

**Friedrich Seibold**

## **Once More – What is Truth?**

### Abstract

The present essay is a truth theory based upon the ‘principle of sufficient reason’. It is a critique of modern logic which does not fulfil this principle. The text differentiates between various meanings of ‘true’ and discusses the presuppositions and procedure necessary to establish a textually stringent logical truth. Furthermore it extends today’s concept of logic by defining a new fundamental principle. This new principle does not only include the classic logical principles of identity, contradiction and excluded third but also provides the essential key to the resolution of logical paradoxes. By their resolution it demonstrates them to be mere seeming paradoxes.

### Once More - What is Truth?

Every serious assertion claims to be true. However since truth cannot ultimately rest upon such subjective assertion alone the possible truth of the assertion must be established. Because this establishment process is always given to others, truth here must mean intersubjective truth. Whether it might also be objective is another question which has been dealt with in another place [1; p. 3]. Not for discussion here are subjective truths which do not need proof if they are not claimed to be intersubjectively valid. Also not in question is ‘true’, as expressed in a schematic, ‘algebraic’ statement; a logical true statement here is a meaningful sentence not an empty statement as in formalized logic. Apart from these excluded cases ‘true’ requires that what has been labelled ‘true’ is precisely so, as it is stated. And this must be proven. That which is possibly ‘true’ is always a fact; a fact being the attachment of a specific quality to either a real (empirical) or ideal (mental) object of cognition. Thus something is being stated about the quality of an object of cognition. Grammatically expressed a fact is a subject and its predicate.

If a real or ideal object of cognition is precisely as it is stated, i.e. that the fact is true, it cannot stand by itself because of possible contradictory assertions where one will affirm what the other will deny. The veracity of one of the two statements can only be established by a verification operation, a truth proving process which is conditioned by the following facts: (1) According to the

principle of contradiction two contradictory statements cannot both be affirmed or denied. Therefore logically one of them must necessarily not be true.

(2) Each and every serious assertion/statement claims to be true. Consequently truth needs substantiation. Thus that which is 'true' can only be facts which are asserted and verified by sufficient reason. The three underlined characteristics – factuality, assertion and verification - are indispensable to render something as unassailably 'true'. Without them the notion 'true' has - at least for statements in an intersubjective respect - no differentiating function.

### 'True' and 'false'

In order to establish the truth of an assertion, i.e. for its verification, the 'principle of contradiction' is not the only principle to be fulfilled, we must also consider the 'principle of identity'. In formal logic this is syntactically signified as  $A = A$ . This axiom requires that in any textual semantic statement the meaning of a term does not change in its textual content.

The 'principle of the excluded third' is also indispensable for any meaningful argument. It demonstrates especially well for this topic the unsuitability of the customary use from ancient times until today of the terms 'true' and 'false' as a contradiction. It is an arbitrary determination which has no logical necessity. This supposed contradiction; analogous to that expressed by the pair of terms 'verification' and 'falsification'; even contravenes the principle of the excluded third, which because of a valid contradiction using 'true', i.e. the opposites 'true – not true', does not permit a third contradiction, 'false'.

Neither can 'not true' and 'false' be used synonymously because 'false' is occupied already by its contradictory meaning to 'right', i.e. 'correct'. Moreover the opposites 'right – false' (false = 'not right') characterize the formal procedure, the aspect in form of an abstract operation and therefore says nothing of the true or not true semantic content of sentences with which they operate. So a conclusion can have been derived logically as false, i.e. by a false syllogism, but nevertheless it can be true. Think for example of a true statement in the position of a conclusion in a logical circle. Vice versa it can be logically right in form but in its semantic content be not true due to untrue premises. If 'false' is the opposite of 'true' then a conclusion in a logical circle with true premises but a 'false = untrue' syllogism is as true as not true! The same is valid for any conclusion with a 'false = untrue' premise in a 'not false = true' syllogism. If the premises are true and the syllogism is 'not false = true' then the conclusion is doubly true! Vice versa it is doubly false.

The reason for this inconsistency is that modern formal logic has reduced logical thought to something akin to algebra, asserting its results instead of right or false as true or false, as if there were no logical truth in textual content at all. And this even though since forever, 'true' has had a logical meaning in a semantic content. It appears that there cannot be any meaningful philosophical truth without logical truth in written literary content. Thus the term 'true' is truly misleading when used in formalized logic.

The content of a statement – i.e. the fact that is asserted by it – is either true or not true; whereas its verification because it is a formal procedure is either right or false. For instance the opposite of a false/wrong chessmove is not a true chessmove but a right chessmove. The inappropriate contrary use of the terms 'true' and 'false' in modern logic is obviously a consequence of its formalistic orientation without consideration of the logical truth arising in factual content from the perspective of applied logic.

As the mutually contradictory opposite of 'a' is 'non-a' so the mutually opposite of 'true' is 'not-true'. Although a not-true because refutable statement is logically also 'not true' (like all unverified statements), first of all it is 'not-true' whilst the contradictory assertion which refutes it is true. Generally expressed the contradictory opposite (here 'not-true') fulfils also the condition of a contrary opposite (here 'not true'). Why therefore does modern logic not differentiate between the one and the other? There is a difference between a not verified and therefore not true statement and a refutable and therefore not-true statement! Hypothesis and theories are always merely possibly true, and when refuted they are simply not-true, and therefore in both cases they are not true too.

### The Principle of Sufficient Reason

The verification of the possible truth of an assertion, i.e. the substantiation of the veracity of a statement, requires a reason in content, which is a further statement/assertion and a reason in form, which is the procedure/process of the verification. To substantiate the content of an assertion alone is not of itself sufficient verification because the statement which substantiates an assertion is an assertion which requires verification in its own right as being true. Thus arises the requirement in form of a verification that a reason of truth in content requires (apart from exceptions yet to be discussed) a further reason of truth in content. If that reason of truth in content does not fulfil this requirement in form there then exists the fault in verification known as 'presupposition of the

unproven' (petitio principii). In this case the reason of truth in form of an assertion is missing because the substantiating statement of the assertion is not substantiated. Thereby not only the statement but also the assertion has not been verified.

The requirement that there be substantiation of verification equally in content as in form is the principle of sufficient reason (principium rationis sufficientis). This axiom of classical logic requires that there be a reason for everything. The axiom's reputed author LEIBNIZ differentiated in it between 'reason of fact' and 'reason of judgement' [Monadology, § 32]. SCHOPENHAUER in his thesis on the principle of sufficient reason differentiated between an empirical 'reason of real facts' as the cause for an empirical effect and a mental 'reason of cognition' as the ideal, intellectual reason for an assertion/a judgement. (Schopenhauer also specified two further – but not relevant here – types of reason, the motive for action and the reason for being.)

Just as in causality where the cause (the reason of real facts) with due factual necessity produces its effect, there exists a logical necessity for consequence to result from its sufficient cognitive reason (the reason of ideal facts). Such a consequence necessarily arises in a formally correct syllogism, i.e. a faultless conclusion. In such syllogism the sufficient cognitive reason consists of two true premises providing the reason of truth in content of its consequence, and the correct relationship between them which gives part of the reason of truth in form of that conclusion. If a syllogism contains a fault concerning the relationship between the two premises such that the resulting conclusion is incorrect then its reason of cognition is not a sufficient one, because the conclusion does not logically follow from the premises. An example is the circular argument whose premises, even they were true, always have insufficient reason of cognition (and therefore no reason of truth in content) because in it the conclusion merely expresses one of its own premises. Thus the fulfilment of the principle of sufficient reason of cognition provides by virtue of reason of truth in form the elimination of any fault of syllogism.

The principle of sufficient reason of cognition is the cardinal principle for verification because it requires indisputable substantiation in content as well as in form. It is odd that this principle has been eliminated by practitioners of modern logic, who diminished it to real facts and thus made it solely a principle of experience concerning the causal connection between cause and effect. This is contrary not only to the original intention of Leibniz and Schopenhauer but also to this principle being to this very day quoted as one of the four main principles of classical logic together with the principles of identity, contradiction

and the excluded third. Furthermore it is a fact that we not only require substantiation for real effects but also for assertions and actions. For that reason alone it is wrong to restrict the principle of sufficient reason to causal substantiation. It is very strange that exactly the principle without which no reason exists to substantiate and thus verify a statement, does not have its firm place in the teaching of logical thought and thus the discipline of substantiation. Presumably it arises as a consequence of the formalization of modern logic because the principle of sufficient reason cannot be satisfactorily expressed by a logical notation.

According to the requirement for substantiation of an assertion equally in content as in form, the sufficient reason of cognition must contain its reason of truth in content as much as its reason of truth in form. If an assertion can be shown to be a conclusion then its sufficient reason of cognition are its two premises provided that the conclusion logically follows from them. Since the premises are again assertions the same is right for their – and perhaps preceding premises – sufficient reasons of cognition and with it their reasons of truth. But reasons of cognition can also be (to be discussed later) logically undeniable and therefore ‘absolute’ true facts if an assertion corresponds in content with such facts. In any case an assertion can only be logically true if it does not contain the verification fault of the presupposition of the unproven. This means that an assertion is logically true because of its faultless formal reduction to/deduction from an undeniable reason of truth in content. And this reason is undeniable if denying it makes intersubjective true statements impossible in principle. Only then does such a reason of truth not need any further reason of truth. Thus it is logically unimpeachable and therefore absolutely true and as such the reason of truth of an assertion is fulfilled equally, both in content and in form.

The reason of truth in content of an assertion does not necessarily consist of two premises. If, as just mentioned, an assertion corresponds in content with a reason of truth in content which is wisely undeniable, for example a logical principle, or if the assertion itself is such a fact, then self-evidently it also does not need any further reason of truth and then naturally it is likewise true. The substantiated truth of assertions therefore depends solely upon their correctness in form (be aware that the reason of truth in form also includes the reason of truth in content!) proceeding from ‘absolutely true’ reasons of truth in content which are not further reduceable to other statements.

In summary, so-called truths are only true if their implied presuppositions are true. Thus no statement is true without (a) the fulfilment of the principle of sufficient reason, i.e. without it having sufficient reason of cognition as reason of truth in form which always includes the reason of truth in content, and without (b) being reliant upon absolutely true and therefore indisputable statements. In the absence of these it cannot be stated what is sufficient reason of cognition nor what is meant by 'true'. Thus 'true' means to have for any statement/assertion sufficient reason of cognition which is either as reason of truth in content two premises, or which is a fact which does not require verification (to be discussed later). Sufficient reason of cognition will be such a fact if the substantiation of an assertion consists of its conformity with such a fact. Any premise, naturally, must be deduced from such absolutely true, not further reduceable, facts.

Without the acceptance of something absolutely true by virtue of irreducible reasons of truth in content it cannot be stated what the term 'true' means nor what is meant by 'truth theory'. It follows that it also makes no sense to speak of an "approximation to the truth", this being the declared aim of Critical Rationalism which does not accept anything as an absolute truth. Consequently this approximation can only be interpreted as an increasing probability of the correctness of statements because of the increasingly right steps of its substantiation. As said before, the procedural rightness in the substantiation of statements leads to their truth. Certainly one cannot come increasingly closer to something which does not absolutely exist. Furthermore, if there is no demonstrable, absolute truth then it cannot be stated with intersubjective validity what is meant by 'true'. Thus 'true' presupposes 'absolutely true'.

### Reasons of Truth not in Need of Verification

There are three kinds of reason of truth that do not require verification: (1) Concrete measurable facts, (2) the classical logical principles and (3) immediate necessities of thought.

Concrete measurable facts do not need substantiation because they cannot be denied if statements of empirical real facts in the so-called outer world are to be possible. Hence they are 'absolutely' true, i.e. not in further need of verification, provided that they do not prove to be erroneous and therefore become worthless as truth. Such a fact could become untrue at a later date with proof from new findings. To concrete measurable facts also belong of course statements concerning concrete measurable behaviour of living beings.

Neither do the principles of logic need verification because verification already presupposes these principles. If one wished for example, to deny the principle of contradiction then consequently any statement could be both true and not true simultaneously and therefore the denial denies itself. Thus this principle must be accepted as absolutely true if true statements are to exist at all. The substantiated denial of a logical principle would moreover contradict itself by using the principle in the substantiation of the denial. Also any restriction would be a denial of its validity as a principle. The denial or restriction of a principle of thought destroys the basic structure of logical thought.

Whilst principles of logic are true by their enforcement as principles of thought (laws of thought) direct necessities of thought are true by themselves and therefore immediately and necessarily true. Examples are: if A includes B and B includes A, then the equation  $A = B$  holds; or the planimetric axiom that the shortest distance between two points is a straight line; or: the left glove does not fit the right hand. Furthermore the recognition of an identity, conformity and equally an equality is an immediate necessity of thought because there is no possibility to explain it more basically. Not least the recognition of the primacy of consciousness in the search for the sum total of all one can know and recognize is relevant here. This primacy is compelling because consciousness is the most immediate and - in contrast with the outer experience - sole experience which is within existence and essentially indisputable without leading to irresolvable contradictions. Its denial would be self refuting because all that which would be stated as seemingly a more immediate experience is an assertion/statement and thus as content of thought, an expression of consciousness and therefore confirmation of the truth of its primacy. To deny or question it is only possible through false reasoning so that it is an immediate necessity of thought and consequently absolutely true. A further example already described in another place [1; p. 1ff.] is the so-called 'fundamental thinking error'. This companion essay describes the thought of notions with meanings excluding themselves from thought, such as the terms 'independent of consciousness' or 'independent of thought' as characteristics of the so-called outer world.

According to the principle of sufficient reason irreducible reasons of truth naturally also have their reason, but it does not have to be identified because as reason of these unassailable reasons of truth it is irrelevant for the ascertainment of truth. In the case of this principle moreover the question for its reason expresses even the principle itself, because why does one ask for the reason? Naturally because of the principle of thought called 'Principle of Sufficient Reason'! From this principle it does not follow that each reason of truth must

have such a reason, nor that a reason which is not a reason of truth/reason of cognition must always be discoverable. Just as a reason of action (a motive) does not need any other motive but has a so-called real, causal reason or a reason rooted in consciousness, so equally a reason of truth can possibly not require any further reason of truth. This is always the case if the denial of a reason of truth in content makes impossible the establishment of a truth in principle. This happens for example in the denial of a logical principle.

In contrast to facts not in need of verification because they are true in principle or absolutely true – all others are only relatively true because they are verified by deduction or conformity with them. Thus facts not in need of verification can provide sufficient reason of truth in content for an assertion in either of two forms: (1) by deduction, because of the two premises of a syllogism, (2) because of a single fact which gives conformity to the meaning of an assertion and of the fact. It is essential for understanding verification by the conformity of concrete measurable facts with assertions, to consider that facts are statements according to the given definition at the beginning (see p. 1). These facts consequently are always in opposition to the assertions only in verbalized form, i.e. as expressions of thoughts. This is absolutely necessary because a verification takes place exclusively in thought. Truth is always the result of a thought process. Naturally these facts can only manifest themselves as thoughts. They perform in the verification of assertions, for the present moment at least, solely as mental facts. That the ‘things’ included in these facts are more than just cognitive things (noumena) has yet to be proven/verified. The controversy between Idealism and Materialism illustrates that the ability of things – so-called real – has not been proven/verified. The absolute truth here adjudged to be attached to these things therefore concerns only their existence; with nothing being said by it about their essential quality to be real or ideal. A statement about this essential quality is a separate asserted fact which as an assertion needs a verification. To deduce a conclusion with a real, i.e. empirical meaning, from premises with a naturally ideal, i.e. a cognitive meaning, is a problem also discussed in connection with the above mentioned ‘fundamental thinking error’ [1; p. 4ff.].

Because the substantiation of an assertion proceeding from real facts, i.e. facts independent of consciousness, is not only impossible because of the primacy of consciousness but also by reason of the cited thinking error, it becomes clear that logic and ontology/metaphysics are not able to be fundamentally separated. How then can it be possible to separate the doctrine of what exists, - the ontology - concerning its objects, from the doctrine of the substantiation of these objects, - the logic? That which is substantiated and that which substantiates



indeed both exist. And that which exists must exist with compelling logic if it is to be substantiated in the same manner.

Thus concrete measurable facts are in the verification of assertions solely statements like the remaining facts that have no need to be verified, i.e. like the classical logical principles and the immediate necessities of thought. Any empirical fact will serve as an example, like for instance the one expressed in the assertion that heating air causes it to expand and enlarge its volume (at constant pressure). This assertion with the warming air as the object of cognition and its expanding as its attached quality, is in conformity with the description of the result of a corresponding experiment. So the statement (assertion) is in conformity with the other statement (description) and thereby the assertion is verified. A 'practical' verification is seemingly just another form of verification. Practical verification means that the description of the demonstrated event is omitted so that the comparison of the assertion with this event takes place not by means of a stated fact but only with a mental representation of the demonstration. The verification then becomes, by the omission of the event's verbalization, less complex in form.

Without the acceptance of something absolutely true in form of irreducible reasons of truth in content, there cannot be any truth which is anything more than a subjective belief. Additionally by the denial of these ultimate reasons a verification of assertions becomes impossible in principle, as shown above for instance by the denial of logical principles. Any attempt to verify an assertion without such ultimate reasons necessarily leads to a presupposition of the unproven although still in need of verification, exactly 'petitio principii'.

According to the common definition of the classical logical principles they are not in need of verification (in need of proof) nor are they verifiable (provable) and therefore neither are they capable of substantiation. And since these principles order and direct rational thinking they are indispensable to the discovery of intersubjectively true statements and must rank as absolutely true. But in contrast to the principle of sufficient reason whose non-substantiality was shown earlier the other three classical axioms (the principles of identity, of contradiction and of excluded third) can be substantiated by a theorem having the form of an immediate necessity of thought which I nominate the 'Principle of Total Sum' and which states: A is included in the total sum of all A's.

## The Principle of Total Sum

Its elaboration begins with the principle of contradiction. This principle states that 'A is not equal to non-A'. According to the theorem of total sum an A cannot be equal to a non-A because otherwise (if an A is equal to a non-A) not every A could be included in the total sum of all A's. Consequently an A could be excluded from the set (whole, total) of all A or a non-A could be included in the total sum of all A's. Thus the principle of total sum is able to substantiate the principle of contradiction. The reverse however is not possible because out of 'A is not equal to non-A' it is not possible to deduce either a total sum or an includedness nor yet an excludedness.

The principle of total sum also permits an element to be of only two possibilities: either it is equal to A or equal to non-A, i.e. a third possibility is excluded, this being the statement of the principle of the excluded third. Furthermore with regard to the affiliation of an A to the total sum of all A's, each A is equal to A or in the case of a context – that is a total of meanings – the element A cannot change its meaning, i.e. it cannot become a non-A, as long as it is not excluded from the total sum of all elements A. Therefore the principle of total sum also includes the statement of the principle of identity. Thus the theorem of total sum implicates the three previously explained principles and is in addition to the principle of sufficient reason a principal theorem of logic, and even more an immediate necessity of thought.

By substantiating the principle of contradiction, the principle of total sum shows why a contravention of the former, i.e. a contradiction in terms (A is equal to non-A), is logically untenable. By this it also shows the reason for the origin of such a contradiction. It originates from the contravention of the principle of total sum, i.e. by the exclusion of an A from the total of all A's it becomes at the same time a non-A whilst according to this principle it always remains an A. Thus a contradiction arises by the exclusion of an element, from a total sum of elements to which it belongs whereby it becomes its contradictory opposite.

## The Principle of Total Sum as a Key to Apories

In addition to the plain logical relationship between the classical axioms and the principle of total sum the latter has practical utility for the explanation of the logical structure of apories (paradoxes) and therefore for their solution. Logical apories/paradoxes are a supposedly insoluble logical hopelessness in the form of a contradiction in terms. Whilst the essential character of a paradox is such a

contradiction and as such is explicable by the principle of total sum, by its contravention, this principle can also reveal the reason for the seeming hopelessness and with it the solution of the paradox. Therefore I term the principle of total sum also a 'key to apories'.

The paradox of 'The White Skinned Moor', the most simple of its kind, will serve as a paradigm for all paradoxes. It is so to speak a miniature paradox, consisting of a whole with only two elements; black-skinned + human (= Moor). By the exclusion of "black" as an element of the whole "Moor", i.e. by contravention of the principle of total sum, the human becomes necessarily un-black although it actually remains a Moor, and therefore a black human. Now in the residual whole (= human) comes a contradictory element ("white" = non-black) which results in the contradiction in terms "white Moor" (= non-black black human). This paradigm makes plain that excluding an element from a whole to which it expressly belongs will cause its contradictory opposite to arise in the residual whole. As to the excluded element, the principle of total sum substantiates why an A excluded from the total sum of all A's becomes its contradictory opposite, i.e. a non-A in comparison with the remaining A's in the whole.

A paradox can always be expressed by two contradictory statements both of which are claimed to be true. In the above paradigm: [a] "The human is black (= a Moor) and [b] "The human is not black (= white)". That paradoxes (apories) cannot be true and therefore are seemingly insoluble contradictions in terms, results first from the principle of contradiction, i.e. from the cognition that two contradictory statements cannot be true together. And second it results because a contradiction in terms, i.e. a contravention of the principle of contradiction, is also a contravention of the principle of total sum, which into the bargain is an immediate necessity of thought.

It is hardly imaginable that a paradox is not soluble by the principle of total sum, i.e. that this theorem is disprovable as a key to apories; because the contradiction in terms forming a paradox necessarily results in a contravention of this theorem. Expressed as hypotheses:

- [1] The contradiction in terms constituting a paradox, i.e. the allegedly logical hopelessness, arises from one or several element(s) belonging to a whole being excluded from this whole. Thereby an A is no longer contained within the total sum of all A's, from which arises the contravention of the principle of total sum.

[2] The contradiction in terms becomes particularly clear if instead of the excluded element(s) (an) opposite or contrary element(s) is/are explicitly put into the whole.

[3] The demonstration of the contravention of the principle of total sum - the reason for the origin of the contradiction in terms - proves the alleged hopelessness of an apory/paradox as only seemingly existant and shows also the course to its solution.

I exemplify these theses with one of the oldest and most renowned paradoxes ascribed to ZENON and named 'Achilles and the Tortoise'. The fast Achilles sets out on a foot-race with a tortoise which gets a head start.

The paradox is that Achilles allegedly can never catch up with the tortoise because he must always reach the point in the distance from which the tortoise has already left. The advantage of the tortoise of course becomes constantly smaller but it can at no time become zero. Thus arises the clear contradiction that the faster Achilles is still not faster than the tortoise.

The solution is that actually Achilles caught up with the tortoise just after the start and before the tortoise could reach a subsequent section relevant for Achilles. The contradiction arises from the partition of the racetrack into imagined quanta which are determined by the tortoise whilst Achilles cannot cover them before the tortoise, "because he must always reach the point in the distance from which the tortoise has already left". Through that, Achilles' potential distance performance and with it his running speed - an essential element of the system "foot-race" - is excluded from it, giving a contravention of the principle of total sum. Thus Achilles' rapidness is reversed into the tortoise's slowness.

As a further simple and famous example I choose 'Buridan's Donkey'. Allegedly it would starve in the middle of two equal bundles of hay, for although hungry, it could not decide for one of them, both representing equality of motive.

The solution: If the donkey has the faculty of decision-making, i.e. it can decide between one of two different remote or unequal bundles of hay, then it can also decide in the case under consideration, since the selection of one of the bundles is conditioned by several factors, not only its appearance and distance. Generally there is no logical reason which excludes a decision in a conflict of motives. The possibility for a decision by the donkey in the present so-called paradox is

excluded from the total sum of its possibilities for decision and thereby reversed into an allegedly non-possibility of decision. Thus arises the contradiction of being capable to decide on principle but not in an individual distinct case. The pretendedly non-possibility of decision in the given case belongs actually to the total sum of the donkey's possibilities of decision. The contravention of the principle of total sum illustrates the origin and at the same time the key to the solution of this contradiction and therefore this so-called paradox.

The examples show in each case elements excluded from a wholeness although they are integral parts of it from which follows the contravention of the principle of total sum. If this exclusion were not to be the case then it may not come to a contradiction in itself and with it not to a paradox.

The principle of total sum is not only a key to the solution of constructed paradoxes. A non-constructed paradox is, for instance, the thinking error in form of the notion 'independent of thought' discussed among the immediate necessities of thought. This content of thought excluding itself from thought by its meaning, i.e. from the sum of all contents of thought to which it belongs, is a contravention of the principle of total sum. On the one hand the expression 'independent of thought' becomes a contradiction in itself and with that a paradox by its auto-contradiction, i.e. by its own reversal into a non-content of thought (after all "independent of thought" means "outside of thought"). On the other hand this expression is, as a content of thought, included in the total sum of all thoughts. This paradox is solved by its proof as a contravention of the principle of total sum, because each content of thought is as an element included in the sum of all contents of thought, i.e. in thought as a whole, and that's why there can be no 'independent of thought'. Thus the principle of total sum proves to be also the key for the solution of this apory/paradox.

Of course the same is true concerning this thinking error in its general form, i.e. in the intention to think notions with meanings which exclude themselves from thought. For more examples see [1]. Its conformity with the contravention of the principle of total sum, i.e. with the statement 'A is not included in the total sum of all A' becomes clear in the sentence: A content of thought which excludes itself by its meaning from the total sum of all contents of thoughts, i.e. from thought as a whole, is not thinkable in that meaning. The so-called thinking error and the contravention of the principle of total sum have in common that they express, like all logical apories/paradoxes, contradiction of themselves. Furthermore it is as impossible to exclude any thought from the total sum of all thoughts as it is impossible, according to the principle of total sum, to exclude any element belonging to the universe from it. Also therefore it is impossible

(not only because of the cited thinking error) to exclude by thought consciousness from the universe. Whilst the basic theorem called principle of total sum accounts for the principle of contradiction it is the structural instruction for the correction of the thinking error, of paradoxes and of auto-contradiction in general. At the same time it shows that paradoxes are untenable in logic. Therefore they have nothing to do with truth but are intended or unintended delusive structures.

## Reference

- [1] Seibold, F. (2003): A Fundamental Thinking Error in Philosophy, ISBN 3-932178-38-6, online:  
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