused because two different policy goals were discussed by the drafters, and correcting the seat assignment formula must be guided by a clear choice of one policy goal or the other.

6) Fr. Joaquin Bernas, S.J., most prominently, envisions a broad system where both large and small parties can compete and receive House seats proportional to the number of votes they receive. (II.A.)

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[1] Veterans Federation Party v. Comm'n on Elections, G.R. No. 136781, 342 SCRA 244, 276, Oct. 6, 2000.

7) *Ang Bagong Bayani* made a powerful statement that the system is for the benefit of marginalized sectors in society. (II.B.)

Implementing reforms: Expansion of the party system

8) Although Fr. Bernas's vision is attractive, the present party-list system cannot empower minority parties because it lacks a mathematical linkage to the district elections that allows it to correct the latter. At present, if large political parties are allowed to enter both the district and the party-list elections, they can simply dominate both. Should one wish to implement this conception of the party-list system, the Party-List Act must be overhauled to incorporate a mechanism that allows the party-list elections to interact with the district elections, similar to how the complete German system works. (This is beyond the scope of the mathematical solution detailed in this article.)

Implementing reforms: Party-list as social justice tool

9) The *Ang Bagong Bayani* vision can be implemented within the present party-list system's structure. However, the seat allocation formula must be corrected, and the first step is to analyze the problems caused by applying the German formula to the Philippine context.

10) The German formula's tiebreaker step produces dubious results in the Philippines. It ends up allocating more seats than the actual formula. (IV.A.)

11) The German formula concentrates votes in the highest ranked parties. (IV.B.)

12) The German formula uses a divisor that inflates seat allocations by giving parties much higher allocations relative to the percentages of the party-list vote. *Veterans* in fact rejected this improper divisor. (IV.C.)

13) The most recent application of the German formula proposed to ignore the three-seat cap without citing a legal basis for doing so. Considering that Justice Mendoza claimed that the German formula was the most faithful to the Party-List Act's text, it is doctrinally bizarre to simultaneously apply the German formula while disclaiming part of the Party-List Act's text. (IV.D.)

14) There is no mathematical evidence that the three-seat cap makes it impossible to fill all the party-list seats, and note that it only affects the handful of parties with very high percentages of the party-list vote. The cap does make applying the German formula difficult, but the law cannot be ignored simply to suit a formula one is proposing. (IV.E.)

15) Dr. Felix Muga II, who most recently attempted to apply the German formula to the Philippine context, presented a check using "ideal numbers" that is a restatement of his own formula. This check unsurprisingly rejects any formula

that does not match Dr. Muga's proposal, including the Party-List Act and its three-seat cap. (IV.F.)

16) A seat cap does not necessarily distort proportionality, if one considers the framers' policy goal of ensuring that no one party received too high a share of party-list seats. One must interpret proportionality in terms of this higher policy goal. (IV.G.)

17) Neither the concept of proportionality nor the three-seat cap appear in the Constitution's text; both appear only in the Party-List Act. There is no legal basis for ignoring the three-seat cap by invoking the concept of proportionality in the same statute, instead of interpreting the two in harmony to give full effect to the Party-List Act. (IV.H.)

Real problem: Vote dispersion in the Philippine context

18) The Philippine context is defined by a large number of parties and a small number of seats, which cause vote dispersion that tends to lower parties' percentages of the vote. This context is the complete opposite of that of other parliamentary systems' such as the German, which feature a small number of strong parties and a large number of seats.

19) The German formula revolves around a 1/55 (or about 1.82%) quota concept that does not function in the above Philippine context, and proves too high. This explains why the German formula tends to concentrate seat allocations in higher ranked parties. (V.A.)

20) This author proposed a solution that addresses vote dispersion and does away with the German formula's fixed "quota." This author's solution seeks the largest possible number with which to divide each party's number of votes by, such that when the resulting numbers' decimals are dropped and the remaining whole numbers are added together, the resulting sum is 55 or the total number of seats. The seat allocations are the whole numbers which were added together. (V.B.)

21) This author feels that his approach produces a more streamlined distribution that avoids concentrating seat allocations in the highest ranked parties, unlike the German formula, and avoids sharp breaks in the allocations of parties receiving different allocations. This is readily observed when various proposed seat allocations are placed side by side. (V.C.)

I. INTRODUCTION

There is a dearth of homegrown articles[2] touching on the field of Law and Economics in the Philippines. In the broadest sense, this field harnesses mathematical tools to quantify laws' effects and calibrate these to meet desired policy goals. Nowhere is the need for such study more pressing than in reforming the party-list system.

This system's heart is a seat-allocation formula that has thus far satisfied no one due to its inability to fill the 20% of House of Representatives seats constitutionally reserved for the party-list system. Lawyers may eagerly debate policy goals, but gloss over mathematical minutiae in their proposed implementation. Mathematicians may propose formulas but lack the crucial legal perspective to place the system and its complex history in its context.[3]

A lack of attention to either law or mathematics is a recipe for disaster, a sure route towards a mathematical solution that unwittingly diverges from the lofty goals it professes, which is where the party list system finds itself at present. This paper seeks to prevent this by detailing subtle mathematical pitfalls to proposals currently under discussion.

It must be emphasized that the system turns not on the Party-List Act, but on the Constitution. The broad policy choice that must be made, traced back to the Constitutional Commission itself, is whether the party-list system intends to enhance minority political party representation in the House of Representatives, or intends to grant poor and marginalized sectors representation in the same.

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[2] From recent volumes, I can only recall Ma. Lourdes Sereno, *Lawyer's Behavior and Judicial Decision-Making*, 70 PHIL. L.J. 476 (1996); Mark Dennis Joven, *Decision Analysis and Other Quantitative Methods as Legal Negotiation Tools in the Context of the Philippine Judicial System*, 80 PHIL. L.J. 395 (2006). In contrast, I watched my American professors Lucian Bebchuk and John Coates debate Harvard Economics professors head-on regarding mathematical models constructed to frame policy issues. Having observed such masters of their craft, I no longer find the Philippine joke that one enrolls in law school because one is not good in mathematics funny, except in an ironic sense.

[3] For example, in the 1998 elections, a perplexed COMELEC initially distributed 38 empty party-list seats to the 38 highest-scoring losing parties. Although this aimed to comply with the Constitution's 20% requirement, this had no basis and was clearly not a proportional solution. Veterans, 342 SCRA at 260.

Similar to this, an *Inquirer* letter writer proposed to "round up" a losing party's votes to 2%, thus qualifying it. This is similarly baseless and not proportional. Artemio Panganiban, *With Due Respect: Criticisms of the Panganiban Formula,* PHIL. DAILY INQUIRER, Jul. 22, 2007, at A15. Finally, another author proposed to allocate one seat per 100% divided by number of *parties*. Although this addresses the vote dispersion unique to the Philippine system with its large number of parties and small number of seats, using "number of parties" is arbitrary and has no basis in law. Onesimo Cuyco, *The Party-List System as a policy mechanism for popular participation*, unpublished policy paper for Master in Public Administration, National College of Public Administration and Governance, University of the Philippines (on file with the House Committee on Suffrage).

Although these goals overlap, they are not identical, and this article will discuss mathematical pitfalls related to each. It will then briefly review the formula proposed in the original *Philippine Law Journal* article and, more recently, in the *Philippine Daily Inquirer*.

A. RECENT TRENDS

Much has changed since I wrote my original article discussing the first party-list elections in 1998. Most importantly, party-list groups have learned from early organizational mistakes and consolidated their votes.[4] Strong parties with large shares of the vote have emerged, and the three-seat cap is increasingly relevant to the top parties.[5] In the 2007 elections, Buhay received 8.10% while Bayan Muna received 6.59%. In contrast, in 1998, APEC led with 5.50%, followed by ABA with 3.51%.

Such successes bring new considerations. For example, some believe that the party-list system must be reformed to address the alarming murders of activists allegedly by the military. They reason that a party-list group with links to an armed insurgent group can assure itself of three seats in the House and three sets of "pork barrel" funds. Frustrated by what they fear is a ready source of funding to arm insurgents, military adventurists surreptitiously but violently attack suspected community organizers who form the backbone of the party-list group's campaign machinery. This is cited as a reason to remove the current three-seat cap and allow strong, established political parties to compete for party-list seats and stabilize the system.

As another consideration, Fr. Joaquin Bernas, S.J. reports that:

> [S]ince it is said that it is less expensive to win a party-list seat than it is to campaign for a district seat, disadvantaged sectors in need of campaign funds are tempted to sell seats to moneyed candidates who would like to win congressional seats at a cheaper cost.[6]

Finally, I posit that party-list seats are also seen as potential buffers against an impeachment attempt by opposition congressmen.

However, many old problems remain, particularly the central problem that the party-list seats have yet to be filled in any given election. The 2007 elections

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[4] For example, the Trade Union Congress of the Philippines felt it could rely on a membership of 500,000 to 1,000,000. Considering the Party-List Act's 3-seat per party cap, TUCP's disastrous 1998 strategy was to field *five* party-list groups, which dissipated its grossly overestimated votes. AGUSTIN RODRIGUEZ & DJORINA VELASCO, DEMOCRACY RISING? THE TRIALS AND TRIUMPHS OF THE 1998 PARTY-LIST ELECTIONS 14-17 (Institute of Politics and Governance, 1998).

[5] Rep. Act. No. 7941, § 11 (1995).

[6] *Sounding Board: More on the party-list system,* PHIL. DAILY INQUIRER, May 7, 2007, at A15.

yielded 21 party-list representatives out of 240 congressmen, or a 9% woefully below the constitutionally promised 20%.

Further, despite the strongly worded *Ang Bagong Bayani v. COMELEC*[7] ponencia in favor of poor and marginalized sectors, it remains extremely vague in practice which sectors a party-list group may properly represent and how to determine whether their nominees are qualified to represent this sector. Immediately before the 2007 elections, former Senate President Jovito Salonga and Akbayan Rep. Etta Rosales tried to ferret out alleged administration-backed front groups by obtaining an order from the Supreme Court to have COMELEC release the names of each group's nominees.[8] Further, the eventual winner Buhay was criticized for its ties to the influential Catholic religious movement, El Shaddai.

Finally, many problems still plague the actual logistics of voting. Recall that in 1998, with groups simply presented to voters alphabetically at precincts, six out of the thirteen winning parties had names that began with the letter A. This remains the paramount consideration in choosing a name today.

I also note that there remains scant legal literature on the party-list system. One has the *Inquirer* columns of constitutional heavyweights Fr. Bernas, retired Chief Justice Artemio Panganiban, and Dean Raul Pangalangan (plus a recent feature by nonlawyer Dr. Felix Muga II, an Ateneo de Manila math professor), and scant discussion in the legal academic journals.

Finally, I note that the Niemeyer formula, used to allocate seats in Germany's parliament and discussed in great detail in Justice Vicente V. Mendoza's *Veterans Federation Party v. COMELEC,*[9] dissent, still enjoys significant discussion today despite *Veterans'* vehement rejection of this formula. It was often mentioned during the constitutional commission and Party-List Act deliberations, and is mentioned as a matter of course in more recent commentary such as Fr. Bernas's. As a student of Justice Mendoza, however, I must voice disappointment when I see an author produce extended mathematical commentary based on the German formula but fail to acknowledge my beloved professor's original discussion in 2000.

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[7] Ang Bagong Bayani v. Comm'n on Elections, G.R. No. 147589, 359 SCRA 698, Jun. 26, 2001.

[8] BA-RA 7941 v. Comm'n on Elections, G.R. No. 177271, 523 SCRA 1, May 4, 2007.

[9] Veterans Federation Party v. Comm'n on Elections, G.R. No. 136781, 342 SCRA 244, Oct. 6, 2000.

B. ADMIRING *VETERANS'* AND *ANG BAGONG BAYANI'S* VISION

It has become fashionable to heap criticism onto *Veterans,* to the point that retired Chief Justice Panganiban recently devoted an entire newspaper column to addressing a number of his ponencia's critics,[10] myself included.

I actually admire the twin decisions that form the basis of our party-list system jurisprudence. *Ang Bagong Bayani* made a strong statement regarding which sectors could validly participate in the system, and the sense of social justice was unmistakable. *Veterans* marked the first time the COMELEC and the Court had to navigate the Party-List Act's mathematics, and is as important for what it said was inapplicable as it is for its much-criticized formula, which was only the last part of that long decision.

Veterans rejected the initial solution presented to the Court, the German formula. Although I have reservations regarding the details the Court focused on, *Veterans* emphasized that the German formula comes from a vastly different context:

> The Niemeyer formula, while no doubt suitable for Germany, finds no application in the Philippine setting, because of our three-seat limit and the non-mandatory character of the twenty percent allocation. True, both our Congress and the Bundestag have threshold requirements – two percent for us and five for them. There are marked differences between the two models, however. As ably pointed out by private respondents, one half of the German Parliament is filled up by party-list members. More important, there are no seat limitations, because German law discourages the proliferation of small parties. In contrast, RA 7941, as already mentioned, imposes a three-seat limit to encourage the promotion of the multiparty system. *This major statutory difference makes the Niemeyer formula completely inapplicable to the Philippines.* (emphasis added)[11]

The key choice that confronted the *Veterans* Court was whether to strike down the Party-List Act's 2% vote threshold or ignore the Constitution's 20% figure. It is impossible to comply with both because, simplistically speaking, 2% multiplied by the then 52 seats in 1998 required 104% of the vote.

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[10] Panganiban, *Criticisms, supra* note 3, at A15.

[11] Veterans, 342 SCRA 244, 275. This quote is reiterated in Artemio Panganiban, *With Due Respect: Law, mathematics and the party-list system,* PHIL. DAILY INQUIRER, Jul. 15, 2007, at A15. Note that the threshold is irrelevant because only the votes of parties that hurdle the threshold are used in the formula, and the resulting percentage will always add up to 100% because of the formula's choice of divisor. The number of party-list seats in the House is irrelevant because the Niemeyer formula actually allocates percentages of the total, and only translates these percentages to number of seats later on. The cap is irrelevant because it would only take away seats from parties that received a very high number of votes, but not disturb the other allocations.

My central criticism of *Veterans* is that it consciously chose to ignore the Constitution and suddenly consider the 20% figure a ceiling. Although the Court faced the grave problem of how to allocate seats if it struck down a part of the Act's formula, *Veterans* entered its own formula into law anyway and brought the same problem upon itself. Not only did the Court fail to uphold the fundamental law, with a nod to John Hart Ely,[12] it specifically failed to uphold a provision that strengthened marginalized groups' access to the democratic process. The specific criticisms regarding the *Veterans* formula's details spring from this central criticism.

One notes that the Court unanimously reiterated the *Veterans* formula shortly before the 2007 elections.[13] Nevertheless, I have reservations regarding Chief Justice Panganiban's statement regarding "the Panganiban formula:"

> In 2000, the Veterans decision already recognized the difficulties in converting the parameters into a flawless equation. However, despite the lapse of seven years and despite the active presence of party lists, Congress has not amended the law to cure its alleged "mathematical absurdities."
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> Hence, the Supreme Court cannot be faulted for unanimously reiterating the Panganiban formula in subsequent cases, confident that Congress—by its inaction—agrees with the Court's math. Indeed, some provisions of the law may be unwise or mathematically imprecise but, certainly, they are not unconstitutional.[14]

Interpreting Congressional silence is a tricky task. Professor Laurence Tribe lectured that this only has significance "as *operative legal facts* that is not derived from the internal states of mind that various silences may be thought to manifest, but from external constitutional norms"[15] and "as parts of the historical context of actual enactment."[16] The sound I, personally, hear from this particular silence is indeed silence, and no more. Both Congress and the current Court are aware of the dissatisfaction with the *Veterans* formula, given the bills and lawsuits regularly filed with respect to the Party-List Act. The difficulties Chief Justice Panganiban recognizes are very real, and I simply believe that while the relevant actors study alternatives, the status quo is a comfortable path of least resistance, lest one expend significant effort only to exacerbate the system's existing problems.

To end, I summarized my specific criticisms to *Veterans* in the *Philippine Daily Inquirer:*

> "The *Veterans* formula begins by allocating seats to the party with the highest vote. It allocates one seat foreach 2 percent of the vote this first

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[12] DEMOCRACY AND DISTRUST (1980). *See* CONST. art. XIII (on social justice).

[13] Citizens' Battle Against Corruption (CIBAC) v. Comm'n on Elections, G.R. No. 172103, Apr. 13, 2007.

[14] Panganiban, *Criticisms, supra* note 3, at A15.

[15] LAURENCE TRIBE, CONSTITUTIONAL CHOICES 36 (1985).

[16] *Id.*

party has obtained, up to the three-seat cap. This is its first error, as *Veterans* fails to explain why the first party is subject to a separate formula, and fails to even explain the rationale for this separate formula (which appears to be the mathematically absurd 2 percent per seat ratio).

"The *Veterans* formula then allocates seats to each otherqualifying party. It assigns one seat each then allocates additional seats by dividing each party's vote by the first party's vote, then multiplying the result by the first party's additional seats beyond its first (usually two). In its second error and contrary to the Party-List Act requirement, the *Veterans* formula is not proportional and does not form a rough straight line when graphed.

"(Using Buhay's present 8.10 percent, the formula would allocate no seats to parties with 0-1.99 percent, one to those with 2.00-4.04 percent, and two to those with 4.05-8.09 percent.)

"The *Veterans* formula allows only the first party to receive the maximum number of seats, its third error. Even if the second party obtains just one vote less, it will still receive one seat less. This breaks proportionality because such results are practically equal, since one cannot allocate fractions of seats.

"Worse, the strongest parties are irrationally forced to compete because only one will be allotted the three-seat maximum no matter how high their percentages.

"Further, the *Veterans* formula produces inconsistent results that depend solely on the first party's votes.

"Its fourth error is that it continues to count the first party's votes in excess of 6 percent, the maximum considered by the separate first-party formula. That is, it allocates three seats to the first party whether it has received 6 percent, 20 percent or 50 percent of the votes.

"However, the higher the first party's votes, the less seats the *Veterans* formula allocates to all other parties, and we are only beginning to observe the catastrophic results now that very strong parties with disproportionately high percentages are emerging. For example, if the first party obtains 20 percent of the votes, other parties will be allocated two seats only if they obtain at least 10 percent.

"Finally, as the *Veterans* formula's fifth error, its two subformulas are inconsistent. If the first party obtains exactly 6 percent, other parties will receive two seats if they obtain at least 3 percent, which contradicts the first-party formula (which requires 4 percent for two seats). At present, Buhay leads with 8.10 percent and the *Veterans* formula would allocate only two seats to second placer Bayan Muna despite its very high 6.59 percent, or enough for three seats under the separate first-party formula.

"Further, were Buhay's percentage lower, say 6 percent, the inconsistent formula would allocate two seats instead of one to Apec, with 3.50 percent."[17]

Figure 1: Separate Veterans first-party formula

Percentage of votes	Seats
0 - 1.99	0
2.00 - 3.99	1+ 0
4.00 - 5.99	1+ 1
6.00 or higher	1+ 2

Problem: Veterans does not explain why there is a separate formula for the first party. It also does not explain the rationale behind this separate formula.

(Note: The notation "1+0," "1+1" and "1+2" instead of "1," "2" and "3" is intentional because the Veterans formula returns additional seats after the first. This actually creates a mathematical problem not discussed in the article.)

Figure 2: Veterans formula seat allocation for 2007 elections

$$\frac{\text{Percentage of vote of party}}{\text{8.10\% (Buhay percentage)}} = \text{2 seats (additional seats allocated to Buhay)}$$

Problems:

- Only the first party can get the maximum three seats, because the Veterans formula's result can never reach two additional seats for any other party. (The ratio on the left is always less than one.)
- The Veterans formula continues to count the first party's votes in excess of the maximum 6% counted by the separate formula for the first party. This drives down every other party's seat allocation.
- The first party formula and the formula applied to other parties are inconsistent.
- The Veterans seat allocation (left) is not proportional, especially when one factors the allocation to losing parties. Consider the example where the first party obtains exactly 6% of the vote. ***(See Figure 3)***

Figure 3: Veterans seat allocation if first party obtains 6% (not proportional)

Percentage of votes	Seats
0 - 1.99	0
2.00 - 2.99	1+ 0
3.00 - 5.99	1+ 1
6.00	1+ 2 (first party only)

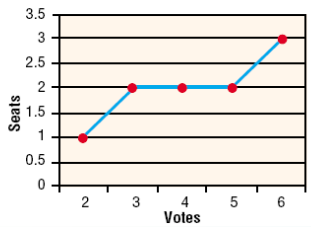

Figure 4: Veterans formula seat allocation given Buhay's 8.10% (not proportional)

Percentage of votes	Seats
0 - 1.99	0
2.00 - 4.04	1+ 0
4.05 - 8.09	1+ 1
8.10	1+ 2 (Buhay only)

Problem: The Veterans formula is inconsistent and drives down other parties' seat allocations using Buhay's high percentage. Bayan Muna, with 6.59%, would have obtained three seats under the separate first-party formula. Apec, with 3.50%, would have obtained two seats if Buhay's percentage were lower.

I believe this articulation is largely accepted.[18] Chief Justice Panganiban reacted in his *Inquirer* column, but largely to say that the *Veterans* formula's defects

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[17] Oscar Franklin Tan, *Party-list system: Mathematical absurdity,* PHIL. DAILY INQUIRER, Jun. 24, 2007, at A14. The charts that follow were created by an *Inquirer* layout artist and reproduced from the same page of that broadsheet. A typographical error in Figure 2 has been corrected; the "=" sign was originally published as "x". Some points raised in this article appeared in an earlier brief essay in *Malaya.* Oscar Franklin Tan, *Party-list: Unfulfilled promises,* MALAYA (Phil.), May 17, 2007, at A5.

arose solely from the law it translated into mathematics. This is a fair response although I personally disagree that there was no error in translation.

Otherwise, the former chief justice argued that "proportionality is applicable only to the additional seat(s) of the qualified parties"[19] and that the Constitution's 20% figure cannot be mandatory as no law has yet increased Congress' total number of seats beyond the original 250 contained in the Constitution. These points reflect what I respectfully submit is a minority viewpoint and are difficult to support using the canons of construction.

Regarding the first point, the *Veterans* formula is precisely criticized because its allocation of additional seats is not wholly proportional, the most pronounced example being how the second-ranked party will always receive less seats than the first-ranked party, even if the first party received only 0.0001% of the vote more than the second. This point was succinctly reiterated by Dean Pangalangan:

> The formula's result is that we will always fall terribly short of the Constitution's 20 percent. …
> …
> …When the law says "in proportion to their total number votes," all it means is, "more votes, more seats," rather than "in proportion to the votes of the highest ranking party."[20]

Regarding the second, it is implicit that laws creating new congressional districts increase the total number of Congress' seats, without having to explicitly specify a new total. Otherwise, one might argue that all these laws are void for rendering the provision specifying 20% of seats impossible, as constitutional provisions take precedence over statutes.

Nevertheless, I stress that I admire our jurisprudence's greater vision, even as I take issue with some details in *Veterans'* mathematics.

II. EXPANSION OF PARTY SYSTEM OR SOCIAL JUSTICE TOOL?

The great dilemma facing anyone studying the party-list system is whether one believes it was intended to expand the party system, or whether it was intended as a social justice tool to empower marginalized sectors. Again, although these goals

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[18] The month after these were published, the above paragraphs were cited by Dean Raul Pangalangan in the *Inquirer* and quoted at length by the *Manila Times*. Raul Pangalangan, *Passion for reason: The party-list conundrum,* PHIL. DAILY INQUIRER, Jul. 13, 2007, at A14; Ben Fernandez & Andy Pugal, *Examining the Tan and Muga analyses and objections to the Panganiban formula,* MANILA TIMES, Jul. 29, 2007, at A1.

[19] Panganiban, *Criticisms, supra* note 3, at A15.

[20] Pangalangan, *supra* note 18, at A14.

overlap, they are not identical. This question has been ignored at all but the highest levels of discussion, but it determines how one would reform the party-list system.

The question exists, to be certain, and is hinted at by the constitution's peculiar language:

> Sec. 5. (1) The House of Representatives shall be composed of … and those who, as provided by law, shall be elected through a party-list system of registered *national, regional and sectoral parties or organizations.*[21] (emphasis added)

Section 2 of the Party-List Act does not definitively clarify this language, and it reads:

> *Section 2. Declaration of Policy.* The State shall promote proportional representation in the election of representatives to the House of Representatives through a party-list system of registered national, regional and sectoral parties or organizations or coalitions thereof, which will enable Filipino citizens belonging to the marginalized and underrepresented sectors, organizations and parties, and who lack well-defined political constituencies but who could contribute to the formulation and enactment of appropriate legislation that will benefit the nation as a whole, to become members of the House of Representatives. Towards this end, the State shall develop and guarantee a full, free and open party system in order to attain the broadest possible representation of party, sectoral or group interests in the House of Representatives by enhancing their chances to compete for and win seats in the legislature, and shall provide the simplest scheme possible.

A. THE BERNAS CONCEPT: EXPANSION OF PARTY SYSTEM

The former view is most notably championed by Fr. Bernas, a former constitutional commissioner, who believes that the system aims to increase minority political parties' representation in the House. He envisions a broad system where both large, established political parties and small, grassroots or sectoral groups can compete and receive seats in proportion to the votes obtained; a large number of seats for a large party with broad support, and a small but proportional number for the small party.

He would interpret the above provision's words "national" and regional" to refer to political parties, and "sectoral" to refer to the marginalized groups we now associate with the party-list system. Thus, the "sectoral" social justice mechanism is subsumed into the broader system. As then Commissioner Christian Monsod described:

> MR. MONSOD: I would like to make a distinction from the beginning that the proposal for the party list system is *not synonymous with that of sectoral representation.*[22] (emphasis added)

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[21] CONST. art. VI, § 5(1).

> MR. MONSOD: No, it is not necessarily synonymous, but it does include the right of sectoral parties or organizations to register, but it is not exclusive to sectoral parties or organizations.[23]

Opening the system to all kinds of parties as envisioned has the benefit of necessarily removing the need to screen whether a party is qualified (except to filter "nuisance" groups that may bloat the ballot). All groups from the dominant political party to a new multisectoral coalition to a small ideology-based group not clearly defined as part of any sector would in theory be allowed onto the same playing field.

B. THE *ANG BAGONG BAYANI* CONCEPT: SOCIAL JUSTICE TOOL

The latter view, on the other hand, was articulated by *Ang Bagong Bayani* and reflects the law's present state. The Court simply ruled that the party-list system was instituted for the *sole* benefit of the marginalized, and interpreted "national" and "regional" parties to mean national and regional parties *of the marginalized*. It cited a speech by Commissioner Wilfrido Villacorta:

> Notwithstanding the sparse language of the provision, a distinguished member of the Constitutional Commission declared that the purpose of the party-list provision was to give "genuine power to our people" in Congress. Hence, when the provision was discussed, he exultantly announced: "On this first day of August 1986, we shall, hopefully, usher in a new chapter to our national history, by giving genuine power to our people in the legislature." (internal citations omitted)[24]

The context, however, was that Commissioner Villacorta was proposing to permanently reserve half the seats for sectoral representatives, an amendment to Commissioner Monsod's proposal that was *rejected* in a narrow vote. Taking this shaky foundation, *Ang Bagong Bayani* thus made its strongly worded pronouncement:

> Indeed, the law crafted to address the peculiar disadvantages of Payatas hovel dwellers cannot be appropriated by the mansion owners of Forbes Park….
>
> …
>
> This Court, therefore, cannot allow the party-list system to be sullied and prostituted by those who are neither marginalized nor underrepresented… The clear state policy must permeate every discussion of the qualification of political parties and other organizations under the party-list system. (internal citations omitted)[25]

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[22] RECORD OF THE CONST. COMM'N 85 (Tuesday, Jul. 22, 1986).

[23] *Id.* at 253 (Friday, Jul. 25, 1986).

[24] Ang Bagong Bayani v. Comm'n on Elections, G.R. No. 147589, 359 SCRA 698, 712, Jun. 26, 2001, *citing* RECORD OF THE CONST. COMM'N 561 (Friday, Aug. 1, 1986).

[25] Ang Bagong Bayani, 359 SCRA at 698, 723.

It even added an explanation that defies the mathematical sense of the term "proportional" so central to the party-list debate:

> "Proportional representation" here does not refer to the number of people in a particular district, because the party-list election is national in scope. Neither does it allude to numerical strength in a distressed or oppressed group. Rather, it refers to the representation of the "marginalized and underrepresented" as exemplified by the enumeration of Section 5 of the law; namely, "labor, peasant, fisherfolk, urban poor, indigenous cultural communities, elderly, handicapped, women, youth, veterans, overseas workers, and professionals.[26]

Finally, consider that the 1987 Constitution explicitly provided for sectoral representatives, but only for the first three congressional elections:

> The party-list representatives shall constitute twenty *per centum* of the total number of representatives including those under the party-list. For three consecutive terms after the ratification of this Constitution, one-half of the seats allocated to party-list representatives shall be filled, as provided by law, by selection or election from the labor, peasant, urban poor, indigenous cultural communities, women, youth, and such other sectors as may be provided by law, except the religious sector.[27]

Arguably, the framers decided on a constitutional grant to give these sectors time to strengthen and organize, but withdrew this by the fourth election to force all sectors to compete purely on their merits. This implies that the party-list system was not intended for sectoral representation in the long-term. (Of course, nothing would prevent from Congress passing a law to extend sectoral representation for a longer period.)

Despite the judicial sleight of hand, I find myself in agreement with *Ang Bagong Bayani's* stand. The seeming magic trick was made with respect to the framers' debates and the canons of construction, which are neither binding nor decisive.

Ang Bagong Bayani's strength lies in its resonance with the 1987 Constitution's social justice thrust, and its slightly strained reading of "national, regional and sectoral" parties, I believe, reflects how the electorate currently perceives the party-list system. Public reaction to Senator Salonga's crusade against "bogus" groups was overwhelmingly positive. No public outcry was heard when the Supreme Court affirmed the disqualification of five party-list groups in the 2001 elections, including three established political parties and popular actor Richard Gomez's party-list group MAD or Mamamayan Ayaw sa Droga.[28] Finally, I quoted

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[26] *Id.* at 719.

[27] CONST. art. VI, § 5(2).

[28] "Citizens Don't Want Drugs." Ang Bagong Bayani v. Comm'n on Elections, G.R. No. 147589, Apr. 10, 2002.

Ang Bagong Bayani on Payatas hovel dwellers and Forbes Park mansion owners in the *Inquirer,* and feedback to this was positive as well.

Finally, and most important in practical terms, the present Party-List Act is simply *incapable* of doing what Fr. Bernas outlines in his columns.

III. IMPLEMENTING REFORMS: EXPANSION OF THE PARTY SYSTEM

A. THE CURRENT SYSTEM CANNOT HELP MINORITY PARTIES AT ALL

Fr. Bernas describes what he and like-minded commissioners envisioned at the constitutional commission:

> [R]epresentation can be won not just by the major political parties but even by smaller parties which would otherwise not have a chance to win seats. Thus, the system is also called "proportional representation." Each party or interest group can win representation in proportion to the size of the constituency it represents. It is thus hoped that the system can be more democratic.[29]

Further:

> [S]eats are allotted to each party in accordance with the percentage of the popular vote each obtains. Thus, the party that obtains 30 percent of the popular votes would be allocated 30 percent of the available seats in the legislative body.[30]

This does not follow, however, in the present electoral system.

It has two completely separate processes: 80% of congressmen are elected for district seats, and 20% are elected through the party-list. If a party were supported by 30% of the electorate, it could obtain 30% of the party-list votes (but have its seat allocation reduced by the three-seat cap), but would not likely capture 30% of district seats.

This follows because district elections are not proportional; one need only obtain more votes than one's opponents. In other words, whether one obtains 20%, 30% or 40% of the vote in a district, one still receives 0% of seats if one loses. Similarly, whether one obtains 90%, 75%, 60%, or 51% of the vote in a district, one still only receives one seat.

Thus, the present system works in a completely *opposite* manner to what Fr. Bernas described. A party that is already dominant in the district elections will

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[29] *Bernas, supra* note 6, at A15.

[30] *Id.*

likely become more so if allowed to enter the party-list system, where it will only obtain more seats. A weaker party will obtain a handful of party-list seats, but be unable to win a substantial number of district elections unless its constituents are concentrated in certain districts.

As Commissioner Jaime Tadeo bewailed before the Commission:

> Kasama rin ang mga partidong ito (UNIDO, PDP-LABAN, Liberal, Nacionalista, PNP). Nahawakan na nila ang 200 legislative seats, hahawakan pa rin nila ang party list—itututlak nila ang sectoral. Lalamunin din ng mga partidong ito ang sectoral.[31]

(The framework necessary to give effect to the policy goals Fr. Bernas outlines is beyond the scope of the mathematical solution presented at the end of this article. This author's solution focuses on the policy goals articulated in party-list jurisprudence, goals which require a substantially different framework. The framework for the former set of policy goals is simply the complete German system, as outlined in the next section.)

B. MISSING LINKAGE BETWEEN DISTRICT AND PARTY-LIST ELECTIONS

Our Constitution's framers, the Party-List Act's authors and the *Veterans* Court all had the German system in mind,[32] and Fr. Bernas does describe the German system's effects in his columns. The problem, however, is that despite this consciousness of the German system's policy goals, only *half* the German system was implemented as our party-list system.

To underscore the central point: *The crucial linkage between district and party-list seats is missing in the Philippines, and we have two completely separate and different systems where the Germans have two linked systems.*

One must understand how the complete German system works. Assume a hypothetical world where there are ten seats, all assigned through district elections. Assume further that this world only has two parties: Buhay, supported by 70% of voters in each district, and Bayan Muna, supported by the remaining 30%.

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[31] 1986 Convention 562-63 (Friday, August 1, 1986). "These parties are also part of the system (UNIDO, PDP-LABAN, Liberal, Nacionalista, PNP). They already hold 200 legislative seats, yet they will also hold the party list—they will shut out the sectoral. These parties will devour the sectoral."

[32] "Rep. Tito R. Espinosa, co-sponsor of the bill which became R.A. No. 7941, explained that the system embodied in the law was largely patterned after the mixed party-list system in Germany. Indeed, the decision to use the German model is clear from the exchanges in the Constitutional Commission between Commissioners Blas F. Ople and Christian S. Monsod." Veterans, 342 SCRA at 304 (Mendoza, J., *dissenting*), *citing* II 1986 Convention 572-73 (Aug. 1, 1986).

The result is clearly lopsided. With 70% of votes in each district, our hypothetical Buhay would nevertheless win 100% of seats, and our hypothetical Bayan Muna would win 0%. The German system aims to precisely avoid this kind of artificial, exaggerated majority.

The German system first multiplies a party's percentage of the party-list vote by the total number of seats, obtaining an estimated total number of seats. It then takes the number of a party's district seats, and allocates additional party-list seats until this matches the estimated total. In this way, a party with 30% of the vote will in fact obtain 30% of seats, as the German system is supposed to work.

Observe the figures for our hypothetical country (assuming its party-list system covers half the seats, or five seats):

Table 1: Distribution of "district" seats using actual German system's linkage

District	Buhay%	Bayan Muna%	Buhay seats	Bayan Muna seats
1	70%	30%	1	0
2	70%	30%	1	0
3	70%	30%	1	0
4	70%	30%	1	0
5	70%	30%	1	0
TOTAL	100%?	0%?	5	0

It appears that our hypothetical Buhay could readily capture all five district seats. This changes dramatically, however, after party-list seats are allocated:

Table 2: "Party-list" seat distribution using actual German system's linkage

Party	% of "national" or "party-list" votes	% vote multiplied by total seats (10)	"district" seats	Additional seats (subtract "district")
Buhay	70%	7	5	2
Bayan Muna	30%	3	0	3

Due to the connection between the district and party-list seats, our hypothetical Buhay receives two more seats in addition to the five district seats. Our hypothetical Bayan Muna had no district seats and thus receives three more seats.

In the end, thus, Buhay receives seven seats, or 70%, and Bayan Muna receives three, or 30%. Thus, when the proper simple linkage between district and party-list allocation systems is established, the German system works as advertised.

However, again, without this crucial linkage, the system works in a completely *opposite* manner and only further entrenches the dominant party.

Should one agree with Fr. Bernas's conception, one must push to have the crucial linkage added to complete what the Philippines adopted, because it is this linkage that empowers minority parties ill-equipped to win district seats. Otherwise, there is nothing to discuss because the policy goal Fr. Bernas discusses is divorced from reality.

Incidentally, it is possible to have surplus seats under the German system. This occurs when a major party strong in the districts allies with a smaller party. Voters receive two votes for congressmen, as in the Philippines, and are asked to give the first, district vote to the large party and the second, party-list vote to the smaller party. Per the demonstration above, the large party would receive a large number of district seats, while the small party will receive none, but receive several party-list seats. When this occurs, the German system simply assigns surplus seats above the prescribed total.[33]

IV. IMPLEMENTING REFORMS: PARTY-LIST AS SOCIAL JUSTICE TOOL

A. GERMAN TIEBREAKER HAS NO TIES TO BREAK IN THE PHILIPPINES

If one subscribes to *Ang Bagong Bayani's* conception (the premise taken by the solution this author presents at the end of this article), one is not as worried by the Philippine system having only half the German formula in place. The linkage between district and party-list seats is less important when one merely wants to give marginalized sectors greater representation within a system that governs the 20% of seats provided for by the Constitution. In other words, it does not matter to the goal that this system is separate from the district elections that handle the other 80%.

The method usually discussed is to apply the German formula, as Justice Mendoza initially proposed, and allocate the seats among the 20% set aside for the party-list system. This formula makes an initial allocation using its first stage, then applies a tiebreaker to unallocated seats as its second stage.

To demonstrate how this might be done in 2007, I borrow Dr. Muga's computations and "ideal numbers" from his *Inquirer* response to my initial article.[34]

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[33] *See* RUPERT SCHICK & WOLFGANG ZEH, THE GERMAN BUNDESTAG: FUNCTIONS AND PROCEDURES (1999). Book available for free from the Bundestag.

[34] Felix Muga II, *Party-list system: Mathematical absurdity (2),* PHIL. DAILY INQUIRER, Jul. 1, 2007, at A14 tab.2.

First, observe his first set of computations where he ignores both the Party-List Act's 2% vote threshold and three-seat cap:[35]

Table 3: The German tiebreaker, disregarding the 2% threshold and the three-seat cap, assigns extra seats to 77% of qualified parties. Thus, the German tiebreaker produces dubious results in the Philippines.

	Party	"Ideal Number" of Seats	First Round Seats	Rank in Tie-breaker	Tie-breaker Seats	Actual No. of Seats
1	Buhay	4.45412859	4	28	1	5
2	Bayan Muna	3.62252367	3	16	1	4
3	Cibac	2.88708642	2	2	1	3
4	Gabriela	2.27137767	2	45	0	2
5	Apec	1.92274384	1	1	1	2
6	A Teacher	1.79173405	1	1	1	2
7	Akbayan	1.68742413	1	11	1	2
8	Butil	1.61646099	1	18	1	2
9	Alagad	1.61529437	1	19	1	2
10	Batas	1.44434701	1	29	1	2
11	Coop-Natcco	1.37095844	1	34	0	1
12	Anakpawis	1.36462824	1	35	0	1
13	Abono	1.33741121	1	37	0	1
14	Agap	1.28011472	1	41	0	1
15	ARC	1.18465264	1	56	0	1
16	AnWaray	1.08559850	1	76	0	1
17	FPJJPM	1.03741846	1	86	0	1
18	Amin	1.01126781	1	93	0	1
19	ABS	0.85763128	0	3	1	1
20	Kabataan	0.84619363	0	4	1	1
21	Aba-Ako	0.82322211	0	5	1	1
22	Senior Citizens	0.79758061	0	6	1	1
23	Kakusa	0.76318347	0	8	1	1
24	VFP	0.73676824	0	9	1	1
25	Uni-Mad	0.73105543	0	10	1	1
26	Anad	0.67962409	0	12	1	1
27	Banat	0.67039138	0	13	1	1
28	Abakada	0.64601271	0	14	1	1
29	Bantay	0.64371556	0	15	1	1
30	1-Utak	0.61974581	0	17	1	1
31	Cocofed	0.58200918	0	20	1	1
32	Agham	0.56836659	0	21	1	1
33	Yacap	0.52455233	0	22	1	1
34	TUCP	0.52451224	0	23	1	1

[35] Rep. Act. No. 7941, § 11 (1995).

35	Anak	0.52038298	0	24	1	1
36	Abanse! Pinay	0.50586643	0	25	1	1
37	Ang Kasangga	0.47376243	0	26	1	1
38	AT	0.46190384	0	27	1	1
39	Ave	0.43490329	0	30	1	1
-	Total	-	25	-	30	55

One immediately notices that the tiebreaker allocates a stunning 55% (30 out of 55) of seats, while the actual formula allocates only 25, or 45% of seats. In other words, what is supposed to be a secondary tiebreaker allocates *the majority* of seats and performs most of the heavy lifting.

A staggering 77% of qualified parties receive seats under the tiebreaker, a result that strongly implies that there are really no ties to break as almost everyone wins a prize. In fact, the tiebreaker appears to be passing down seats to the lower-ranked parties similar to early, awkward proposed amendments to simply allocate seats to the highest ranked parties below the Party-List Act's 2% threshold to fill up the seats.[36]

Second, observe the second set of computations where one applies the 2% threshold but disregards the three-seat cap:[37]

Table 4: The German tiebreaker, disregarding the three-seat cap, assigns extra seats to 47% of qualified parties. Thus, again, the German tiebreaker produces dubious results in the Philippines.

	Party	"Ideal Number" of Seats	First Round Seats	Rank in Tie-breaker	Tie-breaker Seats	Actual No. of Seats
1	Buhay	8.20669351	8	12	0	8
2	Bayan Muna	6.67446863	6	3	1	7
3	Cibac	5.31943184	5	10	0	5
4	Gabriela	4.18499377	4	13	0	4
5	Apec	3.54263895	3	5	1	4
6	A Teacher	3.30125453	3	11	0	3
7	Akbayan	3.10906440	3	15	0	3
8	Butil	2.97831543	2	1	1	3
9	Alagad	2.97616595	2	2	1	3
10	Batas	2.66119692	2	4	1	3
11	Coop-Natcco	2.52597910	2	6	1	3
12	Anakpawis	2.51431577	2	7	1	3
13	Abono	2.46416861	2	8	0	2
14	Agap	2.35860033	2	9	0	2

[36] *E.g.,* H. No. 474, 12th Cong., 1st Sess. (2002). These proposals were likely based on the COMELEC solution rejected in *Veterans*. *See supra* text accompanying note 3.

[37] Muga, *supra* note 34, at A14 tab.3.

15	ARC	2.18271227	2	14	0	2
		Total	**48**		**7**	**55**
16	AnWaray	0	0	-	0	0
17	FPJJPM	0	0	-	0	0

Here the tiebreaker assigns an extra seat to almost half (seven out of fifteen) of the qualified parties, which still appears dubious. Further, if, beginning from these computations, one now applies the three-seat cap and redistributes the surplus seats, one will have to distribute an extra seat to each of the fifteen qualified parties.

Again, the tiebreaker seems to perform quite a considerable portion of the allocation.

Finally, observe the absurd results that arise from a third set of computations where one applies both the 2% threshold and the three-seat cap, incidentally a set of computations not discussed by Dr. Muga:

Table 5: The German tiebreaker, applying both the threshold and the three-seat cap, assigns seats to *every qualified party*. Thus, again, the German tiebreaker produces dubious results in the Philippines.

	Party	"Ideal Number" of Seats	First Round Seats	Rank in Tie-breaker	Tie-breaker Seats	Actual No. of Seats
1	Buhay	8.20669351	3	12	1	3
2	Bayan Muna	6.67446863	3	3	1	3
3	Cibac	5.31943184	3	10	1	3
4	Gabriela	4.18499377	3	13	1	3
5	Apec	3.54263895	3	5	1	3
6	A Teacher	3.30125453	3	11	1	3
7	Akbayan	3.10906440	3	15	1	3
8	Butil	2.97831543	2	1	1	3
9	Alagad	2.97616595	2	2	1	3
10	Batas	2.66119692	2	4	1	3
11	Coop-Natcco	2.52597910	2	6	1	3
12	Anakpawis	2.51431577	2	7	1	3
13	Abono	2.46416861	2	8	1	3
14	Agap	2.35860033	2	9	1	3
15	ARC	2.18271227	2	14	1	3
		Total	**37**		**15**	**45**
16	AnWaray	0	0	-	0	0
17	FPJJPM	0	0	-	0	0

This last result is near-identical to that obtained by Justice Mendoza when he applied the German formula to 1998 election data in his *Veterans* dissent. There,

the tiebreaker also kept allocating seats until each qualified party had three seats each.

Both cases, 2007 and 1998, vividly demonstrate that there are really no ties to break in the Philippines when one applies the German formula and its tiebreaker

I explained the tiebreaker in great detail in my original article,[38] and this tiebreaker *in itself* is both simple and logical. All seat allocation formulas function by producing ratios, including the German formula as seen above. When the initial formula leaves some seats unallocated, the tiebreaker examines the ratios' decimal components. The higher the decimal, the closer that party was to gaining another seat. Thus, although seats can only be distributed in whole numbers, the tiebreaker strives to be as proportional as can be under this constraint, with each vote cast contributing to one party's chance to win an extra seat.

If the tiebreaker is allocating a large number of seats, however, one logically infers that the main formula must not be allocating enough seats. This was particularly vivid in *Veterans,* where the tiebreaker applied by Justice Mendoza to 1998 data had no actual ties to break and just gave every party extra seats. Again, a similar problem takes place if one imposes both the 2% threshold and the three-seat cap on Dr. Muga's computations.

Because the German formula's tiebreaker cannot fill the entire 20% of seats reserved for the party-list system and produces dubious results, Dr. Muga insists on presuming that the three-seat cap is unconstitutional. He presents no constitutional ground to support this weighty assertion, except perhaps that the German formula simply fails when both the law's 2% threshold and three-seat cap are applied. Dr. Muga's unexplained presumption of unconstitutionality thoroughly confused the *Inquirer* discussion, as he criticized my article on the current law's implementation with premises tailored for use with his own legislative proposal.

The German tiebreaker produces dubious results when applied to the Philippine context, no matter that it has worked well in Germany. The *Veterans* Court reached this same conclusion and refused to apply this Washington (or Berlin) apple in the Philippines.

(Tables 4 and 5 may lead one to infer that either the 2% threshold or the three-seat cap must be unconstitutional, concluding that either must prevent all party-list seats from being filled. This is not the complete picture, however, as the next subsection discusses another anomaly in applying the German formula in the Philippines.)

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[38] Tan, *The Philippine Party-List Experiment, supra* note *, at 757-62. *See infra* text accompanying tab.11.

B. GERMAN FORMULA CONCENTRATES VOTES IN TOP PARTIES ONLY

In addition to the seeming anomaly with the tiebreaker's overwork, the German formula inherently concentrates votes in the top parties. This is contrary to the party-list system's proposed spirit of opening the field.[39]

The German formula disregards parties with less votes than the 2% threshold, a figure historically proven to be a difficult threshold for most parties to hurdle, and concentrates seats in the few parties that qualify. This is most readily seen in allocations for parties near the 2% figure.

In Table 4, the German formula allocates two seats to ARC, the lowest ranked qualified party with 2.15% of the vote, and zero seats to An Waray, the highest ranked loser with 1.97% of the vote. This is not a proportional result, and specifically, the qualifying parties' allocations appear proportional to each other, but not to those of the losing parties. Thus, there is quite a jump in allocation of two seats from An Waray to ARC, even though the latter received only 0.18% more of the vote.

Worse, in Table 5 where current law is actually reflected and both the 2% threshold and the three-seat cap are applied, ARC with 2.15% of the vote receives the maximum *three* seats while AnWaray with 1.97% receives none. Thus, the 0.18% different would translate to a three-seat difference.

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[39] Pangalangan, *supra* note 18, at A14, *quoting* Veterans, 342 SCRA at 273. "[T]he cap 'ensures [that] no single group, no matter how large its membership, would dominate the party-list seats, if not the entire House.' (Let's call this the anti-hegemony rationale.)" Rep. Act. No. 7941, § 2 (1995). "[T]he State shall develop and guarantee a full, free and open party system in order to attain the broadest possible representation of party, sectoral or group interests in the House of Representatives…."

Table 6: Examining the unqualified parties' results under the German formula, one finds a very sharp, highly disproportional gap between the seat assignments to the qualified and to the unqualified parties.

	2% threshold applied, three-seat cap disregarded *(see Table 4)*	**2% threshold applied, three-seat cap applied *(see Table 5)***
% vote of ARC (15th place in 2007)	2.15%	2.15%
% vote of AnWaray (16th place in 2007)	1.97%	1.97%
% difference	0.18%	0.18%
Seats assigned to ARC (15th place in 2007) using German formula	2	3
Seats assigned to AnWaray (16th place in 2007) using German formula	0	0
Difference in seats caused by 0.18% difference in percentage of the vote	**2**	**3**

However, examining Table 4, one notes that ARC was not a seat assigned by the German tiebreaker, which implies that the anomaly is not caused by the tiebreaker, but by a problem in the actual allocation formula.

(Note that the sharp, disproportional break between the qualified and the unqualified parties is least pronounced when one disregards the 2% threshold but applies the three-seat cap. Perhaps this supports my contention that there is in fact a problem with using a 2% threshold, or even a 1.82% or 1/55 threshold, to distribute the 55 seats in the 2007 elections. Again, oversimplistically, 2% multiplied by 55 requires at least 110% of the vote to fill all seats.)

C. THE GERMAN FORMULA'S DIVISOR INFLATES SEAT ALLOCATIONS

Again, allocations become concentrated in top parties when the German formula is applied in the Philippines. This is most clearly highlighted when one considers the proposed allocations to the 2007 elections' top four parties under this formula, or those that received more than 4% of the party-list vote.

If as Dr. Muga proposes, the German formula is applied disregarding the three-seat cap but implementing the 2% threshold, these four parties, representing 24% of the vote, receive a stunningly disproportional 44% of total seats. Each of these four parties receives an allocation of 173% to 193% of what their percentage of the vote implies. For example Buhay with about 8% of the vote receives a much larger roughly 15% of the total seats.

Table 7: The German formula, as applied by Dr. Muga to the 2007 elections, assigns to the top four parties (24% of the party-list vote) a disproportional 44% of seats, or an average of 181% of their share of the vote.

	Party	% of Party-List Vote	Seats Allocated	% of Total Seats	Ratio of % of Vote to % of Seats
1	Buhay	8.10%	8	14.55%	179.58%
2	Bayan Muna	6.59%	7	12.73%	193.13%
3	Cibac	5.25%	5	9.09%	173.16%
4	Gabriela	4.13%	4	7.27%	176.10%
	Total or Average	**24.07%**	**24**	**43.64%**	**181.29%**

This discrepancy is also observed when the German formula is applied to data from previous elections. Bayan Muna, for example, was declared by the Supreme Court to have received 26% of the party-list vote in the 2001 elections.[40] This would translate to *one-third* of total seats under the German formula, assuming the three-seat cap is disregarded.

Likewise, the German formula as applied in Justice Mendoza's *Veterans* dissent would have allocated 100% of total seats to the thirteen parties that qualified in the 1998 elections (75% after applying the three-seat cap). In fact, Justice Mendoza was even constrained to rationalize that: "The only reason why … the results seem to make the distribution of excess seats superfluous is that the 2 percenters are not sufficiently numerous."[41]

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[40] Ang Bagong Bayani-OFW Labor Party v. Comm'n on Elections, G.R. No. 147589, 404 SCRA 719, 742-43, Jun. 25, 2003. This decision was also penned by then Justice Panganiban, and applied the *Veterans* formula to the 2001 elections. It is distinct from the original *Ang Bagong Bayani* decision, which was promulgated in 2001.

[41] Veterans, 342 SCRA at 308 (Mendoza, J., *dissenting*).

Table 8: The German formula, as applied by Justice Mendoza to the 1998 elections, assigns to the thirteen qualified parties (37% of the party-list vote) a disproportional 100% of seats, or an average of 267% of their share of the vote.[42]

	Party	% of vote	Seats Allocated Before Cap	% of Total Seats	Ratio of % of Vote to % of Seats
1	Apec	5.50%	7	13.46%	244.76%
2	Aba	3.51%	5	9.62%	273.94%
3	Alagad	3.41%	4	7.69%	225.58%
4	VFP	3.33%	4	7.69%	231.00%
5	Promdi	2.79%	4	7.69%	275.71%
6	Ako	2.61%	4	7.69%	294.72%
7	Scfo	2.60%	4	7.69%	295.86%
8	Abanse Pinay	2.57%	4	7.69%	299.31%
9	Akbayan	2.54%	4	7.69%	302.85%
10	Butil	2.36%	3	5.77%	244.46%
11	Sanlakas	2.13%	3	5.77%	270.86%
12	Coop-Natcco	2.07%	3	5.77%	278.71%
13	Cocofed	2.04%	3	5.77%	282.81%
	TOTAL	37.46%	**52**	100.00%	266.95%
14	Senior Citizens	1.57%	0	-	-
15	Akap	1.49%	0	-	-

Again, these discrepancies are not wholly explained by the tiebreaker, although its absurdity in the Philippine context is clear as crystal in Justice Mendoza's dissent, where it broke ties by handing not one but two extra seats to each qualified party.

The explanation is simple: *The German formula's divisor inflates seat allocations when the formula is applied in the Philippines.*

Justice Mendoza used the following formula in his *Veterans* dissent in 2000:

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[42] Chart taken from Tan, *The Philippine Party-List Experiment, supra* note *, at 776.

Figure 1: Justice Mendoza's German formula inflates a party's seat allocation by comparing a party's votes to the total votes of qualified parties only, not to the total of all party-list votes cast (which would make the result smaller).

$$\frac{\text{"number of additional seats to which a 2 percenter is entitled"}}{\text{"number of seats remaining"}} = \frac{\text{"total number of votes obtained by that [2 percenter] party"}}{\text{"total number of votes garnered by all the 2 percenters"}}$$[43]

He used the term "2 percenter" to refer to qualified parties, and counted additional instead of total seats because he preassigned one seat to each qualified party. Shorn of its mathematical jargon and acronyms, Dr. Muga used an identical, if differently worded (and, again, without crediting Justice Mendoza), formula to compute what he called "the ideal number of seats that a qualified party is entitled to receive based on the principle of proportional representation:"[44]

Figure 2: Dr. Muga's German formula inflates a party's seat allocation by comparing a party's votes to the total votes of qualified parties only, not to the total of all party-list votes cast (which would make the result smaller).

$$\frac{\text{Number of seats of a qualified party}}{\text{Total number of party-list seats available}} = \frac{\text{Number of votes a qualified party obtained}}{\text{Total number of votes of all qualified parties}}$$[45]

The problem is simple: The German formula produces a seat allocation by dividing a party's number of votes by the total votes *of qualified parties only*. The latter

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[43] Veterans, 342 SCRA at 252 (Mendoza, J., *dissenting*). Justice Mendoza's exact words were: "[T]he number of additional seats to which a 2 percenter is entitled should be determined by multiplying the number of seats remaining by the total number of votes obtained by that party and dividing the product by the total number of votes (3,429,438) garnered by all the 2 percenters. The 2 percenters are each entitled to the additional seats equivalent to the integer portion of the resulting product." The formula as I present it is readily derived by taking the equality presented in the dissent's actual text, and transforming this algebraically by dividing both sides by "number of seats remaining," which was 39 in the dissent.

[44] Muga, *supra* note 34, at A14.

[45] Dr. Muga presented the divisors in the *Inquirer* as acronyms, perhaps unintentionally obscuring the discrepancy regarding these divisors that I criticized in my original article. He wrote that "the percentage of seats awarded to a qualified party based on the total number of partylist seats available (TPLS) is equal to the percentage of votes it garnered based on the total number of votes of all parties who are qualified to receive a seat (TQPV)," and used TPLS and TQPV in the article's illustration. Muga, *supra* note 34, at A14; Tan, *The Philippine Party-List Experiment, supra* note *, at 776.

divisor is always smaller than the total votes *of all parties,* qualified and unqualified alike, and *dividing by the total votes of qualified parties only always make an allocation larger.*

However, the German formula's divisor has not elicited complaints in its native Germany. This is because the parties in the German parliamentary system are much larger (including the dominant political parties) and are far less likely to be disqualified by the threshold. This means that there is little difference in dividing by the total votes of qualified parties only and in dividing by the total votes of all parties.

Contrast this with the Philippine context, where there is a large number of small parties – 92 party-list groups competed in the 2007 elections, of which only fifteen qualified under the 2% threshold – and a very large number of disqualified parties each year. Thus, unlike in Germany, there is a whale of difference caused by one's choice of divisor. Returning to Justice Mendoza's dissent, as shown above, the thirteen qualified parties represented only 37% of the vote (meaning the disqualified parties represented 63%), and dividing only by the total votes of qualified parties inflates the seat allocations to about 267% of these parties' actual percentages of the vote.

Dr. Muga took the divisor verbatim from the German formula, taking it for granted. Justice Mendoza went further and justified this divisor based on his interpretation of the Party-List Act and its perceived history. However, I originally wrote:

> Justice Mendoza defended the divisor and insisted the Court stick rigidly to the Germans' divisor:
>
> > The law provides that "those garnering more than two percent (2%) of the votes shall be entitled to additional seats in proportion to their total number of votes." The operative word is "their" which refers to none other than the total number of votes cast for the 2 percenters.
>
> While the interpretation of the grammar and legal etymology is defensible, the resulting mathematics is clearly not, given that qualifying parties in the Philippine system's votes represent only a small fraction of the total votes. Because statutory construction must avoid absurd results, an alternative reading is in order, such as taking "total number of votes" to mean the total number of votes of all parties, which is what the Court did in the majority decision.[46]

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[46] Tan, *The Philippine Party-List Experiment, supra* note *, at 777-78. Note that Justice Mendoza also claimed that the German formula bears some similarity to the formula used to distribute seats on the Commission on Appointments in proportion to party representation in the Senate. One points out that this not particularly helpful as there is neither cap nor threshold involved in that formula, and the only possible decimal figure involved is 0.5 (produced by an odd number of

It must be noted that any solution in the Philippines cannot avoid inflating a qualified party's number of seats out of proportion to the number of votes it actually receives. Vote dispersion caused by the large number of parties and small number of seats prevents many parties from receiving seats, which means that the percentage of the party-list vote collectively represented by the qualified parties is less than 100%. Nevertheless, even given this, it remains problematic when parties receive seat allocations highly disproportional to the percentage of the vote they receive, because this implies that seats are being concentrated in higher-ranking parties. Thus, beyond this inflation, it is crucial to determine how a solution actually distributes seats (instead of merely checking whether it manages to fill all party-list seats).

Perhaps sensing that the German divisor inflated the results when used in the Philippines, the *Veterans* majority declined to grow Guimaras mangoes in the Arctic and divided by the total number of all parties' votes.

D. DIFFICULT TO PROPOSE GERMAN FORMULA BASED ON LAW'S TEXT BUT DISCLAIM THE 3-SEAT CAP IN SAME TEXT AS UNCONSTITUTIONAL

It is indefensible how the German formula's resurrection in academic discussion in 2007, specifically in Dr. Muga's *Inquirer* feature, attacks the three-seat cap explicit in the Party-List Act's text, but simultaneously invokes the same text as basis to apply the German formula. This curiously insists that the constitutional commissioners and legislators intended to apply the German formula in the Philippines, but could not possibly have intended to add other features to this formula to suit their policy goals, even though the three-seat cap was discussed in the commission and later enacted into binding law. This is selective, even self-contradictory, methodology.

Note that in his original *Veterans* dissent in 2000, Justice Mendoza invoked the Party-List Act's bare text to defend the German divisor, the German tiebreaker and the rest of the German formula. He even criticized the *Veterans* majority as engaging in "a bit of judicial legislation."[47] Nevertheless, the majority invoked the same text to ground the *Veterans* formula, and the ponente even argued in 2007 that the formula's imperfections are attributable to imperfections in the law's text itself.[48]

In again proposing the German formula in 2007, however, Dr. Muga attacks part of the Party-List Act's text as unconstitutional (specifically, the three-

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Senate seats held by a party divided by the 24 seats in the Senate multiplied by the 12 seats in the Commission on Appointments), which makes applying a tiebreaker impossible. *See* Veterans, 342 SCRA at 308 (Mendoza, J., *dissenting*), *quoting* Guingona, Jr. v. Gonzales, G.R. No. 106971, 214 SCRA 789, 791-92, Oct. 20, 1992.

[47] Veterans, 342 SCRA at 311 (Mendoza, J., *dissenting*).

[48] Panganiban, *Criticisms, supra* note 3, at A15.

seat cap). Thus, his proposal curiously disclaims part of the very text which is the legal basis laid by Justice Mendoza for applying the German formula in the Philippines. Thus, where the *Veterans* majority recognized the Party-List Act's distinct features and rejected the German formula in the Philippines, the resurrected German formula does the exact opposite and proposes to reject the features enacted into binding law simply to suit the proponent's academic theories.

It must be emphasized that the party-list system presents principally legal issues. Legal basis for proposals cannot be glossed over before one becomes engrossed in mathematical minutiae.

E. THERE IS NO MATHEMATICAL EVIDENCE THAT THE THREE-SEAT CAP MAKES IT IMPOSSIBLE TO FILL ALL PARTY-LIST SEATS

It is actually curious to tar and feather the three-seat cap as the reason why party-list seats remain unfilled after each election because this cap is irrelevant to most parties in any given election. Because votes are dispersed over so many parties, only the handful of exceptionally strong parties leading each election expect to be allocated more than three seats.

This is evidenced in Dr. Muga's own computations in 2007, even though he presents these same computations to condemn the three-seat cap. Dr. Muga presents two cases, and observe that the anomaly he bewails in the first case (apply neither 2% threshold nor three-seat cap) amounts to only three seats, and affects only two parties:

Table 9: Dr. Muga argues that the three-seat cap prevents party-list seats from being filled up, but the cap would only affect *three* seats in the first case he presents (disregarding both the 2% threshold and the three-seat cap).

	Party	"Ideal Number" of Seats	First Round Seats	Rank in Tie-breaker	Tie-breaker Seats	Actual No. of Seats
1	Buhay	4.45412859	4	28	1	5
2	Bayan Muna	3.62252367	3	16	1	4
3	Cibac	2.88708642	2	2	1	3

Further, only *one* seat affected by the three-seat cap is allocated by the actual German formula; the other two are allocated by the overworked secondary tiebreaker, which as discussed dubiously allocates the lion's share in this case. Indeed, Dr. Muga's own computations show that the two top parties would receive the 16th and 28th seat allocated by the tiebreaker, quite far down the line after a curious number of ties. In any case, in this first case, the three-seat cap clearly cannot be the cause of the party-list system's failure to allocate seats if it only affects three (or one) seats.

In Dr. Muga's second case (apply 2% threshold but disregard the three-seat cap), the seat cap would affect only four parties, but would affect eleven seats:

Table 10: Dr. Muga argues that the three-seat cap prevents party-list seats from being filled up, but the cap only affects four parties and eleven seats in the second case he presents (applying the 2% threshold but disregarding the three-seat cap), and mainly because the chosen divisor inflates seat allocations.

	Party	% of Party-List Vote	Seats Allocated	% of Total Seats	Ratio of % of Vote to % of Seats
1	Buhay	8.10%	8	14.55%	179.58%
2	Bayan Muna	6.59%	7	12.73%	193.13%
3	Cibac	5.25%	5	9.09%	173.16%
4	Gabriela	4.13%	4	7.27%	176.10%
	Total or Average	**24.07%**	**24**	**43.64%**	**181.29%**

While eleven is a more substantial figure (or one-fifth of total party-list seats in the 2007 elections), many of these are allocated pursuant to the divisor that inflates seat allocations, as previously discussed in Part IV.C. Should one reject the result that a result of 8.1% should result in eight seats and that a result of 6.6% should result in seven, the alleged anomaly caused by the three-seat cap becomes much less significant in this second case. (And should one reject the criticism regarding the divisor, note that the historical number of unfilled seats in past elections has been higher than eleven anyway.)

Thus, to summarize, the three-seat cap does not appear to create as substantial a number of unfilled seats as Dr. Muga claims, based on his own computations in both cases.

Parenthetically, the three-seat cap might become relevant to more parties in the present system if the number of seats in Congress increases to the point that even low-ranked parties would expect to receive more than three seats. This is in the very far future, however, and is addressed by specifying the cap as a percentage (as discussed in the constitutional commission) of the party-list seats instead of as an absolute figure, or by simply amending the law to increase the cap.

F. THE CHECK DR. MUGA USES TO TEST SEAT ALLOCATIONS IS ACTUALLY HIS OWN PROPOSAL

In attempting to resurrect the German formula in 2007, Dr. Muga claims that the three-seat cap is invalid because it prevents party-list results from being proportional, and presents his computed "ideal numbers" to support this claim. This methodology is curious in that he actually computes his "ideal numbers" using his own proposed formula, which is why he rejects figures computed using any

other method. More curiously, this leads him to reject the three-seat cap which is currently part of the Party-List Act and binding law, as though his academic proposal is superior to Congress.

The preceding section illustrates how Dr. Muga's own two sets of computations do not reflect that the three-seat cap causes a large number of party-list seats to go unfilled. Further, nowhere in his discussions does he assert that the three-seat cap is unconstitutional (and again, a seat cap was explicitly discussed in the constitutional commission). His only argument is that the three-seat cap prevented proportional results, an argument that he never actually explains.

Instead, Dr. Muga presents what he calls "ideal numbers" for the party-list system, described as follows:

> This is the ideal number of seats that a qualified party is entitled to receive based on the principle of proportional representation. The actual number of seats that a qualified party receives is the number of seats allocated by the existing seat allocation formula. Hence,
>
> $$\text{Ideal no. of seats of qualified party} = \frac{\text{[Total number of party-list seats available]}}{\text{[Total number of votes of all parties who are qualified to receive a seat]}} \times \text{No. of votes [the qualified party] obtained}$$[49]

Dr. Muga's "ideal numbers" may be restated as an "ideal proportion" by dividing both sides of his equation by "No. of votes [the qualified party] obtained." This produces the following proportion:

Figure 3: Dr. Muga's "ideal numbers" expressed as a proportion

$$\frac{\text{Ideal no. of seats of qualified party}}{\text{No. of votes [the qualified party] obtained}} = \frac{\text{[Total number of party-list seats available]}}{\text{[Total number of votes of all parties who are qualified to receive a seat]}}$$

The problem with this discussion becomes blatantly obvious when one examines Dr. Muga's proposed formula, which is actually:

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[49] In the actual excerpt, Dr. Muga used the acronyms TPLS ("the percentage of seats awarded to a qualified party based on the total number of partylist seats available") and TQPV ("total number of votes of all parties who are qualified to receive a seat"), which were expanded in this quote for clarity. Muga, *supra* note 34, at A14.

Figure 4: Dr. Muga's proposed formula is *identical* to his "ideal numbers"

$$\frac{\text{No. of seats of qualified party}}{\text{No. of votes obtained by the qualified party}} = \frac{\text{Total no. of party-list seats}}{\text{Total number of votes of all qualified parties}}$$

This is derived by algebraic transposition of his published equation, quoted verbatim as follows:

> Proportional representation must be based on the total number of votes of all the parties that are qualified to receive a seat and on the total number of seats available for the party-list because the principle dictates that the
>
> $$\frac{\text{No. of seats of qualified party}}{\text{Total no. of party-list seats}} = \frac{\text{No. of votes obtained by the qualified party}}{\text{Total number of votes of all qualified parties}}$$[50]

To belabor the obvious, if one aligns Dr. Muga's "ideal numbers" and his proposed formula into the same format and then lays them side by side, one observes the following:

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[50] Muga, *supra* note 34, at A14. The transformation is done by multiplying both sides by "Total no. of party list seats" (thus transferring the left denominator to the right numerator) and dividing both sides by "No. of votes obtained by the qualified party" (thus transferring the right numerator to the left denominator).

Figure 5: Item by item proof that Dr. Muga's "ideal numbers" are identical to his own proposed formula

	Dr. Muga's "ideal numbers"	**Dr. Muga's Proposed formula**
Left numerator	*Ideal* no. of seats of qualified party	No. of seats of qualified party
Left denominator	No. of votes [the qualified party] obtained	No. of votes obtained by the qualified party
Right numerator	[Total number of party-list seats available]	Total no. of party-list seats
Right denominator	[Total number of votes of all parties who are qualified to receive a seat]	Total number of votes of all qualified parties

Clearly, Dr. Muga's "ideal numbers" and his proposed formula are identical, except that the left numerator of his "ideal numbers" contains the word "ideal." In practical terms, his "ideal numbers" compute for numbers of seats as decimal numbers while his proposed formula computes for seats as whole numbers, since there can be no fractions of seats in real life.[51] Thus, with some humility, Dr. Muga concludes that his "index of proportionality"[52] – an index derived from his

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[51] *Id.* Thus, Dr. Muga proposed the first step of the process as follows: "1. In the first round, the number of seats that is allocated to the qualified parties is equal to the *whole part of the ideal number* of seats based on the principle of proportional representation." *Id.* (emphasis added).

[52] *Id.* Dr. Muga proposed that "full proportionality is achieved" only when his "index of proportionality" is 100% for a given formula. However, his index uses "seat allocation errors" which are defined by his "ideal numbers," and the index is constructed in such a way that his proposed formula obviously returns the best index given that it is identical to his "ideal numbers."

In fact, to speak simply, he defines "seat allocation errors" as acceptable if the difference from his "ideal numbers" is less than one seat for a given party. He allows for a difference because, again, there is a small difference caused by rounding error as decimal numbers are dropped when his proposed formula is applied. Again, the only difference between the figures used in his "ideal numbers" and his proposed formula is that the latter drops decimal figures. This rounding error explains why the "index of proportionality" for his proposed formula is slightly less than 100%, even if the formula is identical to the "ideal numbers" used to determine the "index of proportionality."

To quote Dr. Muga: "The index [of proportionality] can be computed using the formula:

$$\text{Index [of proportionality]} = \frac{\text{Sum of the positive value of the seat allocation errors}}{2 \times \text{total number of party-list seats}}$$

where the computed value is expressed in percentage and it ranges from 0% to 100%.

"The index is 100% if full proportionality is achieved. The index is 0% if a party with no votes is awarded all the available seats. The index of proportionality of our proposed formula with 2% formal vote threshold is 96.132874%."

own "ideal numbers" – of his proposed formula is only 96.132874%, the minimal "error" due to rounding error from dropping decimals in his proposed formula.

Thus, underneath the layers of mathematical jargon and formulas presented in slightly different formats, what Dr. Muga is actually saying is that his formula is the only possible correct one, superior even to Congress.

We know, however, that there is no single natural and immutable formula for proportionality in the party-list system's context that can be wrung from pure mathematics.[53] For example, Part IV.C has already discussed the impact of choosing a divisor (which corresponds to the right denominator in the preceding table), something highlighted in how the *Veterans* majority and Justice Mendoza's dissent used different divisors in the original *Veterans* discussion, but a choice presumed and glossed over by Dr. Muga. While the German formula is perfectly logical and has worked splendidly in Germany, it is not the only possible allocation nor is it applicable in the Philippines, for reasons discussed in *Veterans* and for further reasons that will be discussed later by this author when he describes his own proposed formula.

In any case, it must be emphasized that Dr. Muga presented no evidence, legal nor mathematical, to support his weighty claim that the three-seat cap is invalid despite its being binding law, except to self-reference his own proposed formula as "ideal numbers." Simply, he assails the three-seat cap because the German formula cannot fill up the party-list seats whenever the cap is applied, as Justice Mendoza illustrated in his *Veterans* dissent.

To quote Dr. Muga further: "The difference between the ideal number and the actual number of seats of a qualified party is called the seat allocation error of the existing allocation formula on the qualified party. It is determined by

$$\text{Seat allocation error} = \text{Ideal no. of seats} - \text{Actual no. of seats}$$

"If the actual number differs from the ideal number by less than one, then the allocation formula affirms the principle of proportional representation. Otherwise, if the difference is one or more then it violates the principle."

Dr. Muga also further defines a term "degree of negation" which is simply the (absolute value of) his term seat allocation error with decimal figures dropped. This additional term was used only for additional illustration and is not necessary to this critique of his "index of proportionality."

[53] Note that if the ideal or correct seat allocation is not known, then no mathematical proof or equality can be presented. Dr. Muga presents an equality only by presenting the same side twice.

G. THERE IS NO CONCEPTUAL BAR TO HAVING A SEAT CAP BECAUSE IT DOES NOT NECESSARILY DISTORT PROPORTIONALITY

The seat cap was envisioned at the constitutional commission to prevent parties from dominating the party-list system, given the perfectly valid goal of opening the field or what Dean Pangalangan terms the "anti-hegemony rationale."[54] There is simply no conceptual bar to integrating a seat cap into a party-list framework because it does not necessarily distort proportional results. Rather, one must interpret proportionality in the context of the party-list system's policy goals and not in a hermetically sealed dimension of pure mathematics.

Any perception that a seat cap leaves party-list seats unfilled stems from an implicit presumption that when a formula allocates more than three seats to any party, those seats must be left empty. The corollary presumption is that reallocating these excess seats will distort proportionality because parties receiving these excess seats would then have seat allocations too high in relation to the strong parties whose seat allocations were capped at three. For example, a party that receives 20% of the party-list vote might be capped at three seats and thus possibly receive the same allocation as another party with, say, 5% to which the excess seats are reallocated.

This is merely a presumption, however, and is explicit in neither the 1987 Constitution nor the Party-List Act. A seat cap need not distort proportionality if one considers that the law only considers a party's percentage of the vote up to what is necessary to reach the cap. In other words, if a party is allocated three seats when it reaches 6% of the vote (the figure for the first party under the *Veterans* formula), the party-list system should treat parties that receive 10%, 20% and 30% as if they received only 6%. Parties that exceed the cap might be deemed ready to challenge seats under the main district elections instead of entrenching themselves as a cartel on party-list seats.[55]

I frame this logic in terms of an exam where a student receives bonus points and thus score beyond the maximum 100%.[56] Consider a hypothetical exam

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[54] *See supra* text accompanying note 39.

[55] In addition to the constitutional commission deliberations, this thinking finds support in party-list leaders' thinking. For example, Bayan Muna representative Satur Ocampo "proposed that a party that captures, say, 20% of the party-list vote should be barred from subsequent elections because it would clearly no longer be marginalized." Tan, *The Philippine Party-List Experiment, supra* note *, at 763. Comment made during a House Committee on Suffrage hearing on May 14, 2002. However, the precise context was a Bayan Muna proposal to increase or altogether remove the seat cap as early as after the second party-list elections in 2001.

[56] This analogy was presented in Oscar Franklin Tan, *Muga ignores law,* PHIL. DAILY INQUIRER, Jul. 1, 2007, at A14. It was originally included in Tan, *The Philippine Party-List Experiment, supra* note *, but removed by the student chair at the time for reasons of space, although the author considered it a vital portion of the discussion even then.

where student Panganiban receives 110%, student Mendoza receives 100%, student Pangalangan receives 90%, and student Bernas receives 75%.

Figure 6: Hypothetical exam scores when one considers up to 100% and when one considers up to 110%

	Raw Score	Consider up to 100% only	Consider up to 110%
Panganiban	110%	100%	100%
Mendoza	100%	100%	91%
Pangalangan	90%	90%	82%
Bernas	75%	75%	68%

With this set of scores, the teacher has two possible methods of computing final grades available. First, he might cap the grades at 100% and ignore points in excess of 100%, the normal practice. Thus, students Panganiban and Mendoza receive the same final grade even though Panganiban actually had a higher score. This is not a strictly proportional result but no one would consider it unfair, as it is understood that the cap or maximum score is 100%.

The second possible method is to consider the highest scorer as receiving 100% and computing each student's grade in strict proportion to this high score (done by dividing all scores by the high score of 110%). Although the results are strictly proportional, they appear peculiar if not unfair because all other scores are driven down, and poor student Mendoza even receives a failing final grade despite a raw score of 75%.

The first method is clearly more logical in the party-list system's context, and a party that has already received the maximum seat allocation allowed by law has no cause to complain if the excess seats are reallocated to other parties. Nor is it particularly problematic that the final results (and mainly the results for the parties with the highest numbers of votes) are not in strict proportion because laws may define their own mathematics in certain contexts, so long as such remain fair and coherent. In the party-list system's case, the exam score analogy illustrates how it is readily possible to make allowances in terms of proportionality for the seat cap explicitly mandated by the law. The break in proportionality caused by the law's mandating a cap is observed only above the cap, and results remain proportional below the cap, where the majority of results are currently found.

The question of whether to consider results up to the cap only is not explicitly discussed in *Veterans* nor in any other party-list decision. The logic of doing so, however, finds support in Justice Mendoza's dissent, which has the German formula's tiebreaker continuously allocating seats in every way possible, to the point that all qualified parties received the maximum three seats. This was done even though the cost of filling as many seats as possible under the German formula and the Party-List Act's restrictions meant sacrificing any pretense of

proportionality (since every qualified party received three seats regardless of its actual percentage).

One might argue that the *Veterans* formula mimics the logic in the second case, because it uses the votes of the first party (or the party with the most votes) to determine all other parties' seat allocations, even if the first party received more than 6% (again, the figure used by *Veterans'* first party formula to allocate three seats to the first party). I believe this supports my contention because this feature of *Veterans* is one of its most heavily and constantly criticized.[57] Like the second case in the hypothetical exam scores, *Veterans* does in fact use a high first party percentage of votes to drive down all other parties' results, and a second party will always receive two seats even if it received just 0.01% less of the vote than the first party.

H. THERE IS NO LEGAL BASIS IN STATUTORY CONSTRUCTION TO DISREGARD THE SEAT CAP BECAUSE IT AFFECTS PROPORTIONALITY

As a final point, note that the concept of proportionality does not appear in the Constitution's text.[58] With both proportionality and the three-seat cap explicit in the Party-List Act, one must apply the canons of construction, which counsel to attempt to harmonize the two. They are not mutually exclusive, unless one insists on a very strict definition of proportionality to the exclusion of an interpretation that considers the cap.

There is thus no legal basis to, as Dr. Muga insists, disregard the three-seat cap because it admittedly causes a minor break in proportionality (only in the less relevant range beyond the cap). This would only be defensible if it can be shown that the three-seat cap prevents the 20% of seats reserved for the party-list from being filled up, which raises a constitutional objection, but this is not the case. Note, again, that a seat cap was explicitly discussed in the constitutional commission.

Again, it must be emphasized that the party-list system presents principally legal issues. Legal basis for proposals cannot be glossed over before one becomes engrossed in mathematical minutiae.

V. REAL PROBLEM: VOTE DISPERSION IN THE PHILIPPINE CONTEXT

Veterans is a landmark decision in part because it emphasized how "[i]t is now obvious that the Philippine style party-list system is a unique paradigm which

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[57] *E.g.,* Tan, *Mathematical absurdity, supra* note 17, at A14. *Cited in* Pangalangan, *supra* note 18, at A14; *quoted in* Fernandez & Pugal, *supra* note 18, at A1.

[58] *Compare* CONST. art. VI, § 5(1) *to* Rep. Act. No. 7941, §§ 2, 11 (1995).

demands an equally unique formula."[59] No such formula has been presented, however, as most proposals revolve around the German formula, and even the *Veterans* formula is based on the German formula's central idea.

The key is to squarely address what actually makes the Philippine context a "unique paradigm," and this is the vote dispersion that results from having a large number of parties and a relatively small number of seats.

A. ADDRESSING THE QUOTA CONCEPT INHERENT IN GERMAN SYSTEM

Policymakers must understand that the German formula revolves around what I call a quota concept, one completely unsuited for the Philippine context because the German formula was designed for a context that is the complete opposite of the Philippine system's. The German quota concept works in the German context involving a small number of parties and a relatively large number of seats. This is highlighted by the fact that the German and similar formulas govern the parliamentary elections where the largest political parties participate. The Philippine formula, on the other hand, governs a special system for minority parties or those of the marginalized, depending on which conception one subscribes to, and governs only 20% of the House of Representatives.

(Dr. Muga ignores this key point in his *Inquirer* article, and insists on making comparisons to "party-list" systems that are actually entire parliaments and not a mere segment set aside for certain parties such as the Philippine party-list sytem. In fact, his explicit example referred to the German Bundestag, which is mandated by law to have at least 598 seats but spread over only a handful of major parties.)

In the 2007 elections, the German formula's quota was 1/55 (or approximately 1.82%).[60] In theory, the formula would check to see how many 1/55s a party received and assign one seat for each 1/55. Each party's remaining percentages after removing all the 1/55s formed are then used to rank the parties

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[59] Veterans Federation Party v. Comm'n on Elections, G.R. No. 136781, 342 SCRA 244, 276, Oct. 6, 2000.

[60] This is evident from both Justice Mendoza and Dr. Muga's articulations, as expressed in figures 1 and 2. Dr. Muga articulated the central equation as:

$$\frac{\text{Number of seats of a qualified party}}{\text{Total number of party-list seats available}} \quad \frac{\text{Number of votes a qualified party obtained}}{\text{Total number of votes of all qualified parties}}$$[60]

Since the total number of party-list seats in the 2007 elections was 52, under the German formula, a party must obtain 1/52 of the party-list vote in order to qualify for one seat (and hurdle the 2% threshold, of course). Dr. Muga's article refers to the 2% threshold as the "formal threshold" and the 1/52 quota as the "informal threshold." Muga, *supra* note 34, at A14, *citing* PIPPA NORRIS, ELECTORAL ENGINEERING: VOTING RULES AND POLITICAL BEHAVIOR (2004).

for the tiebreaker function, with a higher remainder giving each party a higher chance of getting a seat via the tiebreaker. This is illustrated as follows:

Table 11: The German formula centers around a "quota concept" of 1/55 (or about 1.82%). Each party's number of votes is broken up into sets of 1/55, with the remainder left for the tiebreaker function. However, in the Philippine context, the 1/55 quota is quite high and not enough sets of 1/55 are formed.

Party	% of Vote	First 1/55 (or 1.82%)	Second 1/55 (or 1.82%)	Third 1/55 (or 1.82%)	Fourth 1/55 (or 1.82%)	Remainder for Tie-breaker
Buhay	8.10%	1.82%	1.82%	1.82%	1.82%	0.83%
Bayan Muna	6.59%	1.82%	1.82%	1.82%	-	1.13%
Cibac	5.25%	1.82%	1.82%	-	-	1.61%
Gabriela	4.13%	1.82%	1.82%	-	-	0.49%
Apec	3.50%	1.82%	-	-	-	1.68%
A Teacher	3.26%	1.82%	-	-	-	1.44%
Akbayan	3.07%	1.82%	-	-	-	1.25%
Butil	2.94%	1.82%	-	-	-	1.12%
Alagad	2.94%	1.82%	-	-	-	1.12%
Batas	2.63%	1.82%	-	-	-	0.81%
Coop-Natco	2.49%	1.82%	-	-	-	0.67%
Anakpawis	2.48%	1.82%	-	-	-	0.66%
Abono	2.43%	1.82%	-	-	-	0.61%
Agap	2.33%	1.82%	-	-	-	0.51%
ARC	2.15%	1.82%	-	-	-	0.34%
An Waray	1.97%	1.82%	-	-	-	0.16%
FPJPM	1.89%	1.82%	-	-	-	0.07%
Amin	1.84%	1.82%	-	-	-	0.02%
ABS	1.56%	-	-	-	-	1.56%

The problem with the quota concept is blatantly obvious: Only 25 sets of 1/55 can be formed, leaving 30 seats for the tiebreaker to fill. When the 2% threshold is applied, the number of sets of 1/55 drops to 22 because An Waray, FPJPM and Amin are struck off the list. This result is not reflected in Philippine discussions of the German formula, however, because it is hidden by the improper divisor, which inflates each qualified party's percentage of the vote and artificially creates more sets of 1/55.

In simple terms, without even going to the 2% threshold, a 1/55 quota is too high for most party-list groups to hurdle. These groups' percentages, however,

do not become part of any set of 1/55, and this is what leaves seats empty. This is thus how vote dispersion in the Philippine context makes it impossible to apply the German formula, and I assert that any credible formula must address this vote dispersion. If one compensates without directly addressing this vote dispersion, such as by changing the divisor as present attempts to apply the German formula do, one creates visible distortion such as how a mere 0.18% difference in votes can cause a huge difference in seat assignments (see table 6).

Note, again, that unfilled quotas are hardly a problem in the German context, where 1/598 is a mere 0.1672%. In fact, the German system has a 5% threshold for parties to qualify, and simply hurdling this threshold means that a party already has at least 29 seats assigned to it. Finally the parties governed are the country's strongest, so even a 5% threshold does not disqualify a large number of parties, meaning there is little difference between the two divisors when applied in Germany. Finally, recall that this is why the divisor I noted was improper in the Philippines does not prevent the German formula from working in Germany.

B. BRIEF REVIEW OF AUTHOR'S FORMULA WITH NO THRESHOLD

The key is thus to craft a formula that addresses the vote dispersion so central to the Philippine context. I proposed a solution that does so in my original article and in the *Inquirer,* and restate this here. (Note, however, that my solution is founded on the position that the 2% threshold is unconstitutional because it makes filling the 20% of seats assigned to the party-list system a mathematical impossibility.)

The German formula's quota concept is inherently logical, as it simply expresses a rule of proportionality that for every *x* votes, a party receives a seat. The problem, again, lies in this logic's application to the completely different Philippine context. The quota 1/(number of seats) only functions properly when there are more seats than parties, such that each party fills quotas and whatever percentages left over are smoothed by the tiebreaker function. When there are many more parties, on the other hand, sheer dispersion keeps many parties from filling any quotas, leaving the votes they receive to be handled by the tiebreaker function, which is then overworked to the point of absurdity.

If the quota is too high in context, then one ready solution is to lower the quota, to compensate for how sheer vote dispersion lowers parties' numbers of votes. The key is to lower the quota with some logical relation to dispersion and not lower it to the point that the formula then allocates too many seats instead of too little.

My logic is simply that in the party-list system, each party's number of votes is made to relate to all others, such that a formula simply constructs seat assignment brackets where *x* votes equals one seat, *2x* votes equals two seats, and so on until the three-seat cap is reached. This articulation integrates the language of

proportionality (the familiar *x, 2x, 3x* and so on from algebra classes), but the key is to set *x* properly.

My approach was to simply:

1) divide each party's number of votes by a certain *x;*

2) drop decimals (which can be used to apply the tiebreaker function if necessary); and

3) count any result higher than three as three (due to the three-seat cap).

The best *x* arises when one divides each party's number of votes by this *x,* then drops all decimals and reduces all numbers higher than three to three, the sum of the resulting numbers is 55 or as close as possible.

(For illustrative purposes in my original article, I articulated the solution in terms of dividing each party's number of votes by one party's number of votes. This facilitated an explanation that each party's number of votes was being expressed in relation to one arbitrarily chosen party. However, the idea is simple and not actually tied to any party's number of votes. A further streamlined solution would simply create a rule that uses the largest possible integer that results in a sum of 55 seats as the divisor.)

In my 2007 *Inquirer* article, to facilitate illustration, I chose to divide each party's number of votes by 141,773 votes, which was the number received by Agham, the party ranked 32nd with 1.03% of the vote. When decimals were dropped and numbers higher than three were reduced to three, the resulting sum was 53, and I applied the tiebreaker function to assign the remaining two seats. This yielded the following results:

Table 12: This author's formula, by dividing each party's number of votes by 141,773 (Agham's number of votes), assigns 53 seats, and assigns the remaining two seats through the tiebreaker function; 141,773 (or about 1.03%) arises as an implicit threshold.

Party	Party's Votes	% of Vote	Author Formula Ratio	Author Formula Seat Assign	Tiebreaker Seat Assign
BUHAY	1,111,035	8.10%	7.84	3 (7)	0
BAYAN MUNA	903,600	6.59%	6.37	3 (6)	0
CIBAC	720,153	5.25%	5.08	3 (5)	0

GABRIELA	566,571	4.13%	3.99[61]	3	0
APEC	479,608	3.50%	3.38	3	0
A TEACHER	446,929	3.26%	3.15	3	0
AKBAYAN	420,910	3.07%	2.97	2	1
BUTIL	403,209	2.94%	2.84	2	0
ALAGAD	402,918	2.94%	2.84	2	0
BATAS	360,277	2.63%	2.54	2	0
COOP-NATCO	341,971	2.49%	2.41	2	0
ANAKPAWIS	340,392	2.48%	2.40	2	0
ABONO	333,603	2.43%	2.35	2	0
AGAP	319,311	2.33%	2.25	2	0
ARC	295,499	2.15%	2.08	2	0
AN WARAY	270,791	1.97%	1.91	1	1
FPJPM	258,773	1.89%	1.83	1	0
AMIN	252,250	1.84%	1.78	1	0
ABS	213,927	1.56%	1.51	1	0
KABATAAN	211,074	1.54%	1.49	1	0
ABA-AKO	205,344	1.50%	1.45	1	0
SENIOR CITIZENS	198,948	1.45%	1.40	1	0
KAKUSA	190,368	1.39%	1.34	1	0
VFP	183,779	1.34%	1.30	1	0
UNI-MAD	182,354	1.33%	1.29	1	0
ANAD	169,525	1.24%	1.20	1	0
BANAT	167,222	1.22%	1.18	1	0
ABAKADA	161,141	1.17%	1.14	1	0
BANTAY	160,568	1.17%	1.13	1	0
1-UTAK	154,589	1.13%	1.09	1	0
COCOFED	145,176	1.06%	1.02	1	0
AGHAM	141,773	1.03%	1.00	1	0

[61] Dr. Muga correctly criticized the author's *Inquirer* article for presenting this figure as 4.00, rounded to two decimal places, where the actual quotient rounded to four decimal places was 3.9963. The author had noted this but, as Gabriela clearly reached the three-seat cap under the author's proposed formula, overlooked it when his table was later formatted to two decimal places to avoid distracting readers with unnecessary decimal places. Muga, *supra* note 34, at A14.

YACAP	130,844	0.95%	0.92	0	-[62]
TUCP	130,834	0.95%	0.92	0	-

To illustrate these steps, my formula simply assigns seats based on brackets of 141,773 (or about 1.03%), as follows:

Table 13: The author's formula actually creates brackets of 141,773 votes, and applying these brackets assigns 53 seats, with the last two assigned using the tiebreaker function.

Number of Votes	Seat Assignment
141,772 or less	0
141,773 to 283,545	1
283,546[63] to 425,318	2
425,319[64] or more	3

I stated that one can actually select an arbitrary number, and not necessarily any party's particular number of votes. For example, one can check on one's own that dividing each party's number of votes by 135,000 instead of 141,773 and following this author's approach actually assigns 55 seats without any need for a tiebreaker:

Table 14: Dividing each party's number of votes by 135,000 and following this author's approach actually creates brackets that assign all 55 seats without any need for the tiebreaker.

Number of Votes	Seat Assignment
134,999 or less	0
135,000 to 269,999	1
270,000 to 404,999	2
405,000 or more	3

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[62] Dr. Muga criticized that my *Inquirer* illustration was in error because I had the tiebreaker function assign the last seat to An Waray, even though Yacap had the higher decimal figure. This is a fair point in that one may set the rule to consider the chosen divisor (in this case 141,773) as a threshold below which parties cannot be assigned seats, or to use this figure as a guide but not as a threshold. I chose to use the former rule without explicitly stating so. Dr. Muga envisions the latter rule, and I believe either is valid and that the choice is irrelevant to my approach's central logic. Muga, *supra* note 34, at A14. Again, when I wrote my original article, I merely used the tiebreaker for illustrative purposes, following from my choice to present an iterative process that used the number of votes received by a chosen party as its illustrative tool.

Should one simply choose the largest divisor that produces 55 seats, as I noted in this article, the tiebreaker will not be necessary. A rigid mathematical comparison of how the original and this article articulate the solution is beyond the scope of this piece, however.

[63] 2 x 141,773.

[64] 3 x 141,773.

Again, simplistically speaking, I argue that the 2% threshold must be deemed unconstitutional for mathematical impossibility because 55 seats multiplied by 2% is 110%. My approach does away with a fixed threshold, and, as I described in the *Inquirer,* "creates an implicit threshold based on how parties' votes are distributed."[65] This gives my approach flexibility given various possible vote distributions.

(In my original article, I further noted that my approach is flexible enough to incorporate certain other policies that Congress may wish to implement. For example, Congress may wish to set a low threshold such as 50,000 votes, in which case one simply disallows dividing each party's number of votes by any divisor lower than 50,000. Congress may also wish to guarantee at least one seat to one or more particular sectors that have not received representation even under the party-list system, in which case one may assign a seat to the highest ranking party of a sector if the formula does not assign it a seat, and subtract the number of assignments made in this way from the total number of seats sought to be assigned under the formula.)[66]

C. COMPARING DISTRIBUTION OF AUTHOR'S AND GERMAN FORMULAS

The way a solution actually distributes seats is crucial, in addition to being able to fill up all the seats. Because the party-list system aims to broaden access to the House of Representatives, a solution able to fill up all seats by concentrating allocations in the highest ranked parties does not fully advance the system's policy goals. However, this is precisely the problem with the German formula, which is tied to the 1/55 (or about 1.82%) quota concept so problematic in the Philippine context.

I believe that my proposed solution's results are more evenly distributed compared to the German formula's various applications because:

1) my proposed approach does not concentrate seat allocations in the highest-ranking parties, which is not true of the German formula; and

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[65] Tan, *Mathematical absurdity, supra* note 17, at A14. Dr. Muga criticized this statement, arguing that, "In his proposed formula, Tan believes that the 2% is an informal vote threshold. Hence, he is right in rejecting its implementation because the real informal threshold in the 2007 elections is 1/55 or 1.818182%." Muga, *supra* note 34, at A14. I believe this grossly misrepresents what I wrote, as I clearly was not referring to the formal and informal thresholds found in various parliamentary electoral systems around the world. Indeed, I argued that 1/55 was itself too high a threshold given vote dispersion in the Philippine context. Again, I feel that Dr. Muga tries a tad too hard to frame everything in terms of the extensively documented German and other parliamentary systems whose contexts are completely different from (as *Veterans* emphasized) that of the Philippines, everything from other authors' analyses of the party-list system to the three-seat cap found in the Party-List Act but not in the German parliamentary system.

[66] Tan, *The Philippine Party-List Experiment, supra* note *, at 802-07.

2) my proposed approach returns a seat allocation that does not have sharp breaks between parties receiving different allocations.

Regarding the first observation, when one adds up the percentages of votes received by qualifying parties under various approaches, one finds:

Approach	% of Votes of Qualifying Parties	Number of Qualifying Parties
This author	78.09%	32
German formula (no 2% threshold or seat cap) (see table 3)	84.36%	39
German formula (with 2% threshold, no seat cap) (see table 4)	54.27%	15
German formula (with 2% threshold and seat cap) (see table 5)	54.27%	15

Comparing my proposal and the German formula's results when the latter is applied with the 2% threshold, it is clear that the former allocates seats to a much larger number of parties representing a much larger total number of votes. The latter, on the other hand, clearly concentrates seat allocations in a lesser number of high ranking parties. Finally, one may note that the German formula applied with neither threshold nor seat cap appears to disperse the seat allocations even further, but this is actually due to a problem that I note below.

Regarding the second observation, which is related, observe that my proposal's results show no sharp gap between the allocations of Akbayan (3.07%) with three seats and of Butil (2.94%) with two, nor between those of An Waray (1.97%) with two seats and FPJPM (1.89%) with one.

Contrast this with the German formula's results. If the 2% threshold is applied (see tables 4 and 5), there is a sharp gap between the allocations of ARC (2.15%) with two or three seats and An Waray (1.97%) with no seats (see table 6).

If both the 2% threshold and the three-seat cap are disregarded, the German formula does not seem to create a sharp break between the allocations of Batas (2.63%) with two seats and Coop-Natco (2.49%) with one (see table 3). However, a different kind of sharp break takes place if one observes the intermediate steps involving the actual formula and then the tiebreaker. The formula assigns seats to the eighteen parties with a percentage of votes of at least 1.82% (or 1/55), and then the tiebreaker assigns one seat each to the 19th (ABS) to the 39th (Ave) parties. Thus, the parties with one seat range from Coop-Natco with

2.49% of the vote to Ave with 0.79%. This is a curious result that mimics earlier crude proposals to simply pass down unassigned seats to the highest ranked unqualified parties.

Note, finally, that this application of the German formula gives two or more seats only to the ten parties with 2.63% of the vote or higher, again concentrating seat assignments in the highest ranked parties, in contrast with how my approach spreads out the high seat allocations. This is inherent in the German formula when applied to the Philippine context, given how high the 1/55 or approximately 1.82% "quota" is relative to a party's usual percentage of the vote, given vote dispersion.

Any concentration of seat assignments in the highest ranked parties and any sharp breaks in seat allocation are evident when the various approaches' results placed side by side are:

#	Party	% of vote	Author's formula	German formula (no 2% threshold or three-seat cap)	German formula (with 2% threshold, no three-seat cap)	German formula (2% threshold and three-seat cap)
1	Buhay	8.10%	3	5	8	3
2	Bayan Muna	6.59%	3	4	6	3
3	Cibac	5.25%	3	3	5	3
4	Gabriela	4.13%	3	2	4	3
5	Apec	3.50%	3	2	3	3
6	A Teacher	3.26%	3	2	3	3
7	Akbayan	3.07%	3	2	3	3
8	Butil	2.94%	2	2	2	3
9	Alagad	2.94%	2	2	2	3
10	Batas	2.63%	2	2	2	3
11	Coop-Natcco	2.49%	2	1	2	3
12	Anakpawis	2.48%	2	1	2	3
13	Abono	2.43%	2	1	2	3
14	Agap	2.33%	2	1	2	3
15	ARC	2.15%	2	1	2	3
16	AnWaray	1.97%	2	1	-	-
17	FPJJPM	1.89%	1	1	-	-
18	Amin	1.84%	1	1	-	-
19	ABS	1.56%	1	1	-	--
20	Kabataan	1.54%	1	1	-	-
21	Aba-Ako	1.50%	1	1	-	-
22	Senior Citizens	1.45%	1	1	-	-
23	Kakusa	1.39%	1	1	-	-
24	VFP	1.34%	1	1	-	-
25	Uni-Mad	1.33%	1	1	-	-

26	Anad	1.24%	1	1	-	-
27	Banat	1.22%	1	1	-	-
28	Abakada	1.17%	1	1	-	-
29	Bantay	1.17%	1	1	-	-
30	1-Utak	1.13%	1	1	-	-
31	Cocofed	1.06%	1	1	-	-
32	Agham	1.03%	1	1	-	-
33	Yacap	0.95%	-	1	-	-
34	TUCP	0.95%	-	1	-	-
35	Anak	0.95%	-	1	-	-
36	Abanse! Pinay	0.92%	-	1	-	-
37	Ang Kasangga	0.86%	-	1	-	-
38	AT	0.84%	-	1	-	-
39	Ave	0.79%	-	1	-	-
40	Diwa	0.73%	-	-	-	-

One may criticize that my approach also inflates a party's seat allocations, assigning seats to qualifying parties at a ratio higher than the ratio of each party's number of votes to the total number of votes. Observe:

Party	Party % of Vote	Author Formula Seat Assign	Party % of Seats	Ratio of % of Vote to % of Seats
BUHAY	8.10%	8	14.55%	179.61%
BAYAN MUNA	6.59%	6	10.91%	165.63%
CIBAC	5.25%	5	9.09%	173.18%
GABRIELA	4.13%	4	7.27%	176.10%
APEC	3.50%	3	5.45%	156.03%
A TEACHER	3.26%	3	5.45%	167.44%
AKBAYAN	3.07%	3	5.45%	177.79%
BUTIL	2.94%	2	3.64%	123.73%
ALAGAD	2.94%	2	3.64%	123.82%
BATAS	2.63%	2	3.64%	138.47%
COOP-NATCO	2.49%	2	3.64%	145.88%
ANAKPAWIS	2.48%	2	3.64%	146.56%
ABONO	2.43%	2	3.64%	149.54%
AGAP	2.33%	2	3.64%	156.24%
ARC	2.15%	2	3.64%	168.83%
AN WARAY	1.97%	2	3.64%	184.23%
FPJPM	1.89%	1	1.82%	96.39%
AMIN	1.84%	1	1.82%	98.89%
ABS	1.56%	1	1.82%	116.60%
KABATAAN	1.54%	1	1.82%	118.18%
ABA-AKO	1.50%	1	1.82%	121.47%
SENIOR CITIZENS	1.45%	1	1.82%	125.38%
KAKUSA	1.39%	1	1.82%	131.03%
VFP	1.34%	1	1.82%	135.73%
UNI-MAD	1.33%	1	1.82%	136.79%
ANAD	1.24%	1	1.82%	147.14%
BANAT	1.22%	1	1.82%	149.17%
ABAKADA	1.17%	1	1.82%	154.80%
BANTAY	1.17%	1	1.82%	155.35%
1-UTAK	1.13%	1	1.82%	161.36%
COCOFED	1.06%	1	1.82%	171.82%
AGHAM	1.03%	1	1.82%	175.94%
YACAP	0.95%	0	-	-
TUCP	0.95%	0	-	-

This inflation, however, is unavoidable in the Philippine context. Again, because a large number of parties fail to qualify for any seats, the parties that do qualify will logically receive percentages of the seats higher than the percentages of

the votes they receive. In other words, 100% of seats have to be allocated among parties collectively receiving a lower percentage of votes. Do note that the inflation resulting from the approach I describe is lower than that observed when the German formula was applied by Justice Mendoza and later by Dr. Muga.

The inflation aside, one must pay attention to how the seats are actually distributed.

CONCLUSION

To reiterate, the party-list seat allocation formula's issues are primarily legal and not purely mathematical. One must thus avoid both the pitfall of presenting lofty policy goals but being unable to implement these with the proper mathematics, and the pitfall of asserting mathematical theories without critically analyzing whether these are in fact grounded in the Constitution and in the Party-List Act. The Constitution's framers and Congress are free to modify mathematical operations to pursue policy goals, so long of course as their mathematics avoids absurdity and impossibility.

Despite the extensive discussion devoted to mathematics when the party-list system is discussed, its central issue is one purely of legal policy: Is the system envisioned as one that seeks to empower minority political parties, per Fr. Bernas, or one that seeks to benefit marginalized sectors, per *Ang Bagong Bayani?* The two concepts overlap, but are not identical.

If one chooses the former vision, then the Party-List Act must be completely overhauled to allow the party-list system to interact with the district elections and become a correcting device that benefits minority parties, similar to how the German system functions. (The framework necessary to implement this vision is outside the scope of the formula discussed at the end of this article, which focuses on the policy goals articulated in party-list system jurisprudence.)

If one chooses the latter, then the seat allocation formula must be corrected both to fill up all the party-list seats and to ensure a streamlined distribution, particularly to avoid one that concentrates high seat allocations in the highest ranked parties as the German formula tends to when applied in the Philippines.

With respect to the latter vision, I have proposed a solution that addresses the German formula's central problem when applied in the Philippines, its unduly restrictive 1/55 (or about 1.82%) quota concept. I instead propose to find the largest possible number with which to divide each party's number of votes by, such that when the resulting numbers' decimals are dropped and the remaining whole numbers are added together, the resulting sum is 55 or the total number of seats. This produces a streamlined seat allocation which I feel addresses the problems I have raised, including the vote dispersion observed in the Philippines. This solution,

however, is premised on the position that the 2% threshold makes filling the party-list seats mathematically impossible, because, simplistically speaking, 2% multiplied by 55 requires 110% of the party-list vote.

Hopefully, as *Veterans* already counseled so many years ago, we stop attempting to grow Washington apples in the Philippines and begin searching for Guimaras mangoes. Hopefully, the party-list system which is the present generation of voter's inheritance from the last generation's stand at EDSA may bear fruit in its fullness. I wrote in my original article:

> It has now been fifteen years since the 1987 Constitution was ratified. Society has thus tarried fifteen years too long in enabling the most important Constitutional tool for social justice. Partisan politics should not bar its path, COMELEC procedural blunders should not bar its path, and errors in basic mathematics most certainly should not bar its path.[67]

It has now been twenty years.

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[67] Tan, *The Philippine Party-List Experiment, supra* note *, at 742.