Unthink the Zero!

by Christophe Kotanyi

Introduction

As we know, our loss of limits is closely related to capitalism. This is but one aspect of the question of the limits of modernity, of modernity which precisely proposes to set us free from our limits. I propose to cast a radical glance onto the question, in the sense of going to the roots, and I claim that they reach down to the foundations of mathematics, which is, of course, a difficult subject. But I suggest that we cannot spare ourselves that effort. In what follows, I attempt to articulate the question of the zero, which has conquered enough of our everyday life, of what Ivan Illich called the vernacular, to be familiar to everyone. The issue, in short, is that we have become accustomed to thinking of zero as a number, which it is not. Can we un-learn thinking of it as a number, or should we eliminate it? The present state of affairs seems to suggest the latter as the only way out.

The question of the zero involves a mathematical theory called transfinite set theory, which laid the abstract foundations of mathematics today. We will only allude to it here since going into it would be arduous. As the Greek geometer Euclid said twenty-three centuries ago, there is no royal road to mathematics, meaning no easy access. But we could use it as an example of how to address our question of the limits of modernity.

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1 A Non-Number

If it is true that capitalism operates by quantifying everything, first of all, time,[1] then getting rid of capitalism would require, in the first place, getting rid of the zero. Because without the zero, we can still count, but we cannot easily quantify or manipulate quantities with excessive ease. So, the question would be: how can we un-think the zero?

Now unthinking does not mean just deconstructing, forgetting, or forbidding. Because what you deconstruct, you can reconstruct, what you forget, you can remember, and thinking cannot be forbidden. Unthinking a concept would be more like when you are trying to find a certain address in the city, an address which turns out not to exist, making the search pointless. So, it is more proof of pointlessness than just proof of falsity or non-existence. It is more like undoing a wrong thought, taking it back by thinking it backward, the way you would undo a badly knit sweater, unbutton an ill-buttoned shirt, or back your car out of a dead-end, like getting rid, freeing yourself of a bad idea, dismissing it. And the zero, as we will argue below, has turned out to be, in many respects, a very bad idea, a hypnotic device worse than any addictive we know of.

We may remember here that the Romans did not use the zero. So how did they quantify? Because quantify they did. The army had units of a hundred soldiers each, the *centuria*. But that unit formed a well-defined pattern, so counting the soldiers was unnecessary, only to verify that the pattern had no gaps and excesses. This was not so much a quantification as what we might call pattern recognition, with a current though not entirely appropriate technical term. It is not so much a

1 Frank Engster, *Money as a Measure of Time*, Radical Philosophy Conference, Berlin 2015.

logical operation as an aesthetic one. And indeed, remember: the word cosmetic originates from cosmos, originally a military term denoting the well-ordered army.[2]

That would mean a concept of number which does not operate with the distinction between ordinality and cardinality introduced by Georg Cantor, indeed the very framework upon which he constructed his transfinite set theory, but of number as a pattern. Every number can be represented as a pattern. Only the zero cannot be represented as a pattern.

This may remind us of the ethnomathematician Claudia Zaslavsky, who showed in her book *Africa Counts* (1973) how African mathematics uses counting patterns rather than numbers. And I still remember my wonder as a child when being told that some so-called primitive cultures know only three words for numbers: *one, two, many*. Why? We may answer with a shrug: they are too primitive to count further. The reason I was told was different: they are convinced that anything you count will vanish into nothing.

This brings us back to Cantor, whose greatest achievement was to think up to its ultimate consequences, with exemplary rigor, the concept of cardinality, i.e., quantification relying on the distinction between ordinality and cardinality (number as a place in succession, as a placeholder, versus number as a quantity), and to show that it leads to an unsolvable contradiction. Here we have the one-to-many effect: numbers conceived of as either ordinals or cardinals turn out to be without existence, without being, to be mere operational tools, forms without shape, logistical tools violating elementary logic.

Unthinking the zero would mean recovering the concept of a number as a pattern. The introduction of the zero

2 Or the speaking order at the *symposion*.

has a history well documented by Jacob Klein in his *Greek Mathematical Thought and the Origin of Algebra* (1968). It coincides indeed with the rise of capitalism in the 17th century. Now reversing that process would, of course, have a price: the loss of European hegemony over the globe. But for those convinced that that hegemony has gone far enough, indeed too far, that price might be worth paying.

2 Thinking the Zero

To be more accurate, the story begins in the late 12th century, when young Leonardo, the son of the Italian businessman Bonaccio, sails to North Africa to learn the secret of the Arabs' art of computing. The secret lies in the zero, called *shfr* in Arabic, derived from Sanskrit *shunya*, the void. *Shfr* gave Italian *zefiro*, hence our *zero*, and *cipher* (Georges Ifrah, *Histoire universelle des chiffres*, 1981). *Liber abbaci*, the book Leonardo "Fibonacci" (Bonaccio's son) published 1202, after his return to Pisa, will show with spectacular examples how the use of the zero enables one to write and to manipulate numbers as large as one may wish. We may easily imagine the enthusiasm the book raised among the businessmen of the time.

But *shunya* also denotes a key concept in Indian philosophy, similar to Parmenides' concept of pure being as the pure void, since free of all predicates; or Meister Eckehart's famous formula for divinity as sheer nothing, meaning un-graspable for any instrumental purpose. The instrumentalization of this void in the shape of the zero will lead to the instrumentalization of infinity, a key concept in Christian theology.[3] This story, in turn, might be traced to Nicholas of Cusa's *Learned Ignorance* (1440), where he introduces infini-

3 Even though a positional numeral system without the zero, also leading to infinity, is just as easy to conceive, see below.

ty as a mathematical metaphor for absolute being: the infinite circle whose center is everywhere and whose periphery is nowhere.

Secularization might then be another instance of the effect we might call, with Lewis Carroll, the *boojum* effect: counting and conceptualization as repression of being under its functionality.

3 Productive Womb

Cantor's conceptualization of infinity as transfinity — infinity beyond infinity — begins, in a sense, with the ordinalization of the cardinals. By adding the zero at the beginning of the series of cardinal numbers, he replaces one as the first cardinal. As Klein reports, this procedure was introduced by the English mathematician John Wallis in the 17th century.[4] But whereas the zero can still be thought of as the result of an operation with numbers, as what remains after removing a positive, well-defined quantity, say the three apples from my basket, namely nothing; as a *number*, it defies common sense. Nothing is not a number, and the month has no day zero. As a number, as the quantity zero, or as the first member of succession, we might see it as an ill-formed formal functionalization of the concept of creation out of nothing, again a key concept in late Christian (nominalist) theology. Again, we recognize here a favorite topic in the discourse of capitalism, the creation of wealth out of nothing and the associated practices cheerfully transgressing the limits of common sense.

Thinking the zero, thus, one of the most fateful and fatal achievements of European civilization turns out to stretch over at least five hundred years. We may only hope that its unthinking takes less time as one step toward what Ivan Illich

4 After the Flemish mathematician Simon Stevin had turned the one into a number, into the first cardinal, into a quantity (16th century).

called the urgent task of *deschooling society*.

4 Absurd Multiplicity

The recovery could begin with understanding how the introduction of zero turns the idea of multiplicity into an absurdity. The zero, as it were, contaminates numbers with its unreality, with its nothingness. This begins with etymology: *shfr* is the source for zero and also for cipher, for digit, and also for a secret code. Unthinking the zero would then begin with realizing that thinking the zero means unthinking the numbers. Shortly before the birth of set theory, Richard Dedekind asks: what are numbers? and answers: mere gaps in rationality. We might say with Ivan Illich: the decontamination should begin with revealing how the contamination occurred in the first place.

For set theory, multiplicity is a "heap", a container indifferent to its contents. Whether the set contains apples or bombs is indifferent, the main thing is its structure, which determines how it functions. What we call a number in this sense was still an absurdity for the Renaissance: ab-surdus, deaf and un-speakable. Indeed, most numbers in this sense cannot be spoken nor heard and not even computed. Zero comma three, three three, and so on would still be okay, but it is impossible to spell out the square root of two as a number, only as an algebraic operation. And most of them cannot even be said as such. Consider the so-called “real” numbers. We know that they are and that they must be somewhere, but we do not know what they are, where they are, or how big they are. Because most of them cannot even be grasped by a mathematical formula, they cannot be computed by any means. This is their utter paradox: numbers in this sense are pure “bigness”, pure cardinality, and most of them lack precisely this “bigness”, cardinality.

And here, we may remember that people usually count in their first language, called their mother tongue. Again, Illich notes that the mother tongue denotes an artificial language, as opposed to the vernacular.[5] We may thus surmise the configurational number (the number as a pattern, as a configuration instead of just a quantity) to be associated with the vernacular, and recapturing it would call for recapturing the vernacular. More than a conceptual task, this would be a political one. The zero would be proper to the circuits of power and the configurational number to life. The zero would secure the circulation of power and, to speak with Marx, produce an economy as a political power.

5 A Secret Weapon

This brings us to zero as a secret weapon of capitalism. The instrument of secrecy is concealed as openness. Of subtracting oneself from attack by obscuration. The zero would then be the device of hidden warfare. Of occult transparency. Of production usurping the role of generation, of productivity, of fertility. To summarize: unthinking the zero would require revealing its political dimension, unmasking it, of tarnishing its conceptual mask. As Marx would say: of exposing its metaphysical disguise.

Interestingly, *zefiro* stood first for the void uncovering meaning, giving sense to a hidden message: the holes in a screen superimposed on a coded text, showing the meaningful characters. This shift is most telling. Unthinking could then be more like an un-shifting, a mere shifting back. This shift is intimately linked to the shift from loud to silent reading made possible by the blank spaces between words, as documented by Ivan Illich. In a sense, the introduction of the zero secures

5 *In the Vineyard of the Text*, 1997.

that shift and extends it, giving it a new dimension.

6 The Vernacular

The vernacular dislikes algorithmic thinking. Proper things have a proper name, including numbers. *Zero Zero Seven* is a covert agent, and the zero stands for improper things. This is, so to speak, the moral aspect. As the French still remember, the number is close to the name. Twenty is a number, a name, but two hundred is an operation with numbers, with names, two times a hundred, a manipulation always subject to doubt. The zero turns numbers into operations, names into algorithms, and language into an arbitrary logistic. Numbers are neither true nor wrong, but operations can be. Words are true, but their combination can be a lie. The vernacular does not combine words or numbers; it tells them in a narrative, "hundred and hundred". And the narrative cannot be true or false; it is good or bad, like a tune or a memory.

Unthinking the zero would not mean eliminating it but revealing how it came to be, to lift the curtain on its backstages. Ivan Illich's recovery of the vernacular, of the moral sense of the Romans, might turn out to have been one of the first steps to explaining the Romans' mistrust of the zero. This mistrust seems to have been widespread in Antiquity. Modernity might just be a forgetting, deliberate or not, of the original mistrust of the zero.

7 A Disease

Once released, the zero contaminates everything with its unreality. Language turns empty, the world becomes a void, and modernity becomes a sick man ignoring his disease. If it is true that this virus was released in India in the 5th century as a political device to finish once and for all with Antiquity represented by an outdated Roman Empire, then it spread as

gunpowder did through Europe after it was introduced there by the Muslims. And the zero grew like urbanization did, as did the production of non-spaces in the middle of rural spaces, which were declared wasteland.

An apt therapist might diagnose amnesia as the result of the repeated traumatic shocks of history and prescribe the study of history as anamnesis for the cure. This would be the medical aspect. From the debacle of the Crusades to the mutation of Christianity into a robbers' association or, at best, into a limited liability company, one shock after the other, with all the symptoms of a wounded narcissism, that of warring nations domesticated and humiliated by culture, a culture operating with the virus zero. (I am alluding here to Nietzsche's accusation against the Roman Church, in *Twilight of the Idols*, that they have pacified the Barbarians who were invading the Roman Empire by contaminating them with the virus of nihilism, with resentment: "making the beast weak by making it sick"). Again, this exemplifies Illich's *corruptio optimi quae pessima*, the corruption of the best into the worst.

The full story would then tell how this cleaning agent of history backfires and favors the proliferation of a virus called "humanity", destroying all in its passage.

Unthinking the zero would also mean thinking to the end of Schumpeter's "creative destruction" and Béla Hamvas' "everything is in a crisis, except capitalism, because capitalism lives on the crisis" (Budapest 1945): capitalism as a *potlatch* and as an eschatological factor, driven by an empty signifier disguised as a number, as a shadow of emptiness (a second-order nothing), turning economy and politics into opportunistic diseases of a world at the brink of eternal crisis.

8 Gender

Suppose we accept Lacan's symbolism of the 0 and the 1 as associated with the feminine and the masculine principles, respectively. In that case, we might ask what their instrumentalization as numbers does to these principles. For Illich, "sex" comes from Latin *secare*, to cut, and the modern content of "sex" would indicate a split from a fictive neutral state, while "gender" denotes complementarity. Here we have a succession, the 1 being after the 0 in the sequence of numbers, and a quantification, the 1 being "bigger" than the 0, negating both symbolism and complementarity, and a homogenization again in the sense of neutrality.

Hence, we might consider tracing the elimination of "gender" in favor of "sex" also to the introduction of the zero, recalling the Marxist thesis according to which the homogenization of the "sexes" would serve primarily the purpose of producing a surplus of the workforce at the mercy of capital, as a strategy to neutralize what Marx called the "tendential fall of the profit rate" proper to capitalistic dynamics.

But this would call for further analysis, first of all of the dramatic "over-productivity" of this substitution of "sex" for "gender": of society as a multiplicity as amorphous as the mathematical set, instead of community relying on a "template"; of a science of nature and society relying on the standards of measurement meter-kilogram-second and money;[6] all of these, in turn, drawing on the unreality of the zero and contaminating all measurement and quantification with this unreality.

6 Frank Engster and Andreas Schröder, *Mass und Messung*, ZKSP 2014 1 (1), 109-147.

9 From Using to Thinking the Zero

According to Paul Saenger,[7] the introduction of Arabic digits, hence the zero, in Europe was related to word separation around the 10th century, again related to the translation of Greek texts from Arabic. Thus, the zero served here, just like word separations, merely as a graphic aid to reading. However, the resulting transformation of the concept of "word" seems to have brought along also a transformation of the concept of number and a shift from just using to thinking the zero. This might be seen as part of nominalist thinking since the Middle Ages, eventually leading to modern science and positivism.

In this picture, word separation generates words as visual patterns more than sounds. The positional system also seems to have aimed first at a representation of number as a pattern that is easy to grasp visually, hence easy to manipulate (Gerbert, later Pope Sylvester II, 10th century, quoted by Saenger). Yet just like words made of alphabetical characters, numbers made of digits differ from graphic patterns. They are rather encoded images, much more like our digital images; indeed, we might say, their very precursors. These numbers, like these words, are thus, in a sense, more like cryptograms than patterns.

Words as visual patterns composed as a succession of fixed elements drawn from a rather limited supply do not seem to have the same degree of "reality" as a graphic pattern, hence the notion that words are "just" this pattern – and so are the concepts they denote.

In other words, "thinking the zero" seems part of our history of "thinking language" in a close interplay. "Unthinking the zero" will then require rethinking our whole concept

7 *Space Between Words - The Origins of Silent Reading*, 1997.

of language (and indeed our "thinking language" altogether instead of speaking it), more than just our mathematics.

Indeed, if one considers the introduction of the zero as a by-product of a transfer of cultures (from India to Europe via the Arabs) and the resulting theological debates, then the instruments proper to capitalism — stocks and their derivatives — will turn out to be of the same kind of unreality, or rather to claiming reality by turning autonomous, just like the new concepts of number and word are now seen as purely "formal patterns" made of arbitrary signs.

10 Number

The number as a pure multiplicity does not exist. It is an empty space, a void, a dummy, a substitute, an extension of the zero, generalized zero, zero in free-fall, its inertial, force-free movement, its *perpetuum mobile* violating the laws of being.

The configurational number is a comparison, an analogy: we here are like the fingers of this hand – in a precise mutual relationship. The accurate number is an accurate analogy: it says the richness of multiplicity. The configurational number says an excess of structure rather than its deficit.

The fictive number follows the law of addition, the configurational number of division: we belong together like the fingers of this hand, which does not obtain as their sum, but as their differentiation.

A number is also a name, a call, an invocation, a second-order call, of language calling language—of being calling being; instead of a void, the void of multiplicity at the shores of language also as a void. Unthinking the zero will then require thinking this call, number as language talking to language, a calling and answering, a structuring of language in an analogical network, in proportionality – number everywhere, not

just as a multiplicity, but also as a network of relationships similar to language.

11 Articulation

Once three is not quite the same as three times one. The former says a truth, the three is the one three, a "structural tautology" (Lajos Szabó, 1947). The latter, taken at face value, is a lie. The one is unique, and so is the three. Three is the one three, once three, a basic truth, the tautology of being saying the "structure" of itself.

When we say three times the one, we obviously cannot mean three times the same one, because the one is unique. One is one; this is the tautology of being. Before three times the one was two times the one. If the "first" one here is taken as something like the true one, the one true one, then the "second" one cannot be but some kind of copy, a substitute one. And with three times one, the third one can be either the copy of the first, a "first-order copy", or of the second. Three times one can thus be this or that, a first-degree three or a second-degree three.

The number as a pure quantity is thus a lie, and the number as a pattern is an articulated truth. Twelve is three times four or four times three, and the difference is obvious at a glance:

The fours (the squares) here are not identical, nor are the threes, but are so only if we disregard their differences. The number as a pure quantity is pure fiction.

What does the commutation rule of multiplication, which says that "once three is equal to three times one", make abstraction of? Precisely of the inner structure of the numbers, of their articulation. Truth is articulated. "Articulated truth" is a pleonasm, or the tautology of truth.

Language is articulated (language is truth, or the articulation of truth, its "articulated-ness": speaking the truth is "articulating" it), therefore, the number as a pure quantity is alien to it. The zero is the very principle of non-articulation. Unlike the one which is infinitely articulated, the point which points in every direction, each number which is finitely articulated, the zero has no articulation. This alienation from truth explains the "magnificent isolation" of mathematics working with the zero and also its alienation from the "vernacular", from the spoken words.

The one is "not like the other numbers", but, in a sense, precisely opposed to the zero. The one says Unity, the whole, everything, and the whole is infinitely articulated, it is "more than the sum of its parts" (Aristotle), this "more" being precisely its articulation. The "sum" would be "one plus one plus one...". The number as a pattern is "more" than just a quantity or a placeholder (a cardinal or an ordinal), precisely in this sense of articulation. Without its articulation, it is a lie, its articulation makes it true. Four is not just twice two. A car behaves very differently from a bicycle. Ignoring this distinction assimilates the bicycle and the pedestrian to the car and produces a traffic system closer to a permanent state of war than an urban way of life.

To summarize: at the logical level of language, words and numbers are networks within networks. At the logistical level, that of instrumentality, they are isolated quantities. The transition occurs through the zero, which turns Continuity, the One, Being into an instrument, the principle of separation.

12 The Zero and the Infinite

The zero thus usurps the place of the one as the counterpart of the infinite. The one is infinitely articulated, and the infinite is the articulation of the one. The zero disposes of the infinite as the principle of articulation by reducing it to the petty infinite. The "petty infinite", Hegel's "schlechte Unendlichkeit", which we should perhaps read, if we trust Nietzsche, as "schlichte Unendlichkeit" (meaning petty, mean), is that whole which claims to be the sum of its parts. True infinity, as the principle of articulation, is a meta-articulation, a superior articulation. From there to the conundrum of Cantor's undecidable "continuum hypothesis", to the riddle of the transfinites, to infinity which "can and cannot" be supplied with an order, is but a small step. True infinity is "one step" beyond language and says the *ineffabilis*, the unspeakable.

The petty infinite is a surrogate, a "simulated" infinite, the endless reflection of the inarticulate one, of nothing, of the zero, thus nothing itself, ultimately equivalent to the zero ("of measure zero", as the mathematicians say). The zero turns the true infinite into the petty infinite, truth into a lie – not even a lie, the mere shadow of a lie. As such, it is nothing less than the seed of evil. Would that not be reason enough to mistrust it? To use it with the utmost caution, like its offsprings, the economy of "boundless wealth" and the physics of "boundless energy"? Lest evil grow all over?

13 Zero-free

The "configurational number" stands for articulation, and a zero-free position-value numeral system could stand for counting as distinct from quantifying. As the biologist Adolf Portmann remarked, our ten-based system is indeed natural in the sense of relying on a basic biological truth, that

we have ten fingers, ten thus being a digit like the others.[8] The zero turns it into a number, an artificial construct using placeholders instead of digits. The digit ten (write it "t") for our tenth finger (Latin *digitus* for finger) turns now into a number composed of two placeholders, or to be more precise, of a digit and a non-digit – the non-digit which has turned digits into placeholders, into ciphers, into non-digits.

The positional system with the zero seems to have been developed in India, though with a deep awareness of the true nature of the zero. We want to free the positional system from this metaphysical reminder of the antinomies of multiplicity. The positional system without the zero is a symbolic expression of counting with our fingers rather than with the *abacus*. Ten is the tenth digit, our tenth finger, for which we may also show our ten fingers. To count further, like the children, we show our ten fingers, then one for eleven. To put this in writing, we write a 1 and then a second 1 to the left to indicate that we have already counted once ten, but this is not a digit, just an index, a pointer like the particle "the", meaningless without its substantive, like the predicate without its verb. As language philosopher Melchior Palágyi (the inventor of the four-dimensional space-time of relativity theory, 1901) noted, language, like our eyes, deploys a dual means to grasp a single reality.[9] "The cat jumps" uses two expressions — "the cat" and "jumps" — to speak of one action, the cat's jump. By seeing them as autonomous and making them into "words", the cat's jump is divided and recombined into "the cat" "jumps."

The characters to the left of the first digit are not digits. In zero-free counting, ten is followed by eleven up to nineteen and, well, let us call it "tenteen", then comes twenty-one. "Ten" is a digit, our tenth finger, whereas "twenty", "thirty," up

8 A. Portmann, *An den Grenzen des Wissens*, 1974.

9 M. Palágyi, *Neue Theorie des Raumes und der Zeit*, 1901.

to "tenty" are just prefixes, as meaningless without their digit as is the prefix "un" in "undo" without the "do". Then come the hundreds as second-order prefixes. The digit "t" disposes of the non-digit zero, showing it as superfluous, an excess over numbers, and supernumerary for counting. The zero-free positional system would then also help to recover the concept of number as an agglutinative reality (the prefixes and suffixes as inflections of the word) more than just a logistical tool — similar to the original language as the articulation of the primeval one.

We could then speak of the nine hundred tenty-one (9t1) nights and Ali Baba and his thirtyten (3t) thieves, disposing of 1001 and 40 as misleading artefacts using the zero, a *fake* digit, a non-digit, removing it from the operational, explicit level, but of course keeping it at the implicit, axiomatic level defining positionality. Writing, for instance, 10 implicitly assumes an infinity of empty spaces to the left as the very principle of positionality – also, writing this text assumes an indefinite sequence of possible characters to the right, as opposed to speech, which does not come as a sequence of separate sounds.

Like the configurational number, which recovers the concept of number as an articulation, as a symbolic expression of the richness of being, the zero-free positional system could be a step toward unthinking the zero and recovering the concept of counting as distinct from quantifying. The vernacular counts zero-free, as with dates and names. The 12th of July 1923 is a semantic hierarchy: 12 is a number, July is a name, and 1923 is a symbol, in this case, that of the Christian era. And while "Joe Smith" may be used as a dummy, many people called "Joe Smith" actually exist, but the zero, the placeholder made digit, the true dummy, does not exist. As Béla Tábor remarked, an original, healthy language like the Bible dislikes

the use of dummies and prefers to say metonymically "Israel", and "Jacob" instead of just "any nation", and "any person" as empty placeholders.[10] Our electronic technology resting on the on-off logic of Boolean algebra ought to be appropriately called "cipheral" instead of "digital", since it relies fundamentally on the non-digit zero, a cipher for the absence of a digit. One might even surmise that the latter's power comes, very much in the sense of black magic, from calling it a digit, from this misuse of language.

A zero-free arithmetic would still allow addition and subtraction as usual but set a limit to the free manipulation of numbers, show the artificiality of multiplication, and allow recovery of the notion of harmonic division, of division in proportion instead of an arbitrary division – recover the idea of multiplicity as the result of the natural division of being instead of an arbitrary addition. Half a year is still meaningful, but one nineteenth of a year would already sound more artificial, and half an egg is no egg. As Palágyi notes, an archaic language like the Hungarian still remembers that one eye is just "half an eye".

14 Conclusion

The vernacular follows Bertrand Russell's idea of the "logical types", the zero-free logic of the narrative, the logic of number expressing the richness of being. In contrast, the modern concept of number, which produces the limitless but arid economy, relies on the supernumerary element zero, which ended disrupting Cantor's set theory[11] and its consequent expression — resulting in mathematics resting on shaky foundations, the

10 B. Tábor, *A zsidóság két útja* (Jewry at the Crossroads), 1939.

11 Due to the collapse of the hierarchy of logical types, to the identification of "nothing" with its signifier, the meta-sign *zero* (Brian Rotman, *Signifying Nothing – The Semiotics of Zero*, 1987)

very image of modernity free not of its limits, but its sense of limits.

So, what should we do with the zero? As Martin Heidegger might have said: use it like you use your car or your fridge, but don't stick to it, remember that you can do very well without it, maybe even better. Since, as Ivan Illich said, "when I walk, I discover that I have feet."

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