Gluon Theory: Being and Nothingness

Behnam Zolghadr

Maimonides Centre for Advanced Studies, University of Hamburg

Abstract This paper is about Priest's gluon theoretic account of nothingness. I argue that not only nothingness has more contradictory properties but also nothingness is the being of the totality of all objects and, consequently, everything is metaphysiacally grounded on nothingness.

"Pure Being and pure Nothing are therefore the same."
Hegel, Science of Logic [5, p.59]

1 Introduction

Nothingness is the absence of all objects. If we remove all objects one by one, what remains is nothingness. Nothingness is a philosophical beast. It is supposed to be the absence of everything, but as soon as we start to talk or think about it, it becomes something, i.e. the object of our thought. Thus it has always been a matter of discussion not only in philosophy, both western and eastern, but also in philosophical theology. In this paper, I am giving a new account of nothingness and its relation to being as well as its role in the structure of reality. I will start my discussion from Graham Priest's account of nothingness. This is based on his gluon theory and his Aristotelian definition of being. Gluon theory concerns the problem of unity; what makes a plurality of objects into a unity? An object is not merely a congeries of its parts. The parts of an object may exist, while the object

Australasian Journal of Logic (16:3) 2019, Article no. 2

does not. Though its parts exist, the Eiffel tower does not exist when its parts are disassembled and piled up as a heap. So there must be something more than an object's parts that makes it a unity. Priest calls this object a qluon. His gluon theory explains how the gluon of an object makes it into a unity. Then, by making a distinction between an object and its being, and appealing to the Aristotelian thesis that to be is to be one, Priest defines the being of an object as its gluon. Based on these, he gives his gluon theoretic account of nothingness. Nothingness, according to Priest, is a contradictory object. Although it is the absence of everything and thus not an object, it is also an object. For we can think about it and refer to it. After a review of all these, I will argue that nothingness has more contradictory properties some of which have striking consequences. As we will see, nothingness is the being of the totality of all objects. Moreover, nothingness is the universal of being, and everything is metaphysically dependent on it. Before giving my arguments, I have to spend some pages explaining gluon theory and Priest's account of nothingness. Hence, in the next part, I will briefly explain the theory of gluons. In the third part, I will talk about Priest's gluon theoretic accounts of nothingness and the being of the totality of all objects. These sections are only a brief review of Priest's ideas. Then, in the fourth part, I will put forth an argument that nothingness is the being of the totality of every object as well as the universal of being. The fifth part is a comparison between my account of nothingness and that of Priest. This makes it clear what new properties I am ascribing to nothingness. Finally, in sixth section I will indicate that everything is metaphysically dependent on nothingness. In other words, nothingness is the ground of reality as a whole.

2 Gluon Theory

Gluon theory answers the problem of unity, i.e.; What makes an object into a unity? An object is not merely the plurality of its parts. You can destroy a house by separating each brick from another, and collect the bricks of the house as a pile. Now the house does not exist, however, the plurality of the parts of the house exists. You can also make a wall out of those bricks, by placing the bricks in an appropriate order. Now a wall exists, though neither the house nor the pile of bricks exist. The standard mereology does not make a distinction between this wall and that house. This is due to the axiom of the uniqueness of composition. As Katherine Koslicki, by giving

her favourite example of a motorcycle, put it [6, p. 4],

[I]t follows from one of the axioms of standard mereology, commonly known as the Uniqueness of Composition, that there is no difference between a heap of unassembled motorcycle parts piled up in someone's garage and the motorcycle in running condition that results from assembling these parts in a particular way: for the heap and the motorcycle, by hypothesis, have the very same parts and, according to the Uniqueness of Composition, objects with the same parts are numerically identical. Thus, standard mereology cannot tell the difference between the motorcycle in running condition and the heap of disassembled parts; from the point of view of theory, they are the very same thing.

To fulfil this shortage of the standard mereology, she appeals to the distinction between the form and the matter of an object. Her Aristotelian explanation of the structure of objects also answers the problem of unity, or as she calls it the problem of the One and the Many [6, p. 197]. According to her, a material object is composed of not only material parts but also of a formal part, i.e. the order in which its material parts are put together. Kit Fine also goes the same way. He criticizes the standard mereology for not being capable of giving an explanation of the relation between a whole and its parts. As he says [4, p. 63]: 'If the sandwich is to exist, it is not sufficient for the ingredients merely to be around. They must be appropriately assembled'. He seems to be right. If the piece of ham, instead of being within the bread, is on the bread, probably no one asserts that the congeries of the ham and the bread is a ham sandwich. Thus, according to him, the sandwich should also have a formal part, besides its material parts.

Fine and Koslicki are both well aware that an object is not merely the congeries of its parts. They both claim that there is more to the material parts of a material object, i.e. a formal part without which the object in question does not exist. But there remains a question. The formal part is that which binds the different material parts of the object together. Now, what binds the formal part to the material parts? It seems that the question of the relation between a whole, or a unity, and its parts is not answered but only transferred to another place. Priest's gluon theory, considering this problem, answers the question concerning the relation between a unity and its parts. As mentioned above, there should be something other than the parts of an object which makes the object into a unity. Priest calls this a

gluon¹ [9, p.9]. A gluon is an object. For we can talk about it, think about it and refer to it. But it is not an object as well. If the gluon of an object is an object itself, we will fall into a vicious regress, as we saw in the cases of Koslicki and Fine. Priest explains the regress, in which we fall by taking a gluon to be an object, as follows [10, p.253]:

[a gluon] is not an object. If it were the totality comprising it and the other parts would be just as much a congeries as the parts themselves, and we would want for an explanation of how the unity is achieved. Think of Bradley's regress at this point. If the gluon were just another object, there would need to be a "hypergluon", holding the gluon and the other parts together. And so on... We are off on a vicious regress. ...

So a gluon is and is not an object. Again, if a gluon of a partite object were distinct from each part of the object, we would fall into Bradley's regress. Thus, a gluon of a partite object binds different parts of the object by being identical with each of them [9, p. 17]. If an object, x, has two parts, a and b, the gluon of x, g_x , is identical with a and b. But a and b are not identical. Thus, in gluon theory, identity relation is not transitive. Priest explains this by using a paraconsistent logic and the Leibnizian definition of identity according to which a = b iff:

$$\forall X(X_a \equiv X_b)$$

Suppose there are only two properties, P_1 and P_2 . Let a belong to the extension of P_1 , and to the anti-extension of P_2 , i.e. P_1a and $\neg P_2a$ are true, and $\neg P_1a$ and P_2a are false. And let b belongs to the extensions of P_1 and P_2 , i.e. P_1b and P_2b are true, and $\neg P_1b$ and $\neg P_2b$ are false². g_x is identical to both a and b. Since g_x is identical to a, it belongs to the extension of P_1 and the anti-extension of P_2 . And since it is identical to a, a belongs to the extension of a, as well as to the extension of a. So a0 belongs to the extension of a1, and also belongs to the extension and anti-extension of a2.

¹At the moment it does not matter whether a gluon is a form or a structure or whatever else.

 $^{^{2}}$ It is worth noting that a and b are consistent, but if they were inconsistent, nothing would change.

Material equivalence (\equiv), which is used in the identity definition, works differently in a paraconsistent logic³. As in classical logic for the truth of $A \equiv B$, we need both sentences to have the same truth value. The difference in a paraconsistent logic, such as LP, is that each side can have two different values. For example, if A is true and false, and B is True only, $A \equiv B$ is true. Even though it is both true and false, it is still nonetheless true. So $P_2g_x \equiv P_2b$ is true, though P_2g_x is true and false. And $P_2g_x \equiv P_2a$ is also true. Because P_2g_x and P_2a are both false, though P_2g_x is also true. We can see all these in this table:

$$\begin{array}{c|cccc}
 & P_1 & P_2 \\
\hline
a & + & - \\
b & + & + \\
g_x & + & \pm
\end{array}$$

It is easy to check the truth of $a = g_x$ and $g_x = b$. This model shows how in LP identity relation is not transitive. Thus, the gluon of x is identical with each part of x, however, other parts are not identical (or can be not identical) with each other. This is how a gluon of an object glues different parts of an object together. A gluon is identical with each part of an object. It is nothing beside an object's parts. But it is not only one of those parts or the mereological sum of them. As already discussed, a gluon of a partite object is not an object. Exploring the example above will show this. Since g_x belongs to the extension and the anti-extension of P_2 , then, $\exists X(Xg_x \land \neg Xg_x)$. By the principle of excluded middle, for an arbitrary y, we have $Xy \vee \neg Xy$. Suppose Xy. Then Xy and $\neg Xg_x$, so $\neg (Xy \equiv Xg_x)$, and therefore $\exists X \neg (Xy \equiv g_x)$. That is, $y \neq g_x$ (the result is the same if $\neg Xy$). Thus every object is nonidentical with g_x . It means that g_x is not an object. However, since it is identical with itself, g_x is also an object. One can easily check that this is true of the gluon of every partite object. The gluon of every partite object is and is not an object. But what about the unity of gluons themselves? Priest

³Priest uses a plurivalent semantics, as opposed to a univalent semantics, of LP. In a univalent semantics of LP there are three values: True, False and both True and False. Values are assigned to propositional parameters by a valuation function. And the designated values are True and Both True and False. In a plurivalent semantics of LP, there are only two values: True and False. Values are assigned to propositional parameters by a valuation relation and the designated value is True. In both approaches the results are the same. For more see [12].

takes gluons to be simplices, i.e. non-partite objects. Thus the gluon of a gluon is itself. It does not have any proper part. Thus a gluon does not need another gluon to bind its different parts together. A gluon is a unity in itself.

In this section, we saw that the gluon of a partite object is that which makes it into a unity. And we also saw how a gluon of an object binds different parts of the object by being identical with each one of them. In the next section, we will make a review of Priest's account of being and nothingness according to his gluon theory.

3 Being

In defining the being of a being, Priest appeals to the Aristotelian thesis that to be is to be one. As Aristotle put it $[Met.1003^b23 - 31]^4$:

...being and unity are the same and are one thing in the sense that they are implied by one another as principle and cause are; for one man and a man are the same thing and [man who is] and a man are the same thing, and the doubling of the words in 'one man' and 'one [man who is]' does not give any new meaning...; and similarly with 'one', so that it is obvious that the addition in these cases means the same thing, and unity is nothing other than being...

To be a being for Priest is to be an object [9, p. 49]. Whatever is an object, is self-identical. Thus, whatever is self-identical *is*. Priest then takes the being of an object to be its gluon [9, p. 51]:

The being of something is that in virtue of which it is. To be is to be one. So the being of something is that in virtue of which it is one. And what it is in virtue of which something is one? By definition, its gluon, g. The being of something is therefore its gluon.

So there is a distinction between a being and its being. The Eiffel tower is. The being of the Eiffel tower is its gluon, which is what makes the Eiffel tower one, and is identical with each part of the Eiffel tower. Thus the being of a being is identical with each part of the being.

⁴Quoted in [9, p. 50].

What about the being of a non-partite object? The gluon of an object is that in virtue of which the object is a unity. A simple object is a unity in virtue of itself. So the gluon of a simple object is itself. Therefore, since a simple object is itself a unity, the being of a simple object is itself.

Enough for preliminaries. In what follows, we will meet Priest's gluon theoretic account of two specific objects, i.e. the totality of all objects and nothingness, as well as their beings.

3.1 Everything and its Being

Although 'every' words are often used as quantifiers, they can also be noun phrases [9, p. 54]. Consider the totality of every object. The totality which has every single object, i.e. whatever is, as its part. We can refer to this totality by 'everything'. Here, 'everything' is a noun phrase. In Priest's words [9, p.54]:

When I use the word 'everything' in what follows, I intend the range to be the broadest possible: 'Everything' means absolutely everything, every object there is (whether or not it exists). 'Everything' means the totality of every object.

From now on, following Priest, I will write 'everything' - as defined abovein boldface, thus: **everything**. **Everything** is an object. We just talked about it and referred to it⁵. It is the mereological sum of all the objects. Thus, every object is a part of **everything** (e).

$$\forall x (x < \mathbf{e})$$

Since **everything** is an object, it is a unity. The gluon of **everything** is identical with every part of it. Thus the gluon of **everything** (g_e) is identical with every object.

$$\forall x(x=g_{\mathbf{e}})$$

Priest makes a distinction between prime and non-prime gluons. The gluon of an object is prime only if it has all the properties of every part of the

⁵Priest defends his own version of Meinongianism, namely Noneism. According to this view, it is impossible to intend without an object being intended. Thinking is an intentional act. Whenever we are thinking, we are thinking about some object, whether existent or not. In other words, whatever is intendable is an object [11].

object. In other words, if the gluon of an object is prime, it mimics every part of the object in question. Priest defines *mimicking* as follows [9, p.31]:

b mimics a if and only if for every arbitrary property P:

- If $a \in P^+, b \in P^+$
- If $a \in P^-, b \in P^-$

However, some gluons are not prime. Consider the object, x, we discussed in the second section of this paper. It has two parts, a and b. g_x is a prime gluon. But if ceteris paribus b also belonged to the anti-extension of P_1 , then g_x would be a non-prime gluon. But the gluon of **everything** is a prime gluon. It is obvious by symmetric considerations [9, p. 55]. It is symmetrically related to all other objects. Thus it has all the properties of every object. For every object x and every property P:

- If $x \in P^+, g_{\mathbf{e}} \in P^+$
- If $x \in P^-$, $q_{\mathbf{e}} \in P^-$

3.2 Nothingness and its Being

As we saw in the previous section, 'every' words are not always quantifiers. Likewise, 'no' words are sometimes used as noun phrases. When one says 'Sartre wrote a book about nothing', she does not mean that Sartre wrote a book which was not about anything. Here, 'nothing' is noun-phrase. Sartre has written a book about something, which is nothing(ness)⁶. According to Priest, 'nothing' when is used as noun phrase, refers to the absence of every thing [9, p. 55]:

By nothing [used as a noun phrase], I mean absolutely nothing. It is the complement of **everything**: the absence of every thing.

Following Priest, from now on I will write 'nothing' when it is a noun phrase, in boldface, thus; **nothing**. **Nothing** is not an object. It is no thing. It is the complement of the totality of every object. If we make a list of all objects, **nothing** is not any of them. In other words: $\forall x (x \neq \mathbf{n})$.

⁶Sometimes the suffix '-ness' is added to 'nothing', when it is used as a noun-phrase.

Nothing (n), metaphorically speaking, falls out of the totality of all objects. It is the mereological sum of the empty set. There is no thing in the empty set. Hence, 'nothing is what you get when you fuse no things' [9, pp.97-98]. Moreover, it has no proper parts and it is not a proper part of anything. This is what one would expect of the absolute absence of everything. In spite of these, nothing is also an object. Although it is the absolute absence of everything, and consequently we don't expect it to be anything, but as soon as we start thinking about it, it becomes something, i.e. the object of our thought. Priest calls it 'a most strange contradictory thing' [8, p. 151]. In the lines above, we referred to it and thought about it. For Nothing is an object. In fact, it is a contradictory object. It is and is not an object. Since it is an object, it is and has being. Like all other beings (or objects) it's being is its gluon. As Priest puts it [9, p. 56],

Nothing is and is not an object. In this respect, it behaves exactly as does a proper gluon. In fact, it is a gluon. For **nothing** can have no parts (other than itself): if it did, it would not be the absence of every thing. Hence, it is a simplex, and so is its own gluon. **Nothing** is the gluon of **nothing**.

Nothing is not partite. It is a simplex. The gluon of an object is that in virtue of which it is one. A simplex is a unity in itself. Hence, the gluon of a simplex is itself. Likewise, the gluon of **nothing** is itself. The being of an object is its gluon. Since the gluon of **nothing** is itself, the being of **nothing** is **nothing** itself.

I think, now, we are done with Priest's gluon theoretic account of **nothing**. But we are not done yet with **nothing** and its being. There seems to be more to say about the properties of **nothing**. In the next section, I argue that **nothing** has more contradictory properties and is the being of the totality of all objects, i.e. **everything**.

4 Being and Nothingness

Whatever is an object is a part of **everything**: $\forall x((x = x) \equiv x < \mathbf{e})$. All objects comprise **everything**. Beyond **everything**, there is no object. **Everything** is the mereological sum of all objects. Thus;

$$\mathbf{e} = \oplus \{x : x = x\}$$

Australasian Journal of Logic (16:3) 2019, Article no. 2

Nothing, as defined to be the complement of **everything**, falls out of **everything**. If we make a list of all objects, **nothing** is not identical with any of them; $\forall x (x \neq \mathbf{n})$. However, **nothing** is also an object. We just thought about it. Thus, it is self-identical and is a part of **everything**.

As mentioned before, **nothing** is what you get when you fuse no things. Hence, **nothing** is the mereological sum of all non-objects, i.e. whatever is no thing, no object. Whatever is non-self-identical is not an object. It is no thing. Every inconsistent object is non-self-identical. Because, if x is an inconsistent object, $\exists X(Xx \land \neg Xx)$, that is $\neg \forall X(Xx \equiv Xx)$, and according to the definition of identity, it follows that $x \neq x$. Hence, every inconsistent object is non-self-identical. In other words, every inconsistent object is a non-object, and thus, is a part of the complement of the totality of every object, i.e. a part of nothing. Because if we make a list of all object it is not identical with any of them. It means that **nothing** is partite, and its parts are inconsistent objects. **Nothing** (n) is, therefore, the mereological sum of all non-objects.

$$\mathbf{n} = \oplus \{x : x \neq x\}$$

Although inconsistent objects belong to the complement of the totality of every object, i.e. the complement of **everything**, they also belong to the totality of every object. Since they are non-objects they are parts of **nothing**. And since they are objects, they are parts of **everything**. So they are parts of both **nothing** and **everything**.

As we saw in section 3.2, **nothing** is a simplex, otherwise it couldn't be the absence of everything. Now, we see that **nothing** is also partite and is composed of non-objects. Thus;

(1) **nothing** is and is not simple.

Nothing *is*, and thus, has a being. The being of an object is its gluon. But what is the gluon of **nothing**? **Nothing** is a simplex, as well as a partite object. As already mentioned, the gluon of a simplex is itself. Hence, the gluon of **nothing** is itself. In other words, since **nothing** is a simplex;

(2) **nothing** is its own gluon.

From (1) and (2): **Nothing** is also a partite object, and its gluon, which is itself, is identical with each of its parts. Every inconsistent object is its part. In other words, **nothing** is composed of all the inconsistent objects. **Nothing**, therefore, is identical with every inconsistent object. Among **nothing**'s

parts is the being of **everything**, i.e. $g_{\mathbf{e}}$. In section 2, we saw that the gluon of a partite object is an inconsistent object. It follows that $g_{\mathbf{e}}$ is also an inconsistent object, and thus is a part of **nothing**. Hence, the gluon of **nothing**, which is **nothing** itself, is identical with $g_{\mathbf{e}}$. Now a question remains: What properties do they share? The answer depends on whether **nothing** is a prime gluon or a non-prime gluon. By considerations of symmetry, **nothing** is a prime gluon. It is symmetrically related to all of its parts⁷. It follows that it has all the properties of its parts. In other words, **nothing** mimics every part of itself. Among **nothing**'s parts is $g_{\mathbf{e}}$. $g_{\mathbf{e}}$ is the being of **everything**. Therefore:

(3) Nothing mimics the being of everything.

From section 3.1 we know that $g_{\mathbf{e}}$ mimics every part of **everything**. **Nothing** is an object and thus is a part of **everything**. $g_{\mathbf{e}}$ is the being of **everything**. Therefore:

(4) The being of **everything** mimics **nothing**.

It follows, from (3) and (4), that **nothing** (n) and the being of **everything** (g_e) are not only identical, but they also have exactly the same properties. According to the definition of *mimicking* in the section 3.1:

- $\mathbf{n} \in P^+$ iff $g_{\mathbf{e}} \in P^+$
- $\mathbf{n} \in P^-$ iff $g_{\mathbf{e}} \in P^-$

Nothing and the being of **everything** therefore have the same properties. Thus **Nothing** is the being of **everything**. There is still more to say about the being of **everything**. There are so many beings and each has a being. The being of every being, i.e. the gluon of every object, is an object itself, and so a part of **everything**. Hence, the being of **everything** is identical with the being of every being:

$$(5) \ \forall x (g_x = g_{\mathbf{e}})$$

If *being* is a property, every being (object) is an instance of the property of *being*. So there is a universal of *being*. Priest explains the instantiation

⁷The idea belongs to Graham Priest. 'If nothing is not prime, it has the all properties of some, but not of others. So it relates to different parts differently. Now, there would seem to be nothing, as such, which would make the relationship of nothing to any thing different to that with anything else'. Thanks to him for sharing the idea.

relation between an object and a universal by borrowing some Aristotelian terminology [9, p. 45]:

a instantiates U-ness if a has a pin (the U-ness of a) which is identical with U-ness.

There is a universal of *being* and every being (object) has a pin of *being*. The being of every object, then, is a pin which is identical with the universal of being. According to (5) $g_{\mathbf{e}}$ is identical with the being of every object. In other words, beings of objects are parts of a single totality which is $g_{\mathbf{e}}$. Thus, following Priest's explanation of instantiation relation, $g_{\mathbf{e}}$ is the universal of being and beings are instances of $g_{\mathbf{e}}$.

So we have demonstrated that **nothing** is the being of **everything** or, in other words, **nothing** is that which makes the totality of all objects, let us say the whole reality, into a unity. We have also demonstrated that **Nothing** is the universal of *being* which is identical with, and has all the properties of, each single being of all objects. One may well call **nothing** the pure being⁸.

5 A Comparison

Before going to the last part of the paper, let me make it clear what is new in my account of **nothing** compared to Priest's. Before his gluon theory, Priest had already espoused his mereological account of nothingness [8]. According to this, **nothing** is the empty fusion. It is the mereological sum of the empty set. Since there is no thing in the empty set, you gain no thing by fusing the content of the empty set together. Thus **nothing** is the absolute absence of every thing. Moreover, it is not a part of anything and it itself has no proper part. **Nothing** is not an object, because it is the absence of everything. But it is an object as well, because it is intendable. Therefore, **nothing** is a contradictory object.

In his book *One* [9, ch. 4 and 6], priest brings his mereological account of **nothing** into his gluon theory. What is new here, compared to his previous account of **nothing**, is a discussion of the being of **nothing**. By *being* he means *being an object*. As we saw in section 3, he concludes that **nothing**, since is an object, *is* and has being. Then, according to his Aristotelian idea that to be is to be one, his gluon theory tells us that **nothing** is a simplex

⁸Though not in its Hegelian sense.

and itself is its gluon, i.e. its being. Although Priest focuses on **nothing** as the mereological sum of the empty set, he also tells us, though in a passing line, that **nothing** is the complement of the totality of all objects⁹ [9, p. 55]. In my argument in section 4, I appealed to the latter, i.e. that **nothing** is the complement of **everything**. I indicated that **nothing** has more contradictory properties some of which has striking results. Now, **nothing** not only is a partite object, as well as a simplex, and has every contradictory object as its part, but also it is the universal of *being* and is the being of **everything**. That **nothing** is the being of **everything** means that **everything**, which may well be called the reality as a whole, is metaphysically dependent on **nothing**. In other words, **nothing** is that which makes **everything** into a unity. We will see more about this in the next section.

6 Nothingness is the Ground of Everything

As already mentioned, a gluon of an object is that in virtue of which the object is. This is why the gluon of an object is its being. It makes the object into a unity. Since to be is to be one, what makes the object into a unity is that which makes it be. Suppose x is an object which has a and b as its parts. Without g_x there is no unity comprising of a and b, i.e. there is no x. It means that x is metaphysically dependent on its gluon, g_x . Thus, generally speaking, an object is metaphysically dependent on its gluon. In other words, an object is grounded in its gluon. Thus the gluon of an object is its ground.

Nothing is the gluon of everything. Therefore, nothing is the ground of everything. Everything or the totality of all objects, which one may well call it 'the reality as a whole', is metaphysically dependent on nothing. Without nothing there is no everything. What about the ground of nothing itself? Nothing is its own gluon and thus is its own ground. Nothing is grounded in itself. Although at first look it might sound odd, the reflexive grounding has already been discussed and defended [1, 2].

So far so good. Now let us consider the metaphysical dependency of other objects. Every object is grounded in its gluon. We already know that **nothing** mimics every object including every gluon. Thus whatever property a gluon (or in general an object) has is also a property of **nothing**. For an

⁹The idea that **nothing** is the complement of **everything** has been well discussed in [3]. However, their account of **nothing** is not gluon theoretic.

arbitrary object, x, g_x is the ground of x. Nothing mimics g_x , and thus, is also the ground of x. Therefore, **nothing** is the ground of every object.

7 Conclusion

We reviewed Priest's gluon theoretic accounts of being and **nothing**. Then I tried to show that there is more to say about **nothing** and its relation to the being of the totality of all objects. Now, **nothing** seems to have more contradictory properties compared to what has been ascribed to it in the book *One*. **Nothing** is also the universal of *being*. Moreover, **nothing** is that which makes **everything** be, and thus is its ground. Consequently, as I argued, everything including **everything** is metaphysically dependent on **nothing**. Thus **nothing** plays a much more significant role in the theory of gluons and the structure of reality it proposes. Furthermore, the idea that *nothingness* is *being* has been espoused in some occasions in the history of philosophy. The most significant and more recent ones, I suppose, are the views of Heidegger and Nishida [7]. However, I am not competent to draw a connection between these views and mine.

Acknowledgements

I would like to thank Graham Priest for his comments on the arguments of this paper. Without them, this paper would not exist. I am also thankful to Davood Hosseini for his encouraging comments on an early draft of this paper.

References

- [1] Ricki Bliss and Graham Priest. Reality and its structure: Essays in fundamentality. Oxford University Press, 2018.
- [2] Filippo Casati. Being g: Gluon theory and inconsistent grounding. *International Journal of Philosophical Studies*, 25(4):535–543, 2017.
- [3] Filippo Casati and Naoya Fujikawa. Nothingness, meinongianism and inconsistent mereology. *Synthese*, pages 1–34, 2017.

- [4] Kit Fine. Things and their parts. *Midwest Studies in Philosophy*, 23(1):61–74, 1999.
- [5] Georg Wilhelm Friedrich Hegel. *The Science of Logic*. Cambridge University Press, 2010.
- [6] Kathrin Koslicki. *The Structure of Objects*. Oxford University Press, 2008.
- [7] John WM Krummel. On (the) nothing: Heidegger and nishida. Continental Philosophy Review, 51(2):239–268, 2018.
- [8] Graham Priest. Much ado about nothing. The Australasian Journal of Logic, 11(2), 2014.
- [9] Graham Priest. One: Being an Investigation Into the Unity of Reality and of its Parts, Including the Singular Object Which is Nothingness. Oxford University Press, 2014.
- [10] Graham Priest. The answer to the question of being. Beyond the analytic-continental divide: Pluralist philosophy in the twenty-first century, page 249, 2015.
- [11] Graham Priest. Towards non-being: The logic and metaphysics of intentionality. Oxford University Press, 2016.
- [12] Graham Priest. Plurivalent logics. In *The Logical Legacy of Nikolai Vasiliev and Modern Logic*, pages 169–179. Springer, 2017.