

# Are We Really All Kinder On Christmas?

---

How the “Christmas Spirit” impacts crimes.



by Matteo Ladislai

2024-01-02

# Contents

Executive Summary	2
Introduction: What Does “Kinder” Mean	3
Methodology: When You Can Trust This Analysis	4
<b>Does The Christmas Spirit Really Impact Crimes?</b>	<b>5</b>
<b>How The Christmas Spirit Impacts Crimes</b>	<b>8</b>
Conclusion	11
Appendix	12

# Contacts

- Email: [matteo.ladislai@hotmail.com](mailto:matteo.ladislai@hotmail.com)
- LinkedIn: <https://www.linkedin.com/in/matteo-ladislai/>

# Executive Summary

We all like to think that there's a sort of magic in Christmas. A spirit, we say, that magically makes us all kinder and brings us together.

Is this really true? The response is something between Yes and No.

The data reveals a drop in daily crimes during the Christmas period. What seems to cause it is just the fact that Christmas is coming.

However, this relationship is more nuanced than that.

Christmas discourages less serious offenses (Part 2 crimes). Yet, the more serious Part 1 crimes, characterized by violence and premeditation, remain untouched.

The takeaway is clear: the Christmas spirit is far from a one-size-fits-all catalyst. **It acts as a magnifying glass rather than a power that transforms everyone. It doesn't make us all kinder; instead, it amplifies existing kindness.**

# Introduction:

## What Does “Kinder” Mean

If I were to say Christmas, what would you think about? You’d probably imagine a warm family reunion, the crackle of the fireplace, and those red and white sweaters. You’d imagine the smiles of people, the generosity, the altruism.

Numerous research tell us that indeed Christmas makes us more generous.

*“The main finding is that we become more altruistic In December.”* —  
Mathias Philip Ekström with his “Seasonal Altruism: How Christmas Shapes Unsolicited Charitable Giving.”

But, this is just one side of the coin. True kindness extends beyond generosity. It involves acting selflessly for the well-being of others, showing mercy and forgiveness.

Does the Christmas spirit truly make us kinder?

This is what this analysis tries to solve.

# Methodology:

## When You Can Trust This Analysis

It's crucial to spend some words on the methodology and limitations of this analysis before diving into it.

The dataset used reflects incidents of crime in the City of Los Angeles from 2020 to 2022. This means the scope of the analysis has been limited to just LA. It would require great computational power to analyze global crime data. And surely not every nation would publicly land the data about their crimes.

For this reason, this report provides a baseline understanding and may not universally apply. **Nonetheless, it gives us valuable insights on this thing called “Christmas spirit.”**

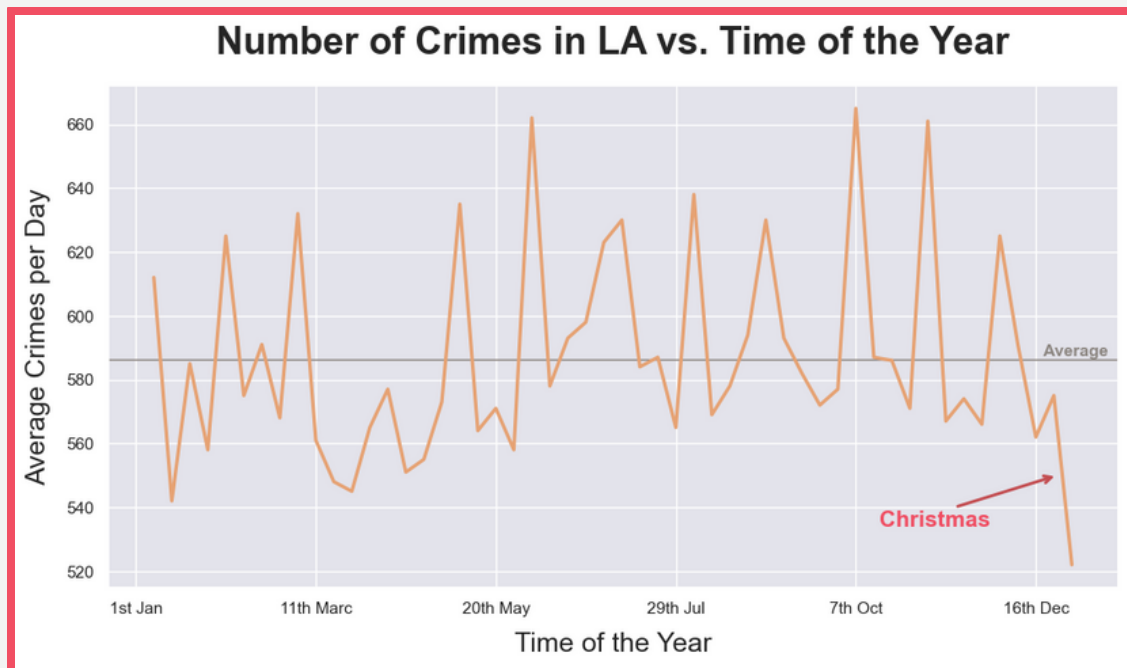
Through this analysis, I'll broadly use these 2 terms:

- *“Christmas period.”* — It refers to the last 14 days of the year; from 18th Dec to 31st Dec.
- *“Christmas spirit.”* — It refers to this warm atmosphere that we think makes us kinder.

# Does The Christmas Spirit Really Impact Crimes?

If the holiday spirit makes us kinder, the crime rates must take a dip during this season. This is why the first step is to find out if there really is a relationship between Christmas and crimes.

The graph below shows how the daily average number of crimes changes during the year. **You can see a noticeable drop (9.6%) in daily crimes during the Christmas period compared to the annual average.**



But this finding alone doesn't tell much. The fewer crimes on Christmas don't necessarily mean it's the Christmas spirit that causes it.

There are 2 main hypotheses to explain the crime dip, other than the Christmas spirit. They are:

- **The increased police presence is responsible for fewer crimes.**
- **The increase in social activity discourages criminal behavior.**

## 1 - Does The Increased Police Presence Cause Fewer Crimes?

It's reasonable to attribute the fewer crimes to the increased police presence. After all, this is a common sight during the holidays. But the very nature of this analysis rejects this hypothesis.

The graph above shows a decrease of the crimes over the whole Christmas period (from 18th Dec to 31st Dec), and not just on the 24th or 25th (i.e. when the police presence increases).

For this reason, it can confidently be said the increased police presence is not the main reason why crimes decrease during the Christmas period.

## 2 - Do Crowder Streets Mean Fewer Crimes?

Holidays, especially big ones like Christmas, increase social activities. More people hitting the streets means more eyes on the lookout, which may discourage criminal behaviors.

This appears to be a valid reason. But the same principle discussed before applies there too. In other words, the increased street presence becomes less significant since we're looking at the entire Christmas period.

To strengthen this point, consider the figure below. While there's no dataset tracking daily street activity, we can make an estimation using passenger arrivals to LA as a proxy for "social movement."

As the graph shows, passenger arrivals during December are just slightly above the yearly average. This means that, after all, there's not that much "social movement" in comparison to periods like August or New Year's Eve.





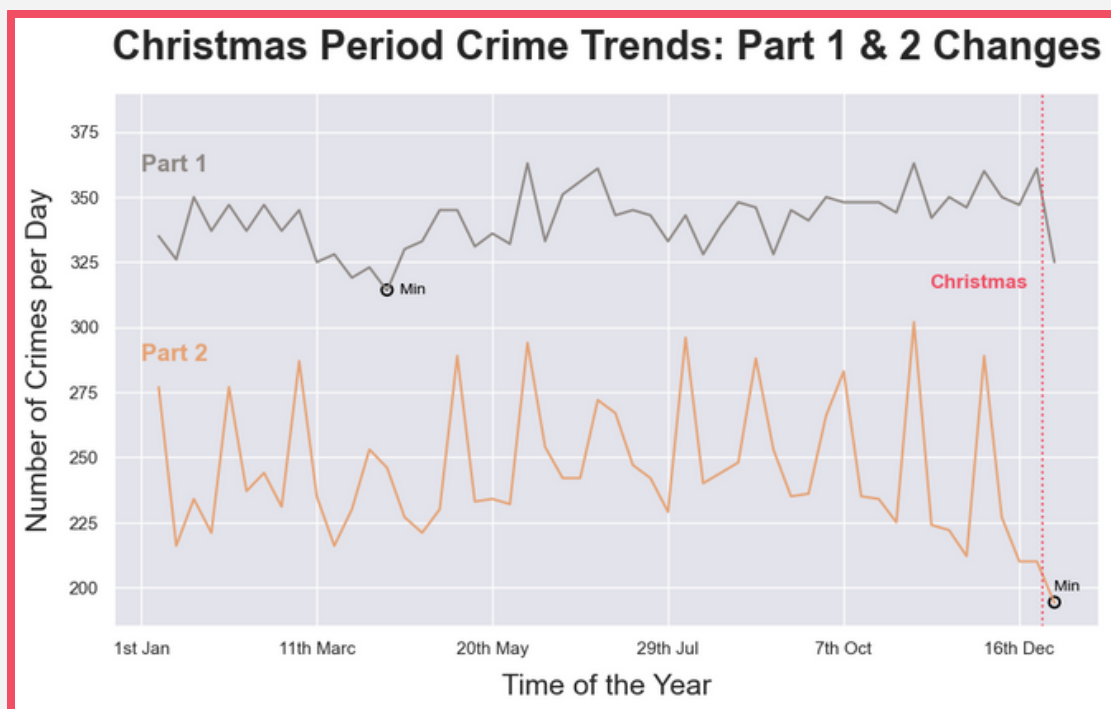
# How The Christmas Spirit Impacts Crimes

The initial hypothesis was simple: the Christmas spirit brings out the best in all of us. That means crimes across the board should all decrease the same during this festive time. However, it turns out that this assumption missed the mark.

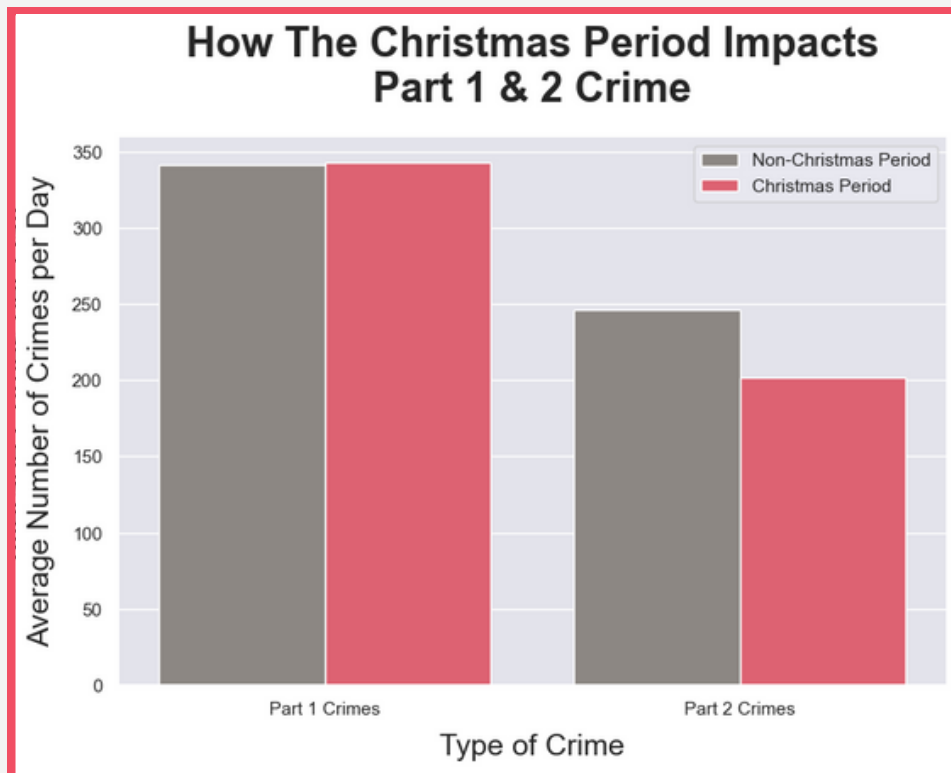
The first difference explored is the type of crime. I.e. whether Part 1 crimes (more serious) and Part 2 (less serious) are influenced in the same way.

Looking at the chart below, it's evident that Part 2 crimes dip during Christmas. They plummet so much that the Christmas period marks the yearly minimum for Part 2 crimes.

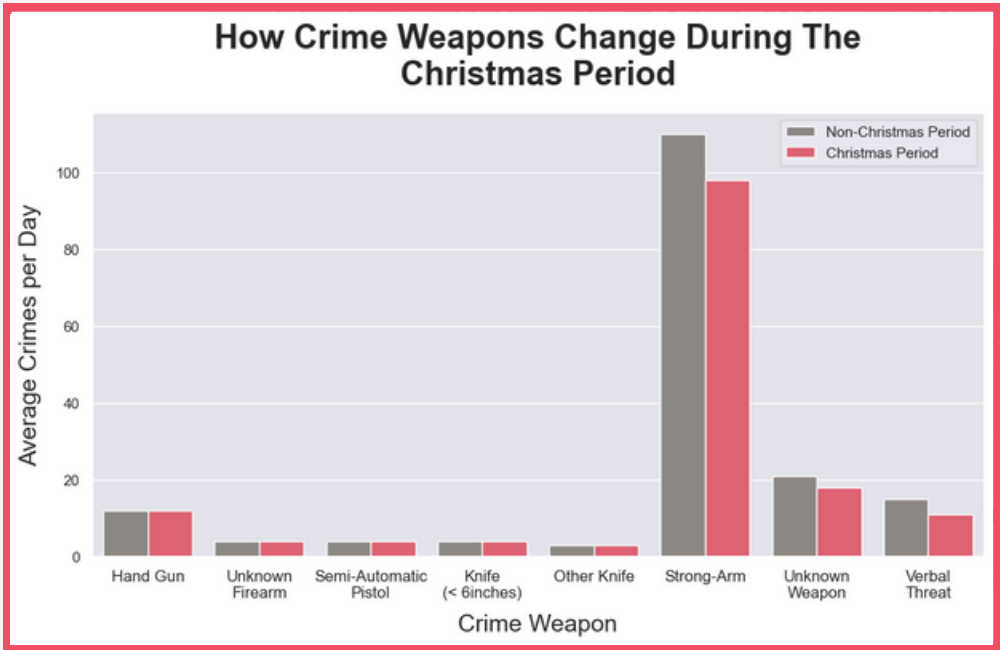
It can't be said the same for Part 1 crimes. They don't hit their yearly low during Christmas, with the minimum occurring in mid-April. **It seems that Part 1 crimes are less influenced by the holiday spirit, if at all.**



For a more complete analysis, below there's a graph that illustrates the daily mean of Part 1 & 2 Crimes during the Christmas and non-Christmas periods. As you can see, the only type of crime that decreases is Part 2 crimes.

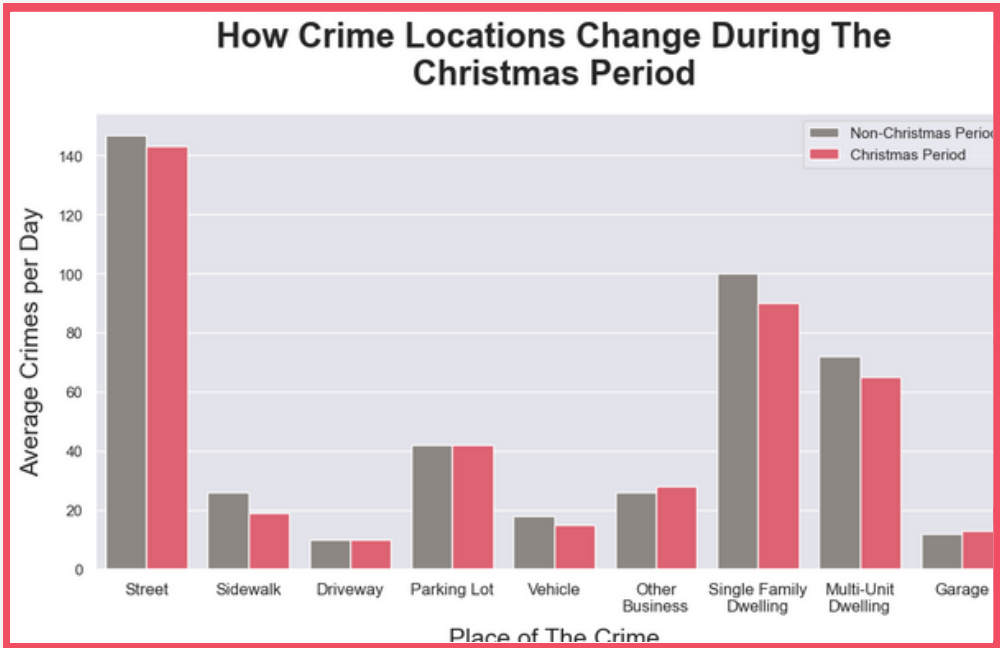


This disparity is highlighted also when examining the change in crime weapons. **Not all weapons decrease the same during the Christmas period.** Weapons associated with lesser serious crimes, such as Verbal Threat and Strong-Arm, see a substantial drop, while those tied to more severe offenses, like Hand Gun or Knife, show little to no decline.



With this finding in mind, it's reasonable to expect the same regarding crime locations. Indeed, this turns out to be true.

The three places experiencing the most significant decrease in crimes are Sidewalk, Single Family Dwelling, and Multi-Unit Dwelling. In contrast, locations like Parking Lots, Garages, and Other Businesses witness minimal to no decrease in criminal activity.



# Conclusion

Are we really all kinder on Christmas?

From this analysis, it's evident that there are indeed fewer criminal behaviors during the Christmas period.

We've considered the whole Christmas period (from 18th Dec to 31st Dec), so the increased police presence can't be the main reason. Nor can it be the more social movement. We've seen that there's not so much "social movement" on Christmas relative to summer or New Year's Eve.

The only valid reason that explains the fewer crimes during the Christmas period is this thing we call the "Christmas spirit." **This means that just the fact that Christmas is coming is enough to "magically" lower the crimes.**

But not all crimes decrease. The only type of crime to take a dip on Christmas is Part 2 crimes — the less serious ones that are probably caused by the absence of social interactions.

The more serious Part 1 crimes, often involving violence or intricate planning, seem to be not influenced at all by the Christmas spirit. The reasons behind these crimes could be rooted in broader social and economic factors not affected by Christmas.

**In conclusion, we can think of the Christmas spirit as a magnifying glass rather than a transformative force;**

**It doesn't make us all kinder. It just magnifies the existing kindness.**

# Appendix

If you're curious about the nitty-gritty of how this analysis came to life, you can find it here:

[ipynb file](#)

This link will bring you to the Jupyter Notebook (in Python). Basically, it's the behind-the-scenes of this report. You'll also find some documentation through it so it's easier to navigate.

A special thanks goes to LAPD OpenData. Without their contribution, there would be no dataset to analyze, no insights to glean, and certainly nothing new to discover.

Moreover, my biggest THANK YOU! goes to the three people who shaped my skills the most:

- [Jake VanderPlas](#).
- [Wes McKinney](#).
- [Claus O. Wilke](#).

## Contacts

- Email: [matteo.ladislai@hotmail.com](mailto:matteo.ladislai@hotmail.com)
- LinkedIn: <https://www.linkedin.com/in/matteo-ladislai/>



A festive holiday scene featuring a tray of decorated cookies, a small evergreen branch with silver ornaments, and a white knit sweater. The cookies are shaped like various holiday symbols: a star, a Christmas tree, a snowflake, a heart, a bell, a snowman, and a reindeer. They are decorated with white, red, and green icing. The evergreen branch is adorned with silver ornaments. The white knit sweater is draped over the left side of the image. The background is a grey and white patterned fabric.

**Thank You!**