Why Computers can not Anticipate the Sufficient, but the Necessary Condition of What Will be.

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1. Introduction

Anticipation presupposes that we run ahead of things, that we can more or less assess the future. In one or another way, if we want to anticipate, we must *know* what shall or can happen. Anticipation, we can comprehend in two ways. First, one can mean that we can anticipate what will happen in an absolute way. Secondly, one can mean that we can anticipate something to a certain amount. Concerning computers, the question is if computers can count in an absolute or relative way, in a binary way, what shall or can be. Out of transcendental metaphysics we want to evaluate both forms of anticipation.[1] We want to demonstrate howonly the relative form of anticipation is possible under the three necessary conditions of thinking as such, which are the principles of identity, of opposistion and of limitation.

2. Keywords:

binary methodology, identity, opposition, difference, principle of grounding, sufficient condition, necessary condition

3. Binary logic and Transcendental philosophy

In this text we want to show the relevance of transcendental philosophy for computer anticipatory systems. How can transcendental philosophy be relevant for logic and anticipation? In general, transcendental philosophy wants to produce an insight in the a priori concepts (or necessary conditions) of our thinking concerning the world. The main transcendental question is: how, or under which conditions, is thinking of something possible? We can reformulate this question: how, or under which conditions is anticipation of something possible?

Kant[2] and Fichte[3] brought us an insight in this conditions. And so, because logic is a way of thinking – everybody has at least to admit that logic as an activity, is a mental act, an act of thinking – the transcendental necessary conditions concerning thinking as such, are relevant for the mental practice of logic and anticipation.

Kant, but in a more direct way Fichte, showed us those necessary conditions, which are the concepts of 'identity', 'opposition' and 'limitation'. Those concepts are the fundamental

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[1] The reasoning we present here can also be seen as a proof of the impossibility for all objective knowledge (comprehended as an absolute knowledge of what is.).

[2] Kant I., *Kritik der reinen Vernunft*, Weischedel W. (red.), Frankfurt am Main, Suhrkamp, (1981/1787), 1995.

[3] Fichte J.G., *Fichtes Werke*, Fichte I.H. (red.), Berlin, Walter de Gruyter & Co., (1845/1846), 1971.

concepts if we want to think something concerning the world. When we reformulate those concepts (as Kant and Fichte did) as 'logical principles' we get:

1. the logical principle of identity : 'A = A'
2. the logical principle of opposition: 'A ≠ -A'
3. the logical principle of limitation (or grounding): A is for a part = A, and for a part = − A.

Cave: 'A' can here only be understood as a concept in it's most abstract form. (It's the common ground for all mental acts like numbers, words, music, representations, et cetera in your head.)

When those three principles are the a priori necessary conditions for every form of thinking, then those three principles must be relevant for every form of logic a well. So, transcendental philosophy learns us that the concept of conjunction, disjunction et cetera at least presupposse those three logical principles. We can imagine that some analytical philosophers will have serious objections against our transcendental statements. At least, the principle of limitation will be considered as a complete twaddle.

Nevertheless, we are willing to give the analytical philosopher the benefit of the doubt. We are willing to drop this problematic principle of limitation. Let's suppose that every form of thinking only presupposes the principle of identity and opposition.
And let's make the next ecercise, let's suppose that the binary methodology (for example a computer as a form of artificial thinking) is only based on two logical principles, in particular the principle of identity 'A = A' and the principle of opposition 'A ≠ -A'. A striking and intresting point is that the two abstract concepts A and −A have a certain simularity with the binary concepts 1 and 0.[4]
When we make the supposition that the concept of identity and opposition are the only fundamentals of binary thinking, in this way we can reformulate 'A = A' and 'A ≠ -A' as '1 = 1' and '1 ≠ 0'.[5] Now the question is: on the basis of those two logical fundamentals, can computers anticipate?

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[4] And in this way with this reasoning will count for every calculating methodology.

[5] Possible objection 1: Those who do not understand what we are doing here, can make the objection that we equate -1 with 0, or which is logically the same and as worse as equating 0 with 1. When A = 1, than -A must equate -1, and so -A can never be 0. Nevertheless, we make this statement here. Why? In a certain way, we must admit that we are here equating -1 with 0. But we must state that we are forced to make this equation. Due to the fact that in a binary logic we only have '1' and '0', we are forced to make this equation; '-1' does not exist here. In what follows, we want to show that due to the abstraction of the principle of limitation we where forced to do what we did here. Our main point is showing how the presupposition that thinking is only based on the principle of identity and opposition must necessary lead into the absurdity that 1 = 0.
Possible objection 2: Another can state that the number '0' has a very special mathematical meaning, it stands for really absolutely 'nothing'. So, in this case, when A equates 1, it's very problematic to equate 0 with −A. We want to state that this objection is not relevant. Due to the abstraction of the principle of limitation, A or 1 does not stand for a number here, 1 stands for the absolute opposite of 0, so the absolute as such. (Those who are trained in transcendental thinking, will see that objection 1 and 2 have the same problematic ground. In fact, both stand for the same problem formulated in a different way.)
At least, one can just state that what we are trying to do here is absurd. I admit, he's right. In what follows we want to show that the abstraction of the principle of limitation leads into an absurdity. What we want to present here is an indirect proof (a reductio ad absurdum) that the rejection of the principle of limitation is absurd. Numbers, concepts et cetera, or thinking as such, is only possible when we presuppose the principle of limitation. Stating that 1 ≠ 0 presupposes this principle.

A last prior statement. What are we trying to do here? By means of logic language, we try to demonstrate what transcendental philosophy is all about. This is not without risks. It means that we are entering the territory of logic with transcendental concepts. Let's make an anticipation! The risk for a misunderstanding, the risk for a failure is probably high. Nevertheless, if science wants to make progress, a clash of concepts is necessary. It's the only way to be fruitfull. Just repeating what is already known, is without any sense.

4. Binary logic and Anticipation

Anticipation presupposes time. After all, you want to anticipate something which is not yet, something which will occur in the future. At minimum, this means that you expect that something *different*, something *changed*, something *new* can happen. If in general, something new was impossible, if in such a way everything would stay the same, which means that only the principle of identity would apply ($1 = 1 = 1 = 1$ etc.), then in general nothing would have to be anticipated. So, anticipation presupposes the possibility of a modification, or time against which we can place the change.[6] To be able to anticipate, at minimum, we must have in opposition of situation S in time t, a future situation S' in time t'. Technically spoken: when S and S' oppose each other, then they must be different in at least one feature. Two different (or opposing) things should differ in at least one feature.[7] In other words: between S and S' there must be a border, a limit, a difference, or you can only anticipate sopething which is only probable.

With this, the question concerning anticipation can be reformulated. If S and S' differ in at least one feature, then the question is can this difference be anticipated by means of binary methodology? Can we calculate by the binary method, something which isn't yet in existence? Can we anticipate by the binary method, the difference between S that exists, and S' that will exist?

We started with the idea that the binary methodology presupposes two logical principles: the principle of identity and the principle of opposition. Now the question is: can we, from the principles $1 = 1$ and $1 \neq 0$, anticipate the difference between S and S'? If only the principles $1 = 1$ and $1 \neq 0$ are avaliable to us, then we must at least comprehend the difference between S and S' as a difference between 1 and 0. In other words, if there is time and difference, then the conclusion drawn from our two logical principles has to be that the difference between S and S' is only possible to the extent to which our two principles are making the difference possible, and this can be no more than the difference between 1 and 0. No different form of distinction is here conceivable. Following from

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[6] The superficial objection can be made here that the possibility of modification is no necessary condition for anticipation. One can state that people anticipate that the sun will rise tomorrow and this is certainly not a change. We doubt. If people anticipate the rising of the sun, the question is what exactly do they anticipate. The more they make abstraction of the concrete circumstances in which the sun will rise (the colour of the sun, the weahterconditions et cetera) the higher the probability of their anticipation will be, but the less interesting this anticipation is. There's nothing exciting in anticipation a natural law. But nvertheless, the probability of the rising of the sun as such is high, but nevertheless in the history of the world, it already happened several times she rose in a very unexpected form. Let's really suppose that every thing stays the same, that nothing changes! Anticipation would be totally meaningless. Nowadays it's very interesting to anticipate in which form the mexican flu will spread out over the world. If we already would know in which way this flu would evolve, all computer anticipatory systems would be useless.

[7] Fichte J. G., *Fichtes Werke I*, (further abbreviation FWI), p. 111.

both of these logical principles, each difference is only comprehensible as a difference between 1 and 0. Concerning this conclusion, we can draw attention to four things.

First, one could conclude that a computer can anticipate absolutely what will be. Whenever there is change, one knows for certain that from 1 there necessarily follows 0. In that way, this anticipation is logical and absolutely correct. But, we will be forced to conclude that this is not relevant, and therefore false.[8] As when time keeps on running and there appears another change, then, after the anticipated 0 at time t', there must occur 1 at time t'', and there again 0 at time t''', etc.; consequently we obtain the sequence: (t1 → t'0 → t''1 → t''' 0 → etc). But, what must we conclude? In general, it seems that nothing new occurs in this succession of 1 and 0; as a consequence, in the sequence of 1 and 0 there is no change (nothing new occurs), by which the concepts of time, difference and border in the sequence of 1 and 0 are eliminated. The first anticipated difference t'0 is, in general, no change, thus the concept of anticipation is done away with as well.[9]

Secondly, because time t is absent in the sequence of 1 and 0, we can translate our sequence as: (1 → 0 → 1 → 0 → etc.). What does this sequence mean? To clarify, we must introduce the transcendental metaphysical concept of sufficient reason (*hinreichende Grund*). We understand a sufficient reason as follow: when S is sufficient reason for S', then S' must necessary be if S is, because S is a *sufficient* reason for S' (nothing more than S is needed to have S'). When S is, then S' is as well. Important to note is that time is absent in this concept of sufficient reason;. (There's no tension, friction or difference between the being of S and S'.) We can formalise this as S → S'. When in the sequence (1 → 0 → 1 → 0 → etc.) time is not conceivable, then this means that 1 is a sufficient reason for 0. But, because time is absent, the same reasoning counts in the opposite direction. In other words 1 → 0, and 0 → 1, or: 1 ↔ 0. *Or, in general: 1 = 0, which is of course totally absurd*.[10] The consequence of this reasoning which leads to absurdity, is devastating in reference to our presupposition of binary logics. It means that both the principle of identity and the principle of opposition break down. On the one hand 1 = 1, and on the other hand 1 ≠ 0 is no longer conceivable.[11] If our two logical principles break down, is there something left to think about?

Thirdly, one could say that both concepts 1 and 0 and both logical principles can be salvaged. One could say that our two logical principles make more forms of difference possible than just the one between 1 and 0; as such, the irrelevant sequence of 1 and 0 can be avoided. So, in a certain way we redefine our system by associating our both concepts! One could state that S is equal to 11 and S' to 10, so that another difference becomes

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[8] Although this is not the topic of this article, this proposition points to a second concept of truth, namely: topical truth. Thus, besides logical truth, there's a topical truth as well. Logical truth is that form of truth which is grounded in the logical principles of identity and opposition. Topical truth will be grounded in the principle of grounding. This connection is the metaphysical background for this article. The concept of a topical truth was developed by the Rudolf Boehm (Univeristy Gent).

[9] To set clear, it means that identity and opposition lose all validity.

[10] Here we get a first indication that our presupposition that thinking only presupposes the principe of identity and opposition, leads into an absurdity. (Stating that I, as the author equate 1 = 0 is by this an irrelevant blame. One should have to know that every person who can live his live in a normal way, must know that 1 ≠ 0. We can make next statement. Knowing that for every reasonable person 0 is different of 1, one could presuppose on the moment that I equate 1 = 0, that this person is trying to make special statement. The statement I want to make is to make clear in which way the difference between 1 and 0 can be thought. To do this,I have to push the possibilities concerning our thinking up to it's limits. And by neglecting the principle of limitation, I want to show we pushed our thinkig over it's limits; which will lead us into an absolute absurdity.)

[11] So , in a certain way we admit the two objections we presented in note x.

noticeable here. We disagree. When we consider the decimals, S and S' are, on basis of the principle of identity, the same: 1X = 1X. Considering the unities they are unequal and opposite: X1 ≠ X0. Does this means that there exists another form of difference than seen in the case of 1 ≠ 0? No! Because the decimal in S and S' is the same, the decimal is not different pertaining to the difference in the unities. In other words, the decimals are, in reference to the difference between the unities, irrelevant. Consequently, the difference between 1 ≠ 0 and X1 ≠ X0 is the same. Or, whatever the decimal is, in reference to the difference between S and S', it doesn't matter. Is S = 11 and S' = 10 or is S = 01 and S' = 00; in reference to the difference between both, the decimals are irrelevant. X can and may be 1 as well as 0. Conclusion: the difference between S and S', comprehended as a difference between 10 and 11, doesn't bring us any further. In general, we keep on getting stuck at the absurd and all devastating sequence of 1 and 0.

Fourthly, does the difference between 1 and 0 explain anything at all? Being that the difference between 1 and 0 only make possible the ever recurring, and so neverending, sequence of 1 and 0, we may ask the question of whether the principles of identity and opposition can elucidate change after all and thereby allow anticipation. As mentioned above, we disagree.

A similar conclusion, the fundamental impossibility to anticipate on the basis of the two logical principles was already delivered by transcendental philosophy. This proof is called the antinomy of pure reason. We apply this proof to binary logic.

5. The antinomy of pure reason (or the transcendental proof reductio ad absurdum)[12]

We started from the supposition, we only have the concepts of 1 and 0 and the two logical principles: the principles of identity and opposition. When we apply both concepts and logical principles, what do we achieve? What we have demonstrated above, can be demonstrated in a more abstract and general way. This demonstration is the transcendental proof reductio ad absurdum, or the antinomy of pure[13] reason.

Premisse 1:
Suppose there is 0. Due to the fact we made abstraction of the concept of limitation, 0 is absolutely identical with itself (the principle of identity) and on the basis of the principle of opposition it denies 1 in an absolute way. As a consequence 1 is not.[14] Thus, everything that is, is = 0. The absolute coincides with 0.[15]

Premisse 2:
However, 0 can only be, if 1 is. 0 only has meaning as 0 in contrast (limitation) with 1.

[12] Fichte, FWI, pag. p. 105 – 107.
[13] Pure means here formally, which can be understood as a pure formally reasoning, a reasoning without any content concerning the world. (Or, in other words, a reasoning with an abstraction of the principle of limitation.)
[14] One has to understand that here, in this argument, 1 is absolutely nothing, by which there is absolutely no ontological and epistemological (or in general: metaphysical) reference between 1 and 0.
[15] Note: since we do not have the concept of limitation, it's obvious that 0 is absolute. Nevertheless, if there would have to be a 1, then it can only be in an absolutely different metaphysical space, which means that there would be two universes, which is of course absurd.

Conclusion 1:
Premisse 1 and 2 contradict each other. If 0 is absolute, then 0 eliminates itself, because it eliminates its necessary presupposition, which is 1.[16]

Premisse 3:
Suppose there is 1. Due to the fact we made abstraction of the concept of limitation, 1 is absolutely identical with itself (the principle of identity) and on the basis of the principle of opposition it denies 0 in an absolute way. As a consequence 0 is not.[17] Thus, everything that is, is = 1. The absolute coincides with 1.[18]

Premisse 4:
However, 1 can only be, if 0 is. 1 only has meaning as 1 in contrast (limitation) with 0.

Conclusion 2:
Premisse 3 and 4 contradict each other. If 1 is absolute, then 1 eliminates itself, because it eiminates it's necessary presupposition, which is 0.

Conclusion 3:
From conclusion 1 and 2, there follows that both concepts and both logical principles eliminates themselves, by which our binary logic as defined above collapses. As a consequence, we lose every basis from which to form logical truth, by which 1 equals 0 and 0 equals 1, or $(1 = 0 = 1 = 0$ etc.). The conclusion is that the difference between 1 and 0, on the basis of the principles of identity and opposition, is no longer conceivable.[19] Everything seems to point towards the same empty and all devastating sequence from above. Or, the conclusion is that $1 = 0$.

However, we can imagine that not everyone is persuaded by our antinomy of pure reason. One can claim that we are not loyal to our supposition. For instance presmisse 2 and 4 presuppose limitation. We have to admit. But this is exactly the whole idea. If we do not presuppose limitation, the only thing we can do is identify and opposite the absolute with itself, which means that the absolute 1 and the absolute 0 are one and the same, which is of course without any meaning.
Once again, the one who makes the objection (see note x) that our starting point, by which we equate -1 to 0 is absurd. Well he's right, but the whole point is that in making this objection, he must presuppose the principle of limitation. In the absolute unlimited all thinking is absurd. But maybe the analytical philosopher is unaware that he is presupposing this principle. In that case, he thinks he can think without thinking about what thinking is about.

We add an argument of authority and an extension.

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[16] The same remark as in note 6 and 7 can be made here.
[17] One has to understand that here, in this argument, 1 is absolutely nothing, by which there is absolutely no ontological and epistemological (or in general: metaphysical) reference between 1 and 0.
[18] Note: since we do not have the concept of limitation, it's obvious that 0 is absolute. Nevertheless, if there would have to be a 1, then it can only be in an absolutely different metaphysical space, which means that there would be two universes, which is of course absurd.
[19] This shows that both principles presuppose a third principle, the principle of grounding. In what follows, this will be demonstrated.

<u>Argument of authority</u>: Kant (and his successor Fichte) pointed out nothing else.[20] So Kant indicated that out of a pure and therefore unlimited thinking we can derive a proof for the existence, as well the non-existence, of God; which we can understand as a proof for an absolute 1 and an absolute 0. Both are absolute! But, precisely the absolute character of both is a fundamental contradiction, by which both proofs become absurd.[21] Out of this reasoning Kant derived the conclusion that all reasoning, without the concept of limitation, is absurd. The ultimate consequence is that $1 = 0$,[22] which is of course absurd.

As a matter fact, Kants shows us that every thinking without limitation (which means without any contrast with reality, or a pure formal reasoning) is a pure castle in the air. Pure formally thinking as such, can never be a sufficient condition to know something about reality, and so it can never be sufficient condition to anticipate. (At least we may suppose that the one who wants to anticipate, wants to anticipate something that probably will or can *be,* something that will or can be *real*.)

<u>Extension</u>: Most probably, for the one that is transcendentally unskilled, it is comprehensible that the logical principle of opposition presupposses the principle of identity. The sign '/ ' only has meaning in contrast with the sign '='; '≠' means not equal. To be able to know what differs, it is necessary to know what's the same. That is, what's not equal becomes clear in contrast with what's equal. As a consequence we can make the following proposition: two different things must be equal in at least one feature. Two things that differ, must have a moment of synthesis.[23]

Nevertheless, it can be more difficult to comprehend that '=' is only understandable in contrast with '/ '. Namely, what's equal is only clear in contrast with what's not equal. Probably, one has more difficulty with this last proposition. But the fundamental question is: on which basis does one mean that identity, as such, can be understood without any presupposition! Above, we demonstrated that two different things must be equal in at least one feature. But vice versa, the proposition holds that two equal things must differ in at least one feature. Two identical things, must have a moment of analysis.[24]

5. The principle of grounding (*Satz des Grundes*)

What can we conclude out of this aporia? Our reasoning, by which we started from the principles of identity and opposition, points out the necessity of a third principle to make anticipation, or the understanding of difference possible. What can this be? We have just posited two statements:

(1) two different things must be equal in at least one feature
(2) two equal things must differ in at least one feature

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[20] Fichte, FWI, p. 91 – 123. / Kant, *Kritik der reinen Vernunft*, p. 308 – 582. (It concerns here the whole second part of this book, namely: *Die transzendentale Dialektik*.)
[21] As mentioned above, there can only one metaphysical universe.
[22] It general it means that human reasoning is finite. Human reasoning can not be intuitive. It is always and only disjunctive.
[23] Fichte, FWI, p. 111.
[24] Fichte, FWI, p. 111.

Integrating both statements, we can formulate the next statement: two things must be equal in at least one feature and different in at least one feature. Consequently: in general, when we have only two things A and B, and both things differ, then B has to be for a part B and for a part not-B, and then A has to be for a part A and for a part not-A.[25] In its highest abstraction this means that X is for a part X and for a part –X, or X is for a part 1 and 0.[26] With this we have derived an important principle of the transcendental philosophy, namely the *Satz des Grundes*.[27] In what follows, we will refer to this as the principle of grounding.

We are aware that such a principle will drive the analytical philosopher mad. Nevertheless, one can refute the principle of grounding. But in so doing, one must demonstrate how he can derive something merely out of the principles of identity and opposition. Positing the principle of grounding, in general it only means that something (a concept or a being, or we can say life after all) can only be under the condition that it is finite, or limited. This explains the name of this principle: this principle describes the necessary condition (the ground) on which something can be, and this is limitation.[28]

We have to admit that we can't provide an absolute proof for this principle. The only proof we provided, was a reductio ad absurdum. But, let's make a second exercise and suppose we that the principle of limitation is valid. What logical material is available now? At this moment we possess the principles of identity, opposition and grounding, and we have the concepts 1 and 0, and we have the concept of limitation by which X is for a part 1 and for a part 0. Concerning the question of anticipation, does this bring us any further? We provide two reasonings.

Reasoning 1: Suppose that A and B are different. Suppose A is equal to 1 and B to 0 (A = 1 and B = 0). Is the difference (analysis) between A and B comprehensible? According to the principle of grounding this is possible, if and only if we can indicate the identity of A and B. As a consequence, the difference between A and B is only possible and comprehensible if A and B have, through their difference, something in common (synthesis). As for the principle of grounding, X being for a part 1 and for a part 0, the similarity between A and B as respective 1 and 0, is nothing else than X. (We want to state that this confirms our principle of grounding). In this way A and B as respective 1 and 0, can be reconstructed as X1 and X0.

What's X now? In both cases X has to be identical. X must in both cases be **1** or **0**. This means that if A and B differ, respectively they must be **1**1 and **1**0 or **0**1 and **0**0. In other words, what X in general is, is irrelevant, but (I) X must anyhow be and (II) X must be identical in A and B. Technically spoken: in the principle of grounding, identity is the necessary condition for the difference between A and B. To make the difference between A and B comprehensible, X must in both cases be identical.[29]

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[25] Or which is the same, B is for a part not-A and A; and A is for a part not-B and B.

[26] X has to be comprehended as this presupposition, that states that synthesis and analysis, can only be, when they in one moment go together. We will demonstrate that this going together mean that they are each others necessary condition.

[27] Fichte, FWI, p. 111.

[28] By which we have also given the principle for each form of complexity as well.

[29] If not, it would mean that A and B would be in a different universe, a different metaphysical space.

Herewith, we bump upon the second fundamental concept of transcendental philosophy: the concept of necessary condition. We comprehend a necessary condition, as this condition X, without which a second thing Y (as an A or a B) cannot be. X is a necessary condition for Y, which means that if Y is, X as well must be; but the being of X does not necessarily mean that Y is (It means that there is between X and Y, friction, time, limitation.); after all X is only a *necessary* condition and not a sufficient condition. In this case, X is the necessary condition for Y, namely Y comprehended as the difference between A and B. Without X there is no Y, or no difference between A and B, and so no A and B as well.

Reasoning 2: Suppose that A and B are equal, suppose A = 1 and B = 1. Is their identity (synthesis) comprehensible? According to the principle of grounding, this is only possible if we can indicate the difference (analysis) between A and B. The identity between A and B is only possible if they are, through what they have in common, different in at least one feature. Because, if they do not differ at all, then in accordance with the antinomy of the pure reason (the reductio ad absurdum), they coincide absolutely, by which the concepts A, B and identity lose all meaning. According to the principle of grounding: X is for a part 1 and for a part 0, which means that the difference between A and B as 1 and 1, is nothing else than X. In this way, A and B as 1 and 1, can be reformulated as X1 and X1.

What's X now? What X finally is, in reference to the similarity between A and B, is relevant. But in contrast to that above, the relevancy of X is different. Now X must in both cases be different. In both cases it has to be **1** as well as **0**, by which A and B must be **1**1 and **0**1, or **0**1 and **1**1. The similarity between A and B as 1 is only conceivable if they differ in at least one feature. In other words, the difference in the principle of grounding is a necessary condition for the identity between A and B. To make the similarity between A and B comprehensible, X has to be in both cases different. In this sense X, as a difference, is a necessary condition for the similarity Y between A and B.

End conclusion 1: From reasonings 1 and 2 we can formulate an end conclusion. Both reasonings show that identity is a necessary condition for difference and difference is a necessary condition for identity. Both are necessary conditions for each other. But, does this mean that identity and difference are one and the same, that they are for each other a sufficient condition? No! Precisely because of the concept of limitation, it is not possible for them to be each other's sufficient condition. The concept of limitation means that there is an irreducible and non-anticipatible distinction between identity and difference, namely that something really new (without cause) happens.[30] This non-anticipatible distinction explains why we can't provide an absolute proof for the principle of grounding. Should there be an absolute proof for the principle of grounding, then there must be a sufficient condition for the principle of grounding. But precisely this is impossible. Our reasoning pointed out that from the concept of sufficient condition (A = B), the concept of difference is absolutely incomprehensible. If the new that occurs would have a sufficient condition, it cannot possibly be something new.

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[30] As a consequence, our reasoning relativates the old principle of *Ex nihilo nihil fit*. It means that the concept of cause is no longer comprehensable as a sufficient condition, but as a necessary condition. As we will show, it means that out of the concept of cause, we know that something will be, but we lack the possibility to know what will be.

In another way, the principle of grounding is the principle for all chaos theory. That what can happen is nor predictable, what can happen is A and -A. Nevertheless what canhappen is not as such absolute arbitrary. It's only arbitrary within the frame of it's necessary condition.

Nevertheless, we are not without means to anticipate. When we concretise this reasoning, then this means that out of the concept of identity, it is clear *that* a difference must occur, but *what* this difference finally will be, is not derivable from the concept of identity. Inverse counts the same. Because difference is only a necessary condition for identity, that which is identical is, out of the concept of difference, not derivable. As a consequence, *what* finally will be is not determinable and therefore non-anticipatible. But it is clear and necessary *that* something will be.

Suppose you have 1. What do you know? What can you anticipate? You know that something will become, but what will become is unclear. Therefore, what we know is: 1 → A. But what can A be?

(I)   Because 1 has to change, we know that A can never be equal to 1
(II)   Because 1 is a necessary condition for A, A cannot be without 1, or 1 must be in A
(III)   Because of (I) and (II), A is more than 1, so A must be = 1X
(IV)   Because 1 is only a necessary condition, we know that A (as = 1X) must be, but we do not know what X can be, which means that, by the exception that it cannot be 1, X is not determined. (Cave: A (or X) is not determined, but because 1 is A's necessary condition, A is not absolutely undetermined.)

Therefore A must = 1X. (1 as a necessary condition for A and X for the undetermined new in A.) So, since X is not determined, X can be equal to 0, (or 1), or 2, or 3, or 4, or 5, or ∞.[31] But, for all clarity, X as 0, 1, 2, or ∞, can only be in relation to 1 (because X is in A, and 1 is necessary condition for A).
So, what A can be, is everything, but this *everything* is not absolute coincidental. It is determined by its necessary condition, namely 1. Thus, if we have 1, then A can be 10, 11, 12, 13, 14, 15, 1∞, etc.

A second step: suppose that after 1, A occurs as a 17 (which means: X was = 7). So 1 → A, or, we now know: 1 → 17. When 17 has occurred, what can be next? What we now know is 17, and when time keeps changing, then after 17 something new has to occur. So, what we know is 17 → B. What can B be?

(I)   Because 17 has to change, we know that B can never be equal to 17
(II)   Because 17 is a necessary condition for B, B cannot be without 17, or 17 has to be in B
(III)   Because of (I) and (II), B is more than 17, so B must be = 17Y
(IV)   Because 17 is only a necessary condition, we know that B (as = 17Y) must be, but we do not know what Y can be, which means that, by the exception that it cannot be 17, Y is not determined. (Cave: B (or Y) is not determined, but because 17 is B's necessary condition, B is not absolutely undetermined.)

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[31] We want to remarke that from now one we have the ability to work with the concept of number or logic. From now one 1 is different of 0, 2, 3 et cetera. From now one the concepts of conjunction disjunction et cetera have a meaning.

Therefore, B must be = 17Y. (17 as a necessary condition for B and Y for the undetermined new in B.) So, since Y is not determined, Y can be equal to 0, or 1, or 2, or 3, or 4, or 5, or ∞. But, for all clarity, Y as 0, 1, 2, or ∞, can only be in relation to 17.

Thus, what B can be, is everything, but this everything is not absolute coincidental. It is determined by its necessary condition, namely 17. If we have 17, then B can be 170, 171, 172, 173, 174, 175, 17∞, etc.

Historical spoken:
1 means: Ceasar marches up to the Rubicon.
17 means: Ceasar crosses the Rubicon (alea iacta est).
What will 17X be or mean?
171 can mean: Ceasar got a cold by crossing the Rubicon and dies. (by crossing the river, Ceasar made by accident his feet wet)
172 can mean: Ceasar marches up to Pompeius' legion and wins (veni vidi vici).
173 can mean: Ceaser marches up to Pompeius' legion and is defeated (vae victus).
What did happen? 172 did happen. But 172 could only happen because of 1 and 17, because they are the necessary condition (and are not sufficient condition) for 172.[32] [33]

Fysico-biological spoken:
1 means: The Big Bang and atoms come into being.
17 means: Proteins come into being (with the Big Bang and the atoms as necessary conditions)
171 means: Apes come into being.
172 means: Unicorn come into being.
What did happen?

6. Anticipating the necessary condition (end conclusion 2)

Concerning the possibility to anticipate by computers, what does our reasoning mean? Does it mean the impossibility for anticipation? We want to invert the whole case. In a

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[32] One can make the objection that besides, the assertion that 1 and 17 are necessary conditions but not sufficient seems is to be the highlight of my the paper. One can state that my thesis is build upon the the simple meaning that there are only some missing premises, and that missing premises are nothing new! One can state that I has wasted many pages on, obviously without knowing it, the amounts to ordinary reasoning in arithmetic but in a horrible way that I have fooled myself to believe that I have has described anticipatory computers. I quote the review of X: "In fact, the conclusion in the paper boils down to the false assertion that missing premises make deductive methods anticipatory. This is of course ridiculous."
I want to make my point again. The whole problem I want to point at is not a lack of premises. This really to easy. The point is that what will come, namely 17X that X is absolutely unpremisable! There is nothing that can help you to anticipate what X in 17X will be. The only thing you will be able to anticipate is 17X. And that's already something.
[33] One can make the objection I am making an attempt to do reasoning in propisitional logic without having the simplest knowledge about that logic. For example, one can state that 172 stands not only for a proposition, but for a conjunction of propositions, by which I am confusing logic with reality. We want to make clear that I am not confusing logic with reality, my point in which way logic or thinking can be relevant for reality. So, I want to mix them up deliberatry. What can anticipation be about, if we may only anticipate what can not be! This is what transcendental philosophy is about, how can thinking be relevant for being! To make clear, I have nothing against logic. But the analytical philosopher has to know, that on the moment he wants to anticipate or say something about the world, he is leaving the pure logical territory and enters the territory of reality; and reality is only thinkable under the condition of limitation.

superficial way, one can state that it is the principle of grounding which makes anticipation impossible, and therefore the rumour is spread that this principle is irrational and annoying. Our issue is, it is precisely the principle of grounding which makes anticipation to a certain level possible. The binary methodology gives us the opportunity to determine what the necessary condition of X is. Which mean that we can anticipate relativily, not absolutely.

Suppose Z is the necessary condition for X. So, at the moment t, we expect the situation ZY, (which means that X = ZY, and Z is the necessary condition and Y is the undetermined element in X). If we should know what Z is, then in reference with ZY (or X) we can already anticipate something. Suppose we know that Z exists out of [127?97?1] and every numeral represents a necessary condition. In this case, some necessary conditions in reference to Z are determined and are already known, and some are still mysterious and are subject to scientific investigation. To determine these unknown necessary conditions, in other words, to determine their *identity*, we have to compare *different* situations on their *identity* and we have to compare *identical* situations on their *difference*.[34] And therefore we only need the logical principles of identity and opposition. It is precisely this sort of exercise in which computers excel: counting the differences and similarities among all kinds of situations. When a binary investigation points out that [127?97?1] = [127**3**97?1], than we can anticipate that ZY in each case is = [127**3**97?1]Y. On the other hand, in case we discovered that [127?97?1] ≠ [127**7**97?1] and [127**9**97?1], then we have anticipated that ZY can necessarily not be [127 **(-7, -9)**97?1]Y. Anticipating, we are able to know what Z is, and therefore computers are our best tool, but we will never be able to anticipate Y. Nevertheless, in knowing what Z is, science has achieved progress.

Conclusion: Computers can not anticipate absolutely what can be (= X), but they can anticipate in a relative way, they can binary count what Z (the necessary condition) in X is.

7. The logical mistake of the non-transcendental sciences (end conclusion 3)

Ignoring the principle of grounding, and restricting themselves to the principles of identity and opposition, is the logical mistake that non-transcendental sciences make. Out of this ignorance and restriction, they ignore Y in X, and as a consequence they lose all perspective on what X in fact is. Therefore for them [127?97?1]Y is equal to [127?97?1]; or [127?97?1]Y = [127?97?1]. In its highest abstraction this means that 1 = 0, which is in contradiction with their principles of identity and non-contradiction, which is of course absurd.

8. References

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[34] See how the principle of grounding functions here as background. / What we can't develop here is how the principle of grouding functions. It's function is, that it decides where in case of X as ZY, the limit (/) between Z and Y is, or Z / Y. In general, what is the relevant scientific perspective to start the envistigation (analysis/synthesis) of something as X. As a consequence, when the relevant scientific perspective makes sense, this perspective is topical true.

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