



Statistics in Service of Human Rights
Colombia: The Palace of Justice

HRDAG Supports Victims in Court Case
November, 2013

Introduction and Context

On November 6, 1985, in Bogotá, Colombia, guerillas of the M-19 group seized the Palace of Justice, which is home to the Supreme Court. About 300 civilians in the Palace were taken hostage by the guerillas. The Colombian Army responded by launching a military counter-siege that has been noted many times in the 28 years since the events for its “destructive nature.” During this counter-siege, about 200 civilians were rescued and about 100 died in the attacks. Most likely as a result of the Army’s rockets, a two-day fire raged in the Palace, burning some of the hostages.

In the aftermath of the two-day siege, some survivors were detained by the Army as suspected members of M-19. Twelve were disappeared; four of those twelve were tortured; and a thirteenth survivor was disappeared and executed. The bodies of 11 of the 13 disappeared survivors have never been found. Nine of those 11 missing were workers in the Palace cafeteria.

The Court Case

Organizations representing the families of the thirteen victims who were forcibly disappeared claim that the Colombian Army committed grave human rights violations (i.e., forced disappearance and torture) against these thirteen victims, eleven of whom are still missing, during the operation to recapture the Palace of Justice.

The Colombian State claims that the eleven people still missing from the Palace of Justice were not forcibly disappeared, but rather that their bodies burned inside the Palace or were returned to the wrong families as a result of being mistakenly identified.



HRDAG’s Involvement

[The Center for Justice and International Law \(CEJIL\)](#)

asked HRDAG to prove that it would be unlikely for all nine of the still-missing cafeteria worker victims, by sheer coincidence, to have been mistakenly identified and returned to the wrong families.

The Count

- 94 bodies were recovered; 94 death certificates were issued.
- From the 94 bodies, 69 were identified and 25 were not identified. The 25 not identified were burned in the fire resulting from the siege.
- From the 69 bodies that were identified, 56 were given to the families and 13 were not; this latter group includes twelve guerrilla members and one civilian. From the 56 bodies given to the families, 35 suffered burn damage.

The Problem

This study concerns the nine civilians who worked in the Palace cafeteria and who were disappeared and possibly tortured. The Army argues that these victims are among the 35 burnt bodies, some of which were misidentified and given to the wrong families. This analysis considers the probability that the nine of the cafeteria were all among the 35 bodies returned to the families. Stated in more specific probability terms, what is the probability that given the group of 94 total bodies, the nine bodies of the cafeteria workers were among the 35 bodies returned to families?

Probability Analysis

The situation can be described as [sampling without replacement](#) from the population of bodies. Sampling without replacement can be described mathematically by the [hypergeometric distribution](#), but in this case we can be explicit.

The probability of the first body coming from the returned bodies is 35/94. The probability of the second body coming from the same group is conceptually the same, but since the first body was already assumed to be from the same group, there is now one fewer in the numerator and in the denominator: 34/93. The probability of each subsequent cafeteria worker's body being among the bodies returned reduces both terms by 1. The probability that all nine bodies came from the 35 returned to families is the product of the nine individual probabilities, as below:

$$\frac{35}{94} \cdot \frac{34}{93} \cdot \frac{33}{92} \cdot \frac{32}{91} \cdot \frac{31}{90} \cdot \frac{30}{89} \cdot \frac{29}{88} \cdot \frac{28}{87} \cdot \frac{27}{86} = .0007$$

Interpretation

If the bodies of the cafeteria workers were distributed among the three categories of outcomes at random, the probability that all nine would have been in the group of bodies burned, identified, returned to families is approximately 0.00007. This is an extremely small probability, approximately one thousand times below the usual guideline for statistical significance.

Outcome

The case was heard in Brazil on 12 and 13 November, 2013, before the Inter-American Court of Human Rights. CEJIL's forensic expert was able to use HRDAG's calculation during the hearing, and it is now part of the case evidence.

Testimonial from the Center for Justice and International Law

“The HRDAG assisted our forensic anthropologist expert witness in proving, on the basis of science and sound statistical analysis, a point that seemed logical to us: that it would be incredibly unlikely for all of our victims, by sheer coincidence, to have been mistakenly identified and their bodies given to family members of other people dead during the events. At our court hearing, we were able to make this point using easy-to-understand language, but supported by the statistical calculation made by the HRDAG.”

Study Authors

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