

# Lifestyle

SUNDAY, APRIL 21, 2019



Gardeners work inside the Royal Greenhouses of Laeken castle during a press preview in Brussels. — AFP

## In Notre-Dame's shadow, a 'village' faces uncertain future

Days after the catastrophic fire at Paris's Notre-Dame, around 30 business owners on Thursday gathered at a cafe in the shadow of the burned cathedral. The owners of restaurants and souvenir stores, flower stalls and gourmet food markets in an area known to residents simply as the "village", they have all been forced to close since Monday's devastating fire at the UNESCO World Heritage landmark.

Few at the gathering Thursday morning in the Quasimodo cafe—named after the hunchback in Victor Hugo's celebrated novel set at the cathedral-seemed optimistic about the chances of re-opening in the near future. Police are letting only residents and business owners onto the River Seine island known as the Ile de la Cite where the cathedral stands, choking off the tourist traffic that is their lifeblood.

"We usually have lots of tourists, more than 500 a day, but now there's nobody," said Virginie Aranda, who has a stall at the flower market on the Ile de la Cite. "We haven't even been able to come and water our plants." She and others at the meeting say the extended security perimeter set up while inspections are carried out at Notre-Dame could cost them dearly.

"We've already had a tough winter because of the 'yellow vests, and now we have this," said Betty Toulhier, another flower vendor, referring to the protests that have shaken central Paris since November. "We're at risk of losing everything," said Toulhier, who has held a stand at the flower market since 1971.

But Patrice Le Jeune, president of the Notre-Dame business alliance, said that based on his meetings with city officials, the island's picturesque streets could remain closed for weeks, maybe months. "They're not going to take any risks," he tells the group. Aides to Ariel Weil, the mayor of the Fourth Arrondissement, which includes Notre-Dame, said he was not immediately available for comment.

### One coffee

For many Parisians, the winding streets in the shadow of Notre-Dame are full of nothing but cheap tourist stands and overpriced restaurants claiming to be among the oldest in the city. It's an image that riles many residents and business owners, some of whom have lived and worked on the Ile de la Cite for decades. "People forget that there's a church, but there's also a village that surrounds it. The cathedral is our church, our children were baptized there," said one mother, asking not to be identified by name.

"It's a village," agreed Michel Mathieu, whose grandmother opened a store on the Rue d'Arcole in 1921. That store is still open, offering the souvenirs you won't find from the roving trinket sellers, as is another right down the street owned by his brother. And another by Mathieu's daughter. Like other businesses, they are hoping insurance policies will cover the lost revenue and merchandise—the dead flowers, the food going bad in restaurant refrigerators.

But so far officials have not declared the site a disaster zone, meaning insurance won't kick in, and shop owners can't file for state aid for the forced unemployment of their workers. "There are jobs at stake," said Esther Butel, who runs a restaurant with three employees on the Quai des Fleurs. "I opened today but this morning all I sold was one coffee. I'm not going to make it with one client paying 2.50 euros," she told AFP.

Le Jeune said he would meet soon with the tourism chief in Mayor Anne Hidalgo's cabinet, to push for a freeze on social charges like payroll taxes and VAT for the affected businesses. But such help, if it comes, might be too late for some. "We opened just four weeks ago," said Francois Monville, who chose the Notre-Dame neighborhood for his food shop upon returning to France with his wife after 15 years abroad. "The idea was to create something for visitors, but for Parisians as well, to reconcile tourists and locals," he said. But with rent, wages and loan payments, "we can't hold out like this for long." — AFP

## On American hard drives, a precise 3-D model of Notre-Dame

At Vassar College in the United States, a university team gathered the week before the devastating fire at Notre-Dame cathedral in Paris to plan an ambitious project: inventorying about a terabyte of 3-D modeling data of the famed Gothic masterpiece. The precious data is the work of Andrew Tallon, a Francophile American art professor who loved medieval architecture and was passionate about Gothic cathedrals. He died in November.

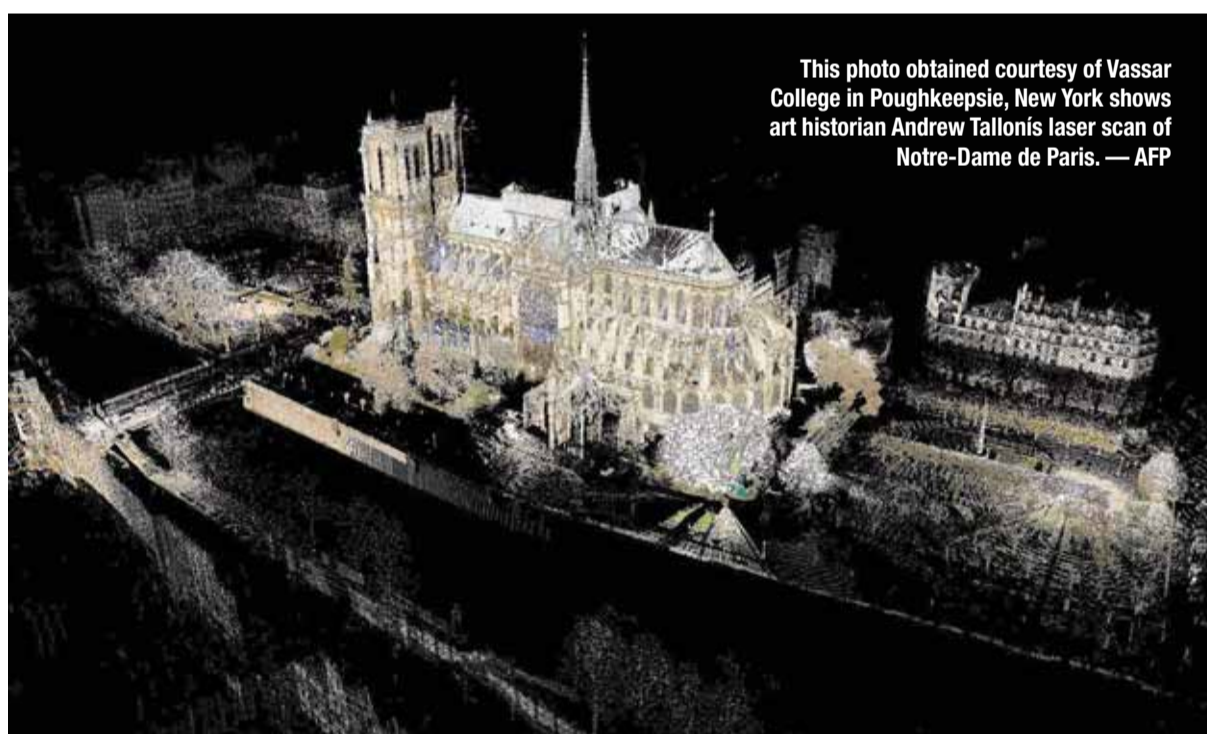
His technique was nothing new, but his application of the tools was innovative. In 2011 and 2012, funded by a foundation, Tallon used a laser device to accurately measure the interior and exterior of the cathedral, which was ravaged by flames this week. He placed the device in about 50 places to measure the distance between each wall and pillar, recess, statue or other form—and to record all the imperfections intrinsic to any centuries-old monument.

The result is over a billion points in the "point cloud." The final computer-generated images reconstruct the cathedral down to the smallest detail, including its tiny defects, with a precision of about five millimeters. These images, for example, confirmed how the west side of the cathedral was a "total mess... a train wreck," Tallon told National Geographic in 2015, pointing to the misalignment of the interior columns.

He wanted to get "into the mind of the builders," said his former student Lindsay Cook, a Francophile like Tallon who is now a visiting assistant professor of art at Vassar. "He was interested in using laserscan data to find moments like small ruptures in the construction, places where things were not exactly straight or in plumb, where you could see the hand of an individual architect at work, and in that case the hand of individual masons," Cook told AFP.

### A fitting memorial

From these measurements were born the images published in a book in 2013 and shown in an exhibition at Notre-Dame in 2014. But the bulk of the data remains untapped in the form of 1s and 0s on some hard drives. Several French firms have also digitally mapped Notre-Dame bit by bit—not for historical research but for conser-



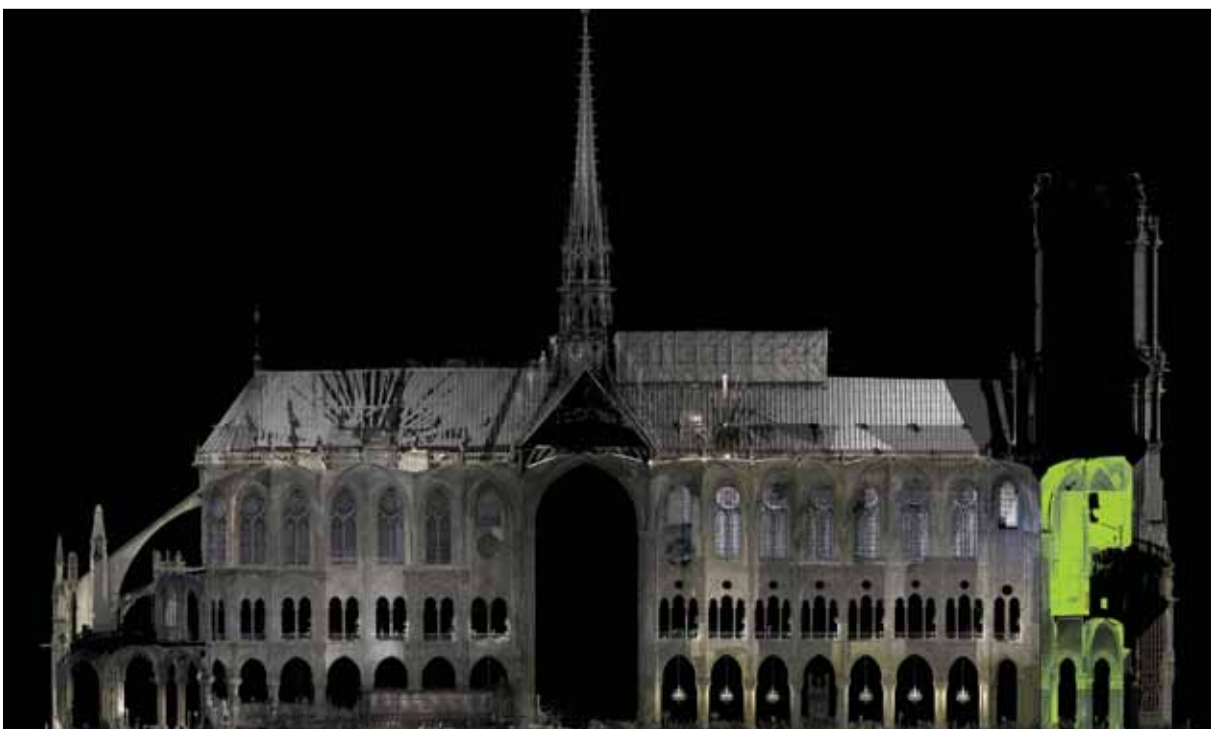
This photo obtained courtesy of Vassar College in Poughkeepsie, New York shows art historian Andrew Tallon's laser scan of Notre-Dame de Paris. — AFP

vation purposes. Art Graphique et Patrimoine, which assisted Tallon in his work, says that over 25 years, they have collected 30-50 billion data points, notably of the destroyed 19th century spire and the ravaged roof.

Tallon "has a complete model, but it is not exhaustive," Gael Hamon, the CEO of Art Graphique et Patrimoine, told AFP. His firm is now trying to piece the data "puzzle" together. Notre-Dame can probably be reconstructed without this data, but laser modeling brings precision to the photographs and drawings held by architects in France. This is particularly useful for elements such as roofing and the spire, which were more difficult to measure physically.

The modeling will help restorers to identically recreate the part of the vault that has collapsed inside. "If eventually the authorities wish to use this, then of course it would be shared with them," said Cook. The data is currently on external hard drives at Vassar, with copies at Columbia University, where academics collaborated with Tallon as part of the "Mapping Gothic" project. If architects ask for the data, it would have to be delivered in person, as it is too large to be transmitted over the internet.

If Tallon's "scholarly work can somehow inform those who will be taking on the daunting task of restoring a cathedral to its former glory, it will be a fitting memorial for a very wonderful scholar who devoted so much to Notre-Dame," said Vassar dean Jon Chenette. On other hard drives, historians will also find, if they wish one day, another inheritance from Tallon: laser modeling of the cathedrals of Beauvais, Chartres, Canterbury and even the Basilica of Saint-Denis.—AFP



Art historian Andrew Tallon