Research Article

An Ontological Basis for Truth From Falsity

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Abstract I provide an ontological basis for any formal system that works with truth-values. To get to such a basis, I start with the notion of absolute nothingness, from which I construct a nothingness which is akin to the notion of an empty set in mathematics. Then I provide a formal system that its ability to produce symbols is an integral property and an inseparable part of its metaphysics.

Keywords Nothingness; Ontology; Truth-Values; Formal Systems; Naming; Reference; Infinity

1. Absolute Nothingness

Reduction of objects to simpler ones, and trying to get to the—metaphorical—indestructible atomic object is an essential part of our scientific endeavours. For instance, in mathematics, by using some primitive elements, we can generate varieties that are expressed in terms of these elements. Moreover, any meaning that is implied by the expressions that are generated in this way is characterized by the primitive elements. Such a computation, not only generates a multiplicity of varieties—produced by distinct primitives—but also, by going in from the other direction—starting with a generated variety—we can trace it back to the original primitives. This can further illuminate the structure of the variety under consideration. Examples include prime integers and addition; axioms of mathematical logic; the atoms of the chemical elements and their chemistry and syllables and syntax of a natural language.

I want to construct a primitive object that makes a non-trivial systemic repetition possible. This primitive object is meant to be produced from the most bared and fundamental object of thought—the absolute nothingness. And I investigate the logical possibility of such a primitive object, and how its *intrinsic dynamics* can be made into a formal system.

I define the absolute nothingness as an object (in the Meinongian sense) that nothing can break its state; the invariant of every possibility; an absolute infinity that can always be the case. Most importantly, it cannot even be reduced to the state of being referred to—in a proper way. Because in the proper case, if something can refer to this object, then there should be something other than this object. Thus, there is something that can break its *always being the case*; because the absolute nothingness should be externalized by or from the additional object, therefore the absolute nothingness is not the case regarding the additional object. Thus, there exists this object, which breaks the case of the absolute nothingness.

Here all we want from the absolute nothingness is for it to act as our reference point. The idea is to find a way to refer to it by any means possible. Nonetheless, by definition, this should be impossible if we are to completely preserve the absolute nothingness. Thus, we should preserve some characteristic parts and dismiss the rest. So the object generated by such a reference should have a nonzero divergence relative to the absolute nothingness. Said differently, any reference to this absolute nothingness will inevitably mutilate it.

Now, as we deviate from the absolute nothingness into its reduced form—i.e. the primitive object we are to construct—we want every possible variety of this primitive object to be generated by expressions in terms of the constituent parts of the primitive, which the rules for any such expression, is initially implied by the primitive. Further, we want the possibility of generating some infinite variety from this primitive object. This is to say this infinity of the absolute nothingness is, the invariance of our transformation. This is crucial because this infinity is what we preserve from the absolute nothingness into our reduced nothingness, i.e. our primitive object. Yet even this preservation is partial—it is as good as our limitations allow, and so the primitive object only implies the possibility of generating an infinite variety. In a nutshell, this primitive object is a projection of the absolute nothingness, externalized and reduced into a bundle.

2. Singularities

To describe our formal system, we need to specify the means, which enables this description. In this regard, the most important device is the notion of a *singularity* which shares some similarity with a mathematical notion of the same name. Though mathematical analysis and cosmology were the disciplines in which I snatched this idea from, I will not bind myself to the definitions of this term in these disciplines. Nevertheless, the definition I give tends to apply to different systems, but this is not the focus of this article. I define singularity in this thin sense so that it is applicable more generally so that it applies to the foundational notion of absolute nothingness. It is worth noting that Deleuze (1994, pp. xii, 10, 47–52) developed a similar concept called "point remarquable". In his view, a *point remarquable* is a point that "distinguish one idea, problem or multiplicity from another … introduced alongside the mathematical concept of 'singular point', which is employed to designate those points which characterize or define a given function".

Now, I introduce a singularity via an example from mathematics. Let $\mathbb{C}$ be the field of the complex numbers in which the following function $f(x) = 1/x$ is defined for every element other than 0. Now, the point $f(0)$ is a division by zero, which is not defined in $\mathbb{C}$. The undefined point can be thought of as something that characterizes the rules of division, which our function adopts to generate a certain variety of points. Thus regarding the division, the number 0 is distinguished from every other number of the field, by the properties dictated by the quotient.

The meaning that we are implying by the term singularity has a close tie with the role of the number 0 in the above example. We say a singularity is a point within any system which removing or identifying it with any other point of the system will result in the total collapse, or at least a reduction or a mutilation of the system. As if this was the point that made the characterization of the system in question possible. A knot of some sort that unknotting it gives back a plain meaningless string. So singularity implies an essential and unique difference of some singular point.

Now if I were to suggest where is the singularity in a context like literature—more specifically a piece that tells a story, say Tolstoy's *War and Peace*. I look for it, in the loci where the integrity of the work oscillates, but it does not fall apart, regarding themes like love, death, morality, etc. For any of these concepts, if we were to know an eternal definition, then there would have been no need to bother ourselves with words and stories. *War and Peace* exists because these concepts cannot be expressed without a setting and its dynamics; and even then, we are left with inconsistencies. And resolving these inconsistencies will turn *War and Peace* into something banal.

We can say the whole structure of a system is built around these loci, and every other element is in an ever-changing state of successive mutations. These seemingly unresolvable points, somehow force the whole dynamic to revolve around their nullity. These omitted points generate all the meaning and bound the semantic possibilities of the whole system. A singularity implies a characterization by means of an alien object from a transcendental world that itself is omitted in the world under consideration.

3. What is Reduced Nothingness?

We said the absolute nothingness is somehow out of reach. And to reach it we need to reduce it somehow. Put differently, reaching it inevitably reduces it. This reduced absolute nothingness we shall simply call nothingness.

In set theory, something close to this nothingness is the notion of the empty set. The empty set is a set: a set brings forward the possibility of containing some proper elements, and in the case of the empty set, nothing at all: we are left with the bared possibility; we have restricted ourselves to the bare and hollow idea, i.e., a set that is just a set, which every other set is this bared idea that is further specified by some element or elements that fill the emptiness within.

Consider $\mathcal{E} = \{\}$. The notation $\{\}$ is just the bared notion of a set, and $\mathcal{E}$ says I am another way to state this fact. Here the equation implies absolute sameness, and representing the empty set $\{\}$ also by $\mathcal{E}$ is only for notational purposes and it is assumed that it has no significance of its own[1]. Shortly we shall present another way, which further distinguishes between these two and somehow removes the equality sign.

The idea is to extend and distinguish the notion of a set into further constituents: that is a *name*, which implies an *operator* that bundles an object into a *characterization* for it. This characterization externalizes the object via the operator. So intuitively, a characterization is the idea of an imagined container or an operator that bundles an object, and the object inside somehow prevents this imaginary container from degenerating out of existence.

Looking at the empty set, we can see that such an object is not explicitly addressable: the operator only refers—it proposes a container—yet the object in reference and the contained is missing, or hidden in a sense.

Now if I say the object I am trying to characterize is also *the object being externalized* and is equal to *the name* of the envisioned characterization, then we have said of this pathological object to be itself and the externalization of itself all at the same time:

$$\mathcal{P} = \{\mathcal{P}\}.$$

Here we have imagined an operator, denoted by the empty set {}, which bundles up $\mathcal{P}$ as $\{\mathcal{P}\}$. The object that characterization operates on is $\mathcal{P}$ which is also its given name. So $\mathcal{P}$ is itself and a reference to itself; on the other hand, $\mathcal{P}$ is all the same if it is considered without a reference to itself. The externalization the name implies contains its own externalization, so in principle, there could be nothing beyond $\mathcal{P}$. Therefore there can be no externalization. This name describes itself in terms of itself.

By considering a looser logic—than that of classical logic—we can imagine that this pathological name implies some oscillation between the following expressions: being itself; being the reference to itself; and being its own signification. This is far from something pure like $S = S$ because extensionally S is just S: nothing more nothing less. Yet $\mathcal{P}$ is also a description of itself; it distinguishes itself. However, what it distinguishes is not only itself, but itself also infinitely contains itself and refers to itself with no termination.

4. The Construction

Now we introduce the new notation. We say a name denoted by Λ implies a tuple as follows $\Lambda \Rightarrow (\mu, \chi, \chi(\mu))$ where μ is the object, χ is the mean to reference or the characterization operator which taking on μ, it outputs the characterization $\chi(\mu)$. Further, whenever it is proper, we may write $\Lambda = \chi(\mu)$. We do this when the object is different from the name of the characterization. Thus in the example where $\mathcal{P} = \{\mathcal{P}\}$, we do not have this difference, and we do not write $\mathcal{P} = \chi(\mathcal{P})$.

So χ specifies the rule, which makes the act of referring possible. It characterizes (or expresses) μ by an arbitrary operator like {} or $' '$ and this act externalizes the object. The very distinction that χ proposes dictates there should be something to be distinguished from. Thus in order to have a proper characterization, we should have something inside or outside the object—not equal to it.

For example, in set theory, membership is such a rule: a set proposes the possibility of including proper elements inside. On the other hand, for our $\mathcal{P}$, the name enables *an operator that characterizes $\mathcal{P}$ by containing itself*. If this is the case, then there is nothing beyond this object. Thus, the distinction is only formally implied or imagined, and a proper distinction is impossible: because the object is equal to its characterization.

If we have only one object then to properly characterize it, the object itself should have different referable atoms. This is, if χ is well-behaved, it should not redefine the object by the characterization. Considering some arbitrary object, if χ characterizes the object by reducing

[1] However, I think this assumption is excessive, but I will leave it be and go on with it in this article. For it is embedded in every form of language, logic and computation that we have, and this is not the place for digging into this complex further.

it to some of its atoms—irreversibly—then it is not the original object that is being characterized, but some atoms, given by the irreversible annihilation of the other atoms. Therefore, in this case, the characterization is pathologically defined and further, it is false. Because we said we are going to characterize a specific object, yet we mutilate it into a new object.

Suppose we have only one object, and further, this is some primitive object (i.e., it has only two atoms), we shall call this setting a primordial universe. Our object has nothing outside, but two—potentially—referable atoms inside, that is if we have the device to refer to the atoms.

So naturally, we cannot refer to the object itself in its totality, because we do not have anything outside of the object, and the object itself is some superficial bound for its constituents. Nonetheless, we can characterize it by the information it gives us, i.e. its parts and its dynamics. Therefore, in the primordial universe—if we want to have anything to say—at least one of the atoms should give us the possibility of a characterization.

If without mutilating the object to any of its two atoms, we can characterize it, we shall call this characterization a restriction. Here, one of the atoms should characterize the other atom, which is considered as the object of the characterization. The externalization is provided by the integrity of the object being in its totality. Further, let $\rightarrow$ denotes such a restriction and $\hookrightarrow$ the release from this restriction back to the original state.

For illustration, think about a primordial universe of some light bulb, which is an object that implies the possibility of *being-on* that is a restriction; and the release of this restriction is to be *no longer being characterized by being-on*. Put more intuitively, before we turn on the light bulb, the light bulb is neither on nor off, because it has not—yet—actualized its possibility. Then when the possibility is actualized, it is in the state of being-on. So, it is only after this occurrence that we can turn off the light, so to make *being-off* being the case.

Let us denote the light bulb by $\mathcal{A}$ which has two atoms: ν and an operator for characterization denoted by χ. Let $\mathcal{A}$ imply $\chi(\nu)$, in which $\chi(\nu)$ is *being-on*. Further $\mathcal{A} \rightarrow \chi(\nu)$ denotes the restriction of $\mathcal{A}$ onto $\chi(\nu)$. Now let us say ν is an atom that its initial state is being false and it is true if it is characterized, that is if $\chi(\nu)$. Because our object $\mathcal{A}$ initially is in the state of the *unactualized possibility of* $\chi(\nu)$. Thus—initially—there is no such expression $\chi(\nu)$, and so ν is false, denoted by F.

Now, assuming $\chi(\nu)$ is actualized then $\chi(\nu)$ is true, denoted by T. At this stage, we can release our restriction: $\chi(\nu) \hookrightarrow \mathcal{A}$, which expresses *being-off*. To sum up, let us write:

$\mathcal{A} = \{\nu, \chi : \mathcal{A} \Rightarrow \chi(\nu)\}$,
$\chi(\nu)$ is the expression generated by considering $\mathcal{A} \rightarrow \chi(\nu)$,
$0 \coloneqq \chi(\nu) \hookrightarrow \mathcal{A}$ is the expression that is equal to the release of $\chi(\nu)$ back to $\mathcal{A}$.

Now we define further expressions and denote them by binary numbers:

$$
\begin{aligned}
0 &\coloneqq \chi^{-}(\chi(\nu)) \\
1 &\coloneqq \chi(\nu) \\
10 &\coloneqq \chi(1) \\
11 &\coloneqq \chi(10) \\
100 &\coloneqq \chi(11) \\
&\dots .
\end{aligned}
$$

By modifying the formal system of the light bulb example, now I shall present the desired primitive object. Suppose $\mathcal{A}$ is a primordial universe. Let x and $y = \mathcal{A} \otimes x$ be the two constituent atoms. y is the restriction that is put forward by $\mathcal{A}$, and it is defined as a quotient $\mathcal{A} \otimes x$. The quotient fractionalizes the numerator $\mathcal{A}$ in terms of its denominator x. We also have a proper release from the restriction that is denoted by $y \bigtriangleup x$. The release is a product that glues back the fractions. That is, it multiplies the whole fraction by the denominator. Let:

$$1 \quad \coloneqq \quad \mathcal{A} \otimes x \rightarrow y,$$

$$0 \quad \coloneqq \quad y \triangle x \hookrightarrow \mathcal{A}.$$

For convenience, let $-\curvearrowright-$ and $-\circlearrowleft-$ denote the *fractionalization* and *defractionalization*. That is denoting that the object to the left is fractionalized (defractionalized) into the object to the right. This is just a more convenient way of writing the quotient and the product we have just defined in successive sequences. So the primitive object is:

$$\mathcal{A} = \{x, y : \mathcal{A} \Rightarrow \otimes\}.$$

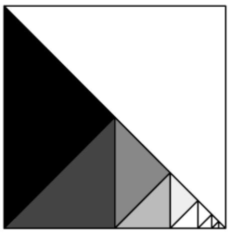
Denoting the outcome of the iterations via binary numbers, we generate the following sequence of outcomes:

$$\mathcal{A} \curvearrowright 1 \circlearrowleft 0 \curvearrowright 1 \curvearrowright 10 \curvearrowright 11 \curvearrowright 100 \curvearrowright \cdots$$

with their decomposition as:

$$\begin{array}{lll} \mathcal{A} \curvearrowright & \mathcal{A} \otimes x \to y & \coloneqq 1 \\ \circlearrowleft & y \triangle x \hookrightarrow \mathcal{A} & \coloneqq 0 \\ \curvearrowright & \mathcal{A} \otimes x \to y & \coloneqq 1 \\ \curvearrowright & \mathcal{A} \otimes x \to yy \triangle x \hookrightarrow \mathcal{A} & \coloneqq 10 \\ \curvearrowright & \mathcal{A} \otimes x \to y\mathcal{A} \otimes x \to y & \coloneqq 11 \\ \curvearrowright & \mathcal{A} \otimes x \to yy \triangle x \hookrightarrow \mathcal{A}y \triangle x \hookrightarrow \mathcal{A} & \coloneqq 100 \curvearrowright \cdots. \end{array}$$

Using this construction, an infinite variety can be generated if we are not to terminate the iteration of the further implied characterizations. The following figure visualizes the decomposition of the primitive object. Starting from the square, a decomposition could be *the big white triangle* attached to the part that implies *the decomposition into smaller triangles*, next, *the big white triangle together with the black one* attached to the part that implies *the decomposition into smaller triangles*, etc.



the decomposition

5. Falsity

Once again, consider the original mathematical notation $\mathcal{E} = \{\}$. In mathematics, this is just a definition: a set with no elements, and we do not usually consider questions about its nature. The definition is very well-behaved and useful. Nonetheless, I shall ask *what is contained inside the characterization?* This what, this object, this contained object is sort of like the following expression—sometimes used to describe the integer zero: *the placeholder for when we want to say we have nothing*. So, for $\mathcal{E} = \chi(\mu)$, our object should be something like μ is *not being a thing*. Continuing in this line of thought, we are just going to circulate some tautological iterations without mutilating these iterations into a signification. So let us utter that $\mathcal{E}$ is *a characterization for something that does not accept a proper definition* or rather *the emptiness of some false statement*. For example, *the set of all x such that $x \neq x$*.

6. The Reference

To review, we said a name is a device that enables an operator to characterize an object:

$$\Lambda \Rightarrow \big(\mu, \chi, \chi(\mu)\big).$$

So in the case of the empty set, at least a characterization is possible such as $x \neq x$. Regarding the names for the pathological set and the empty one, we write:

$$\mathcal{P} \Rightarrow (\mathcal{P}, \mathcal{P}, \mathcal{P}),$$
$$\mathcal{E} \Rightarrow (\ \chi(\mathcal{P}), F, \mathcal{A}).$$

Where F denotes falsity, and $\mathcal{A}$ is the primitive object that we have defined previously.

Any characterization or an ability to refer bounds the object it refers to by the characterization it draws upon it. Therefore, it makes some distinction possible: the characterization momentarily forgets everything else about the object, or annihilates them permanently. Regarding $\mathcal{E}$ the absolute nothingness can be thought of as the reference point of its characterization. The absolute nothingness is where any sort of distinction is impossible. So there is no possible duality, and this is to say falsity and truth are not the cases. This nothingness does not even have a proper name, and nothing can break the absolute infinity of its indescribability.

Now that we cannot properly characterize this object, let us take the absolute nothingness and try to pathologically characterize it by a mutilation. The characterization operator being this mutilation, the absolute nothingness can be referred to. Yet as the absolute nothingness defies being in reference, the outcome of this mutilation—the characterization—is itself a falsity. I am saying, the ontology of any system that consists of truth-values embeds inside itself a logical flaw that is $x \neq x$. This I call the *fundamental flaw*, we said of *what it is that it is not*. Without this flaw, there is no beginning. There is only the absolute nothingness.

The falsity becomes the possibility for our atom to be the object of a characterization. The falsity is precisely the thing that prevents this container from degenerating out of existence. The definition holds by means of the falsity, and it characterizes a primitive object that can imply a duality. This is to say, a truth can be generated, and for such a truth and utilizing the release operator, a falsity can be expressed. This falsity iterates, reifies, and preserves the singularity of the absolute nothingness.

Decompositions can produce new symbols, and symbols can multiply, and varieties can come into being as the singularity oscillates the truth of the primitive object. By this equipment—the ability to reference—it is now possible to generate infinite varieties. Though this infinity is smaller than the infinity of the absolute nothingness, it is the only thing that is preserved from the absolute nothingness. The system revolves around the infinite gravity of this singularity—a reference to the unreferable as a locus—the projection of the absolute nothingness into a reference by falsity.

References

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