

Tatiana Arrigoni

K. GÖDEL'S PLATONISM IN THE LIGHT OF E. HUSSERL'S PHILOSOPHY

A Brief Analysis

Abstract

In this paper I will sketch a brief introduction to Kurt Gödel's platonistic philosophy of mathematics. I'll first take into account some claims of Gödel in Gödel [1944], [1947/64], [1951] and [1953/59].

In these writings one does not find a systematic philosophy where Gödel's various views are worked out and hang together with one another. Instead Gödel has some basic points he comes back to repeatedly, i.e. a kind of realism with respect to mathematical entities and concepts, the claim that there is an analogy between mathematics and other sciences, the characterization of mathematical knowledge as founded on a special kind of intuition or insight, which is the basis for mathematical theories.

It is known that Gödel was studying E. Husserl's phenomenology since 1959. Gödel himself explains, in a lecture published after his death (Gödel [1961]), in which sense phenomenology could be illuminating with respect to philosophy of mathematics. To put it in other words, Gödel turned to Husserl for methodological reasons and found in Husserl's general philosophy a systematic framework for a number of his earlier ideas in the foundation of mathematics.

In this paper, I will thus also examine how Gödel's own philosophical ideas are connected with Husserl's ones. I will first go through very quickly some basic ideas in Husserl and see how they are interconnected to one another and then turn back to Gödel.

I will conclude with some general remarks concerning Platonism, i.e. mathematical realism, in the light of phenomenology. I will argue that Gödel's latest accounts of Platonism (Gödel [1964], Gödel [1961]) reveal his attempt to formulate a *critical realism* where mathematical knowledge and its (phenomenological) analysis play a central role. Phenomenology moves from mental processes and, omitting ("bracketing") every kind of previous assumptions, describe them as they are performed. In this way phenomenology comes to bring out the *experiential reality* not only of perceptual objects but also of "ideal" or abstract objects, as those which mathematics deal with. Moreover, it points out that abstract and perceptual objects are both known as something independent of our conventions and constructions. In this way phenomenology doesn't place mathematical objects outside of all possible experience and then try to explain how we come to know them. Moving rather from mathematical knowledge as we've experience of it, phenomenology suggests how to elaborate a coherent epistemology, which gives both mathematical objects and mathematical knowledge their due, without making unjustified assumptions.