

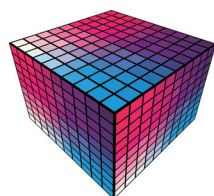


From above and left: Fengkui Ju,  
Jakub Motrenko, Tomoyouki Yamada,  
Maciej Witek; Jacek Jadacki,  
Bartosz Brożek, Berislav Žarnić,  
Aleksandra Horecka,  
Natalia Miklaszewska, Wojciech Załuski,  
Robert Trypuz, Piotr Kulicki,  
Anna Brożek

The seventh volume of the series *Logic, Methodology and Philosophy of Science at Warsaw University* is devoted to some successive results of the project *Theory of Imperatives and Its Applications* realized by the group composed by Anna Brożek and Jacek Jadacki from Warsaw University, and Berislav Žarnić from Split University (Croatia).

One of the most important points of this project was the International Symposium *Imperatives in Theory and Practice* which took place in Warsaw, on the 18<sup>th</sup> and 19<sup>th</sup> May, 2012. The symposium was the meeting of many specialists in the domain of the theory of imperatives – from China, Croatia, Japan, Poland and The United States. The present volume, entitled *Imperatives from Different Points of View (2)* contains almost all the papers presented at the Symposium.

At Warsaw University Library, against the background of great figures of the Lvov-Warsaw School (Kazimierz Twardowski, Jan Łukasiewicz, Alfred Tarski, Stanisław Leśniewski). From the left: Fengkui Ju, Peter B.M. Vranas, Tomoyouki Yamada, Berislav Žarnić, Jacek Jadacki, Anna Brożek, Tomasz Lechowski, Robert Trypuz

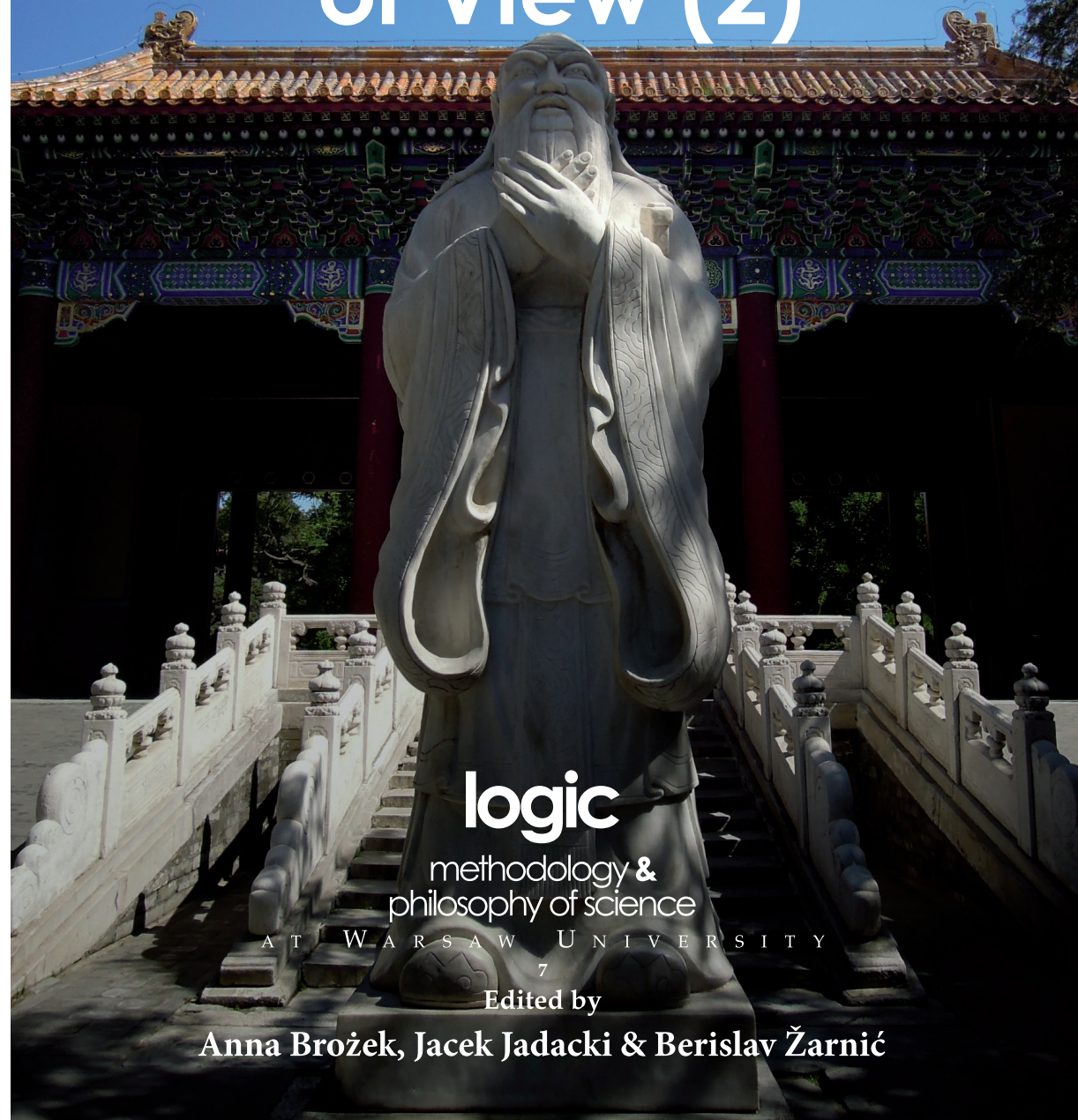


FILOZOFIA NAUKI

Logic, Methodology and Philosophy of Science at Warsaw University

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# Theory of Imperatives from Different Points of View (2)



logic

methodology &  
philosophy of science

AT WARSAW UNIVERSITY

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Edited by

Anna Brożek, Jacek Jadacki & Berislav Žarnić

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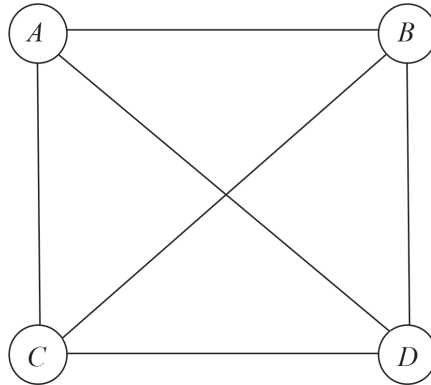
# WITWICKI'S SQUARE

1. I am going to consider four worlds: the world of BEING, the world of VALUE, the world of OBLIGATION and the world of WILL – as well as relations between these worlds.

The point of departure of my analysis is the scheme which I call “Witwicki’s square” – in honor of Władysław Witwicki, the author of a remarkable text, *A Psychological Analysis of Symptoms of Will*, written at the beginning of 20<sup>th</sup> century and being an inspiration of this considerations.<sup>1</sup>

It is the case that the fact that  $p$  occurs.

It is good that the fact that  $p$  occurs.



The fact that  $p$  ought to occur.

$x$  wants the fact that  $p$  to occur.

2. Let the letter ‘ $p$ ’ be a sentence variable in Witwicki’s square. Is it a variable of unlimited range, *scil.* does it represent any sentence of natural (English) language?

Let us consider the following sentences of different grammatical tenses and of different complexity.<sup>2</sup>

- (1) Felix recovered.
- (2) Felix is recovering.
- (3) Felix will recover.
- (4) Felix will recover, if he adheres to instructions of his doctor.

1 In the formulas A-D, the term “the fact” occurs. I must stress that the presence of this term is forced only by the grammatical structure of English language, and not by the structure of the world. These formulas do not presuppose the reality of respective states of affairs. Let us assume that the sentence ‘ $p$ ’ states the state of affairs  $S$ ; in such a case, the fact that  $p$  is identical with the state of affairs  $S$  stated by the sentence ‘ $p$ ’. It is the case independently of “the fact”  $S$  is real or not.

2 Let me emphasize that these examples are illustrations of only some types of formulas. For instance – instead of the formula (2) one may take: “Felix will recover” (future simple tense).

If one substitutes the variable ' $p$ ' in formulas  $A$  and  $B$  by any of sentences (1)-(4), the formulas become correct (English) sentences. It is not clear whether substitutions of (1) and (2) in formula  $C$  are correct. However, in my opinion, in the case of the formula  $D$ , such a substitution seems to be incorrect.

Can one conclude that one may want only the occurrence of FUTURE states of affairs?

I am not able to answer this question.

3. Let us notice that for the formula  $A$  the following equivalence hold:

(5) It is the case that the fact that  $p$  occurs  $\leftrightarrow$  the fact that  $p$  occurs.

(6) It is the case that the fact that  $p$  occurs  $\leftrightarrow$  it is the case that  $p$ .

Moreover, we have the following equivalence:

(7) It is the case that  $p \leftrightarrow p$ .

As a consequence, we have *i.a.*:

(8) It is the case that the fact that  $p$  occurs  $p \leftrightarrow p$ .

Instead of the formula  $A$ , one may use the formulas:

(9) The fact that  $p$  occurs.

(10) It is the case that  $p$ .

(11)  $p$ .

I do not use such formulas, because it would be more difficult to compare the formula  $A$  with the formula  $B$ , and all the more with the formulae  $C$  and  $D$ .

Is the reason of that a certain important difference between the formula  $A$  and the formulae (9)-(11)?

I am not able to answer this question.

4. For the formula  $B$ , the following equivalence holds:

(12) It is good that the fact that  $p$  occurs  $\leftrightarrow$  it is good that  $p$ .

Instead of the formula  $B$ , one may say:

(13) It is good that  $p$ .

The structure of the formula (13) is the same as the structure of the formula (10).

Both formulas may be considered as direct answers to the hypothetical question:

(14) How is it, that  $p$ ?

Is it here only a superficial similarity?

I am not able to answer this question.

5. Let us now analyze the formula  $C$ .

It is striking that, firstly, the predicate "occur" in  $C$  is an infinitive. However, notice that:

(15) The fact that  $p$  ought to occur  $\leftrightarrow$  it ought to be the case that the fact that  $p$  occurs.

On the other hand, the structure of the formula:

(16) It ought to be the case that the fact that  $p$  occurs.

is analogical to the structure of the formula (10); the only difference is the occurrence of "is" instead of "ought to be".

Are these similarities only superficial again?

Firstly, on the basis of the equivalence (7), one may reduce the formula (16) to the following form:

(17) It ought to be the case that  $p$ .

Secondly, only in the case of the formula  $C$ , its main functor “it ought to be the case that” may be «hidden» in the argument ‘ $p$ ’. For the sentences (1) and (3) we have the following *de re* counterparts:

(18) It ought to be the case that Felix recovered  $\rightarrow$  Felix ought to recover.

(19) It ought to be the case that Felix will recover  $\rightarrow$  Felix ought to recover.

On the other hand, for the sentence (2) we have:

(20) It ought to be the case that Felix is recovering  $\rightarrow$  Felix ought to be recovering.

Can one put equivalences instead of implications in formulae (18)-(20)?

I am not able to answer this and the previous question.

6. Let us now concentrate on the functors “it is the case that”, “it is good that”, “it ought to be the case that”. What is the sense of these functors?

The formula (10), which contains the first functor, states that the fact that  $p$  is real – *scil.* that it is a state of affairs localized in space and time.

The formula (13), which contains the second functor, should be interpreted as the simplification of the formula:

(21) It is good in respect  $R^3$  for  $x$ , that  $p$ .<sup>4</sup>

In such an interpretation, it is easy to answer George Edward Moore’s question of why the expression “is good” (or “it is good that”) is indefinable: because it is a syncategorematic expression.

Similarly, the formula (17) which contains the third functor is – as I think – a simplification of the formula:

(22) It ought be seen to it by  $x$  that  $p$ .

It is clear that the idea expressed in (22) may be more easily expressed by the formula in active form:

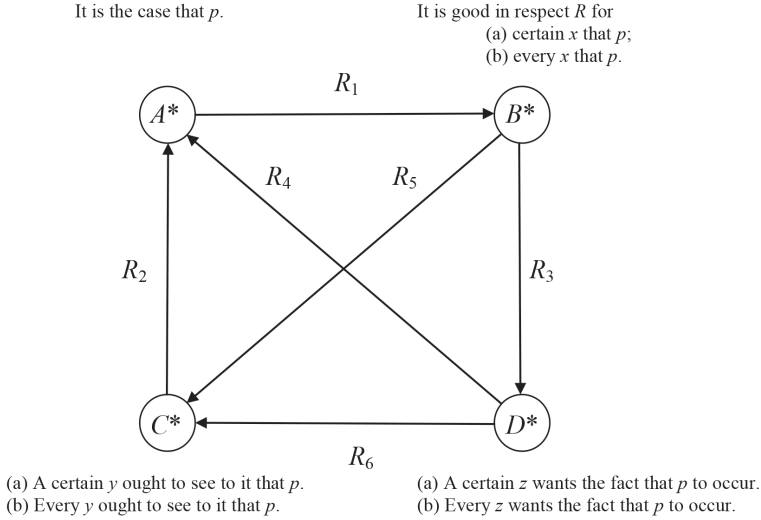
(23)  $x$  ought to see to it that  $p$ .

As we see, not only in the formula  $D$  but also in the formulae  $B$  and  $D$  it is said that the state of affairs stated in  $A$ , *scil.* in the sentence ‘ $p$ ’, is in a certain relation to some  $x$  (*resp.* to all  $x$ -es): it is desired by  $x$  ( $D$ ), is good for  $x$  ( $B$ ) or ought to be seen to it by  $x$ , *scil.* realized by  $x$  ( $C$ ).

3 One of possible respects – but not the only one – is morality. Surely, there are many states of affairs which are morally neutral for everybody: neither good, nor bad.

4 This formula should be distinguished from the formula “It is good according to  $x$  that  $p$ ”. Agreeing that the last formula is a correct interpretation of (13) means pronouncing for axiological relativism in the controversy between relativism and absolutism. To agree that the formula (13) is a shortening of the formula (21) does not entail such a consequence; moreover – it is neutral with respect to the controversy between axiological objectivism and subjectivism. For, the formula (21) is a sentential function; if the variable ‘ $x$ ’ is bound by general quantifier and if for some states of affairs stated by ‘ $p$ ’ this function becomes a true sentence, then the controversy is settled for the objectivism. This comment concerns also – after necessary modifications – the interpretation of the formula (17).

7. Let us now introduce the results of the above analysis to the Witwicki's square:



Let us now look at the relations  $R_1$ - $R_6$  between the formulas  $A^*$ - $D^*$ .

8. It seems that neither  $R_1$ - $R_5$ , nor their converses  $\check{R}_1$ - $\check{R}_5$ , hold between  $A^*$ - $D^*$  – in both versions (a) and (b) – if they are to be relations of logical consequence.

True enough, there are such states of affairs that their occurrence is in some respects good for somebody – but it is not the case that all states of affairs are such that their occurrence is in some respect good for somebody, as it would be in the case of  $R_1$ . On the other hand, if the relations  $R_3$  and  $R_4$  held, then  $z$  would be omnipotent and «omni-good», which is usually attributed at most to God.

What is the case with the relation  $R_6$  and its converse  $\check{R}_6$ ?

Well, I think that only the following entailment of the type of  $\check{R}_6$  holds:<sup>5</sup>

(24)  $\forall y (y \text{ ought to see to it that } p) \rightarrow \forall z (z \text{ wants the fact that } p \text{ to occur})$ .

Metaphorically speaking, there is no obligation without will.

The situation is different when the formulas  $A^*$ - $D^*$  are arguments of conjunctions with other factors. Let us consider two possible combinations.

9. Let us substitute the variable ' $p$ ' in the formula  $D^*$  by the formula "see to it that  $p$ " and, for the sake of clarity, let us simplify the formula " $x$  wants the fact that  $p$  to occur" to the form " $x$  wants that  $p$ " (remembering that in such a case, the sentence ' $p$ ' has to be a sentence in the past tense).

Let us assume that:

(25)  $\bigwedge z \bigwedge y \{z \text{ is a deontic authority for } y \leftrightarrow$

<sup>5</sup> However, it is sometimes claimed that in some domains – if everybody wants something to be the case, then it ought to be realized (although it is not always clear by whom).

$[(z \text{ wants } y \text{ to see to it that } q \wedge y \text{ is able to see to it that } q) \rightarrow y \text{ will see to it that } q]]$ .<sup>6</sup>

By this assumption, firstly, the relation of the type of  $R_6$  holds:

(26)  $\bigwedge z \bigwedge y [(z \text{ is a deontic authority for } y \wedge z \text{ wants that } y \text{ sees to it that } q) \rightarrow y \text{ ought to see to it that } q]$ .

If we agree that the antecedent of the above implication belongs to the world of BEING and the consequent – to the world of OBLIGATION, then contrary to what David Hume suggested, it happens that being entails obligation.

Secondly, the following dependence of the type of  $R_4$  holds:

(27)  $\bigwedge z \bigwedge y \{[(z \text{ is a deontic authority for } y \wedge z \text{ wants that } y \text{ sees to it that } q) \wedge y \text{ is able to see to it that } q] \rightarrow q\}$ .

Thirdly, also the dependence of the type of  $R_2$  holds:

(28)  $\bigwedge y [(y \text{ ought to see to it that } q \wedge y \text{ is able to see to it that } q) \rightarrow q]$ .

10. It is interesting that dependences in the «negative» square (“it is not the case that”, “it is bad in respect R for”, “ought not”, “does not want”) are not a «mirror» image of the relations from the «positive» square.

For instance, it seems that in such a «negative» square, the relation of the type of  $R_5$  holds: for instance, if something is bad in moral respect for somebody, then it ought not to occur.

11. It is not excluded that the analyzed dependences occur only in some ethnic languages.

Independently from what is exactly the case, Witwicki’s square is – as I tried to show – a transparent model of relations between these four worlds: the world of BEING, the world of VALUE, the world of OBLIGATION and the world of WILL. Thanks to that, it may find application in both ontology and its history.

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<sup>6</sup> I skip here a difficult question, whether the antecedent of the second argument of the equivalence should be supplemented by the formula “y is convinced that  $\alpha$ ”, where ‘ $\alpha$ ’ symbolizes the antecedent. Analogically, similar supplementations should be done in other formulae in this paragraph.