What to do with Kant’s philosophy of geometry in the aftermath of the discovery of Non-Euclidean geometries? This paper aims at suggesting that a revision of Kant’s account of imagination and of the activity of schematism in mathematical reasoning might make possible to approach non-Euclidean geometries within his system. My main claim is to suggest that Non-Euclidean geometries could indeed have been thinkable to Kant, in effect, if he gave imagination at large more procedural latitude, while keeping separate metaphysical and epistemological considerations on the nature of space and of mathematical objects. To re-interpret the philosophical uses of transcendental idealism doctrine is key to this project, as well as to appreciate both the wealth and the shortcomings of Kant’s understanding of arithmetical concepts regarding the category of quantity.

In the first part of this paper, I discuss Kant’s commitment to Euclidean geometry, vis-à-vis the doctrine of transcendental idealism. I defend, in line with Allison (Kant’s transcendental idealism: an interpretation and defense, 2004), that Kant’s transcendental idealism project should be interpreted first and foremost in epistemic rather than in ontological terms, in contrast with transcendental realism; also, that Kant’s ideality of space doctrine can resist the failure of the “argument from geometry”, and lastly, I contend that transcendental idealism as a metaphilosophical position - and not an ‘alternative ontology” - may be suggestive as such of a privileged viewpoint for considering both Non-Euclidean geometry and Euclidean Geometries. From that
metaphilosophical perspective, we could be able to contemplate the operational need for a mediating faculty such as imagination, in a higher degree of autonomy then what Kant suggests in his oeuvre, and in line with the maker’s knowledge argument tradition. Given formal constraints, such faculty could make conceivable those different geometrical models in a rigorous way, allowing us then to compare, contrast and discuss their meaning and the opportunity for their applications. I turn then to Makkreel’s interpretation of Kant’s philosophy of imagination in the overall context of his oeuvre (Imagination and Interpretation in Kant, 1990), and take seriously his suggestion that the faculty of imagination, expanded by reflective powers in the Critique of Judgment, may be developed towards a theory of interpretation, in which the transcendental viewpoint is mainly orientational - rather than foundational. I take the next step to consider it in mathematical terms, and discuss the case of Non-Euclidean geometries and Klein’s Erlanger Programme.