The exception to the balance in the Eurovision semifinals

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Every year we ask ourselves the same question: Is one of the two Eurovision semifinals more competitive than the other? In this blog, we analyze whether the semifinals have been balanced over time, as well as the implications.

THE SEMIFINALS: HOW THEY'RE DRAWN UP

In this blog, we'll analyze whether the Eurovision semifinals have been evenly matched in terms of the level of the songs. Has one semifinal ever been significantly better than the other? Are the results of Semifinal 2 better than those of Semifinal 1?

The semifinals are randomly allocated based on geographic pots. This prevents certain similar groups from all being drawn into the same semifinal, giving them an advantage. It's not the most optimal method, but it is somewhat effective and simple. What is certainly not done is to distribute the countries based on the level of their songs because many are not even known at that moment.



This can lead to the best songs being concentrated in one semifinal, as this variable has not been taken into account. However, the level of the songs is taken into account at other times, such as when creating the performance order. Will the organizers consider dividing the songs in the semifinals according to their level in the future? There are also other types of imbalances, such as a semifinal with similar vocals or all the ballads being drawn together.

But how can we know if one semifinal has a higher competitive level than another? This can be determined before the semifinals (for example, with a poll and comparing the results by country

in each semifinal) or it can be done after the fact with other surveys or the official Eurovision results. This last method is the one we will use to analyze the level of the semifinals since 2008.

CALCULATING THE LEVEL OF THE SEMIFINALS

The calculation to determine the level of a semifinal is simple. We take the results of each year's Eurovision final and average the countries' positions based on their semifinal of origin. This means we always discard the results of the Big 5 countries and the host country.

The following graph reflects what we just said. The points reflect the average position of the 10 countries that qualified from each semifinal in the final. In blue, we have the averages for semifinal 1, and in orange, those for semifinal 2. For example, in 2008, the countries that qualified from semifinal 1 finished on average in 10.8th place in the final, while those from the second semifinal averaged 13th. Therefore, those from semifinal 1 finished on average better.



Let's first analyze it over time. It can be seen that there is no trend, no evolution, and that everything is distributed very randomly. It is not observed that countries in one semi-final perform better than those in the other. Therefore, the semi-final of origin does not affect the final result. In the last three years, countries in semi-final 1 have performed better, but the difference is minimal and not significant.

2019: THE YEAR OF THE GREAT IMBALANCE

How large were the differences each year? The following graph reflects the difference, for each year, from the averages in the previous graph. That is, the distance between the blue and orange dots for each year. Furthermore, it is ordered from highest to lowest, not by year.



The largest difference is observed in 2019, with a difference of up to 8 places. This is followed by the semifinals from the previous year in Lisbon 2018. The closest semifinals according to this criterion are Vienna 2015, where the difference was just half a place. Therefore, we see that some semifinals are more unbalanced than others.

As we have seen, the most unbalanced semifinals were Eurovision 2019. The following scoreboard reflects the final results for that year, highlighting the semifinal of each country's origin in color. The first semifinal is in blue, and the second in orange. The Big 5 countries and the host are not colored.

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EUROV	ISI0	N 2019 FINAL					5	5
RESULIADUS DISTINGUIENDU EL UKIGEN DE LUS SEMIFINALISTAS EUROVISION 2019 FINAL: RESULTS REGARDING THE ORIGIN OF THE FINALISTS								
		FURO	VISION	2019	FI	ΝΔΙ		
(países de la Semifinal 1 en azul, países de la Semifinal 2 en naranja)								
1°		Países Bajos	498	14°	+	Malta	107	
2°		Italia	472	15°		Eslovenia	105	
3°		Rusia	370	16°	Ū	Francia	105	
4°		Suiza	364	17°		Albania	90	
5°		Suecia	334	18°		Serbia	89	
6°		Noruega	331	19°	6	San Marino	77	
7°	×	Macedonia del Norte	305	20°		Estonia	76	
8°		Azerbaiyán	302	21°		Grecia	74	
9°	*	Australia	284	22°	<u>s:</u>	España	54	
10°		Islandia	232	23°	۵	Israel	35	
11°		Chequia	157	24°		Bielorrusia	31	
12°		Dinamarca	120	25°		Alemania	24	
13°	۲	Chipre	109	26°		Reino Unido	11	

The eight-place difference becomes much more apparent in this case. It can be seen that the top eight is occupied only by countries from the second semifinal and Italy. The highest-ranked country in the second semifinal is Australia, which finished eighth despite winning its heat.

Furthermore, the lowest-ranked country in the second semifinal was Albania, which finished 17th, ahead of five countries from the other semifinal.

As we have seen, this is an exceptional case. It is worth asking whether Lithuania, eleventh in the second semifinal with Jurij Veklenko and *Run with the Lions*, would have qualified had it fallen in the other semifinal.

CONSEQUENCES OF UNBALANCED SEMIFINALS

And what happens when the semifinals are very unbalanced? If one semifinal only has good songs and another has bad songs, songs will qualify that are overall worse than some of the nonqualifiers. This worsens the quality of the final since the best songs don't qualify.

The biggest losers are those countries that, as we saw with Lithuania, would likely have qualified comfortably had they lost in the less competitive semifinal. Furthermore, some of the countries that qualify from a low-level semifinal are likely to have a very disappointing result in the final.

And who benefits from this imbalance? Well, the biggest beneficiaries are the Big 5 countries and the host country, since countries have qualified that, in a more equitable distribution, wouldn't have. Therefore, by lowering the level of the final, the direct qualifiers see less competition and can achieve better positions. Ironically, this didn't happen in 2019 (see table above), where four of the bottom five countries qualified directly. Even with that little help, they couldn't recover.

TO LEARN MORE... SIMULATIONS TO DETERMINE WHEN A DIFFERENCE IS SIGNIFICANT

In this part of the blog, we're going to go further, getting more technical. You can continue reading if you want to dig deeper to understand when there is a real difference between semifinals.

Are the differences in the level of the semifinals significant? How can we know? Although there are statistical methods, in this case we ran 1,000 random simulations to check how likely each outcome, each difference in positions, is. It's as if we were rolling two dice 1,000 times to determine the difference between their results.

The following graph is a mix, a Pareto chart. On one hand, the bars are a histogram that shows the frequency of each event in an orderly manner. On the other hand, the line is a curve that accumulates the probabilities of each event from the beginning. We'll explain this now.



What we see in the bars is that the most likely outcome is that there will only be a difference between 0 and 1 place between each semifinal, followed by a difference of 1 and 2 places, 2 and 3, and so on.

The line, as we mentioned, represents the cumulative probability. In the first bar (0 and 1), it equals 23% because 23% of the cases have a difference of less than 1 place. In the second bar, it equals 44% because it is the cumulative probability that the difference is less than 2 places.

The interesting thing here is to look at the values typically used in hypothesis testing to determine whether something is significant or not. Typically, a value of 95% or 90% is used in social sciences like this one. In this case, 90% is reached for differences less than or equal to 6 places. In other words, anything above this value is outside the (statistically) normal range. Therefore, only one year (or even two if we're more strict with the 90% cutoff) have significant differences between the competitiveness levels of their semifinals.

In conclusion, only one (or two) of the 16 years have had unbalanced semifinals. Therefore, it doesn't seem necessary to intervene to better distribute them; randomness already does a good job.

WHAT REALLY MATTERS: NOW ONLY WITH THE TOP 5

In our study, we considered the positions of the top 10 countries that qualify from each semifinal. Some might think that perhaps those who barely make it to the semifinal do so because they have to be the top 10 or because of the neighborhood effect. In other words, the study should be limited to those who truly have the strength to make it to the semifinal.

To do this, instead of the top 10 countries, we now took only the average results of the top 5 countries in each semifinal. For example, it's as if in last year's first semifinal we had only

considered the results of Croatia, Ukraine, Ireland, Lithuania, and Luxembourg and ignored those of Cyprus, Finland, Portugal, Slovenia, and Serbia.

The following graph shows the differences considering only the top 5 countries. It is also sorted by the size of the differences each year.



2019 is once again the year with the largest gap, this time with a gap of 9.2 places. After that, there are four other editions with a gap of more than 8 places, while only in two years is the gap less than one place.

The gaps have increased, but this is a statistical consequence: if we run 1,000 simulations again, only gaps greater than 9 places are significant. Therefore, we obtain the same result as in the previous case: only in one year was there a significant difference.

Fortunately, we have seen that in very few years we have had unbalanced semifinals and that chance distributes the favorites evenly, allowing for high-performance finals. This is detrimental to the direct qualifiers, who must do more to secure a good position. Did you think there would be more imbalances? Which semifinals do you remember being more unbalanced? Are the 2025 semifinals balanced? We'll see how the balance tips in Switzerland.