

## When science challenges terrorism

**New studies are developing innovative tools that mix social, psychological and economic factors to study the recruitment process of organised crime and terror groups. The balance between fundamental rights and security is at stake**

Can science become central to combating terrorism and organised crime? **Predictive policing** uses mathematical and analytical tools to identify potentially dangerous people and forecast crimes. In 2011 [Time magazine even named it as one of the year's best innovations](#).

These predictions normally draw on data on past criminal acts (considering type, location, time, etc.) with **statistical methods**, to model “hotspots” that become the **focus off specific prevention policies**. An example is the [PredPol](#) software used by police [in many US cities](#), and created eight years ago by researchers from the University of California ([UCLA](#)) and [Santa Clara University](#).

However, there are significant challenges in risk-based measurement when it comes to forecasting **human behaviour** because of its **unpredictable nature**. The neutrality of data collected may be biased by the assumption that crime will likely happen where it has already occurred in the past and committed by the same people. **The risk is that the algorithm could unfairly target specific groups, such as minorities.**

Moreover, predictive programmes present several "**vulnerabilities**" **when it comes to counter-terrorism**, as underlined by [Andrew Ferguson](#), professor of Law at the [University of the District of Columbia](#), Washington: “Crimes happen every day, several times a day, and with certain crimes occurring in repeated patterns in particular geographic locations. Terrorism instead happens rarely and even more rarely repeats in the same place. Whatever lessons you have learned about risk from street crime will not be applicable to predict the risk of international terrorism.”

**Researchers are trying to take a step forward, focusing on the affiliation process of criminal minds.** They are analysing the formation, radicalisation and dissolution of organised crime and terrorist networks, integrating for the first time **social, psychological and economic data**.

Through [Agent-Based Modelling \(ABM\)](#), a class of computational models, the scientists are currently developing a virtual society, to test different scenarios. **Their aim is to go beyond predictive policing techniques**, providing governments with the

opportunity to evaluate, **in the long term rather than the short, the impact of potential policies** on the recruitment and radicalisation phases.

The study comes under the EU project [Proton](#). One of the members of the consortium, Maria Laura Fiorina, jurist from University of Pavia, Italy, explains: “These models will address questions such as: if the policy maker increases the number of schools in a specific area with high potential of criminal recruitment, what will the impact be on this?”

“Data heterogeneity is a fundamental aspect. A low level of instruction is proven to be a breeding ground for organised crime affiliation, but the same principle does not apply to the terrorism networking process. This is an example of the challenges of selecting the elements that will be introduced in the ABMs.”

Fiorina warns: “Our research is aimed at **helping governments to identify risk factors**. However, **it is also fundamental to elaborate a correct assessment of the impacts**, to evaluate whether the prevention measures could cause social stigmatisation towards group already suffering from **discrimination**.”

“In this context, a study realised under Proton on the **London Muslim community** showed that prevention policies, such as the [stop and search method](#) had damaging effects, worsening the situation. **This approach may make some people more radical in their thoughts and actions**,” Fiorina adds.

It is therefore essential to pay attention to any side effects. “**Agent-based modelling are probabilistic rather than predictive tools**. Consequently, policy makers should consider the fact that **ABMs are neutral tools and should not be taken as an oracle**,” the jurist concludes.

The researchers found that the general trend is to focus **more on disruption of the networks rather on prevention**.

In this context, [Thomas Renard](#), international expert in counter-terrorism and counter-radicalisation and senior research fellow at Egmont Institute in Brussels, has **identified some wrong decisions taken by European governments**: “The first mistake was to respond to terrorism through a security-only or security-first approach. It failed to do more on prevention aspects. There has also been a tendency to exaggerate certain threats, like the Islamic one, looking at every problem through that prism and therefore ignoring other causes, and even other forms of political violence. Another mistake was to ignore the ‘local’ dynamics. Communities know their constituencies best and must play a central role”.

Michaël Privot, director of the [European Network against racism](#), shares this view and thinks that greater engagement with social groups is crucial, and governments should invest in it. “For example, [community policing](#) is a method that seeks to break with a certain image of the police,” he says. “It is not only about repression and control. It is about trust and security. Officers constantly interact with the community; they may belong to minority groups.”

“**Proportionality** is another principle to be evaluated while elaborating a new prevention policy. The measure has to be proportional to the objective. For example, the **massive data collection that followed the Brussels attacks was disproportionate**, and threatened the right to privacy. Proportionality will build trust and reinforce the message that security and fundamental rights can go hand in hand,” he concludes.

By Anna Maria Volpe