VI

History’s scars—a scientific controversy...
in 1965

Julia claimed priority on iteration and got it; Fatou died without knowing that he would perhaps be recognised at last for his scientific merit; German mathematicians were somehow reinstated in the international scientific community; Julia, then Montel, were elected science academicians; German science was decimated (we caught sight of this with Hausdorff’s suicide and Siegel’s move to the United States, where he published the article [Siegel 1942] mentioned above), and this was a prelude to the start of a new war which tried and divided French mathematicians as it tried and divided the population. After the Liberation, the community started up again, not forgetting its antagonisms but without speaking of them, so that they are today forgotten. Nevertheless, this community is not, and never was, monolithic.

Still concentrating on our surviving protagonists, Julia and Montel, we shall see that the scars caused by the resentments coming from the time of the great war and the great prize, which we discussed earlier, were still likely to reopen... half a century later.

We have seen that the first Julia set appeared in Fatou’s Note [1906d], when Julia was 13, and before normal families were invented. Afterwards the Julia set was defined more generally (as the set of what Montel himself called irregular points) in the independent work of Fatou and Julia in 1917.

It is sometimes said that it was Mandelbrot who ensured immortality for Julia’s name by attaching it to the set which now bears that name. It is true that it could have been called “Fatou set” and its complement “Julia set” instead of the opposite. However the terminology seems to have been established long before the invention of fractals. It was the subject of a controversy, but between Julia and Montel, more recently—but still, before the invention of fractals.

A question (that has already been raised at the end of Chapter II and invoked again in §V.8) is still unanswered: we know nothing about the relationship between Fatou and Julia. We know a little more about that between
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Julia and Montel. This is our focus here, where as in Chapters I and II, the Academy of Sciences will be the main scene of our study.

We start by examining the trajectories of Julia and Montel (between 1918 and 1965); then we consider their relationship, through, on the one hand, a scientific discussion, in 1932, of which written notes were kept, and on the other hand their confrontation in an election at the Academy of Sciences in 1934—where we cite the great influence of Émile Picard, the revolts of Henri Lebesgue and the surprising success of René Garnier. This framework being set up, we shall come to the 1965 controversy, which was induced by a text Paul Lévy had to write for the third centenary, in 1966, of the Institut de France. The feeling one might have that Julia’s career and recognition had been advantaged by his status as a disabled hero, will find here explicit corroboration.

VI.1 The protagonists, from 1918 to 1965

Gaston Julia

After the 1917 Bordin Prize and the 1918 Great Prize of mathematical sciences, Julia was awarded three more prizes of the Academy of Sciences, the Francœur Prize in 1926, the Poncelet Prize in 1928 and the Petit d’Ormoy Prize in 1931. He was elected a member of the Academy of Sciences in 1934. He was already a member of the Pontifical Academy.

Digression (Julia at Zentralblatt and Compositio). Julia was also a member of the editorial board of Zentralblatt für Mathematik, from its foundation in 1931 through to the end of the war and beyond, even when, after the removal of Levi-Civitá, an Italian member of the board with a too Jewish name, in 1938, Neugebauer asked for and obtained the resignation of (almost) all the non-German members, Harald Bohr, Hardy, Tamarkin, Veblen, and so on, and of reviewers, like Davenport. See [Remmert 2000].

He was a member of the (over-abundant) editorial board of Compositio mathematica, “this fundamentally international journal” [ce périodique foncièrement international] and one of its four “administrators”, from its first issue in 1935, through to beyond the republishing of the journal after the war (even after Doetsch, Feigl and Süss left, refusing to participate in a non-completely Aryan enterprise). See [van Dalen & Remmert 2006] for the history of this journal.

1 See §VI.4 for some remarks on the difficulty of writing a biography of Gaston Julia.

2 On Julia’s collaboration with Zentralblatt during the war, see [Audin & Schappacher 2010].