Russell’s discussion of analytic philosophy in his popular History begins on a surprising note: the first analytic philosopher he mentions is ... Weierstrass. His further remarks – in which he discusses Cantor and Frege, singling out their work in the foundations of mathematics – indicate that he thought that the origin of modern philosophical analysis lay in the elaboration of modern mathematical analysis in the nineteenth century (cf. Russell 1972, 829f.). Given the markedly different meanings attached to the word “analysis” in these two contexts, this juxtaposition might be dismissed as merely an odd coincidence. As it turns out, however, modern philosophical and mathematical analysis are rather closely linked. They have, for one thing, a common root, albeit one long since buried and forgotten. More important still, and apparently unknown to Russell, is the circumstance that one individual was instrumental in the creation of both: Bolzano.

Russell’s account could easily leave one with the impression that analytic philosophy had no deep roots in philosophical tradition; that, instead, it emerged when methods and principles used more or less tacitly in mathematics were, after long use, finally articulated and brought to the attention of the philosophical public. A most misleading impression this would be. For right at the beginning of the reconstruction of the calculus which Russell attributed to Weier-

* I would like to thank the Government of France, Ministry of External Affairs, and the Social Sciences and Humanities Research Council of Canada for financial support.
strass we find Bolzano setting out with great clarity the methodology guiding these developments in mathematics – a methodology which, far from being rootless, was developed in close conjunction with Bolzano’s usual critical survey of the relevant philosophical literature. But not merely that: for Bolzano also put this methodology to work with considerable skill and precision, developing many of the central elements of the new mathematical analysis while Weierstrass was still in short pants. Far from an unwitting carrier of modern philosophical analysis, Bolzano’s mathematical research was just one of several quite conscious applications of it in his thought.

Bolzano’s influence on Weierstrass and his circle – and thus, at second remove, on Russell – has been firmly established.¹ There is good reason, then, to include Bolzano in the history of analytic philosophy and not just as an isolated, uninfluential precursor (§ 6). My main concern here, however, is not the transmission of Bolzarian philosophy, but rather its roots, in particular the question of why Bolzano thought that both philosophical and mathematical analysis were ripe for reform. My discussion begins in earnest with Descartes (§ 3), who stands close to the beginning of the modern evolution of the two analyses. Before this, I present a sketch of some earlier developments (§ 2).

§ 2

The ancient method of geometrical analysis, we are informed by Pappus (who also furnishes us with a “Treasury” of examples of the technique), is that of the “solution backwards”:

[I]n analysis we assume that which is sought as if it were already done, and we inquire what it is from which this results, and again what is the antecedent cause of the latter, and so on, until by retracing our steps we come upon something already known or belonging to the class of first principles.²

Synthesis, on the other hand, is the solution forwards, proceeding