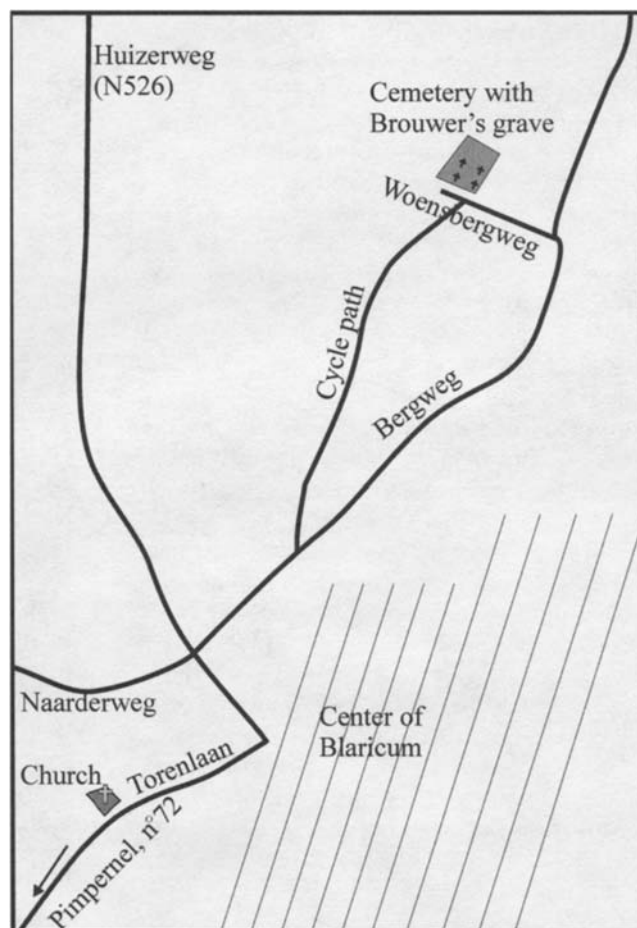# A Blaricum Topology for Brouwer

Dirk van Dalen

Does your hometown have any mathematical tourist attractions such as statues, plaques, graves, the café where the famous conjecture was made, the desk where the famous initials are scratched, birthplaces, houses, or memorials? Have you encountered a mathematical sight on your travels? If so, we invite you to submit to this column a picture, a description of its mathematical significance, and either a map or directions so that others may follow in your tracks.

One hundred years ago, L. E. J. Brouwer settled in one of the most attractive Dutch villages, Blaricum. The village had a reputation for undisturbed landscapes, for artists, and for experiments in social communes. One of these communes, the Christian Anarchists, was led by the charismatic Professor Van Rees. When this commune fell apart, Brouwer bought part of the land and asked his friend Rudolph Mauve (son of the famous painter Anton Mauve) to design a small cottage for him. The cottage, called "the hut," was ready in 1904. In that year Brouwer and his bride Lize moved in; they remained faithful to the hut and Blaricum for the rest of their lives.

The property contained some rem-nants of the old commune (e.g., a ro-tating "tuberculosis" hut). In the course of time Brouwer added some small buildings (e.g., the Padox). In the 1920s he bought a neighboring villa, *De Pimpernel* at the Torenlaan. In 1925–26 the Hut and *De Pimpernel* were the center of the Dutch topological school, with Alexandrov, Menger, Newman, Vietoris, and even Emmy Noether as short-term visitors.

The village, and the whole area, called *Het Gooi*, were for a long time the home of a rich variety of artists (e.g., Piet Mondriaan); it also attracted the attention of well-known Dutch architects. Even today, the village offers a panorama of original (small) farm-houses, interesting eccentric houses,

Map of the center of Blaricum, showing the cemetery (above) and the Torenlaan (below), where Brouwer lived.

Save Brouwer (†)

It is a perfectly common grave in the Municipal Cemetery at the Woensbergweg in the northern part of Blaricum. The austere stone carries the name L. E. J. Brouwer, 1881–1966; the grave is flanked by that of Mrs. Brouwer-De Holl. Nothing indicates that here the greatest Dutch mathematician since Huygens has been laid to rest.

"Yet," says Brouwer's biographer, Prof. Dr. Dirk van Dalen, an Utrecht philosopher, "this grave is a modest place of pilgrimage for insiders, in particular foreign mathematicians, who know how in the beginning of the twentieth century the budding Dutchman put a bomb under traditional mathematics. Last year Brouwer's old wooden cottage (the 'hut') was torn down without so much as an apology—to make place for a good-sized villa—the grave is the only trace that is left of the great mathematician."

And that, as the seriously worried Van Dalen reports, could soon also be a thing of the past. After some inquiring he found out that both graves had fallen to the town of Blaricum, as the fees had not been paid for a long time. "The graves could be removed. That would be terrible after the loss of the hut."

Van Dalen has taken the Brouwer case directly to the mayor himself, who happened to be a former math teacher, and thus had some affinity with the matter. Van Dalen: "In the meantime he has told me that he was prepared to help to resolve the matter."

In the end, however, it is the town council that decides. And so Van Dalen has this week put a letter in the post, in which he explains once more the cultural-scientific interest of the Blaricum man who died in 1966. "Blaricum," he concludes, "can justifiably be proud to have counted a scientist of the Gauss and Newton class among its inhabitants. It is unthinkable that Cambridge or Göttingen would give up the graves of Wittgenstein or Gauss."

Van Dalen asks the council in the letter to find "ways to preserve this cultural-historic monument for the Netherlands." How exactly this should be done is not yet clear to the Utrecht philosopher. "For the moment the thing is to prevent its removal," he says.

Then head of the external services of the town of Blaricum, Waalman, also responsible for the Municipal Cemetery, with unmistakable reluctance fishes the relevant card out of the card-index box. Brouwer, L.E.J., which is indeed lot J 32. The grave reverted to the town in 1994, he reads out. The removal could therefore take place. But there is no such decision, and the service has at the moment no plans of the sort. Anyway, the council would have to approve such plans.

That is why he, as the person in charge, has not yet heard about the matter of the grave." That will probably come in due time."

Martijn van Calmthout

Red Brouwer (†)

Een doodgewoon graf is het, op de Gemeentelijke Begraafplaats aan de Woensbergweg in het noorden van Blaricum. L. E. J. Brouwer staat er op de sobere steen, 1881-1966, ernaast het graf van de in 1959 overleden mevrouw Brouwer-de Holl. Dat hier volgens de kenners de grootste Nederlandse wiskundige sinds Christiaan Huygens rust, blijkt nergens uit.

Toch, zegt Brouwers biograaf prof. dr. Dirk van Dalen, filosoof te Utrecht, is dit graf een bescheiden bedevaartsoord voor ingewijden, buitenlandse wiskundigen vooral, die weten hoe de piepjonge Nederlander begin twintigste eeuw een bom onder de gevestigde wiskunde legde. Sinds vorig jaar op Torenlaan 70 zonder pardon Brouwers oude houten woonhuis ('de hut') is gesloopt – om plaats te maken voor een forse nieuwbouwvilla – is het graf het enige spoor dat nog van de grote wiskundige rest.

En dat, meldt de hevig verontruste Van Dalen, kan binnenkort ook wel eens verleden tijd zijn. Bij navraag ontdekte hij onlangs dat beide graven aan de gemeente Blaricum zijn vervallen, omdat de grafrechten al lang niet meer waren voldaan. 'De graven kunnen zo geruimd worden. Dat zou na het verlies van de hut verschikkelijk zijn.'

Van Dalen heeft de zaak-Brouwer met de burgemeester persoonlijk opgenomen. Die bleek oud-wiskundeleraar en had dus van nature enige voeling met de zaak. Van Dalen: 'Inmiddels heeft hij me gezegd de zaak wel te willen proberen te redden.'
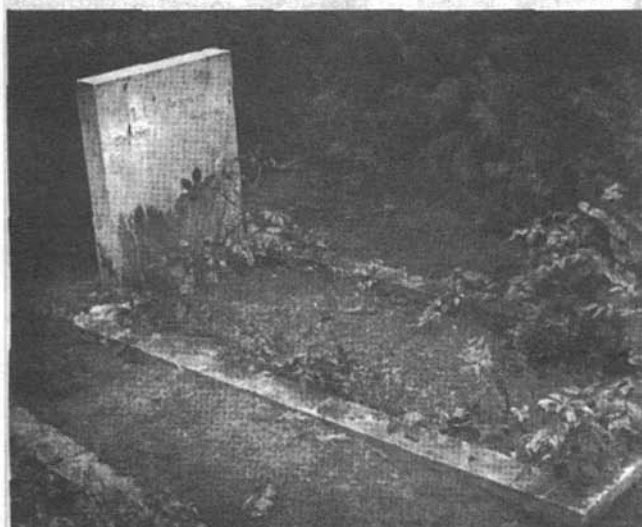
Uiteindelijk is het echter de gemeenteraad die beslist. En dus heeft Van Dalen deze week een brief naar de Gooise gemeente op de post gedaan waarin hij nog eens het cultureel-wetenschappelijke belang van de in 1966 overleden Blaricummer uiteenzet. 'Blaricum', besluit hij, 'kan terecht trots zijn een geleerde van het formaat van een Newton of Gauss onder haar bewoners te hebben geteld. Het is ondenkbaar dat Cambridge of Göttingen de graven van Newton of Gauss zou opgeven.'

Van Dalen vraagt in de brief de gemeente 'wegen te vinden dit cultuurhistorische monument voor Nederland te behouden'. Maar hoe dat precies zou moeten, ook financieel, weet de Utrechtse filosoof nog niet. 'Het gaat er nu om een eventuele ruiming te blokkeren', zegt hij.

Hoofd Waalman van de Buitendienst van de Gemeente Blaricum, tevens verantwoordelijk voor de Gemeentelijke Begraafplaats, haalt met hoorbare tegenzin de betreffende kaart uit de kaartenbak. Brouwer, L. E. J., dat is inderdaad perceel J 32. Het graf is al in 1994 vervallen aan de gemeente, leest hij voor. Er kan dus inderdaad geruimd worden. Maar een ruimingsbesluit is er niet en de dienst Buitendienst heeft momenteel ook geen plannen in die richting. En dan nog zou de gemeenteraad die eerst moeten goedkeuren.

Vandaar, waarschijnlijk, dat hij als verantwoordelijke de burgemeester nog niet over de grafkwestie heeft gehoord. 'Dat zal dan nog wel komen.'
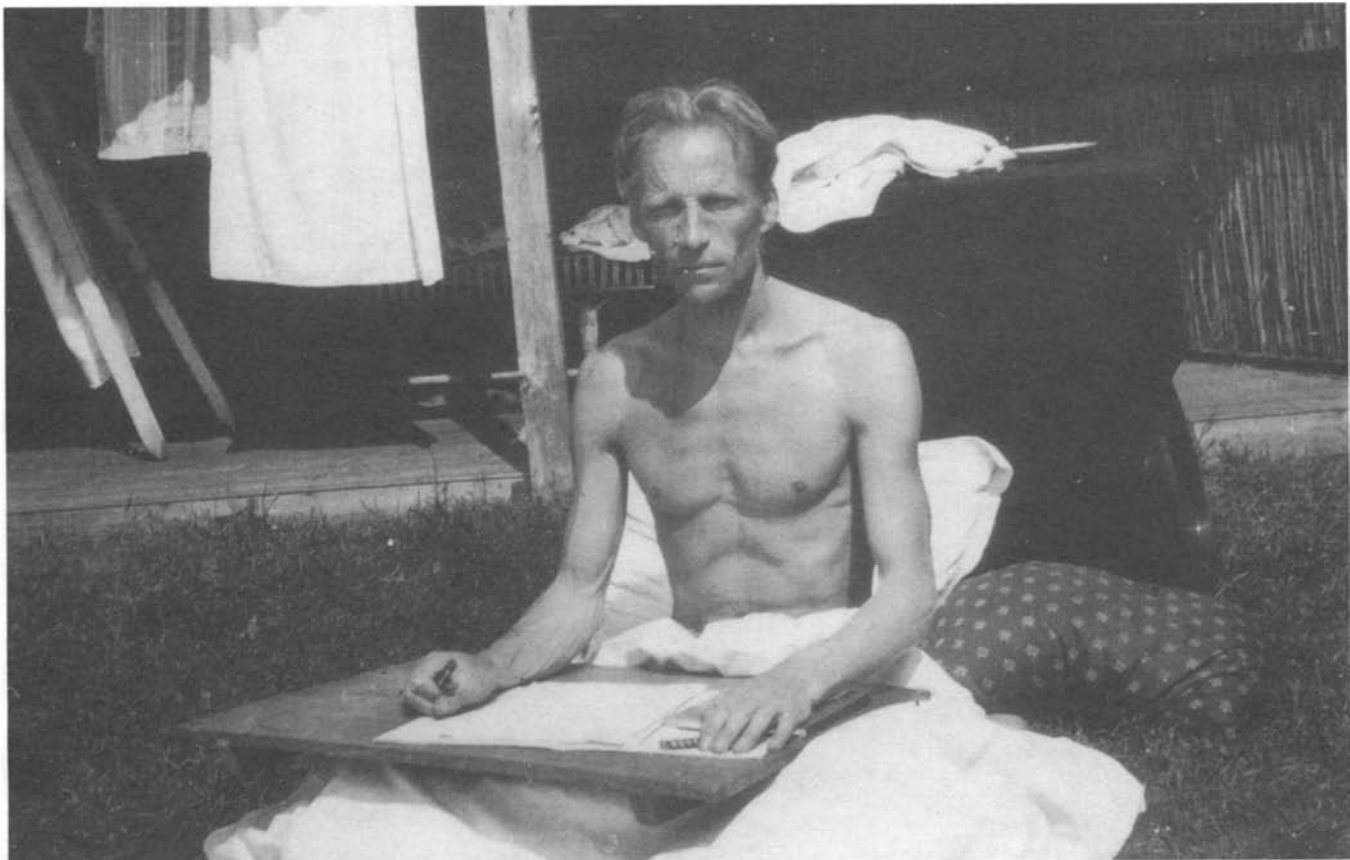
Martijn van Calmthout

Brouwers graf in Blaricum.   FOTO THOMAS SCHLIJPER

Copy of the original newspaper article.

A cottage designed in 1904 by Brouwer's friend Rudolph Mauve. It was always referred to as the hut.

Brouwer at work in his Blaricum place (Brouwer Archive).

"Pimpernel," the villa in Blaricum, adjacent to the hut.

A small structure on a rotating base that could follow the sun. These little houses were often used by tuberculosis patients, hence the name "TBC hut."

"The Padox," a prefab house, used for guests.

and opulent villas in the pre-war style. In 2000, Brouwer's hut and the other small buildings fell victim to property developers; fortunately *De Pimpernel* escaped the demolition crews.

The fate of the hut raised fears that Brouwer's grave, for which the lease had run out, could also be cleared out. The national press voiced its concern (see inset), and the town of Blaricum acted with a great sense of responsibility; it decided to preserve the graves of Lize and Bertus Brouwer and to care for the graves. The Dutch mathematical community (represented by the Royal Dutch Mathematical Society) and the University of Amsterdam acted fittingly by placing a modest memorial—a glass plate etched with the text "Luitzen Egbertus Brouwer, Mathematician-Philosopher. Father of the New Topology. Founder of Intuitionism," followed by a text in Brouwer's handwriting etched into the glass plate.

A bus from the train station in Hilversum takes the visitor to the center of Blaricum, from which it is a 10-minute walk to the cemetery. For hikers, there is a path round the IJsselmeer, the Zuiderzeepad, which passes by the cemetery (see map).

More historical information on Brouwer can be found in my biography *Mystic, Geometer and Intuitionist: The Life of L.E.J. Brouwer.* Vol 1. *The Dawning Revolution*; vol. 2, *Hope and Disillusion*, Oxford University Press, 1999 and 2005, resp. The unique photographs that accompany this contribution are by Dokie van Dalen.

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