The mathematics of Lajos Szabó

by Miklós Abért

The first time I met Lajos Szabó he was in the University Library. I was seventeen. He looked pale and dusty, a hidden archive kept in existence only by the ancient religion of librarians. Perhaps no one has looked at him before me – but I can now open him and learn his time-worn secrets. As I was holding him in my hands, he rapidly heated through easily winning the drag race against my rockets (I was reading a lot of science fiction at the time) and then, emitting a smell of burning metal, against my thoughts as well.

That is what I still feel about Szabó. There is nothing redundant or incidental about him; the white heat of his intensity burned out all cinder or lower forms of expression from his language.

This may sound harsh and merciless, as if burning completely destroyed the lower forms. But real form, and poetical form too, yearns to burn up in the flames of a higher form. It is not destruction but fulfillment. Here I have to add that even in some of the best drawings of Szabó I feel a strong residue of passion, like oxidized ore, giving color to fired clay. The residue remains not even in the lines of the drawing, rather in the space surrounding and embracing the line.

In somewhat cooler (or perhaps even hotter!) words I could say that Lajos Szabó is *pinpoint accurate* and *axiomatic* to the core: a real mathematician. A poet, too, but a mathematician poet.

That is, if by *point*, we do not mean a recluse construction, atom-like and isolated from the rest of reality, but the point that measures itself on "the entire reality straining within one point", in the meaning of Béla Tábor.

If by *axiom*, we do not mean a concept that can not be divided further, the place where the researcher stops asking, something that can be used as a brick of Babel, to build a tower on a plain with its top in the heavens, but contrariwise: a place in the language that concentrates the core truths of an entire worldview, and forcefully repels everyone who does not question it again and again.

> *Among the attempts aiming to resolve the contradiction that arose (that an infinite set is equivalent to its proper part), there was one that held that one inevitably needs to further examine the notion of* infinity. *This attempt called our attention to the fact that the word "infinity" expresses a* negation. *Joining this attempt, we are now asking:* what *does the notion of "infinity" negate? Here, the word shows its content without hiding, and we can immediately respond (as soon as we had the courage and the ability*

to ask the question): "infinity" is the negation of finite.
The negation of "finite"! The word itself helps us again and points out the fact that "finite" is itself a pure negation!
So, pondering the notion of infinity in an axiomatic sense, we found that it is a double negation.[1]

As I read this text of Szabó, I immediately started to think about this: "what does *finite* negate then?" I felt a sudden, deep joy.

True double negation, you see, is not the same as the proposition. Darkness is the negation of light, but light is not the negation of darkness. The drama of double negation is that the negated root can not serve as the basis anymore, because of the chasm that negation created. Instead, the chasm becomes the basis, and through that, one can only reach a reflection of the original.

In this sense, mathematical infinity is a shadow or double negation of infinity, as happiness is of joy, church of faith and fixated memory of reality. Of course all to a different extent, and a different way for everyone.

The friends of Job, and at the beginning of the story, Job himself only experience God through double negation. This is what Satan negates, in his own way. Job's friends try to persuade him to return from negation to behind the well-defended hedge of double negation, but for Job, who is only satisfied with reality, this is not enough anymore.

What can reverse this loss of dimension? How can I search backwards, how can I summon the intensity that will ask the right question? How can I make sure that I am not hiding behind the walls of double negation in my most important positions?

1 Lajos Szabó, *Contributions to the Problems of Set Theory*, 1938.