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ON LOGICAL ERRORS
IN KANT'S TABLE
OF JUDGEMENTS¹

This article focuses on the logical inconsistency of Kant's classification of judgements presented in the "Critique of pure reason". The author shows how Kant's division of judgements violates elementary logical rules. The article analyses an earlier attempt by G. Ryle to detect logical errors in the table of judgements. It is shown that the correct divisions were not unfamiliar to the 18th century German logic, nevertheless, they were not accepted by Kant. The author proposes possible explanations for Kant's violation of logical rules and offers a critical analysis of K. Reich's arguments in favour of the consistency of Kant's table of judgements.

Key words: logic, judgement, table of judgements, division rules, dichotomy, trichotomy, transcendental logic, categories.

While developing his transcendental philosophy as a critique of pure reason, Kant looks for its justification, the proof of its consistency. The central position of the system of categories in the structure of transcendental logic compelled Kant to focus on the search for a solid foundation for this system. Opposing it to Aristotle's "rhapsodic" set of categories, Kant aspires to detect the principle of necessity of each category, as well as that of the system's consistency. He finds this principle in general pure logic. Logic, according to Kant, is a complete a priori science of pure reason [B VIII], thus, one can rely on it when proving the apriority and completeness of the system of categories. The metaphysical deduction of categories begins with the classification of judgements in general logic as expressed in the table of judgements, and ends with the table of categories. Thereby, the validity of Kant's thesis about the apriority of transcendental logic depends on the consistency of metaphysical deduction. In this respect, the table of judgements claims the role of the starting point of transcendental philosophy. This article will focus on Kant's assertion that his table of judgements is a complete and based on general pure logic division of the logical functions of thought.

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The inconsistency of Kant's Classification of Judgements²

Let us consider Kant's approach to the classification of judgements in general logic following Kant's grouping.

Quantity

According to quantity, Kant distinguishes universal, particular and singular judgements, which raises a question as to the place of empty judgements, whose subject is an empty concept. One can claim that Kant proceeds from the traditional for the logic of the time premise regarding the non-emptiness of the subject of judgement. But, in the *Note to the Amphiboly of Concepts of Reflection*, Kant himself distinguishes empty concepts, which include, by the way, the notion of noumenon – the judgements containing which belong to the class of empty judgements³. However, the analysis of empty judgements can be easily omitted in this context without interfering with further reasoning. Another question concerns singular and universal judgements. In the comments to the table of judgements, Kant uses a strange phrase stating that singular judgements “have no domain at all” [CPR, A71/B 96]. It seems that, by “domain” (or “extension”), Kant understands a set consisting of more than one element. But further he says that, if we “compare a singular judgement with a generally valid one, merely as cognition, with respect to quantity, then the former relates to the latter as a unity relates to infinity...” [CPR, A71/B 96]. Therefore, a singular judgement has a certain extension (“unity”)⁴ and, what is more important, the extension of a general judgement can be only an infinite set. So, how should we tackle the problem of judgements, whose subject is represented by concepts, whose extension is a set of more than one element, but that are not infinite? The Kantian table introduces singular judgements without extension (i.e. whose subject has no extension), however, as *unities*, they are opposed to general judgements, whose extension is *infinite*. However, Kant states with certainty and in accordance with conventional word usage that it is characteristic of general judgements that “the predicate... holds of that concept without exception” [CPR, A71/B 96]. Here, the notion of subject concept is not relevant. If we consider all terms that Kant used or should have used in the table of judgements regarding quantity, we arrive at the following classification:

² I came up with the thought that Kant violated the rules of division in his tables of judgement several years ago while delivering a lecture on Kant's logic in the framework of the history of logic course. When sharing this thought with colleagues, I was constantly surprised that this obvious thought had not been mentioned in logical literature before. But only after finishing this article I came across a similar thought in Gilbert Ryle's *Categories* (Ryle G. *Categories* // Ryle G. *Collected Papers*. Vol. II: *Collected Essays*. New York: Barnes and Noble, 1971. Originally published in 1936). However, instead of changing the argument presentation structure, I will analyse Ryle's arguments below.

³ The need to use such concepts and judgements in reasoning resulted in the development of logics with no existential presuppositions or free logics.

⁴ In his lectures on logics, Kant says that the domain (sphere) of a singular judgement is a point.

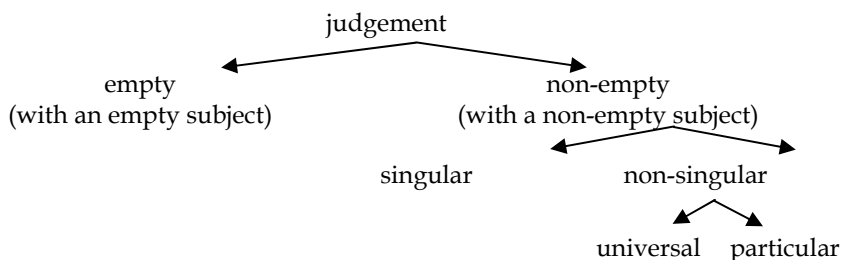


Fig. 1

Even if we set aside judgements with empty subject, the division into universal, particular and singular judgements seems to be a cross-division⁵, since the principle for the division into universal and particular judgements is that of predicate's relevance/non-relevance to the whole extension of the subject or a certain part of it⁶. And when identifying singular judgements, one deals with the extension of the subject itself regardless of the act of ascribing predicate to the subject. If we assume that only one characteristic of division is applied here, for instance, that of relevance/non-relevance, we arrive at the error "the members of division do not exclude each other", since, in this case, singular and universal judgements belong to the same class.

Quality

According to quality, Kant divides judgements into affirmative, negative and infinite. This division is inconsistent as a trichotomy, since it violates the rule of exclusion (the members of division should exclude each other). The problem is that infinite judgements are also affirmative. One cannot say that Kant does not realize this circumstance. Although he does not mention that infinite judgements are also affirmative in "The Critique of Pure Reason"⁷, in Logik Pölitz (1789), he says that affirmation and negation are properties of a judgement. If negation does not affect the connective, it is not a negative, but affirmative judgement, since the connective establishes the connection. Therefore, it refers to both affirmative and infinite judgements [AA, XI, p. 578]⁸.

If we admit that there are two successive divisions:

⁵ I will not reproduce here the list of division rules and possible errors. It can be found in any textbook on elementary logic.

⁶ It raises the question as to the meaning of the word "some", which can be interpreted as "only some" or "some or may be all". It seems that Kant assigns the first meaning to the word. This interpretation excludes some of logical square relations.

⁷ Nor does he in the lectures preceding "The Critique".

⁸ The difference between the pre-Critique and post-Critique lectures on logic is of certain interest in this context. In the pre-Critique lectures, Kant does not mention infinite judgements as affirmative and sometimes even does not identify them as a particular group. In the post-Critique lectures, he attempts to construe this relation and find arguments in favour of recognising infinite judgements as an independent group.

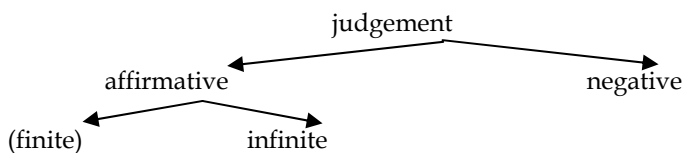


Fig. 2

where affirmative judgements are those with a positive predicate (representing a property or relation), and infinite ones are those with a negative predicate (representing the absence of a property or relation), then we arrive at the following conclusions:

- Negative judgements are opposed not to affirmative judgements in general but rather to a certain type of them. Kant disguises it with the term “affirmative judgement” denoting (finite) affirmative judgements, which is an obvious violation of the law of identity – substitution of notions.
- Different level members are tackled as those of the same level, which is a violation of the continuity of division – a leap in division.

Even if we set aside the continuity of division and focus on the extent relations, we should still distinguish finite affirmative, negative and infinite affirmative judgements. However, in this case, we face the fallacy of cross-division: finite and infinite affirmative judgements differ in the quality of predicate (positive/negative); negative judgements are distinguished by the quality of connective (positive “is” and negative “is not”). Moreover, for the sake of logical consistency, one should also introduce negative infinite judgements, for instance: “The soul is not non-mortal”. Then, we obtain the following classification:

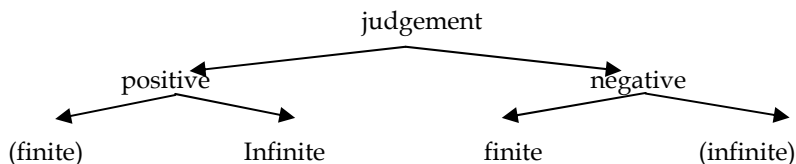


Fig. 3

At the same time, Kant's trichotomy – which is of crucial importance for his table of judgements – is ruined. This division raises a question as to whether infinite affirmative judgement are equipollent to finite negative judgements and infinite negative to finite affirmative ones. This question is equivalent to that whether the law of double negation is applicable for the negation of connective (propositional negation) and the negation of the term (term negation)? If the answer to these questions is positive, the identification of infinite judgements does not affect the division into negative and affirmative ones. But it seems that Kant entertains another opinion. In *Logik Pölitz*, he writes: “In infinite judgments I imagine that the subject is contained in a different sphere than that of the predicate. For example, *anima est non-mortalis*; here, I imagine that the soul does not belong to the mortals, but I think still more, namely that it belongs to the immortals, I imagine it in a different sphere as contained in the concept” [AA, XI,

S. 578]. The phrase "I think still more" implies that term negation, unlike propositional negation, does introduce something new. But under what conditions is such introduction possible? It is possible only if we take into account not only the extensional relations of terms but also something beyond them. This 'something' relates to the content (substance) of the judgement. And it is no surprise, since Kant himself classifies only the quality of connective as the form of judgement, while terms (and their types) are classified as the substance of judgement. Thus, the identification of infinite judgements transcends logic, which, according to Kant, judges only by the form of thoughts and leads to tetrachotomy rather than trichotomy, which ruins Kant's design.

Relation

The situation in this section is similar to that above. Kant suggests dividing judgements into categorical, hypothetical, and disjunctive. Evidently, categorical judgements on the one hand, and hypothetical and disjunctive on the other hand belong to different types of judgements – the former are simple judgements, while the latter complex ones. So, we identify the fallacy immediately – it is cross-division. After this error is rectified, the division looks as follows:

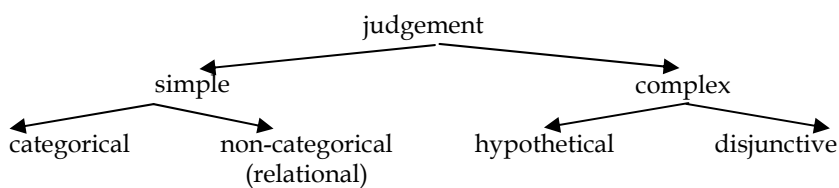


Fig. 4

I do not intend to analyse Kant's understanding of categorical judgements. It seems that he adds singular judgements to the four standard types of categorical judgements (A, E, I, O). However, it is difficult to understand what happened to the so called judgements with relations or relational judgements. Distinguishing them from categorical judgements was not unfamiliar to the logic of the time. Anyway, if we speak of a comprehensive display of all functions of thought, it constitutes a gap that destroys the trichotomy structure of the table. It is also evident that the division of compound judgements into hypothetical and disjunctive ones violates the rule of exhaustive division, which results in the fallacy of "too narrow division". Hypothetical and disjunctive judgements do not exhaust the "sphere" (in Kant's terminology) of the concept of compound judgements. It is hard to understand why Kant ignores such type of complex judgements as conjunctive ones, which were familiar to the logic of the time, or "neither... nor" judgements, which were familiar even to stoics. It means that, in the division of relation judgements, Kant makes at least two logical errors: cross-division and too narrow division. Thus, one can hardly speak of a comprehensive display of logical functions.

Modality

At first sight, the division of modality judgements is the least problematic. Although, if we tackle this division seriously, we should divide judgements as follows:

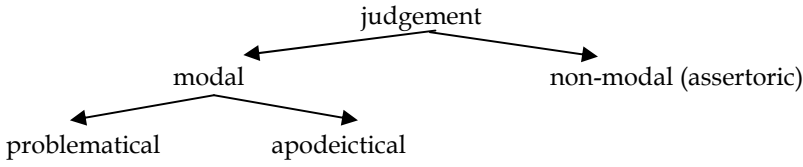


Fig. 5

In this case, there is a fallacy of *cross-division*. The first dichotomous division is based on the presence/absence of the property “to be modal”, the second one on the type of modality (possibility, necessity). However, it is difficult to understand the absence of such traditional class of modal judgements as contingent ones. Nevertheless, it is a minor error; they can be easily introduced through the negation of necessity. Similarly, the traditional class of impossible judgements can be derived from the negation of possible judgements. Kant’s mistake on modality is the slightest of all present in this work.

Ryle’s Attack

In his work “Categories” that analyses correlation between Kant’s table of judgements and table of categories, Gilbert Ryle (1936) [10] emphasises that Kant made significant progress in comparison to Aristotle and critically assesses both Kant’s choice of categories and, what is more important for us, the means of category derivation⁹. In this context, Ryle stresses that the classification presented in the table of judgements violates certain rules of division. Let us consider Ryle’s arguments. He starts with an evident problem, i.e. infinite judgements: “His sub-variety of ‘infinite’ judgments is a fraud” [9]. Here, Ryle does not mention that infinite judgements can be derived properly, if the term “negation” and the class of “finite” judgements are introduced. In this case, we obtain Table 2a. Ryle: “there are several sorts of ‘universal’ judgments, but the sort which he was considering should come under the heading of hypothetical judgments; the division into assertoric, problematic and apodeictic is wrong-headed, the two last being special cases of hypotheticals” [10]. It is peculiar that problematical and apodeictical judgements are a subgroup of hypothetical ones. Both in Kant’s classification and in general, modal judgements can be represented by simple judgements with modal operators, while hypothetical judgements, according to Ryle himself, are complex. Ryle’s idea that Kant’s universal judgements relate to the class of hypotheticals may stem from the standard translation of general affirmative judgements in to the language of predicate logic:

$$A: \forall x(S(x) \supset P(x)),$$

where a simple categorical judgement is transformed into a hypothetical judgement. But to demand it from Kant is an obvious anachronism. Ryle: “the division into categorical, hypothetical and disjunctive embodies a cross-division and contains one glaring omission, for (a) what he had in mind was the distinction be-

⁹ “Kant’s of approach was, in principle, much more enlightened than Aristotle’s had been. Unfortunately his execution was hopelessly misguided” [9].

tween simple and compound propositions and (b) he omitted from this latter class conjunctive propositions of the 'p and q' form" [10]. Here, Ryle speaks of the violation of division rules regarding quality. He is absolutely right about conjunctive judgements, however, he expresses a strange opinion reproaching Kant for the fallacy of non-exclusive division, since categorical judgements, on the one side, and hypothetical and disjunctive judgements, on the other side, belong to different types. Furthermore, Kant did not intend to distinguish between simple and complex (compound) judgements, which is one of the sources of fallacies in his table of judgements. This error was analysed in our critique of judgement classification by quality. One cannot deny the "too narrow division" fallacy. However, in the XVIII century and, of course, contemporary logic also distinguishes other classes of compound judgements. Ryle: "Only of simple proposition is it true that they must be either affirmative or negative and either universal or particular or singular, since in a two-limbed conjunctive, disjunctive or hypothetical proposition, for instance, one of the conjoined propositions may be one while the second is one of the others" [10]. Here, Ryle is not absolutely right. He apparently relies on propositional logic, while it is possible to consider compound judgements as universal or particular ones in compliance with the well-known equivalencies of predicate logic:

$$\forall x(A(x) \& B(x)) \Leftrightarrow \forall xA(x) \& \forall xB(x)$$

or

$$\exists x(A(x) \vee B(x)) \Leftrightarrow \exists xA(x) \vee \exists xB(x).$$

Ryle: "The distinction between the disjunctive and the hypothetical forms is false". It is difficult to say what Ryle means by this. If he means that disjunction is defined through implication, or vice versa, there is a need for propositional negation that is neither mentioned by Kant in this context nor introduced by Ryle. Ryle: "No overt distinction is drawn between general and non-general propositions". Apparently, Ryle believes that non-general judgements should be divided into particular and singular ones. But here he makes a mistake himself, because there is no common principle for such division, since particulars are distinguished on the basis of the extension of subject in the judgement, while singulars on the basis of the number of subject extension elements. Ryle: "no place is found for such propositions as 'seven cows are in the field', 'most men wear coats', 'John is probably dead'." [10]. One can formulate numerous statements of this kind, but the methods of their classification depend on the initial mechanism chosen for such classification. Ryle: "And lastly, in simple singular propositions no distinction is drawn between attributive and relational propositions" [10]. One cannot but agree with this remark of Ryle, which is reflected in table 3.

Possible explanations of the inconsistency of the table of judgements

It seems that Kant, when compiling the table of judgements, which, in his own words, is borrowed from general pure logic and contains the whole system of thought functions, violates all possible rules of division, while the table itself is evidently incomplete. An attempt to explain this strange circumstance suggests three hypotheses: 1) Kant did not know the rules of division; 2) he neglected them on purpose; 3) he did not notice the violation of the rules in his table.

Let us consider them one after another.

Kant did not know the rules of division

This hypothesis is evidently erroneous. It is not only that these rules were mentioned in every logic course of the time, but Kant included them in his own lectures. For instance, in *Wiener Logik* in the section dedicated to logical division, Kant explicitly formulates the rules of exhaustive and exclusive division [AA, XI, S. 927–928]. In the same work, when speaking of *Unterteilung*, he formulates the rule "division must proceed gradually" and demands that mathematicians observe it. He writes that all triangles are either equilateral or non-equilateral. Non-equilateral triangles are either scalene or isosceles. Thus, when triangles are divided into equilateral, scalene and isosceles, the division makes a leap and is therefore false [AA, XI, S. 928]. It is not difficult to see that this example proves the need to observe the rule of continuity of division, therefore, Kant emphasises that mathematicians commit the fallacy of "a leap in division". But this is the very fallacy that Kant commits in all parts of his table. The Jäsche logic also offers the rules of division: «§111. Universal rules of logical division. In every division of a conception we must see to it: 1) *that the members of division exclude or are opposed*¹⁰ to one another; that furthermore they, 2) belong under a higher concept (*conceptus communis*) and finally that 3) taken together they constitute the sphere of the divided concept or are equal to it" [6, p. 636–637]. Here, Kant formulates the rules of exhaustive and exclusive division. The same rules can be found in the majority of Kant's lectures on logic.

Kant consciously neglected them.

This hypothesis is also erroneous. This statement could hold true if we considered Hegel, for example. In "The Critique of Pure Reason" as well as in other works, Kant emphasises that general logic is the canon for any kind of thinking, the rules of general logic apply to all knowledge – both empiric and a priori [CPR, B VIII] – and, consequently, to his table of judgements, which, Kant's opinion, is an example of a priori knowledge.

Kant did not notice the violation of division rules in the table.

In view of the above considerations above, this hypothesis seems to be the most plausible. But before we confirm it and analyse its consequences for transcendental philosophy, let us answer the question as to whether it is possible that the divisions analogous to those presented in Tables 1–4 were unknown to the logic of the time? The answer to this question can be found in the Giorgio Tonelli's article "Die Voraussetzungen zur Kantischen Urteilstafel in der Logik des 18. Jahrhunderts" [11]. Tonelli analyses all important 18th century logic textbooks that were popular in Germany and other countries and could influence Kant. Let us see whether the textbooks of the time offered examples of correct division following the headings of Kant's table of judgements.

Quantity

G.F. Meier's "Logic", which Kant used in his lectures on logic, presents the following division: judgements are divided into singular [*einzeln*] and common [*gemein*] ones, while common judgements are divided into general [*allgemein*] and particular [*besonders*] [11, S. 141]. This division corresponds exactly to the

¹⁰ Further, Kant explains that it is a contradictory opposition.

division given in Table 1. It means that Kant had an example of correct division at hand, but he did not use it. Kant fully understood the problems related to the identification of singular judgements and the grounds for such identification. Thus he provided the first Critique with a long (and quite confusing) section on the need to distinguish singular judgements, although the grounds for it, according to Kant, are not logical (the extension, in which the subject of judgement is considered) but rather empirical, relating to the number of elements of the extension of subject concept regardless of the act of judgement. In this sense, the identification of singular judgements is carried out due to external to logic reasons. The analysis of logic textbooks conducted by Tonelli shows that the variant of judgement division by quality supported by Kant was quite popular. Thus, Kant shares this error with many logicians of his times, however, at least one textbook, with which Kant was undoubtedly familiar, contains the correct division. Nevertheless, Kant ignored it.

Quality

Tonelli's analysis shows that Kant was not the only one who identified infinite judgements. Many textbook authors distinguished infinite judgements alongside affirmative and negative ones. However, there are examples of correct division, for example, in the textbook of a Wolffian, Boehm, which came out in 1749. *Quails* judgements are divided into *finita* and *infinita*, and the former into *affirmativa* and *negativa* [11, S. 140]. The *infinita* are not divided further, but, nevertheless, the scientific literature of the time did offer an example of a more correct division. Although, one cannot be sure that Kant was familiar with it, but, as Meier's example shows, it hardly changes anything.

Relation

In this case, the situation is a little more complicated than in the previous two. Tonelli remarks that difficulties arise with relation judgements mentioning that before Kant, the term "relation" had not been used in connection with the corresponding type of judgements [11, S. 151]. His analysis shows that twenty nine authors distinguish these types, usually, alongside other types of judgement, in the context of a broader division into simple and compound judgements. [11, S. 151 – 152]. For example, Ch. Wolff distinguished simple and compound judgements and divided the latter into copulative and disjunctive. Corvinus divided judgements into simple and complex and the latter into hypothetical, disjunctive, copulative, excluding, limiting, and comparative ones [11, S. 138]. In other words, the correct division was widespread in the literature of the time. However another popular division of judgements was that into categorical and hypothetical ones (10 authors, four of them mention additionally disjunctive judgements, which are, nevertheless, complex) [11, S. 152]. Only two authors – Schütz and Rösser (in 1773 and 1775, respectively) – divide judgements the way Kant does in his table. At the same time, it was conventional to distinguish copulative judgements. Kant elucidates that within such judgements one predicate relates to two subjects. Thus, copulative judgements are an analogue of conjunctive judgements. Tonelli addresses Lambert to prove that copulative judgements were mentioned in division similar to that of Kant, stating that Lambert refers to categorical, hypothetical, and disjunctive judgements only alongside copulative ones [11, S. 153]. The identification of copulative judgements indicates that logic of the time acknowledged the incompleteness of division of compound judge-

ments into hypothetical and disjunctive ones. Even relational judgements¹¹ were identified as a particular group. Crusius, who was very familiar to Kant, distinguishes relational judgements (the subject and the predicate are members of a relation, for example, "a movement presupposes a cause" [11, S. 139]. Thus, one cannot say that the division into simple sentences into categorical and relational ones was unknown to 18th century logic and even that it was unknown to Kant, since he was familiar with the works of Crusius.

Modality

A conventional method to divide judgements by modality in the 18th century was the division into necessary, contingent, possible, and impossible judgements (24 authors according to Tonelli) [11, S. 153]. Only Lambert offers a division of judgements into possible, actual, necessary and their opposites [11, S. 153]. From a modern perspective, assertoric judgements are not modal. Moreover, Kant, when speaking of assertoric judgements, emphasises that in this case "we regard the proposition as *real* (true)" [CPR, A75/B100]. The addition of the word "true" in brackets indicates that the "real" is considered not as a modality, i.e. a supplementary characteristic of the judgement connection, but rather as a relation of the judgement in whole to the reality, the judgement refers to. If we take into account the rule of exclusive division, apodeictical judgements, according to Kant, cannot be true, since in this case they would coincide with assertoric ones regarding their principal characteristic – being true. Of course, it raises a number of further questions. For example, what should one do with false judgements that claim to describe the reality? Should they be classed under the heading of problematic? According to Kant, problematic judgements state something that could be accepted "for the moment" [CPR, A75/B101].

The considerations mentioned above lead us to the following conclusion: *in his table of judgements, Kant violated all known¹² rules of division, although the logical literature of the time¹³ contained examples of correct division.* It means that Kant *did not realise the erroneousness of his divisions, despite its obviousness.*

This conclusion raises two interesting questions: 1) why did not Kant recognise the violation of division rules? 2) what effect does the admission of the erroneousness of Kant's division have on the further course of reasoning in the *Critique of Pure Reason* as well as the relation between formal and transcendental logics?

The answer to the first question, although it partially relates to the field of psychology, is quite simple: he had already identified the relations between categories, which the table of judgements was meant to prove relying on the authority of logic. Kant needed substantiation for his table of categories, the image of which he already had in mind. This answer to our question is popular in literature. Even the first critics of Kant, Herbart and Hegel, already reproached him for the empirical character of his table of judgement, which represents an arbitrary set of judgements that were known to the logic of the time¹⁴. The hy-

¹¹ A relational judgement is a judgement, whose predicate is a relation characteristic. Unlike categorical judgements, relational judgements refer to more than one subject and do not include connections.

¹² And known to him as well.

¹³ Including that familiar to Kant.

¹⁴ See, for example, Hegel's critique [1, p. 157].

pothesis about the gradual compilation of the table of judgements alongside the development of the conception of the table of categories is, for instance, supported by the fact that, under the heading of quality judgements, Kant initially distinguished only affirmative and negative judgements, while infinite ones seem to be introduced for the sake of ternary structure of categories. Another proof is that a collection of Kant's lecture notes and drafts for his published works contain the following fragment: "Quality of judgements: affirmative or negative" [7, p. 60].

All other sections of this initial draft contain three division members. The quality section is indicative of further development. It is this section that gives rise to the triadic structure of categories – the concept (reality), its negation (negation), the synthesis of the initial concept and its negation (limitation). It also holds true for the quantity section: singularity-plurality-totality. This structure is less evident in the relation and modality sections. However, two first sections are sufficient to make a general conclusion: Kant *sacrificed logical rigor for the sake of triadic structure of categories*. It is this consideration, due to which he had to resort to cross-division and neglect the rules of exhaustive and exclusive division. In his lectures on logic, Kant continually repeats that only dichotomous division is a priori and purely logical, while any polytomy rests on experience and is empirical. In *Logik Pöhlitz*, he emphasises that the fault of any polytomy lies in the fact that it is empirical, while dichotomy is apodeictic, since every object should be either A or non A [AA, XI, S. 577]. However, when it concerns the table of judgements, his position changes. There is a note in *Logik Pöhlitz* immediately below the table of judgements – a copy from the first *Critique* – that claims that, although logics indicate that, when applied, affirmative judgements have the same effect as infinite ones and universal as singular, it is a logical distinction. The actus of mind, Kant continues, is always tripartite [AA, XI, S. 577]. Step by step, Kant arrives at a conclusion that trichotomy is peculiar to synthetic a priori divisions. In the *Critique of Judgement*, he clearly states that "If there is to be an *a priori* division it must be either *analytical*, according to the law of contradiction, which is always twofold ... or it is *synthetical*. And if in this latter case it is to be derived from *a priori* concepts ..., the division must necessarily be trichotomy..." [4, p. 43]. As to the table of judgements, this change in position, as I see it, was an adjustment of the method of logical division to the earlier designed structure of categories¹⁵, since general logic is not familiar with the problem of synthetic a priori judgements. And Kant's principal claim to the a priority of his system of categories in the *Critique of Pure Reason* consisted in that the classification of judgements belongs to general logic. Here, one cannot but notice the germs of future Hegel's enmity towards formal logic. It was Hegel who made triad the underlying principle of his system of categories. Kant's example shows that, for the sake of triadic structure of categories, logic had to be violated.

It is much more difficult to answer the second question.

Kant himself assesses his metaphysical deduction of categories based on the table of judgements as follows: "In the **metaphysical deduction**, the origin of the a priori categories in general was established by their complete coincidence with the universal logical functions of thinking" [B159–12, p. 261]. The a priori origin of categories is closely connected with the completeness and consistency of the

¹⁵ I will analyse this position in more detail when scrutinising the arguments in favour of completeness of Kant's table advanced by K. Reich.

table of judgements. However, our analysis of the violation of division rules in Kant's table shows that a classification produced with a violation of logical rules cannot be considered as consistent. Thus, the table of judgements does not rest on logic and, therefore, does not offer a complete and consistent system of logical function of thought. Apparently, Kant suspected the devised method of classification was not logical. Let us consider, for example, the modality section. The correct logical division does not allow us to place assertoric judgements *between* possible and actual ones, since assertoric judgements belong to the class of non-modal judgements. Kant, trying to overcome this problem, described not the logical characteristics of judgements, but rather their *cognitive* statuses through linking them gradually to the reason and altering, on this basis, their cognitive characteristics. The incorrect logical division in the table of judgements shows that Kant did not succeed in substantiating the a priori origin of categories, while the metaphysical deduction of categories loses its basis. However, Hegel understood it immediately and started to develop a system of categories from a scratch, maybe, in order to avoid the resistance of material that Kant had confronted¹⁶.

Reich's defence

An attempt to prove the consistency of Kant's approach to the development of table of judgements was made in the 1930s by Klaus Reich [8]. However, Reich does not consider the application of division rules to Kant's classification and focuses all his attention on the justification of completeness of Kant's table from the perspective of general logic and the soundness of division principles, especially in the relation judgement section. While achieving this target, he solves two problems. He tries to prove that: 1) Kant's division into four sections – modality, relation, quality, and quantity (this is the order Reich insists upon) – is exhaustive on the basis of a reconstruction of Kant's definition of judgement; 2) Kant's division within each section is exhaustive. Reich solves the first problem through reconstructing Kant's definition of judgement: "A judgment is an objectively valid (Modality) relation of representations (Relation) which are representations of parts (consequence: Quality) as analytic grounds of cognition (consequence: Quantity)" [9, p. 102]. Avoiding a comprehensive critique of such reconstruction, I will only point out that this definition lies beyond general logic. It is a transcendental definition of judgement that takes into account the characteristics of cognitive ability. Therefore the division into sections also lies beyond general logic and represents a philosophical organisation of judgement types. It might be extremely good, but, in Reich's interpretation, it does not solve the problem of justifying Kant's table from the perspective of pure logic. However, for us, Reich's solution to the second problem is of more importance. Let us analyse Reich's arguments suggesting that categorical, hypothetical, and disjunctive judgements represent an exhaustive and consistent division of relational judgements from the perspective of general logic. Firstly, Reich mentions that 18th century logic knew other divisions of relational judgements and that categorical

¹⁶ Nevertheless, several works dedicated to Kant's table of categories claim that the table of categories is independent from the table of judgement. For instance, Heidegger voices this opinion saying that it is not only that categories are not derived from the table of judgements but they cannot be derived from it at all [2, S. 56].

judgements were often related to simple judgements, while hypothetical and disjunctive to complex ones. Secondly, he emphasises that, usually, such divisions distinguished copulative (conjunctive) judgements as well as many others. Thus, Reich has to prove that, within this section, one can — on the basis of a single principle — identify between categorical, hypothetical, and disjunctive judgements and only them. "The perspective that allows Kant to view only categorical, hypothetical, and disjunctive judgments as belonging to pure general logic, and which is at the same time the criterion for determining whether they are differences in judgments as such, is the view that they must be differences in that relation of concepts or problematic judgments in which such thoughts in general (apart from their specific content) "first become cognitions of an object" (Metaphysical Foundations of Natural Science). This is what we mean when we say that they are related to the objective unity of apperception. It can easily be seen from this perspective that thoughts that are not given as true, but rather as some thought or other that one could assume, are, for the first time, related to possible truth in the combination ... of inherence, consequence and disjunction" [9, pp. 80–81]. Later, Reich tries to prove that conjunctive judgements do not belong to the section of relational judgements, since "in a conjunction ... it is essential that the individual terms should be true in order that the combined content be true" [9, p. 81], which, in his opinion, indicates only that whether a conjunctive (copulative) judgement is true depends only on that whether its terms are true or false and, hence, does not relate to logical functions of thought in Kant's understanding. However this argument is not valid, because, in this relation, there is no distinction between conjunctive (copulative), hypothetical (conditional, implicative), and disjunctive judgements. Reich's argument apparently supports our thesis that there is a distinction between simple (categorical) and complex (conditional, disjunctive, conjunctive, etc) judgements. Furthermore, Reich's argument based on the "cognitions of an object" is not valid either, in part at least because Kant constantly speaks of general logic as a theory of forms of thought and draws a clear distinction between thought and cognition. When we address the specific characteristics of cognition (as opposed to thought), we leave the confines of general logic. As to relational judgements, Reich also failed to justify Kant's position. He even puts greater stress than Kant on the identification of assertoric judgements through their relation to the reality. However, it is obvious that here both Kant and Reich speak of the actual truth of judgements, which is not a modal characteristic and lies beyond general logic. Nevertheless, in his notes on the metaphysics of the 1770s, Kant claims that assertoric judgements express logical truth [3, S. 37], but, in this context, the word "logical" is rather a metaphor. Moreover, strictly speaking, logically true judgements belong to the judgements of necessity. One can analyse Reich's arguments further, but, I believe, it is already clear that in the cases where Reich succeeded in justifying the completeness of Kant's table of judgements, he leaves the confines of general logic, appeals to transcendental consideration, object of cognition, etc. It is impossible to prove the completeness of Kant's divisions within general logic. This general conclusion is also supported by the principle for the justification of division completeness that Reich introduces at the end of the book. He adheres to the principle introduced by Kant in his Reflexion 5834 from the manuscripts on metaphysics. "For this reason there are three logical functions under a certain title, hence also three categories: because two of them demonstrate the unity of consciousness in two *oppositis*, while the third in turn combines the conscious-

ness of the two. Further kinds of unity of consciousness cannot be conceived. For if a is a consciousness that connects a manifold, and b is another which connects in the opposite way, then c is the connection of a and b " [7, p. 300]. Reich shows that the table of judgements rests on this principle, but since this principle is evidently non-logical, the proof of completeness provided by Reich shows that Kant's systematisation of judgements rests on non-logical principle and, hence, does not belong to general logic and does not rest upon it¹⁷. However, this conclusion can be also drawn from the evolution of Kant's attitude towards the logical character of division.

Conclusion

The analysis of logical consistency of Kant's table of judgements, its connection to the 18th century tradition of logical research, and the methods to prove it carried out in this article leads us to the following conclusions:

- Kant's table of judgements is logically inconsistent, since each section violates the rules of division, which were familiar both to the logic of the time and Kant himself;

- the analysis of reasons for the violation of division rules in each section shows that Kant failed to abstract "all content of a judgement" and "consider only the intellectual form thereof". It means that the table of judgements does not belong to general logic and is compiled according to some other, non-logical principles;

- the basic principles of the table of judgements are not logical, but rather transcendental, connected with the possibility of the object of cognition. It is indicative of the circular character of Kant's metaphysical deduction of categories. Kant obtained in the table of categories only that what he introduced in the table of judgements.

- the appeal to the authority of logic in justifying the division and its completeness both in case of judgements, and categories, turns out to be invalid.

All in all, it indicates that Kant indeed began to develop a different — transcendental — logic, whose rules deviate from the rules of general logic and, maybe, are incompatible with them. The appeal to general logic seems to be a tribute to tradition and, apparently, the prospects of the development of a different logic were best understood by his followers in the framework of German idealism. At least, its most prominent representative — Hegel — based his own system on the triad (trichotomy) principle that was formulated by Kant and underlay his table of judgements, which resulted in the violation of simple rules of general logic. Although one can assume that Kant would not agree with Hegel's limitation of general logic, as he did not agree with the development of his philosophy carried out by Fichte.

I have all reasons to suspect that if Kant had considered his table of judgements impartially, he would have called it a "pseudo-a priori overintellectualising".

¹⁷ I will not focus here on Reich's analysis of infinite and singular judgements, which he rightfully excludes from the list of logical functions of thought and derives from logical function by means of the above mentioned triadic principle. It is the proof of their non-logical nature.

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