



HAL
open science

Second World War: Paris neurosurgeon's map outwitted Nazis

Pierre Bourdillon, Marc Lévêque, Caroline Apra

► **To cite this version:**

Pierre Bourdillon, Marc Lévêque, Caroline Apra. Second World War: Paris neurosurgeon's map outwitted Nazis. *Nature*, 2017, 547 (7663), pp.281-281. 10.1038/547281a . hal-01992032

HAL Id: hal-01992032

<https://hal.sorbonne-universite.fr/hal-01992032>

Submitted on 24 Jan 2019

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Paris neurosurgeon's map outwitted Nazis

Neurosurgeon Jean Talairach (1911–2007) created his pioneering brain atlas with his colleague Gabor Szikla in 1967. Almost three decades earlier, he had painstakingly drawn a quite different map — of Paris's subterranean ossuaries (see 'Catacomb network under Paris'), a copy of which we recently unearthed in the archives of the city's Sainte Anne Hospital. The map served as a crucial guide in the liberation of the French capital from the occupying Nazis during the Second World War.

While working at the hospital in 1938, Talairach and his colleague René Suttel picked the lock of a secret door in the historic building to gain access to the city's catacombs. This maze of passageways lies south of the River Seine and comprises more than 100 kilometres of underground galleries (R. Suttel *Catacombes et Carrières de Paris*; Châtillon, 1986).

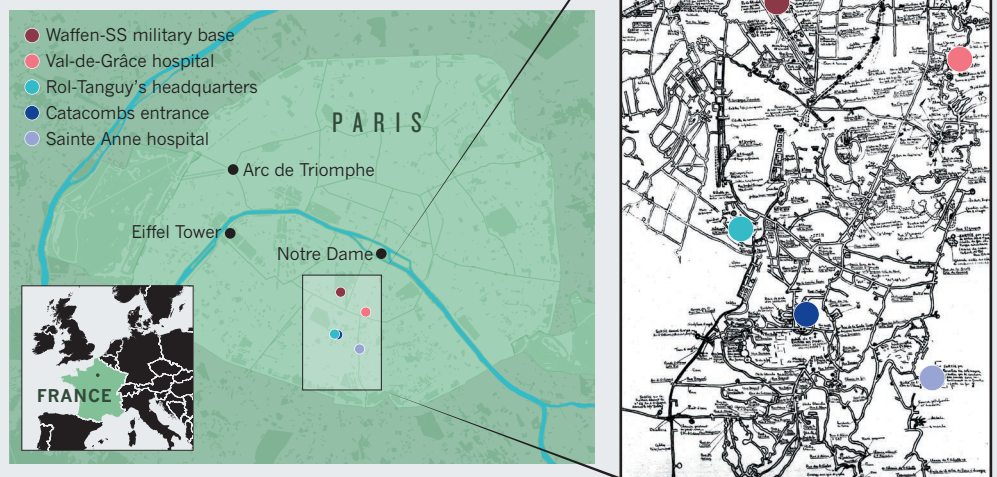
To make the map, Talairach used distinctive points of reference such as inscriptions, groups of skulls, doors and manholes. He then measured the angles and distances between those points — the same principles he later applied in his 3D plan of brain coordinates.

In 1943, the two junior doctors passed the map to a commander in the French Resistance, Colonel Henri Rol-Tanguy. The macabre guide gave him subterranean proximity to the Nazi SS base and enabled him to coordinate the Battle for Paris (19–23 August 1944) from his underground headquarters, until the Allies entered the city on 24 August. After the victory, Talairach was awarded the War Cross, France's highest military distinction.

Pierre Bourdillon *University Claude Bernard, Lyon, France.*
Marc Lévêque *Beauregard Private Hospital, Marseille, France.*

CATACOMB NETWORK UNDER PARIS

A hand-drawn map served the French Resistance against the city's Nazi occupation in 1943.



Caroline Apra *University Pierre and Marie Curie, Paris, France.*
pierre.bourdillon@neurochirurgie.fr