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PROBLEMS OF SEMIOTICS AND LOGIC OF NORMS

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1. Introduction

Norms play an important role in many areas of life. Therefore, it is not surprising that they are the subject of various studies, including semiotic research. A broad range of semiotic problems have appeared in relation to normative statements. Normative statements bring to mind questions belonging to each of the classical fields of semiotics: syntax, semantics, and pragmatics.

Normative statements can be analysed from the syntactic perspective and compared to other types of statements. Syntactic considerations may include, for example, the problem of reducibility of any normative statement to a distinct and relatively simple syntactic type. There is, for instance, the idea that all norms can be reduced to commands. It is supported by many arguments: political, sociological, psychological, historical, etc. The imperative conception of norms leads to the conclusion that all types of norms can be reduced to imperative sentences. The grammatical argument supporting the thesis that such a reduction is possible (although I do not claim that it actually proves what it is supposed to prove) is as follows: in grammar, we distinguish declarative, interrogative, and imperative sentences, but we do not distinguish normative sentences as a separate grammatical category. If grammatical intuition is correct, normative statements would best be perceived as complex imperative statements, and this is an indirect argument supporting the thesis that norms can be reduced to commands.

And here is another example of a syntactic problem related to normative statements. Many logical theories of questions have been formulated, e.g. the one where questions are hidden commands and interrogative sentences are disguised imperative sentences (Åquist 1984). It is an example of a syntactic reduction from questions to imperative sentences, i.e. from one grammatical category to a completely different one. It is clear that such a reduction would require defining the syntactic structure of the expressions belonging to each of these categories.

If we take semantics as the study of meaning of expressions, without any further comments on the concept of meaning, i.e. without a clear distinction between referential and intensional semantics, the range of semantic problems concerning normative statements is very broad and is related, for instance, to the problems of the interpretation of norms, which is one of the fundamental aspects of jurisprudence. What is normative meaning? Can it be reduced to the descriptive meaning, and if not — why? These are two fundamental semantic problems discussed in relation to normative statements. Once we realise what the role of referential semantics is, further questions will appear. Can normative statements be either true or false? If they are neither true nor false, do they have any truth values, and if they do — what values exactly?

The pragmatic problems related to normative statements originate from the fact that normative statements are formulated by someone and addressed to someone. It is disputable whether all norms have been established by someone, but it is certain that all norms exist for someone. It becomes clear when we realise that norms are supposed to influence human behaviour, so they have an inherent pragmatic function. Views on the genesis of norms depend on some general philosophical assumptions. Legal positivists believe that all norms, or at least legal norms, always have a concrete real legislator; we can pass over the complicated theory of sources of law formulated in the spirit of legal positivism by Hans Kelsen. The proponents of the theological concepts of natural law also claim that all norms, not only the legal ones, have been created by man or God, whereas the representatives of the secular school of natural law follow the well-known *dictum* by Montesquieu that both natural and social laws are "the necessary relationships which derive from the nature of things". According to this doctrine, natural laws are not established but discovered. Let us, however, repeat that all philosophers interested in norms agree that norms are supposed to shape human behaviour and, therefore, their pragmatic function results from their very nature. We could even say that the pragmatics of normative statements appears as something more natural than, for instance, the pragmatics of declarative

sentences.

In fact, in order to see the pragmatic problems related to normative statements, we do not have to refer to the philosophical foundations of moral and legal doctrines. For instance, lawyers have established the principle *clara non sunt interpretanda*. It means that clearly formulated legal provisions do not require interpretation. However, there appears a whole tangle of problems of — let us generally say — a semiotic nature. Is clarity an inherent characteristic of language? Or is it a relative feature, depending on the interpreters, their knowledge, etc.? Much indicates that *claritas* of a legal text is indeed something relative. And if so, then the assessment of clarity is definitely pragmatic in nature. Generally speaking, the lion's share of the problems related to legal interpretation concern pragmatic factors in the understanding of legal texts. For instance, if someone says that the role of legal interpretation is to decode the intentions of the legislator, it is nothing more than the examination of pragmatic relations, the relations between the creator of a norm and the norm itself. On the other hand, if we were to define legal interpretation not as decoding the intentions of the actual legislator but of someone who would be the legislator today, we would in fact be proposing that the interpreter creates a pragmatic relationship herself. In claiming that the meaning of legal provisions is stable (static theories of interpretation of law), we would at the same time determine the pragmatic aspect of their interpretation, and we would do the same, although in a different way, if we allowed for the changeability of their meaning depending on the social situation (dynamic theories of interpretation of law).

The very brief review of the semiotic problems related to normative statements presented above shows how multidimensional and varied they are. This means that semiotics of normative statements is a broad research field. However, it can also be looked at from more concrete points of view, one of which is the logical one. The role of logic is to build the theory of inferences based on the concept of logical consequence. The belief that this can be done within the framework of logical syntax belongs to the past. This belief emerged under the influence of Hilbert's formalism and was accepted without reservations by the philosophers of the Vienna Circle, and finally collapsed in the mid-1930s under the influence of the works by Gödel and Tarski, which marked the beginning of the semantic period in the development of logic. With time, it became perfectly clear that logical semantics is the fundamental branch of logic, and that every logical theory should be characterised not only syntactically but also semantically. The reason for this is that each logical theory faces the problem of completeness,

i.e. the question of the relation between the set of theorems provable in the given theory (theorems in the syntactic sense) and the set of theorems which are true under a certain interpretation (theorems in the semantic sense). The problem of completeness can sometimes be solved by a purely syntactic method, for instance in propositional calculus and in some weak first-order theories. However, in the first-order predicate calculus the completeness theorem must be proved by using semantic methods. This digression shows that the role of semantics in logic is irreplaceable by syntax.

Normative statements are elements of various inferences. This implies the problem of logic of these statements and, *a fortiori*, their semantics. Further comments in the present article, both historical and systematic, shall focus on the relation between logic and semantics in the field of normative statements. In particular, I would like to discuss a conception of logic of normative statements popular among lawyers but present among philosophers as well. Generally speaking, it says that norms are a very special grammatical category (it is sometimes considered to be syntactic or even semantic) and as such require separate semantics and logic. In particular, it is said that norms are neither true nor false and therefore require a new logical and semantic background. I shall try to prove that this concept is incorrect. Although it may be historically justified (i.e. it can be explained in sociological terms why it emerged), it is based on a fundamental confusion between norms and normative statements. Unfortunately, this conception acted as a catalyst for many promising semiotic dissertations towards the search for specific logic and semantics of norms. Therefore, it seems reasonable to discuss this matter once again.[1]

2. Historical perspective

We can identify two currents which are important for the present state of studies in logic and semantics of norms. Although the main conclusion of this work will be a postulate to distinguish norms from normative statements, for reporting and critical aims I shall adopt the terminology which treats norms as statements, which means that they have their logic and semantics.

I shall start by mentioning the philosophico-logical current. Until recently, it was believed that the current had originated in modern times, in the

[1]In this article, I refer to Opałek and Woleński 1988 and Woleński 1981. Naturally, at the same time I refer to a large number of works by other authors, but the negative position on the logic of norms and specific legal logic has been outlined in the two works cited above.

works of Höfler, Mally, and the logicians of the interwar period interested in norms (Jørgensen, Dubisław, Hofstadter, McKinsey), and that some past philosophers had barely noticed some problems of the logic of norms. The latter were to include: Hume, who was supposedly the first to notice that in order to reach a normative conclusion we need at least one norm among the premises; Kant, who formulated the general principle of dualism of being and obligation; and Poincaré, who repeated the abovementioned view of Hume on the condition of deducibility of norms from a certain set of premises (on the subject of logic and semiotics of norms, cf. Weinberger 1958, Ziemba 1983).

However, quite recently Knuutilla (1981) proved that elements of deontic logic were known to scholastics, for instance William Ockham, Robert Holcot, and Roger Rosetus. They knew such relations as, for example: $\neg O\neg p \leftrightarrow Pp$, $\neg P\neg p \leftrightarrow Op$, and $Op \leftrightarrow F\neg p$ (O — obligation, P — permission, F — forbidden). Nonetheless, it is certain that in the past the logic and semantics of norms were practiced to a much lesser extent than the logic of assertive sentences. Perhaps the reason for this was that logicians and philosophers were usually not interested in legal matters, and ethics was practiced mainly from the normative perspective, which did not encourage the development of metaethics. One significant work in this context is the well-known book by Ossowska (1947). This excellent work does not include many comments on the logic and semantics of norms, which shows that philosophers of that time had not yet become fully aware of these issues.

In the 1950s and later, rapid development of logic and semantics of norms took place thanks to the pioneering works of von Wright. This led to the emergence of deontic logic as an independent branch of modern formal logic (the present state of deontic logic is discussed in Åquist 1984). We should stress that the first works by von Wright were clearly syntactic in nature, but later deontic logic took a decidedly semantic form. This direction of studies can be referred to as the formal direction in the philosophico-logical current.

The criticism of applying formal logical methods to the natural language as a whole or to its sublanguages (e.g. to the said normative discourse) resulted in the development of the semantics of norms practiced from the point of view of the descriptionist philosophy of everyday language (late Wittgenstein, philosophy of everyday language, etc.). The semiotic analysis consists in examining concrete uses of language, in our case within the normative discourse, or even more broadly, practical discourse. Norms are defined in this case as a type of practical statement, and an interesting type

of thought in the direction of studies discussed herein, which can be called the informal orientation in the philosophical logic current, is the comparison of norms with other types of practical statements, e.g. judgements, wishes, or advice. Probably the most important achievement of the informal orientation is Austin's theory of speech acts, and in particular his theory of performatives.

The other current in the semiotic studies on norms is the legal current. Before the 20^{th} century, it was significantly more developed than philosophical logic. Law manifests itself through language, and therefore lawyers have always faced semiotic problems. Throughout the centuries, they developed many methods for interpretation of legal texts, including the canons of linguistic and logical interpretation. Generally speaking, interpreting of law is identifying the sense of legal provisions. Legal tradition has it that interpretation takes place only when a legal text gives raise to some doubts, which is related to the *clara non sunt interpretanda* principle mentioned before. Sometimes, in order to solve a problem of interpretation, it is enough to apply a comparative language study. But sometimes it requires using arguments of a certain type, often called arguments of legal logic. They include: *argumentum ad simile* (an argument from analogy), *argumentum a contrario* (argument from the contrary), *argumentum a maiori ad minus* (argument from greater to lesser), and *argumentum a minori ad maius* (argument from lesser to greater). Lawyers have tried to develop a general theory of admissibility and validity of these arguments, which proved to be very difficult, as these arguments include both logical and non-logical content. For example, in criminal law an analogy used to the detriment of the defendant is prohibited, which means that even if an analogy is admissible in substantial terms, in some cases it may be excluded by the law itself.

Analyses of legal arguments have conclusively shown that they are not, in their entirety, based on the patterns of formal logic. Let us discuss it with the example of *argumentum a maiori ad minus*. According to this pattern, if more is allowed, then less is allowed as well. In some cases, this argument can be justified by using logic. Let us assume, in line with deontic logic, that obligation is a kind of permission. This results from the general rule: if something ought to be, then it is also permissible. Any objections against perceiving commands as a type of permission stem from defining permission as indifference. There is the following law in deontic logic: if it ought to be that A and B, then it ought to be that A. We can assume that two actions are 'more' and one action is 'less'. This interpretation leads to a special case of *argumentum a maiori ad minus* in relation to obligations.

We should notice, however, that even in this case there is a non-logical

factor — an assumption that two actions are 'more' and one is 'less'. In most cases, this non-logical factor is much more significant, and in fact *argumentum a maiori ad minus* and other legal arguments are enthymemes due to some unstated non-logical assumptions. Lawyers, however, insist on proving the thesis that despite all this, legal logic encodes some universal important rules of legal thinking. This is the genesis of legal logic as logic in general, i.e. a discipline establishing general rules, but at the same time as a special type of logic, different from 'regular' logic. The belief that such a special legal logic exists is an important result of the legal current in the semiotics of norms — a result which, in my opinion, has had a disastrous effect on the development of semiotic studies on norms. It undoubtedly stemmed from some real problems with legal interpretation. However, one of the factors was probably also the centuries-long separation of jurisprudence from logic and philosophy. We should remember that since the beginnings of the existence of universities, faculties of law were completely separate entities, and therefore lawyers had no contact with professional philosophy or logic. Even today, lectures on philosophy and logic for lawyers are often held by lawyers instead of philosophers and professional logicians. This is a manifestation of the said separation, another manifestation being this special legal logic.

The above does not necessarily mean that there have been no strictly logical elements in legal logic. On the contrary, lawyers have formulated many subtle rules with a very distinct formal logic content. For instance, there is a well-known rule: that which is otherwise not permitted, necessity permits. It corresponds to one of the axioms of modern deontic logic: tautologies are permitted. The principle of presumption of innocence may be perceived in the first place as a moral postulate, but it has a distinct logical sense because, in fact, it establishes that negative propositions (I have not done what I am accused of) are not subject to proof. Indeed, legal systems which do not respect this principle (e.g. Stalinist law) may be considered not only unethical but also illogical. Therefore, the thesis on the existence of special legal logic does not stem from the nature of things, as lawyers have formulated many 'regular' logical principles, but rather from historical and sociological factors.

Let us add that the long-time separation of law and logic seems to have been mostly overcome by now.

3. Jørgensen's Dilemma and Hume's/Poincaré's Guillotine

In 1938, the Danish logician and philosopher Jørgen Jørgensen formulated a dilemma which is a very useful tool for the analysis of problems of the logic of norms (Jörgensen 1938). The dilemma is composed of the following sentences:

(1) Only sentences which are capable of being true or false can function as premises in an inference which can be classified as logically correct.
(2) Norms are not capable of being true or false.
(3) Norms cannot occur in logically correct inferences.
(4) There exist logically correct inferences the premises of which are norms.

An example of an inference referred to in (4) can be as follows: promises should be kept, you promised to do A, so you should keep this promise. Certainly, we intuitively perceive this inference as logically correct. It has a normative conclusion and there is a norm among its premises, therefore it falls under Jørgensen's Dilemma.

However, it falls under the dilemma only with the very strong assumption formulated in (2): norms are neither true nor false. This assumption has often been questioned by philosophers who accept cognitivism, i.e. the idea that norms have a cognitive meaning and consequently have regular truth values, i.e. are true or false. There are various types of cognitivism. For instance utilitarians believe norms to be statements about benefits. Others, e.g. pragmatists, perceive norms as hidden predictions and evaluate them in terms of effectiveness. The utilitarian and pragmatic cognitivisms are naturalistic views. But we could also extend Moore's anti-naturalism to the sphere of norms and say that obligation is an intuitively perceived elementary quality; norms are statements about understood obligation. Finally, we could say that, from a cognitivist point of view, norms are statements about some ideal obligation. Cognitivism solves Jørgensen's Dilemma by rejecting statement (2). Then the only remaining problem is the choice of the right type of logic to formalise normative inferences.

The view which accepts (2), on the other hand, is usually referred to as non-cognitivism. According to this belief, norms are neither true nor false. An extreme manifestation of non-cognitivism (a sort of anti-cognitivism) is emotivism in the Vienna Circle style, equalling norms and judgements to exclamations. Thus norms and judgements would only have an acclamatory function. This view was soon deemed too simplistic and clearly inconsistent with the function of norms (and judgements) in language. However, moderate non-cognitivism (e.g. that of Stevenson) faced the problem of meaning of

normative statements and judgements, which are meaningful in the semantic sense but are neither true nor false. Regardless of the proposed solution in this respect, emotivism (both extreme and moderate) faces the problem shown by Jørgensen's Dilemma.

I have already mentioned Hume's observation, later repeated by Poincaré, that in order for an inference to have a normative conclusion there must be at least one norm among its premises. Common opinion has it that Hume's/Poincaré's Law reveals a basic gap between existence and obligation (the 'is-ought' problem). This thesis is also known as Hume's/Poincaré's Guillotine, as it defines the fundamental condition of admissibility of normative inferences. It is often understood in the following way: norms would have 'good' logic if they were inferable from declarative sentences, or even better — 'pure' declarative sentences, i.e. sentences without the use of "ought to" or its equivalents. I believe that this issue should be discussed in some more detail.

Let us point out once again that grammarians distinguish declarative, interrogative, and imperative sentences. Therefore, grammar does not know the category of obligational sentences. Naturally, this proves nothing, as the absence of a grammatical distinction does not mean that no logical problem exists in this respect. For example, grammarians do not differentiate much between proper names and common names, while in logic this distinction is absolutely fundamental. Nevertheless, for a grammarian, obligational sentences are just a type of declarative sentences. This fact is certainly a motive for cognitivists, who can say in addition that preceding an obligational sentence with phrases such as *it is true that* or *it is not true that* does not in fact lead to syntactic or semantic nonsense. Thus, Jørgensen's Dilemma should not state that norms cannot be inferred from declarative sentences, at least without some additional comment, for example: we should differentiate between absolute and relative interpretation of sentences with "ought to" (meaning sentences in the grammatical sense). For instance:

(5) It ought to be that p.

might mean that p is an obligation on the grounds of a given system of norms. Here we have an obligational sentence in the relative sense (systemically relativised in accordance with Wróblewski's terminology), which is a declarative sentence with respect to a given system of norms, e.g. a legal system, but is not a norm. Naturally, a systemically relativised obligational sentence is a declarative sentence in the grammatical sense and is true or

false depending on the circumstances. We should distinguish obligational sentences in the relative sense from norms in the strict sense and obligational sentences in the absolute sense, which are not declarative sentences in the grammatical sense and are neither true nor false. Only after this comment, does Jørgensen's Dilemma — now involving declarative sentences — convey the right meaning.

But let us return to Hume's/Poincaré's Guillotine. It is interesting that it is applicable to obligational sentences in both the absolute and the relative sense. That it applies to obligational sentences in the absolute sense is not at all surprising. If it is a language category *sui generis*, sentence-like statements with "ought to" in the absolute sense are not logical consequences of declarative sentences in the grammatical sense. In this version, Hume's/Poincaré's Law is practically equivalent to Jörgensen's Dilemma. Let us assume that obligational sentences in the relative sense are a type of modal sentences. In the area of modal sentences (in the broad sense) there are instances of logical consequence between assertoric sentences, i.e. sentences with "is", and declarative sentences with modal verbs. For example, the sentence p is a logical consequence of:

(6) It is necessary that p

while the sentence:

(7) It is possible that p

is a logical consequence of p, assuming that p is an assertoric sentence. On the other hand, the sentence:

(8) x believes that p

is not at all a logical consequence of p, and p is not a consequence of (8).

The formulas (6)—(8) are sentences in the logical sense, just as (5). The fact that there is no logical consequence between p and (8), in either direction, does not imply that epistemic logic for belief sentences is impossible. Consequently, the Hume's/Poincaré's Guillotine for sentences like (5) in their relative version does not imply that logic is impossible for such sentences. By the way, it is an interesting historical problem how Hume's, Kant's, and Poincaré's views have been interpreted in the context of the distinction between absolute and relative obligational statements. It seems that Hume

was an emotivist and therefore formulated his observations regarding (5) in accordance with the absolute interpretation. Poincaré, on the other hand, seems to have been a cognitivist, and so his version of the Guillotine referred to obligational sentences in the relative sense; the same seems to apply to Kant. An important conclusion of the above is that a cognitivist may accept the dualism of being and obligation in one of its interpretations.

Naturally, the problem with the logic and semantics of norms concerns both obligational sentences in the relative sense and obligational sentences in the absolute sense. However, in the latter case it becomes severe, or even dramatic. Those who deny norms the capability of being true or false and at the same time want to justify normative inferences, are forced to see norms as a separate semantic category and thus construct a relevant logic and semantics of norms. It may be said in their defence that if we admit the existence of norms in the absolute sense, then they really seem to lay beyond true and false, as norms do not state anything — they 'normalize'.

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