

# Model suggests fear of crime is contagious

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(Phys.org)—A pair of researchers at University College London has found evidence suggesting that fear of crime is contagious. In their paper published in *Proceedings of the Royal Society A*, Rafael Prieto Curiel and Steven Bishop describe the model they built, how it works and what it showed.

Fear of crime is a concern for people who live in areas where they worry about falling prey to a criminal act, but according to Prieto Curiel and Bishop, the amount people worry may not be warranted. This, they contend, is because people can be influenced in their social interactions.

If someone living in a relatively safe area speaks with someone from a high-crime area, they suggest, the person from the safe area can experience increased fear of crime. The researchers came to this conclusion by building a mathematically based computer model.

The model was based on a simulated city with a population of 100,000. Three groups were created to represent three parts of the virtual city: those that were immune from crime, those that lived in a safe part of the city, and those that lived in a crime-ridden part of the city. Each virtual person was given attributes meant to mimic actual human behavior under certain conditions, one of which was a number representing their level of fear of crime. The model ran for a virtual six-year period as the researchers tinkered with events, such as occasions when people in the [model](#) interacted with one another—some of the virtual people even became victims of virtual crimes. The passage of time also allowed impacted fear levels—an absence of crime, for example, caused levels to fall.

The researchers report that the virtual people living in the safe parts of the [city](#) felt safer, quite naturally, than did those living in the high-crime areas. But that quickly changed if an individual was the victim of a crime, or if they talked about crime with someone from the crime-ridden area. The latter, the researchers note, suggests that fear of crime is contagious. People can find themselves fearing crime more than they need to just by talking to people who live in higher crime rate areas. Sadly, things did not appear to work in reverse—the people from the high-[crime](#) areas did not walk away from such interactions with lower [fear](#) levels.

**More information:** Rafael Prieto Curiel et al. Modelling the fear of crime, *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Science* (2017). [DOI: 10.1098/rspa.2017.0156](https://doi.org/10.1098/rspa.2017.0156)

**Abstract**

How secure people feel in a particular region is obviously linked to the actual crime suffered in that region but the exact relationship between crime and its fear is quite subtle. Two regions may have the same crime rate but their local perception of security may differ. Equally, two places may have the same perception of security even though one may have a significantly lower crime rate. Furthermore, a negative perception might persist for many years, even when crime rates drop. Here, we develop a model for the dynamics of the perception of security of a region based on the distribution of crime suffered by the population using concepts similar to those used for opinion dynamics. Simulations under a variety of conditions illustrate different scenarios and help us determine the impact of suffering more, or less, crime. The inhomogeneous concentration of crime together with a memory loss process is incorporated into the model for the perception of security, and results explain why people are often more fearful than actually victimized; why a region is perceived as being insecure despite a low crime rate; and why a decrease in the crime rate might not significantly improve the perception of security.

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