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'On "Therefore"' by Jin Yuelin[1]

(*Continued*)

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6. Form and Content of Thinking

This paper discusses the form "therefore" of thinking, but not any part of its concrete content. There was varying comprehension of form at different symposiums. The "form" or the "form itself" of "therefore" that some comrades talked about seems to be separated, or temporarily separated, from its content. The form of "therefore" discussed in this paper is the one integrated with content, though it does not have to be integrated with any part of its concrete content.

Form and content are inseparable. Where there is content there is form, and vice versa. Content and form are not the same thing, though having content and having form, when being regarded as two facts, are equally facts. They are different from each other. However, although they are not the same, they are united and can not be separated at any time, which is admitted by logicians and can not be violated by anyone. At this point there is no disagreement.

However, in the process of studying formal logic, a logician should make scientific abstraction. We should abstract the form of thinking from the concrete content, and study it. In scientific studies this is unavoidable. This is good, but therein lies the problem. In the process of studying formal logic, we want to "let

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the form of thinking separate temporarily from its concrete content", but the problem is how we can understand this approach. Form can not be separated from concrete content, but in the course of studying, we want to let the form separate temporarily from concrete content. A conflict occurs. How do we understand this conflict? The following one may be incorrect. If so, it would be dissolved in further discussion.

We want to study how to understand "let form separate temporarily from concrete content". Obviously, the key point is how to "separate", since the conflict rises in the understanding of separation. It has been said above that form cannot be separated from content. The form of thinking is with no exception, and it can not be separated from concrete content of thinking either. We begin with the form of thinking that occurred in concrete process of thinking and cognition, actually, with the object that has not yet been studied by the logician. We can regard the form "judgment" as our object of thinking. Most judgments reflect objective material things. The form and content of objective material things are inseparable, and the objective material thing is primary, which is one of the most fundamental principles of dialectical materialism. This is unquestionable. The question is whether the form and content of judgement that occurred in concrete process of thinking and cognition can be separated from each other? Obviously it is not material, but can we thus regard it not objective? There may be different opinions on this issue.

We believe that in the history (because historical issues are easy to spell out) of concrete thinking and cognition, either judgment or proposition, both of its content and form are objective, even though they are not material. That is to say, their existence in history and their greater or smaller influences can not be transferred by our *current cognition*. We do not think this can be denied. Otherwise, we could not explain the existence of the history of philosophy, the history of thought, the history of literature and the history of art, let alone study them. Now that we can study them, they have no way not to be objective. As for the whole history of social development, these things are not primary since they are not material. At this point, they are different. But as for their studying objects, they have no way not to be objective, and their objectivity is the same as that of material things. This point of view is put forward from the historical angle. In fact, this view is not limited to the long-term history, and the current ideological remoulding involves the objective existence of bourgeois ideology. The ideological remoulding of the bourgeoisie and bourgeois intellectuals is possible and realistic; in other words, with criticism we can get rid of bourgeois

thought existing objectively, so as to let it fall away at present. Nevertheless, the bourgeois thought is still an objective existence. Perhaps the question is why we emphasize this fact that has been proved?

The reason why we emphasize this point is that it is the form of thinking occurring in concrete thinking and cognition that is studied by those who study formal logic. Now let us take the studying of the form of judgment, for example. The form of judgment that we are studying is the *object* of study. Pay special attention to the term 'object'. In the course of studying, the form of thinking of judgment is the object which is objective. The purpose of the study lies in reflecting correctly the form of thinking of judgment so as to get the scientific abstraction and the correct concept of the form of thinking of judgment. For the course of logician's research, the concept he got is the content of his thinking. The form of thinking of judgment he is studying is the object of his studies, and the concept about the form of thinking of judgment he arrived at is the content of his thinking. This is so important that the following discussion would become irrelevant without admitting this.

We go back to "let the form of thinking separate temporarily from its concrete content". We want to analyze what on earth separates from what. The form and content of the object, say, the form of judgment that we study in a concrete process of thinking and cognition, are combined closely, and they are inseparable. That is to say, the existence of their close combination will be independent of our research. In the study we can not make our objects out of their concrete content. The form of judgment does not separate from its concrete content, so it is impossible to cut them apart and it should not cut them apart. Being separated from the concrete content is not the object of study. Then what is? We think that what the so-called "let the form of thinking separate temporarily from its concrete content" says is just asking the concept, "S-P" for example, about the form of judgement which is formed in the process of our studying, not to include the concrete content which occurs in the specific thinking and cognition and is combined closely with the form "S-P" of judgment, such as "the yield of wheat per acre can increase", "the South Little Street can be broadened" and so on. The form "S-P" of judgment is the object of our study which *does not* separate from its concrete content in the process of thinking. But in the course of our study, the concept of "S-P" reflecting this form of judgment does not reflect the concrete content of this form. Here exists a separation, but what does it separate from what? Firstly, it is the form in the study that separates from the content in the object, which is the main separation. Secondly, the form in the process of study

also separates from the content occurred in that process. We think that these are the only two kinds of separation, any of which is only temporary and should be temporary.

Firstly, we discuss the latter separation. In the process of research (including teaching), the form of thinking can not be separated from *all* of its content. Such separation is impossible. About thirty years ago, mathematical logicians also used different types of facts to test whether the basic propositions are consistent or not. The form of thinking can only be separated from one content of thinking or another one. In the process of studying the form "S-P" of thinking, we can separate this form from the content of "Mike is a man" (for example), and the reason of doing so lies in that this form is not separated from its other concrete content. It is because of the latter case that we can study the common characteristics of this form. I used to emphasize the former separation alone and disregard the latter combination. Without the former separation, the form "S-P" could not be studied well. The same applies to the latter combination. When we teach S-P, we need to give different examples, and the reason for doing so is not only to *separate from this* example but also to *combine with another* example; meanwhile, we also give some examples, such as "John is taller than Jack", which do not belong to this type, to express the characteristics of the form S-P of judgment that differs from other forms. This is the case of the former separation.

The form of thinking that we study comes from a concrete process of thinking and cognition, and goes back to a concrete process of thinking and cognition, between which there is a separation. This separation is the most important thing for the logicians today. We should discuss the characteristics of this separation. The concrete thinking and cognition are about the objective world, things and laws. These objective things are its *objects*. For *these objects*, if they appear in concrete process of thinking and cognition, they are merely *the content* in that process, no matter whether they are form or content. In this coming and going, the form of thinking studied by logicians is *the object* of their research, so the content in the concrete process of thinking and cognition should be first transformed into *the object* in the research process of logicians. In the course of study, the object is S-P, and what reflects this object is "S-P". "S-P" is a concept which reflects the form of subject-predicate judgments in the course of study. In the course of study, the form of judgement in *content* is separated temporarily from the content of judgment on the objects in the concrete process of thinking and cognition. This sentence may not be clear, so we reformulate it as follows. General and abstract, and individual and concrete are often talked

about together. However, because the present issue is of its own characteristics, we might as well use these two sets of concepts separately. In a concrete process of thinking and cognition, S-P is a form, but it is also general which is impossible to separate from its individual. No matter how powerful they think they are, formal logicians can not separate the general S-P from this individual closely combined with it. But in the course of study, "S-P" is a form, and it is also an abstract. What is discussed above is that this abstract separates from the concrete content in a concrete process of thinking and cognition. This separation is necessary, without which it is impossible to continue the work of discarding the dross and selecting the essential, of eliminating the false and retaining the true, of proceeding from the exterior to the interior, and of proceeding from the one to the other. Formal logicians need this separation, which must be affirmed. However, this separation could only be and should be temporary. "S-P" must go back to the concrete process of thinking and cognition, and it serves and must be tested by the practice of thinking. It is wrong that I myself focused only on the necessity of this separation before. We would stay at this separation if we are focusing only on its necessity but ignoring its temporality. We should not stay at this separation, since the longer we are staying, the farther this separation is. Could "S-P" go back or not and would it be in perfect harmony with the concrete content after going back? It depends on whether it is correct or not. Whether it is correct or not is also tested in the process of coming from the concrete thinking and cognition and going back to the concrete thinking and cognition.

The above two kinds of separation exist at the same time, and the former occurs during the period of the latter's occurrence. In the course of study, the separation happens more than once. Normal and correct researches always separate and then combine, and separate again and then combine again, and so on, which is carried out both simultaneously and separately. In the process of separating and combining, the relationship between the form "S-P" of thinking and its concrete content is complex.

But, it is "S-P" but not S-P that separates temporarily from the concrete content. The latter is the object of study but not the content reflecting this object. It is "S-P" that is the content reflecting this object. Instead of using in your examples this object alone, take only this object with some of *its* contents. As object, S-P cannot be separated from *its* concrete content. Formal logicians never abandoned them, nor can they abandon them. The form of judgment discussed in textbooks sometimes refers to S-P, and sometimes refers to "S-P", between which there is a big difference. For the form S-P of judgement appeared in concrete process of

thinking and cognition, it is impossible to separate it from its concrete content, but conversely, the form "S-P" of judgement abstracted from the process of research. Saying that the form S-P can not be separated from its content means that the general can not be separated from the individual. Here, the so-called form and content are the philosophical categories form and content that are more extensive and profound. But in the aspect that they can not be separated from each other, they are the same. It is not S-P but "S-P" that could separate temporarily from concrete content.

What has been discussed above is the issue of form and content. Judgment is only considered as an example. With this example, the advantage is that the difference between S-P and "S-P" is easy to express. The discussion about judgment applies equally to "therefore". That which corresponds to S-P is the form of "therefore" or inference, and that which corresponds to "S-P" is called the doctrine of "therefore" or inference. The term "doctrine" may not be very suitable, but we won't be confused as long as we take it as the form of "therefore" or inference reflected in our minds.

Based on the above discussion, the form of "therefore" or inference, as the object of study, is never separated from its concrete content, nor will it be possible to do that. Form is mainly determined by content. Because content has some general or basic characteristics, form also has this kind of general or basic characteristics. The above discussion from Section 1 to Section 5 presented three general or basic characteristics of "therefore" or inference. The form of "therefore" or inference also possess these characteristics. Firstly, "therefore" happens, and inference is going to be made out. Once "therefore" happens or inference is made out, the form of "therefore" or inference is carried in it, so it exists. If "therefore" does not happen or inference is not being made out at any time, in any place and on any question, the form of "therefore" or inference does not exist at that time, in that place and on that question. We could present propositions such as p, q, …, r to *consider* if it is possible to infer r from p, q, …. But in doing so, what we actually consider is the veridicality of p, q, …, and that if p, q, …, imply r or not. Inference has not yet been made out, so the form of "therefore" or inference does not yet exist. Secondly, (the happening or being made out of) "therefore" or inference is relative to the level of scientific development of an era. For those below the level of scientific development of an era, even if they happened or were made out previously, most of these old "therefores" and inferences should not happen or be made out at that era. We could study the history of thought or science, but we will not repeat the inference or "therefore" in history. For

the "therefore" or inference beyond the level of scientific development of an era, most of them would not happen or be made out. Here we want to remind you that scientific foresight does not exceed the level of scientific development of an era. Inference or "therefore" goes like this, so does their form. Thirdly, "therefore" or inference is relative to class. The "therefore" or inference of one class basically serves this class. In a class society, the thought of the ruling class also occupies the ruling status, the inference or "therefore" corresponding to this thought also rules. Based on the first point above, inference or "therefore" goes like this, so does their form. Note that what is discussed here is the form of "therefore" or inference which is the object of study and combined closely with the concrete content of inference or "therefore" in the concrete process of thinking and cognition.

Now I am going to present the doctrine of "therefore" or inference, or the form of "therefore" or inference reflected in logicians' minds. In logic textbooks it sometimes refers only to the form of "therefore" or inference reflected in logicians' minds, though sometimes it refers to the form of the object of study. Bourgeois logicians' doctrines seem to be omnifarious, so do those of "therefore" or inference. But in some basic point, they are consistent with each other. In this point, they all distort the form of inference or "therefore" discussed in the above paragraph. Here we are going to refute Carroll. For me this refutation will also be a kind of self-criticism.

7. Refuting Carroll's Attack

Although the inference discussed above is much broader and is not limited to syllogism, we will discuss it using syllogism based on the following two reasons. First, syllogism is the most familiar form of inference that we meet, and we always call it to mind when we discuss inference. Second, Carroll's original question is presented using syllogism.

Lewis Carroll is the pen name of Charles Lutwidge Dodgson, a mathematics teacher at Oxford University during the second half of the 19th century. His posthumous fame is not in mathematics which was the main area during his lifetime. With the pen name Lewis Carroll, he published many children's books among which *Alice's Adventures in Wonderland* is the one we are familiar with. Now, the name Carroll is more popular than the name Dodgson. In 1895, he published, under the pen

name, a short paper in *Mind*, which was strangely titled 'What the Tortoise said to Achilles'. It indeed shows that inference is logically difficult. To my knowledge, Carroll is the first bourgeois logician to attack inference.

The outline of his paper is as follows. The Tortoise discusses the following syllogism with Achilles: (A) Things that are equal to the same are equal to each other. (B) The two sides of this Triangle are things that are equal to the same. (Z) The two sides of this Triangle are equal to each other.

The Tortoise presents the following question: If one hasn't accepted the truth of (A) and (B) yet, whether he'd be likely to accept the relation between (A), (B) and (Z) as a correct one or not?

Achilles replies: Such a person might exist.

The Tortoise then presents: Might there also not be some one who would accept (A) and (B) as true, but doesn't accept the hypothetical "if (A) and (B) be true, (Z) must be true"?

Achilles replies: Certainly there might.

The Tortoise continues: Neither of these two kinds of persons is as yet under any logical necessity to accept (Z) as true?

Achilles assents again.

Then the Tortoise puts forward his request: I accept both (A) and (B) as true, but I don't accept that hypothetical as true. I want you to force me, logically, to accept (Z) as true.

Achilles says: Sure! You accept both (A) and (B), but you don't accept that if (A) and (B) are true, (Z) must be true. Let's call the latter proposition (C). Then I must ask you to accept (C).

The Tortoise says: I'll do so. Please write it down! Write (C) down after (A) and (B). (C): "If (A) and (B) are true, (Z) must be true". And lastly write (Z) down.

Achilles writes them down, but then he has problems as well. Achilles says: Slow down. (Z) does not come yet. We must add (D) which says "if (A), (B) and (C) are true, (Z) must be true." Carroll says that some months afterwards the Tortoise and Achilles are still in discussing. Achilles, sweat trickled down his forehead, has written down more than one thousand premises, but he has not got to the conclusion (Z) yet.

Carroll raised only a one-sided question in the paper mentioned above. In the same way another side question can also be raised. One can accept "if (A) and (B) are both true, (Z) must be true" but does not accept (A) and (B) as true. If one needs to add the third proposition, such as (C) "(A) and (B) are both true", to affirm the veridicality of both (A) and (B), he must add the fourth proposition, the fifth proposition, and so on, as premises to affirm the propositions before each of them to be true, and then the veridicality of each of themselves will not be affirmed. These two series are both infinite.

This indeed is a sophistry that attacks inference. We should refute it.

In the example mentioned above, (A) is a correct judgement, and (B) refers to the current situation. If this is true of the situation, (B) will be correct and is of the first type of the first figure of syllogism, in which (A) and (B) do imply (Z) and the inference is correct on the condition that (A) and (B) are both asserted. What Carroll attacks is this kind of inference. The method he uses is this: if one does not accept this inference, "formal logic" can not "force" him to accept this inference. Formal logic can not necessarily make one accept its necessity though it has necessity. What his sophistry concentrates on is that asserting (his wording is "accept", but it indeed is "assert" and from the present paper's point of view the wording "assert" is more appropriate) can not assert itself. This sentence is of hang-up, for example, if I asserted "today is Tuesday", what asserts the proposition is another proposition, i.e. "I asserted that today is Tuesday". As thus, here the truth-or-falsity issue of "today is Tuesday" turns to *depend on* the truth-or-falsity issue of "I asserted 'today is Tuesday'" which thereby substitutes stealthily for the former. You will fall into the so-called vicious "infinite regress" if you permit this dependence or stealthy substitution. Obviously in the same way you will have to turn "I asserted that today is Tuesday" to depend on and hence be substituted stealthily for "'I asserted' that 'I asserted' that 'today is Tuesday'", the syllogism mentioned above does not require us to assert the implication in it, but obviously requires us to recognize, or in Carroll's wording, accept the implication. But, recognition and acceptation would also fall into vicious "infinite regress" if we admit this dependence and stealthy substitution.

As thus, inference indeed becomes impossible. Obviously this is a kind of attack towards inference.

This sophistry serves mysticism and obscurantism. Ostensibly, Carroll is making inference and assertion (recognition and acceptation included) strictly formal logical, but on the contrary, he is indeed ruling these out in formal logic. As thus,

it seems that these are irrational. At the same time formal logic is closed so as to friendlily coexist with mysticism and obscurantism.

The above-mentioned argument is of sophistry. Propositions can be true or false. Raising the truth-or-falsity issue of one proposition depends on asserting. I will by no means discuss one proposition with you if you do not assert that it is true, and under no circumstances we will discuss one proposition with one bloc without asserting that it is true, but, raising the truth-or-falsity issue of propositions and the truth-or-falsity issue are two different matters (certainly they are related but that is a different matter). This issue might not be raised if you do not assert "today is Tuesday". But, the truth-or-falsity issue of "today is Tuesday" is not completely relevant with your asserting it. Although raising this issue is relevant with your asserting it, it is irrelevant with your assertion. The truth-or-falsity issue is a question of fact, a question of practice, and it is a question of whether proposition conforms with fact or not. It does not depend on your asserting, much less the asserting of asserting. The veridicality of "today is Tuesday" does not depend on that of "I asserted that today is Tuesday". That the former is said to depend on the latter means ruling out the question of fact, the question of practice and the question of whether proposition conforms with the fact or not, as a result it makes a closed system of formal logic. But all of these things can not be ruled out. Whether proposition is true or not can not be closed in the system of formal logic. Obviously here does not exist any vicious "infinite regress", and since this vicious infinite "regress" does not exist at all, it is always futile to try to attack inference using it.

Implication exists objectively, its existence does not depend on our recognition of it, and our recognition of it does not depend on our recognition of the recognition, either. Taking the existence of implication as depending on recognition is of idealism; taking the recognition about implication as depending on the recognition about recognition is indeed of idealism. The truth-or-falsity of a premise does not depend on asserting. Whether our assertion about a premise is based on event or not does not depend on our assertion about this assertion, either. Taking the truth-or-falsity of premise as depending on asserting is of idealism, and taking the truth-or-falsity of this asserting as depending on the assertion about this assertion is of idealism, too. Inference needs to recognize the implication involved in it, but under no circumstances it touches upon the recognition of this recognition; surely inference needs to assert the veridicality of a premise, but it by no means touches upon the assertion about this assertion. Whether an inference is correct or not does not have vicious "infinite regress",

either from the viewpoint of implication or from that of the assertion of the veridicality of premise. It is distorting inference, i.e. the rational being misrepresented as the irrational, in saying inference is of vicious "infinite regress". Obviously, it attacks inference out of thin air. It is clear, from the positive side, that Carroll's argument is sophistry.

Moreover, we need to refute Carroll from the reverse side. He expresses his fallacious ideas and argument through the Tortoise and Achilles. Since it is so, we have no choice but to beg pardon to the Tortoise and Achilles. In the beginning, the Tortoise says that he does not accept that (A) and (B) imply (Z). To prove that this implication holds, Achilles has but one way, i.e. using both events and principles of formal logic, otherwise he has no way to persuade the Tortoise. The method of the Tortoise himself is fallacious, since he would accept that (A) and (B) together imply (Z) as if adding (C) "(A) and (B) imply (Z)", which presented as a conditional in the original paper but it is more simple to use "imply", were enough. Once the proposition that he did not accept before writing out and squeezing in the premise, he accepts it at once! Does language have so much power? Is this not ridiculous? Just having written it out makes him accept that (A) and (B) imply (Z). No problems occur in (A) and (B) now, and it substitutes "(A), (B) and (C) imply (Z)" stealthily for the original problems occurred in (A) and (B). Hence Achilles falls into the trap, such that he takes writing (D) out as necessary. As thus, (E), (F), etc. are all necessary. The problem is simple: if the Tortoise really does not admit that (A) and (B) imply (Z), it is useless to write in even infinite premises; if the Tortoise pretends not to admit that (A) and (B) imply (Z), not only are the infinite premises redundant but (C) is redundant as well. Either the Tortoise really does not admit that (A) and (B) imply (Z) or he pretends not to admit that (A) and (B) imply (Z), in any case, writing in (C), (D), and so on, is either useless or redundant. This is sufficient to prove that Carroll's argument is sophistry.

So far, we think that this sophistry gets the refutation it deserves. Next, we will present another question. Some of the bourgeois idealists just fake up idealistic discussions out of thin air, nevertheless some of them seize a difficult problem to propagandize the idealistic metaphysics. Did Carroll seize such a problem? Yes, I think so. I think that what Carroll seized is this: you draw an inference that you yourself think is correct, and you also prove it. But, if someone does disagree with you, "formal logic" would not know how to deal with him. Such a problem is the one of bourgeoisie objectivist logic, and this logic is exactly to write off the class characteristics of the form of inference. Carroll raised the question rather

than solved it. He did not admit that the objectivist "formal logic" is wrong. His topic is not to criticize this wrong "formal logic" but to advocate it, therefore he can only use sophistry to do so. No doubt, we should criticize his sophistry, but more importantly we should criticize his objectivist "formal logic".

8. Objectivist Doctrine of the Form of "Therefore"

What does it mean when we say that "formal logic" can not force one to admit certain inference or accept certain conclusion? What on earth is the so-called "formal Logic"? In his sophistry, the form that Carroll used is the so-called "form of inference" of ⊢ MAP, ⊢ SAM, ∴ ⊢ SAP. It is this "form of inference" that can not force one to admit certain inference or accept certain conclusion. The question is: is this factual? In a capitalist society it surely is. In that society there exists antagonistic contradiction between the proletariat and the bourgeoisie. Their ideologies are in opposition. Their inferences are basically in opposition, too. Some bourgeois economist said that he knows every word of *Das Kapital* but he can not understand a single sentence. In that case, could it be said that he can understand the "therefore" between sentences? This is not the only origin of the problem. Internal groups of bourgeoisie have different interests. The "therefore" of the 19th-century UK free traders cannot be unified with the "therefore" of the grain protection group, and it is the law but not the "form of inference" mentioned above that makes the latter accept the "therefore" of the former at last. In the great debate on *Evolution and Ethics*, there was a sharp controversy between Bishop S. Wilberforce standing for the extreme diehards and T. H. Huxley, a scientist with progressive thought, because they share no inference. They were neither intervened by law nor forced by the "form of inference". In the 1890s' America, the "form of inference" mentioned above did not make the "therefore" of the East Gold Group and that of the West Silver Group unified. And so on and so forth. In short, formal logic never convinced the opposite classes or different stratums. But this is completely different from that it can not convince an individual.

The problem lies in the analysis and understanding of this fact. Some people, such as bourgeois logicians, have realized that "therefore" does not just simply mean the antecedent implying the consequent, or just the correctness of the premise's content, it actually concerns the reasoners' cognition about these two facets. The concrete manifestation of cognition is to assert the correctness of the content of

premise. Admitting that "therefore" needs the factor of asserting its premise(s) is to emphasize the relativity of "therefore" and cognition. Asserting had the existing symbol "⊢", which we could make use of all the same. After admitting the dependence of "therefore" on cognition, MAP, SAM, SAP, taking *AAA* for example, is not a "form of inference" any more since it does not incorporate this dependency and relativity. It is so much abstract that the factor as one of the essential requirements of "therefore" is erased. We could prefix the existing assertion symbol to keep up this factor. With this prefix symbol, the form MAP, SAM, SAP turns into the form ⊢ MAP, ⊢ SAM, ∴ ⊢ SAP. For a capitalist society, the latter is the "correct" "therefore" or "form of inference". It admitted expressly that "therefore" is relative to cognition. It is of "form of inference", but MAP, SAM, SAP are not. This alone makes the problem clearer.

But, could ⊢ MAP, ⊢ SAM, ∴ ⊢ SAP force people to accept an inference? It still can not. Because this form admitted the dependence of "therefore" on cognition, "therefore" varies along the variation of cognition. Carroll makes a big ado about this point. The bourgeois worldview is of individualism, objectivism, and idealism. Cognition would be viewed of individualism based on this kind of worldview, and individual's cognition would become his own highest authority. In the 1920s, Tennessee in America "denied" Darwinism by means of legislation, and individual's cognition of senators became their own final authority. Some senators obstinately did not agree with Darwinism. If he was still alive, Carroll would applaud and say "look, 'formal logic' did not persuade these senators". In the bourgeois logician's point of view, as long as "therefore" in fact is relative to cognition, it "in fact" proves to be relative to *individual*'s cognition. Cognition that would have been of class distortedly turns into individual's cognition. Thus, for "therefore", the situation becomes that each says he is right. Both sides can not be persuaded by each other through "formal logic". This distortion originally comes from the idealistic worldview; but it conversely "verifies" the idealistic worldview. The nature of this distortion is bourgeois and it regards the "therefore" relative to class as that relative to individual. It covers up the former fact and creates the latter false impressions. It is objectivism that plays the role of covering up, and it is objectivist theory of human nature that plays the role of creating the false impressions. In the previous section we mentioned that Carroll attacked "therefore" based on this distortion. This judgement is not wrong, but it is a little vague in that section. What he attacked is the "therefore" of dialectical materialism, the "therefore" of Marxism, the "therefore" of being persuasive for proletariat. What he insisted in is the unpersuasive "therefore", the "therefore" of objectivism, the "therefore" that objectivism makes formal logic stop working

at individual's cognition. In Section 7, we criticized Carroll's sophistry instead of the "therefore" that he actually insists on. Sophistry ought to be criticized, but the following criticism is more important for the present paper.

Objectivism is one of the vital premises of thought in bourgeois ideology, and its gist is that it does not admit the existence of class with class characteristics. In its rising stage, the bourgeoisie propagandizes itself in the name of all the people or all mankind, and in the course of the revolution, it antagonizes and substitutes for the feudal aristocrat by mobilizing the demotic in the same way. In this connection, objectivism that covers up the class characteristics of the bourgeoisie just expresses the essence of the bourgeoisie. Covered up by objectivism, the bourgeoisie is waging a class struggle. Objectivism covers up the class characteristics of people thereby covering up one of the fundamental sources that cause different kind of cognition. Therefore, objectivism covers up one of the fundamental sources of the diversity of inference or "therefore".

Besides objectivism, the bourgeois theory of human nature or the theory of individual should be considered. In 1949, a bourgeois intellectual said that the proletarian theory of revolution is not so "lofty" and its slogan is not much "sonorous". I agreed with this opinion at that time. This is an affront to Marxism. Is *Manifest der Kommunistischen Partei* not lofty or sonorous? In fact, what this gentleman means by "lofty" is the bourgeois theory of human nature and theory of individual. At the beginning of the 20th century, Rousseau's *Du contrat social ou Principes du droit politique* moved some Chinese intellectuals. They were deeply touched even by the first sentence in the book. It seems that the bourgeoisie would like to liberate all humanity. The bourgeoisie regards the society as if it is just a mass of physical persons. There is no such society in the world at all, and there is no such human. Such a theory of human nature and theory of individual are completely hypocritical. But, what role would they play? With objectivism covering up the class characteristics of human being, the class difference and cognition difference are interpreted only as the individual difference by this hypocritical theory of human nature and theory of individuals. Certainly, different cognition is attributed to different individuals; but in a class society, does not everyone live as a member of a particular class? Is different cognition not stamped with the brand of a class? Objectivism and the abstract theory of human nature are nothing but two different facets of the same thought.

Objectivism is neither of proletarian nor of feudal class. The former is well known and the latter needs some explanation. The feudal society advocates openly the social estate system, so it has no way to cheat with objectivism. In a feudal

society, either in China or in Western Europe, there is a difference between *ren* (人, citizen) and *min* (民, civilian, the common people). Certainly, there was a difference among the degrees of people's cognition about this kind of difference. Confucius never confuses this difference in some of his celebrated dicta. He never says

> "do not impose on other *min* [originally, *ren*] what you yourself do not desire", nor "it is possible for *ren* [originally, *min*] to be made to follow a policy, but it is not possible for them to be made to understand it", nor "keep expenditure under proper regulation and love your fellow *min* [originally, *ren*], employ the labour of *ren* [originally, *min*] in the right seasons.

Indeed, Mencius said that *min* ranks the highest; but according to some comrades' point of view, what this proposition says is about how to make the country rich and its military force efficient but irrelevant to democracy. In traditional drama, Zhuge Liang speaks undisguisedly to the old man cleaning the city gate section channel: "The national affairs do not need your worries." The aim of these supplemented suggestions is to make it recognized clearly that objectivism represents the nature of bourgeoisie. That of objectivism is something of the nature of bourgeoisie.

The form of inference ⊢ MAP, ⊢ SAM, ∴ ⊢ SAP is of objectivism. In the first part of *Principia Mathematica*, the form of inference admitted by Russell is essentially of this kind. Yes, Russell criticized Carroll, but the "therefore" admitted by him was of objectivism. My college textbook *Logic* copied Russell's works, therefore I admitted this form of inference. Why is it essentially this form of inference? Because there is a superficial difference between that admitted by Russell and that described here. Russell did not cite the symbol "∴" but he used some other devices instead. In his proofs which cited a basic proposition, prefixed "⊢" is obviously the same as citing the symbol "∴". It is more about the assertion symbol, the "⊢", which represents recognition in the present paper and thereinto the horizontal line represents the level of scientific development. In his 1903 *The Principles of Mathematics* (Section 38, p. 35) Russell wants to put aside the "psychological component" of assertion, but the present paper does not put aside the cognition component of assertion; in the 1910 *Principia Mathematica*, the symbol "⊢" represents the fact of assertion, nevertheless what it asserted are tautologies, so the scope of its being cited is narrower than that of the present paper. It is not clear what the psychological component put aside by Russell is. Anyhow the cognition component can not be put aside. He has then said, if the *proposition* following "⊢" is not correct, its *author* must be mistaken. What the

antecedent of this conditional states and what the consequent states are different things: the agent of the former is the proposition while that of the latter is its author. What mistakes the author made cannot be anything but relevant to cognition. The form of "therefore" admitted by Russell is relevant to cognition. His whole philosophy shows that the cognition he talks about is individual cognition, moreover it is of individualism. That is to say, the cognition that he talks about is of objectivism and it does not admit being stamped with the brand of a class.

Objectivism is wrong, so is understanding "therefore" or inference from the objectivist point of view. Formal logic, as a branch of science, should obey the law of non-contradiction. But understanding "therefore" or inference from the objectivist point of view will make formal logic violate the law of non-contradiction. The basic and other laws of formal logic are of necessity, but this necessity meets a submerged reef at "therefore" so that those of necessity become those without necessity. Carroll's sophistry is such that it should be criticized; but he was dimly aware of this problem. I had this problem over 20 years ago. At that time, I said that those things written down thwartwise in Russell's *Principia Mathematica* are necessary, whereas those written down vertically (from top to bottom) are not necessary, because they are relative to individual cognition which is of necessity. Those which are necessary are necessary, but it *is not* necessary to recognize this necessity. "The true face of Lushan is lost to my sight, for it is right in this mountain that I reside." Since I myself accepted objectivism at that time, how can I know what the problem is. Being adherent to objectivism, stopping the cognition at individual diversity, ignoring the existence of class, and ignoring the historical roots and class origins of personal views, it is impossible that "individual cognition" would be provided with objective necessity, even if the object of cognition is necessary. Understanding "therefore" from the point of view of objectivism, the bourgeois logicians would not be able to avoid the problem of the Tortoise and Achilles in Carroll's paper, let alone solve it.

Then again. Objectivism represents the nature of the bourgeoisie and is the expression of the class characteristics and party spirit of the bourgeoisie. For the bourgeoisie, it is impossible that inference or "therefore" is not of objectivism and it is the objectivist "therefore" or inference that was used by the bourgeoisie to pursue the class struggles and ideological struggles. For the bourgeoisie, it is impossible that the form of "therefore" or inference, as far as the syllogism MAP, SAM, SAP is concerned, is not $\vdash$ MAP, $\vdash$ SAM, $\therefore \vdash$ SAP. So are the other inferences. The inference or "therefore" in Part 3 of my college textbook

Logic is of this form, too. ⊢ MAP, ⊢ SAM, ∴ ⊢ SAP, which is not purely formal, contains objectivism and the class characteristics of the bourgeoisie. Objectivism is deceptive; but since we know that objectivism represents the nature of the bourgeoisie, we might as well assert faithfully that objectivist form of inference or "therefore" is the form of bourgeois inference or "therefore" in the capitalist society.

We side against objectivism. Objectivism serves the bourgeoisie by covering up the class characteristics of the bourgeoisie, but we openly admit our class characteristics to serve the proletariat. We are dialectical materialists and our epistemology is the reflectionism of dialectical materialism. We affirm uncompromisingly that social existence determines social consciousness and that our cognition has not only causes of cognition but also root causes of class. Our cognition is neither of objectivism nor of individualism, and it has necessity but not all is contingent. For us, it is impossible that each says he is right. Our openly admitting our class characteristics is exactly one of the reasons that helps us with this. Whether our cognition is right or not is judged by objective standards, so is about inference or "therefore". For the syllogism MAP, SAM, SAP, our form of inference or "therefore" is ⊨ MAP, ⊨ SAM, ∴⊨ SAP. One of the horizontal lines in the symbol "⊨" represents the level of scientific development and the other one represents the proletariat. In one word, there is but one truth of Marxism-Leninism, and "therefore" conveys this truth. As one doctrine, it presents a faithful reflection of its object. The form of inference ⊢ MAP, ⊢ SAM, ∴ ⊢ SAP is not the same as the form of inference ⊨ MAP, ⊨ SAM, ∴ ⊨ SAP. Certainly, both of them admit that if the propositions in the forms of MAP and SAM are true, the proposition of the form of SAP is true; but this is implication, not inference. "⊢ …, ⊢ …, ∴ ⊢ …" is used by the bourgeoisie as a tool to spread its cardinal questions of wrong, and we use "⊨ …, ⊨ …, ∴ ⊨ …" as a tool to uphold the cardinal questions of right. These two classes share no form of inference or "therefore".

9. Class Characteristics and Correctness

In the present paper, we separate the class characteristics of inference from its aspect of the level of scientific development. We need this. But at the same time these two kinds of relativity are not irrelevant. In history, the progressiveness of a class is to be connected with its scientificity. A class is progressive and of higher scientificity during its rise. It might be constructive to look back to history. Is the Renaissance period connected with the rise of the bourgeoisie? Is the flourishhing of culture during the period of Spring–Autumn and the Warring States connected with the rising of the feudal landlord class? The rising class is progressive. It has more courage to envisage realities. Moreover, it has a role in raising issues and solving them bravely. That which is progressive is on the whole of higher scientificity. The class characteristics of a class would in general unify its scientificity during its period of rise. That is to say, the level of scientific development and class interests are by and large concordant at this time. This concordance will be broken by the time the ruling class becomes reactionary. So, it is necessary to present them respectively.

The proletariat is the most progressive class, and its scientificity completely unifies its class characteristics, therefore, its inference is correct. In the capitalist society, the bourgeois doctrine of the form of "therefore" or inference is incorrect and deceptive. It is incorrect because it denies the nature of class in the form of inference or "therefore", but it really exists there. It is deceptive because it covers up its class characteristics by the way of not admitting the class characteristics. In the bourgeois form of inference, we must maintain keen vigilance since the class characteristics have been covered up. The "inference" based on their form is not always inference for us. One of the necessary conditions of inference is actually taking place. Here, the "inference" that does not occur is not inference for us. Pay attention, this does not mean that the bourgeoisie does not work out an "inference" of this kind when they make such an inference. It is true that they think that they work out an "inference", which can not be denied. Moreover, from the perspective of class struggle, we must pay special attention to the bourgeoisie on this kind of activities. We only insist that this kind of "inference" of theirs is different from our inference. We should insist on our form of inference or "therefore" (which is $\vDash$ MAP, $\vDash$ SAM, $\therefore \vDash$ SAP for MAP, SAM, SAP). In 1957, the rightists attacked the Party and said: "Science should be led by scientists, the Communist Party are not scientists, therefore, the Communist Party should not lead science." This inference is of the bourgeois rightists, it is

of the reactionaries. This inference is contrafactual. It is not of our proletariat. This inference does not exist in the minds of our proletariat, because inference should be going to happen. Now that it is not at all inference, certainly the issue whether the correctness of form unifies the correctness of content does not exist.

Last year, there was an enthusiastic controversy in the great steelmaking movement. The controversy can be represented in the form of syllogism. In this place, some kind of "tortoise iron" was produced. The issue begun with whether steel could be produced from the tortoise iron. All the experiments of steelmaking failed before the controversy. Some insisted on the following syllogism: "all iron can be turned into steel, the tortoise iron can not be turned into steel, therefore, the tortoise iron is not iron." So they proposed not to steelify. Others insisted on the following syllogism: "all iron can be turned into steel, the tortoise iron is iron, therefore, the tortoise iron can be turned into steel." They studied where the problem was and if it contained impurities then what the impurities are and how to get rid of them. With further endeavor, steel was produced after impurity was removed. There are two different syllogisms here which can not be both true. Who was right? This depends on ways of persuasion, on ways of "speaking out freely, airing views fully and holding great debates (*da ming*, *da fang*, *da bianlun*)", and on the way of "setting forth facts and reasoning things out (*bai shishi*, *jiang daoli*)". On the one hand, based on the unification of cognition, they ran much more tests and studied carefully, and then found the defect of the tortoise iron and methods to solve it. On the other hand, they were going all out, striving for the best, and never bowing down to difficulties. Both are important. The former is about the issue of the level of scientific development, and many people improved their level of technological development in last year's great steelmaking. It is the general line that works, on the other hand, and many people improved their ideological level in last year's great steelmaking. That is to say, the class characteristics and scientificity both play a part in the problem solving.

In the two kinds of examples mentioned above, the two examples about the tortoise iron are both about inference. The other is the bourgeois rightists' "inference", which is not our inference, therefore, by the requirements of the form of inference, it is not an inference, either. So, "therefore" is therein not the form of transition from the premise to the conclusion but just one word. How can it have the issue of whether the form or content of inference is right or not? Some comrades even connect randomly some sentences that have been used by the enemy to slander us with "therefore" and discuss the correctness of their

form and extent just like in the case of inference, which resembles the case that after calling a stag a horse, someone even discusses if it is even a draught horse or a saddle horse and whether it is a swift horse if it is a saddle horse, and so on. Obviously this is improper. Excluding the cardinal questions of wrong and sticking to the cardinal questions of right is exactly going to achieve the unity of correctness of form and that of content in principle.

Sticking to the cardinal questions of right can not be achieved by hanging it in air, it should be implemented in specific questions. After excluding the cardinal questions of wrong, there is still the issue of the unity of correctness of form and that of content, which might not be so yet. For "therefore" or inference, the following problems might still exist: form being correct but not content, content (as judgement but not as a premise or conclusion) being correct but not form, both being incorrect, or both being correct. At the beginning of the last year, I discussed the unity of correctness and truth in one paper. Some comrade criticized that my discussion is too vague. Such is the case and here I accept the advice. But, I am not going to talk about this issue in the present paper yet. Nor do I agree with Mr Li Shifan in that if content is false then form is incorrect. If its content is cardinally wrong, surely its form will be incorrect, but thus it is not an inference and will be absent from us; that is to say, the aforementioned three sentences that were used by the bourgeois rightists to slander us are not $\vDash$ MAP, $\vDash$ SAM, $\therefore \vDash$ SAP, even though they are linked by the word "therefore", which completely differs from the issue of whether the form of the inference that is indeed an inference, but with a wrong content, is correct. In the discussion about the tortoise iron, the first example is an inference of correct form but wrong content. Here the falsehood of content does not affect the correctness of form. More importantly, we proved in practice in the discussion that the second inference about the tortoise iron is correct, and both extensive testing, careful studying, and encouraging enthusiasm and race to the top worked in the proof. In other words, our cardinal questions of right is implemented in this correct inference, or, here we achieved the unity of scientificity and class characteristics. In this example, our cardinal questions of right permeated the content of the inference, even though it concerns technical science.

Is the correctness relative? The process of cognition continues to evolve. It experiences from incognizance to cognizance and from scanty and shallow cognition to ample and deep cognition. And cognition averages itself up as the times progress. As ingredient of cognition, inference also continues to evolve and is relative. Correctness means the correspondence of our reflection with

objective things and its laws as it is reflected. These scanty/ample, shallow/deep, degree of precision, and fullness-in-one-time converted to one-sidedness-in-other-time issues of correspondence averages itself up as the times progress. That the correctness is relative is likely to cause problems, which will be discussed in the following. It is no error that this point is mentioned in the present paper. The problem lies in whether the correctness is of relativism. It would be wrong in principle if the wording of the present paper is that the correctness is of relativism. This paper suggests that whether the correctness is of relativism would rely largely on whether we exclude the absoluteness or not after affirming that the correctness is relative. The key point is the exclusion of absoluteness but not the degree of exclusion. We do not exclude the absoluteness of the correctness, so at least at this point we do not advocate relativism.

Some comrades emphasize that the correctness differs from *being regarded as correct* by us. It is possible that the aim of emphasizing this difference is to deny the relativity of correctness itself. Surely this difference exists. Sometimes, people do not think something correct is correct and something being regarded as correct by someone is not correct. There are too many examples. But the correctness of those that can stand the time's practice test of the struggle for production or the class struggle unifies its being regarded as correct by persons. Being regarded as correct by this one and that one is of relativity which is not the relativity discussed in this paper. It is the relativity of the level of scientific development that we discuss in this paper. In the relativity of the level of scientific development, both *being regarded as correct* by persons and the correctness itself are relative. Formerly, the author of the paper did not admit the latter and always propagandized that whatever is found to be wrong temporarily has never been right, which is wrong for now. The comrade who only admits the former relativity but not the latter might worry about that there would be no difference between science and superstition in one era if the relativity of either is admitted. This worry is unnecessary and the difference between science and superstition follows science. The science of one time can always withstand the time's practice test of the struggle for production or the class struggle. It is just because it possesses the time's correctness that makes it different from superstition. Obviously the time's correctness is relative. Being correct in one time is not always just of relative, nor always just of absolute; we affirm its relativity without excluding its absoluteness.

Correctness also continues to evolve, the so-called correct cognition means the correspondence of our reflection with objective things and its laws. As we have said above, correspondence involves the issue of scanty/ample and the

scant correspondence grows ample during development, it involves the issue of shallow/deep and the correspondence limited to appearance changes into that deep into the essence, and that deep into the shallow essence changes into that deep into the deep essence during development, it involves the issue of a degree of precision and the correspondence of a lower degree of precision becomes that of a higher degree of precision during development, and it involves the issue of mutual transformation of comparative fullness and comparative one-sidedness and the correspondence originally with comparative one-sidedness changes into that with comparative fullness during development. The development of science involves that of correctness. Correctness inherits the existing correctness and it is of the latecomers surpassing the old-timers, therefore, correctness is not always just relative, nor always just of absolute. The latecomers surpassing the old-timers is entirely different from already reaching the limit. Even the dialectical materialism does not end the truth—can it be said that the present level of scientific development ends the development of correctness?

For the sake of concreteness, let's take the following example. That which repeatedly rises from the east and moves towards the west and sets in the west and goes round the Earth—the Sun is that which repeatedly rises from the east and moves towards the west and sets in the west, therefore the Sun goes round the Earth. This inference appeared in the ancient times and we think it was true at that time. Obviously it was scientifically justified in history. When telescope had not been invented, the positions of different celestial bodies in different times were not universally determined and the mathematics was not so developed that it could discover and resolve the conflicting issues in formal logic as part of the celestial theory, the conclusion "the Sun goes round the Earth" is correct based on the objective facts observed by eyes alone. The rotation and revolution of the Earth are both invisible, but the "rising from the east and setting in the west" of the Sun is visible and continues to be visible. The second premise mentioned above is still correct based on the facts accessible by eyes alone. But we do not make this kind of inference any more. Now this inference is incorrect. The previous inference is about the appearance of celestial movement and the subsequent astronomy goes deep into the essence of celestial movement. The present astronomy gets even more advanced. Before 1957, the astronomy was basically observational. After the Soviet Union's launching some man-made satellites, some artificial planets and space stations, astronomy has been rendered experimental. That is to say, we could update some of the practical conditions to study our objects. Astronomy will be more precise and complex. But, in the whole science, is the "rising from the east and setting in the west" of the Sun

still an acceptable material in the category that is observable by eyes alone? We consider it still to be acceptable but we do not raise questions in this way anymore. But this does not mean that this material did not play a role during the development of science. The inference mentioned above was correct in the ancient times and not now, but this inference is not completely incorrect all of a sudden from its ancient origins to the present day, rather it is still correct in some aspect. However, as an inference, it is no longer correct and is replaced by another inference of much higher degree of correctness. In one word, the correctness is evolutive and is of the latecomers surpassing the old-timers, that is correct is not always just relative, nor always just absolute. That the present paper picks out the relativity of correctness does not mean it becomes relativism.

10. The Main Joints between Worldview and Formal Logic

Above we mentioned worldview. There is still something more about it. The following ideas would not put forward an argument but just for communication.

For the preliminary observation, some items of formal logic are unaffected by worldview. Notice that this means neither the theoretical issue of these items nor the issues that they are of basic impersonality or not and what they reflect, etc., which are all about worldview. Rather it means that they are unaffected by worldview when they are cited during the specific thinking or cognitive process. Let us begin with the first three basic laws of thought. The law of identity says: "*x* is *x*." The worldview might influence *x*. Under this influence different *x*'s may be antagonistic to each other but each of these are always "*x* is respectively *x*" in the opposite parts of *x*. The law of contradiction says: "×× can not be both *x* and not *x*." Various kinds of worldviews may adopt a different aspect of the contradiction, even so, they still have to insist that ×× can not be both *x* and not *x*. The law of the excluded middle says: "×× is *x* or not *x*." Various kinds of worldviews may adopt one of these two possibilities which are different and in contradiction; but they have to maintain the law of the excluded middle since they persist in the possibility adopted with another possibility excluded. Here we do not discuss the law of sufficient reason by its peculiarity. Let us take the opposition relations, for example. The contrary relationship is parallel to the law of contradiction mentioned above. For the contradiction relation between *A* and *O*, it is possible (and just possible) that a different worldview would adopt *A* but not *O* or *O* but not *A*, but the contradiction relation between *A* and *O* remains. The contrary

relation between *A* and *E*, the subcontrary relation between *I* and *O*, are both similar. Likewise, the subaltern relation remains whatever the truths of *A* and *I* are. Subaltern is an implication. But the general implication relation is much more complex. Generally speaking, the implication that could be represented with symbols, such as the implication between *AA* and *A* in the first type of the first figure, is unaffected by worldview. But, till now we have not thought about the implication as a whole about which we would not say anything. There are not many examples above. Still, we could get an initial opinion: any form defined on the basis of the relation of *truth and falsehood* by and large could ignore the *truth or falsehood*; since this kind of forms could ignore the truth or falsehood, they could also ignore the cognition of truth or that of falsehood. As mentioned above, the form of inference is out of this range, which is unnecessary to go into detail here. The forms within this range are unaffected by worldview. This initial opinion might be wrong. Anyway, for the sake of studying the issues of formal logic concretely, it needs to be carefully studied in different categories.

The law of sufficient reason has to be discussed through its peculiarity. I agree with some comrades about the part of the opinions on emphasizing the law of sufficient reason. Formerly I did not only attach importance to this law but also did not at all regard it as one of the basic laws of thought. This is extremely wrong. But, some comrades impressed me in that they hold that the law of sufficient reason could guarantee the correctness of thought. If so, I would not agree. All of these laws of thought have both the reflectivity and normativity. They all reflect some aspects of objective things, meanwhile because of the frequent inobservance of our thought these laws require us to obey them by their normativity. We would not discuss this at the moment albeit its importance. No matter what the law of sufficient reason is, we first talk about sufficient reason. Worldview exercises a great influence on the so-called sufficient reason. The so-called sufficient reason of dialectical materialism, or Marxism-Leninism, differs completely from that of the thinkers of bourgeois idealism and metaphysics. Chairman Mao teaches us frequently that before drawing a conclusion we need to grasp a considerable stack of materials and try hard to discard the dross and select the essential, to discard the false and retain the true, to proceed from one point to another, and to proceed from the exterior to the interior, and then the initial conclusion must be put to the test of practice. The sufficient reason of dialectical materialism is the reason of being truly sufficient by its relevance, objectivity, and scientificity. The so-called "sufficient reason" of the bourgeois scholars is often insufficient, sometimes even irrelevant. This difference exists in natural sciences, though it might be little; however this difference is large in the

social sciences. Is the law of sufficient reason not unaffected by this difference? In the hands of the bourgeois idealist, can this law reflect the circumstances of objective things? Can they faithfully comply with this law on account of its being simultaneously regarded as norm? This should resort to the *practice of thinking*. It is irrelevant to include this law in the textbooks of formal logic. Many bourgeois textbooks exclude it. Writing this law in the textbook does not mean that it *complies with* the practice of thinking. The logicality would become strong if this law complies with it. But, whether it complies with it resorts to whether the requirements of this law are *carried out* in the inference. So the issue turns back to inference.

Formal logic definitely requires inference or "therefore" to take on the right form. Formal logicians unanimously agreed to hold on to this requirement. This is completely correct. It is impossible not to hold on to this requirement. Even though there is formal logic here, it should inevitably become unnecessary, unless we keep on studying it. But is that what "therefore" takes on just the correct form? There is no consistent answer to this question. Some comrades think that "therefore" only takes on the correctness of form, and others think it also takes on the correctness of content simultaneously. Whether correctness and truthfulness are involved with cognition or not, whether they serve sophistry or not, both discussions are concerned with this question. And the answer to this fundamental question is concerned with answers to other fundamental questions, such as whether formal logic covers induction logic, whether the basic laws of thought contain only the former three laws or not, and whether these laws have any objective basis, and so on, which remain out of the scope of the present paper. As to that what "therefore" takes on is just the correct form or not, the answer in the present paper should be clear. The first nine sections of the paper expressed the idea that, in fact, and in history, that what "therefore" takes on has never been just the correctness of the form but the correctness of that unifying of the form and the content. Our strong logicality lies in our high correctness, and if our "therefore" only takes on the correctness of the form, our logicality would not be strong.

Textbooks of formal logic all listed many formal fallacies, such as an affirmative conclusion from a negative premise, a negative conclusion from affirmative premises, illicit major, undistributed middle, illicit minor, and fallacy of four terms, and so on. For some comrades, it seems that the ones with reactionary ideology make more mistakes than us. I do not think so. We would make less mistakes in writing articles if we study carefully, otherwise we also make some of these

mistakes. These mistakes partly stem from technical problems. For us, the less the technical problems the better. Wiping them out is even better. But it does not mean that our logicality would be weak even if we make these technical mistakes and their logicality would be strong even if the ones of reactionary ideology reduce these technical mistakes.

Why is our logicality strong? Our strong logicality originates from Marxism-Leninism, dialectical materialism and historical materialism, and the proletarian position. The proletariat is not afraid of the objective world. It needs not to elude or misrepresent the world. It can envisage the world, which is of prime importance. The world is objective, but what it originally looked like can be concealed when we dare not envisage it. It is not enough for us to have only determination to envisage the world, we have to master correct views and methods, that is, our worldview and dialectical materialism and historical materialism. With the good guidance of this worldview, we will be able to reflect the objective world truthfully. We reflect the objective world truthfully as it is. The logicality reflecting correctly the evolution of the objective world is the strongest logicality.

The question is back on the table. Is it irrelevant to formal logic at all? No, the main bridge between both the worldview and cognition and formal logic is the form of inference which plays an extremely important role. The form of inference does not resort directly to the relation of truth and falsehood. Ultimately, it resorts to the relation of truth and truth (from true judgement or proposition to true judgement or proposition), but its direct relation is from recognizing the truth of some judgements or propositions to recognizing the truth of other judgements or propositions, and in the process of cognition it is the central link from the general to the individual, and conversely. It plays the roles of proceeding from one point to another and proceeding from the exterior to the interior. The implication, especially that which is well-founded but not yet complete, also plays an important role. Scientific hypothesis is this kind of implication, some of which falls into disuse while others developed into scientific dogmas. Although implication does not need to involve inference, inference always involves implication. Other logical forms might be less affected by the worldview or even be unaffected by the worldview at all, but they also play a part between both worldview and cognition and formal logic given their roles in implication and inference. Formal logic also contributes to the high logicality of our thinking and cognition, and the role of logicality is also implemented into inference or "therefore". Now that our "therefore" conveys the requirements

of Marxism-Leninism, the sufficient reason of dialectical materialism, and the formal correctness of formal logic, its correctness is the one of highest degree. Our logicality is the one of strongest degree.

To strengthen the logicality, formal logicians should study both formal logic and the logic of the current objective world.

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