

What influences the selection of a Nobel laureate?

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The study by FBK researchers Riccardo Gallotti and Manlio De Domenico examined the data of 17,000 nominees between 1901 and 1965 and was published in Nature's "Scientific Reports" journal

The awarding of Nobel prizes has not always been determined only by the merit of the works submitted to the scrutiny of assignment committee members but, in the selection process, other aspects such as the nationality and sex of the nominees and the academic prestige of the nominators have influenced the decisions.

This emerged from the scientific study carried out by Trento-based **Fondazione Bruno Kessler**'s researchers **Riccardo Gallotti** and **Manlio De Domenico**, published in **journal Nature's "Scientific Reports"**. The study highlighted the influence of homophily and academic reputation in the nomination process.





FBK's researchers with the [CoMuNe Unit](#) (Complex Multilayer Networks) examined the official data of the Nobel prize awarding procedures between 1901 and 1965, in which 17,000 candidates were involved, and analyzed them using complex statistical techniques. The result is that, in general, the choices of those who proposed the candidates as well as those who decided the winners were not entirely neutral.

As regards nationality, or more broadly, political visions, for example, it was noted that between the two world wars, compared to the period before that, the number of German winners dropped while that of Americans went up. In general, there is a correlation between the nationality of the nominators and that of the nominees that goes beyond sheer randomness. "The committees of the Nobel Foundation, based in Sweden", Gallotti pointed out, "tended to propose only experts from politically similar nations. This was particularly relevant in the early years of the past century, where Soviet, German, and French-controlled Nazi Germany scientists were excluded from the pool of experts in charge of selecting the candidates".

As far as gender is concerned, the study showed that, in the period considered, in general men have tended to favor men and women to favor women. The unequal representation in the committees, where males way outnumber women, has resulted in many more men winning the Nobel Prize.

With regard to academic prestige, it emerged for example that nominees supported by recipients of previous Nobel prizes were more likely to win than others.

"It is interesting that starting in 2019," the study reads, "the Nobel committees have required assignment committee members to take into account geographical diversity, gender and work topics. The introduction of additional measures have been requested to the end of improving gender balance, including changes in the nomination committees and nomination rules. We have shown here that these requests are fully justified".

Finally, researchers have created a model that describes the different phases of nomination and selection of candidates, and reproduces the most salient observations. “Thanks to this model”, Gallotti added, “we are able to highlight that the current mechanism of nomination and assignment strengthens and propagates over time the predominance of an “academic hegemony” core. In particular, this effect is enhanced by the custom of inviting Nobel Prize laureates to suggest nominations in following years. These undesirable effects could be reduced if, on the contrary, young experts were asked to propose the nominees”.

The reason why the study took into consideration the years between 1901 and 1965 is that the data of the selection procedures of that period have been made public and therefore accessible for analysis.

For more information: [the study published in Nature’s “Scientific Reports” journal](#)

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- Viviana Lupi