Legal Reasoning: The Methods of Balancing

Proceedings of the Special Workshop "Legal Reasoning: The Methods of Balancing" held at the 24th World Congress of the International Association for Philosophy of Law and Social Philosophy (IVR), Beijing, 2009

Edited by Jan-Reinard Sieckmann

ARSP Beiheft Nr. 124

Archiv für Rechts- und Sozialphilosophie

Franz Steiner Verlag

Nomos

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ARSP BEIHEFT 124

Archiv für Rechts- und Sozialphilosophie

Archives for Philosophy of Law
and Social Philosophy

Archives de Philosophie du Droit
et de Philosophie Sociale

Archivo de Filosofía Jurídica y Social

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Bibliografische Information der Deutschen Nationalbibliothek:
Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar.

ISBN 978-3-515-09723-9

Zugleich: 978-3-8329-6228-9

Gedruckt auf alterungsbeständigem Papier
Druck: Druckhaus Nomos, Sinzheim
Printed in Germany

Foreword

It would appear that balancing is an indispensable instrument of legal reasoning, in particular, with respect to the interpretation and application of basic rights in contemporary constitutional law, but also in many other fields of law. However, the objectivity, rationality, and legitimacy of this method are contested. It is criticised as irrational and arbitrary, a threat to legal certainty, and an illegitimate interference of courts with the powers of political organs, such as parliaments and other legislative bodies. Although in past years ever more sophisticated approaches of balancing have been developed in order to cope with these problems, many issues remain open and contested. The Special Workshop "Legal Reasoning: The Methods of Balancing", a part of the 24th IVR World Congress from 15–20 September 2009 in Beijing, was dedicated to these issues. The workshop provided a forum for the discussion and clarification of the structure of balancing, its epistemology, and its legitimacy.

As for the structure of balancing, the role of normative conflicts in rational argumentation raises many questions: What is the justificatory relation between the arguments to be balanced and the result of the balancing? Is there a logical relation at all, and what species of logic is required to reconstruct it, for example, some form of non-monotonic logic or defeasible reasoning? What are the formal characteristics of the arguments to be balanced against each other? How does the logical structure of these arguments affect the structure of balancing? And what is the structure of normative conflicts that lead to balancing? The contributions of Cesar Serbena, Peng-Hsiang Wang, and David Duarte address some of these issues. Serbena argues for the use of paraconsistent logic in analysing normative conflicts. Wang discusses the notion of the "ideal 'ought'" and tries to reconstruct it by means of a deontic logic based on a possible world semantics. Duarte presents a formal account of conditions in which balancing has to take place.

As for the epistemology of balancing, the crucial problem of balancing is whether it provides a rational justification of normative judgements. Does it provide knowledge about the law, or can one at least claim some other form of objectivity for judgements based on balancing? Diverse conceptions of balancing offer different answers to these questions, for example, conceptions applying economic methods, Alexy's "weight formula", or the conception of balancing as autonomous judgment. In any case, a central issue is whether, and to what extent, an objective determination of the factors of balancing, in particular, of the relative weights of the arguments to be balanced, is possible. The contributions of Bernardo Bolaños, Ekkehard Hofmann, Jean-Baptiste Pointel, Ricardo Guibourg, and myself are concerned with problems of the criteria for balancing and the availability of a rational justification for balancing judgements. Bolaños suggests an understanding of balancing as a kind of deontic probabilistic reasoning, which might help to give a more precise account of Alexy's "weight formula". Hofmann points out the need for applying numerical methods in legal reasoning. Pointel suggests an analysis of principles by means of vectors, and uses the device of the "Edgeworth-box" for explaining the criteria for balancing judge-

ments. My own paper presents an account of balancing as optimization by contrast with Alexy's "weight formula", which is criticized as unsatisfactory in several respects. Guibourg rejects this formula straightforwardly and claims that it cannot contribute much, if anything at all, to the rationality of balancing.

Central issues of the legitimacy of balancing are, on the one hand, whether it should take place at all and, on the other, and perhaps in practical respects even more important, who should have the competence to make binding judgments based on balancing. In particular, the issue is whether the courts or other legal or political organs should have this competence. Since in cases of conflict the normative situation seems not to be determined by previously established law, one might well doubt that such decisions should be regarded as applications of the law. In this respect, the rationality of balancing appears to be crucial. Can the principle of proportionality, which is the legal principle governing balancing, provide a solution to this problem? And might there be an alternative to balancing? These are the issues of the contributions of Marijan Pavčnik and Friedrich Lachmayer, Hannele Isola-Miettinen, and Lin Cai. Pavčnik and Lachmayer present the elements of the principle of proportionality. Isola-Miettinen demonstrates that the jurisprudence of the European Court of Justice depends in crucial respects on balancing, and invites attention to the problem of competence in balancing. Cai critizes the approach of balancing and suggests that one look for an alternative.

In sum, the contributions cover a number of the pertinent issues in the theory of balancing. I should like to thank the contributors for their participation in the workshop, for delivering original and stimulating papers, and for taking responsibility, too, for arriving at a proper English in their contributions, the IVR and the organizers of the IVR-World Congress for offering an opportunity to hold the Special Workshop on balancing at this congress, and the Steiner-Verlag for its readiness to publish the contributions of the workshop in an ARSP-Beiheft.

Buenos Aires, 17 March 2010 Jan Sieckmann

Contents

Cesar Antonio Serbena, Parana

The Theoretical Relevance of Paraconsistent Deontic Logic

The principle of non-contradiction is, since Aristotle, one of the foundations of classical logic. In the second half of the twentieth century it came into being the paraconsistent logic, which relativizes the principle of non-contradiction and admits inconsistent formal systems. Paraconsistent logic had a strong impact on philosophy, because what was thought, for example, about the dialectic, had to be rethought. Paraconsistent logic also suggests new approaches to the philosophy of Law, specifically for the classical problem of contradictions, moral dilemmas and inconsistencies between legal norms. This paper examines, in the first part, the theories of Hans Kelsen and Georg H. von Wright on the contradictions between legal norms; the second part examines the theoretical impact of paraconsistent logic in deontic logic and in the philosophy of Law.

Key-words: principle of non-contradiction; contradictions between legal norms; moral dilemmas; logic; deontic logic; paraconsistent logic.

I. Introduction

It is common to define Logic as the discipline that studies, among other subjects, the valid inferences. Deductive inferences are reasonings in which the premises cannot be true without the conclusion also being so[1]. Another important type of inference are the inductions, that can be understood (in a different sense from that criticized, for example, by David Hume) as being such arguments in which the veracity of the conclusion does not necessarily follow from the veracity of premises, but the veracity of the conclusion is somehow plausible in light of the veracity of premises. Measuring this "degree of plausibility" is important and dif-

1 Of course this definition is simplistic and not actual. Nowdays the logic is a discipline highly complex, that possesses relationships with several sciences, as the science of the computation, the mathematics and the linguistics and it is not only foccused to syllogistic inferences, just as Aristotle conceived it. Observing the main international reviews destined to the publication of works in logic, it is possible to have an idea of the extreme specialization and multiplicity of studied logical systems. The logic won a high abstraction degree and became an fundamental tool for the research in the foundations of the mathematics. The specialization of its current state could be attributed to its connection with the mathematics, and mistakenly thought that the current logic only possesses relevance for the mathematician. The mutation of the logic did not only rebound in the mathematical field. Other disciplines as the Philosophy of Language and the Linguistics suffered important repercussions, in such way to revolutionize its own principles. In the first, is difficult to deny the importance of Frege, Bertrand Russell and Wittgenstein. In the second, through Chomsky and Montague is manifest the usefulness and significance of the logical concepts for the linguistics.

ficult, and to the conclusion is in general attributed a certain degree of probability[2].

The present paper focuses only on aspects of deductive logic, that is, on the logic that treats the first inference type, although inductive inferences have fundamental importance to the Theory of Law.

Historically, the Logic was originated in Aristotle's work, and kept, according Kant, for 2000 years the form of his approach. Kant sustained that the logic, since Aristotle, did not further develop and that it amounted to a finished science.

However, since the beginning of Nineteenth century, logical investigations went through great transformations, with the works of Georg Boole, Augustus De Morgan, Gottlob Frege and Charles S. Pierce. Leibniz (1646–1716) may be seen as one of the precursors of this change. In the beginning of the Twentieth century, after Bertrand Russel (1872–1970), the revolutionary progress that transfigured modern logic was actually made. One of the most important events in the field was the appearance, during the second half of last century, of a logic that either extends the field of classic logic – e.g., by the addition of modal or temporal operators, generating the modal and temporal logic, enlarging and strengthening the propositional language – or repeals the principles considered essential to the classical logic, such as the principle of non-contradiction or of the third excluded.

This created non-classical logics (rivals of the classic logic) or heterodox logics. The deontic logic (or logic of the norms) is a recent development and can be described as the logic that studies forbidden, allowed, and obligatory concepts and their formal relationships. Initially it appeared with the systems formulated by Ernest Mally, that tried to describe the logical principles of the imperatives. Its current form is due to Georg H. von Wright, after his 1951 and 1953 works, *Deontic Logic* and *An essay in modal logic*[3]. Several posterior formulations came into being – including one by Georg H. von Wright –, up to the point that, nowadays, logicians combine non-classical logics, such as the paraconsistent logic, the paracomplete logic, and the non-monotonic logic, with the deontic logic, creating systems of paraconsistent deontic logic or non-monotonic deontic logic[4].

2 Recently, N.C.A Da Costa developed a concept of pragmatic probability that is applied in those cases (see 'Pragmatic probability' (1986) 25 Erkenntnis 141–162)

3 Deontic Logic, 60 Mind 1–15; *An Essay in Modal Logic* (Humanities Press, New York.)

4 Other important field of the logic that possesses special interest for the legal reasoning is the non-monotonical logic. Without many details, a non-monotonical logic is a logic that uses the notion or deduction operator with this property, the monotonicity, that is to say: $\alpha \subseteq \beta$ and if $\alpha \vdash \gamma$, then $\beta \vdash \gamma$. This expression means that, if γ (or something) is deducible from a group α of premises, and if in this group we increase more premises, γ continues being deducible. The mathematical reasoning is based on the monotonicity, what does not happen in all the contexts. The non-monotonical logic hurt this requirement. A clear example is when the judge, when analyzing a judicial case, forms a consistent group of premises, being the sentence the conclusion of the premises. The addition of an additional premise to the initial group of the premises can, most of the time, alter the case to be judged completely

Among the operative laws of classic logic, there are three most acknowledged, the so called laws of identity, of contradiction (or law of no-contradiction) and of the third excluded. These may be defined as follows:

1) Law of identity: every object is identical to itself; 2) law of non-contradiction: between two contradictory propositions – that is, one is the denial of the other – one of them is false; 3) law of the third excluded: between two contradictory propositions, one of them must be true.

The better known and discussed heterodox logics are, in fact, defined by the derogation of at least one of the preceeding laws. The non-reflexive logic repeals the law of identity, the paraconsistent logic repeals the law of non-contradiction and the paracomplete logic repeals the law of the third excluded.

The appearance of the heterodox logic revolutionized the traditional conceptions, acquiring a lot of importance. That is because, according to Newton C. A. Da Costa,

> … they actually derogate at least one of the precedent laws (which, in most varied formulations, were called 'fundamental laws of the thought', perhaps because it was believed that, without them, no rational, logically-linked thought was possible). However, heterodox logics proved that logical-rational thought can be exerted even without obeying those fundamental laws of reason, setting this ability free from the two-millennia-old yoke of laws which seemed absolutely impossible to repeal[5].

Paraconsistent logic came into being with the works by Newton Carneiro Affonso Da Costa, mainly with the presentation, in May 1964, of his thesis in Mathematical Analysis and Superior Analysis, in the old Faculty of Philosophy, Sciences and Letters of Federal University of Paraná, Brazil, entitled "Inconsistent Formal Systems"[6]. In practice, this work inaugurated a new field of studies, that of paraconsistency, with applications in computer sciences, in mathematics foundations and in quantum physics, in the philosophy of Law, in the ethics and in other domains of the knowledge[7].

In the previous paragraph we affirmed that the paraconsistent logic repeals the principle – characteristic of the classical logic – of the non-contradiction. It is important to elaborate, although in a general way, the concept of paraconsistent logic. According to N. C. A. Da Costa:

> Supposing that the underlying language of a deductive theory F contains a symbol for the refutation. Then, F is said to be inconsistent if, and only if, it possesses two theorems, one refuting the other; otherwise, F is said to be consistent. The theory is said to be trivial if, and

and the own sentence that he would utter. Therefore, the legal reasoning, in the judge's activity to sentence, is not a monotonical context. This way, the non-monotonical logic is an important instrument for the formal reconstruction of the juridical reasoning.

5 Newton C.A Da Costa and R. Carrion, *Introdução à lógica elementar* (UFRGS Publisher, Porto Alegre, 1988) – there is only a brazilian edition (*Introduction to elementary logic)*

6 Newton C. A. Da Costa, *Sistemas formais inconsistentes* (UFPR Publisher, Curitiba 1993) – there is only a brazilian edition

7 Recently, on July 29, 1997, it took place in Ghent, in Belgium, the First World Congress on Paraconsistency, and on May 12, 2000, in São Paulo, Brazil, the Second World Congress, embracing relative themes to the mentioned areas.

> only if, all the formulae (or all the sentences) of the language of F are theorems of F; otherwise, F is called non-trivial.
> It is a well-known fact that, if the logic of F is classical logic (or even any of several heterodox logics, like the usual intuitionist logic, for instance), F is trivial if, and only if, it is inconsistent. Consequently, if we want to develop theories that are inconsistent but not trivial, we should build new logics. Loosely speaking, a logic system is paraconsistent if it can be used as underlying logic to inconsistent, but not trivial, theories[8].

This way, Newton C. A. Da Costa distinguished the concepts of inconsistency and of triviality, until then, inseparable in classical logic. This means that in paraconsistent logic the principle of non-contradiction should be in some way restricted, allowing for the appearance of contradictions, trying however to avoid any formula to be deduced from two contradictory premises (which would result in a trivial system).

This aspect of the paraconsistent logic has special relevance for the Theory of Law and for the Philosophy of Law. A juridical system features contradictions (norms contradictory one to each other), and at the same time juridical argumentation and reasoning do not admit the triviality, that is to say, from a juridical contradiction one may not deduce any conclusion. The paraconsistent logic is capable of manipulating contradictions, without causing the collapse of the system.

It is also important that the classical logic keeps its validity inside the domain of the paraconsistent logic. In this way, one logic does not exclude the other.

The appearance of paraconsistent logic generated deep questioning as it replaced the paradigm of Aristotelian logic. This change reverberates in several domains of knowledge, among them the Theory of Law, that we will try to analyze in this paper.

In philosophy, in morals, in ethics and in philosophy of Law, the development of these systems suggests a wide range of themes and problems to be explored, from speculative themes – as the application of these logics to the formal reconstruction of the juridical or practical reasoning and to the discussion of the current difficulties of doing it, the formal relationships among juridical norms and moral norms – to themes with concrete and practical applications – as the development of programming languages and application of artificial intelligence to some fields of Law, specifically to the activity of the registries and public registrations, to the public administration or to the tributary legislation.

Which are the advantages of approaching the juridical phenomenon through a formal method? The adoption of this method does not mean that it is possible to explain the totality of the juridical phenomenon and its contradictions. There is not a logical system that has accomplished such task. Actually what we can do is to try and reconstruct formally, with the aid of the logical apparatus, portions of this phenomenon, such as the juridical reasoning, the relationships between groups of moral and legal statements, and the logical operations of deduction done from an inconsistent normative code. It is a fact that most of the inferences

8 Newton C. A. Da Costa, 'The Philosophical importance of Paraconsistent Logic' (1982) v.1 n.1 Journal of Non Classical Logic 1–19

used in the jurists' practical argumentative activity are not valid according to the laws of traditional logic, such as arguments "*a simile*" (the use of analogy) or "*a minore ad maius"*. But why are they used then? We answer by giving two reasons.

First, the use of these systems constitutes the most rigorous way that we have to explain certain concepts and notions, such as of inference, premise, deduction, validity, contradiction, among others. The precision of the method does not imply the precision of the results, at least in the Theory of Law. Eventually, from the application of these systems, results that are not very coherent may appear, but exactly in these results we can evaluate the advantages of the systems and determine the place where the incoherence is found, something that is not possible using intuitive methods. We can see here an analogy with the method employed in Noam Chomsky's linguistic theory[9].

Second, the current state of logic presents enormous progresses in several directions. These progresses transformed logic into one of the more fertile scientific disciplines for its methods and results. It is no longer possible to speak about logic – or about its application to some branch of the scientific knowledge (such as "juridical logic") – without using its current methods, because of the risk of formulating a speech that does not touch, with seriousness, important and deep points.

II. A Famous Paradox

An old paradox[10], attributed to Protagoras, philosopher and famous teacher of Law in ancient Greece, consists of the following: Protagoras and Euathlus agreeded that the first would instruct the second in the art of rhetoric and that the teaching would be paid if, and only if, Euathlus would win his first case. Euathlus completed his course but he did not get any case. Some time passed and Protagoras took his student to judgement. The following arguments were introduced to the judge in the court.

Protagoras: If I win the case, then Euathlus should pay me by virtue of the verdict. On the other side, if he wins the case, then he will have won his first

9 'The search for rigorous formulation in linguistics has a much more serious motivation than mere concern for logical niceties or the desire to purify well-established methods of linguistic analysis. Precisely constructed models for linguistic structure can play an important role, both negative and positive, in the process of discovery itself. By pushing a precise but inadequate formulation to an unacceptable conclusion, we can often expose the exact source of this inadequacy and, consequently, gain a deeper understanding of the linguistic data. More positively, a formalized theory may automatically provide solutions for many problems other than those for which it was explicitly designed. Obscure and intuition-bound notions can neither lead to absurd conclusions nor provide new and correct ones, and hence they fail to be useful in two important respects.' in Preface, *Syntactic Structures* (2nd ed. Mouton de Gruyter, Berlin 2002)

10 This example is mentioned by Lennart Åqvist, *Handbook of Philosophical Logic* – vol. 8 (Kluwer Academic Publishers, The Netherlands 2002) 649

case; therefore, he should pay me, by virtue of our agreement. In each case, he should pay me. Therefore, he is forced to pay what he owes me.

Euathlus: If I win this case, then, for the verdict, I do not have to pay. If, however, Protagoras wins the case, then I will not still have won my first case; therefore, for our agreement, I do not have to pay. If I win the case or Protagoras wins it, I would not have to pay. In every case I am not forced to pay the costs of his teaching.

Who was right?

Since ancient Greece, the Theory of Law had paradoxes, like this one by Protagoras, as one of its objects of reflection. Paradoxes are important because they represent the conceptual limits of the very discipline or branch of knowledge in which they appear. The ways to understand them are as fundamental as the attempts to overcoming them.

Certainly, the Theory of Law developed methods, argumentative techniques and practices to avoid paradoxes, such as the application of analogy and of criteria, like the hierarchical, chronological or specialty criteria. It is a common opinion that Law deals with an object that can present contradictions and uncertainties. This specific characteristic of the juridical phenomenon posed several problems and obstacles to the construction of a juridical rationality.

A similar case can be illustrated by the judge who, facing with a norm that prescribes that the practice of homicide has to be punished and another that prescribes that minors are nonchargeable, must sentence a case in which a minor comits a murder. The two norms enter in conflict only in such a concrete case.

The resolution of a contradiction is important for the effectiveness of juridical practice, because one of its meanings is the one of solving social conflicts. It happens that, since the appearance of paraconsistent logics, which have demonstrated that the principles of non-contradiction are not an essential requirement for the logic, we have a new situation, but not from the point of view of the juridical practice, because, in it, contradictions demand and will continue to demand a solution. Instead, a new situation from the theoretical and philosophical point of view of the Theory of Law, because in it, the notions of logic and reason, essential for any science, have changed their classical meaning.

Normative conflicts and contradictions have been treated already by great jurists and philosophers, like Hans Kelsen and Georg H. von Wright. It is important to describe concisely the position of these authors in relation to the theme, specifically the cases of Hans Kelsen – the non applicability of the principle of non-contradiction to norms –, of Georg H. von Wright – the incompatibility of norms –, and also the current position of Tecla Mazzarese.

A well-known thesis, belonging not only to the thought of Hans Kelsen but also to Hume, affirms that the logical values of truth and falsehood are not really attributable to the norms, to the imperatives, and to the acts of will. Therefore, the laws of the logic, among them the principle of non-contradiction, are not applicable to the domain of human actions, but only to Nature (the problem of the application of logical laws to the normative domain is well-known to the lit-

erature on the theme as the *Dilemma of Jorgensen*[11]). Hans Kelsen – in several occasions from the *Pure Theory of Law* to the *General Theory of Norms* – has shown solidarity of this idea:

> Statements that are true or false are the sense of thought acts. Norms are, however, the sense of acts of will directed to someone's else conduct and, as such, they are neither true or false and, therefore, not subordinated to the principles of traditional Logic, as long as these are related to truth or falsehood[12].

Hans Kelsen affirms that there are two possibilities for demonstrating the applicability of logical principles to norms. These are: placing in analogy with the truth of a statement (a) the validity of the norm and (b) the execution of the norm. In the case of the applicability of the principle of non-contradiction, he does not admit the two possibilities.

Hans Kelsen rejects the possibility of analogy in the case (a), because a valid norm is an existent norm, and a disabled norm, unlike a false statement, does not exist. Hans Kelsen will confront the logical contradiction between two statements with a conflict of norms, in order to clarify the non-existence of the analogy. The logical contradiction is produced by two statements that are either true or false. The nature of the conflict of norms is different, because the very condition of possibility for a conflict depends on the validity of both conflicting norms. The resolution of a conflict of norms is not automatic. None of the norms that are in conflict suppresses the validity of the other. The suppression of the validity of one or of both norms can only take place in the process of producing norms, especially by a derogatory norm. In a conflict of norms, one is executed, the other is violated, and it is not that only one of the two norms can be valid. Hans Kelsen, in a contested thesis, affirms that a conflict of norms cannot be solved by a scientific interpretation or according to the principle that the norm that would bring less damage should be executed.

The analogy in case (b) is also rejected by Hans Kelsen. His position is that truth is a quality of a statement, and execution is a quality of a conduct and, consequently, of a fact. A statement is true if it corresponds to the facts about which it enunciates something or if it affirms a fact that is existent. A conduct is the execution of a norm if it corresponds to a norm which establishes that this conduct is due. The opposite of the truth is the falsehood of a statement, whereas the opposite of the execution of a norm is its violation. Hans Kelsen emphasizes, according to his overall conceptions, that violation is not a quality of a norm but the quality of an effective conduct. Executed or violated, the norm remains unmodified.

Another reason for the absence of analogy stems from the fact that a statement cannot be true and false: "the human being Socrates is mortal" is a statement that either is true or false; "every person is mortal" cannot be true for a

11 J.J. Jorgensen, 'Imperatives and logic' (1937–38) 7 Erkenntnis 288–296

12 Hans Kelsen, *Teoria Geral das normas* (Sergio Antonio Fabris Publisher, Porto Alegre 1985) 276 – we used brazilian edition; the english one is: Michel Hartney (tr), *General Theory of Norms* (Oxford University Press, USA 1991)

person and false for another. On the other hand, a general norm may be executed by one and violated by other, or executed by a same individual in one day and violated in another day, or instants thereafter. Hans Kelsen concludes:

> … thus, there is no analogy between truth (or the falsehood of a statement) and execution (or the violation of a norm), because the execution, or the violation of a norm, is not a quality of it, in the way the falsehood, or the truth of a statement, is quality of it[13].

In Law, a case may happen in which a specific law contains two general norms that are in conflict one with the other, and a tribunal decides applying one of the norms to the concrete case. In a judged decision, the conflict of norms is solved just for this concrete case, but the conflict between the general norms contained in the same code stays. For Hans Kelsen, the same happens if a misleading juridical norm possesses in its composition two opposing interpretations. The interpretation adopted for a concrete case does not solve the opposition or the conflict between both interpretations.

In the same way, the kelsenian theory of norms does not conceive as contradictory the relationship between the derogatory norm and the repealed norm, because the latter establishes the obligation of a certain conduct, while the former establishes the non-obligation of the same conduct. The first excludes the validity of the second, and consequently, the repealed norm ceases to exist. Being this no more, the possibility of a contradiction, or of any relation similar to a contradiction, between the norms disappears, since truth and falsehood are qualities of existent statements. To present Georg H. von Wright's theory and describe his concepts about the incompatibility between norms, it will be necessary to do some initial restrictions, at the same time introducing, in an informal way and without much strictness (unlike the author himself), a symbolism, basic and essential, to the explanation of his theory. We do not intend here to expose the incompatibility between norms in the whole of Georg H. von Wright's theory – which was constantly reformulated in many opportunities –, but only in his *Norm and Action*[14].

Georg H. von Wright introduces a transformation or transition symbol, T, to which expressions can be placed, at its right and left sides, that designate a state of things. Thus, pTq is a (generic) transformation or transition from a state of things described by p to a (generic) state of things described by q. Supposing that p means that a certain window is open; ~p then means that this same window is shut (not open). ~pTp means that the window was opened; pT~p means that the window was closed; ~pT~p means that, in two successive states in time, the window remained shut; and pTp, that the window, also in two successive states in time, remained open. These four possibilities are denominated by Georg H. von

13 Ibidem

14 Georg H. von Wright, *Norma y Accion: Una investigación logica* (Ed. Tecnos, Madri 1970) – we used spanish edition; in english: *Norm and Action* (Gifford Lectures, St. Andrews 1958–60). Also available in <http://www.giffordlectures.org/Browse.asp?PubID=TPNORM&Cover=TRUE> accessed 23 January 2010

Wright the four elementary state tranformations that are possible in relation to a generic state of things.

To the four elementary state transformations, we may add two symbols: d and f. The first means to act and the second to refrain. Thus, we have d(pTp), d(pT~p), d(~pTp) and d(~pT~p) and f(pTp), f(pT~p), f(~pTp) and f(~pT~p). It should be observed that d(pTp) and the other possibilities are schematic representations of sentences that describe acts, in the same way as (pTp), etc, are schematic representations that describe transformations; and p, or q, etc, are schematic representations of sentences that describe generic states of things.

It will be essential to describe Georg H. von Wright's concept of incompatibility among norms and his distinction between internal and external denial.

The internal denial of *to do* is *to refrain*. The external denial tells us that the action described by expression in question is not actualized (for the agent in question, in the occasion in question). The internal denial tell us that, under the same condition of action, the opposite of the action described by the expression in question is actualized (for the agent in question, in the occasion in question). The internal denial, for example, of d(pTp) is f(pTp). The external denial of d(pTp) is a disjunction sentence of seven terms, thus we have d(pT~p) ∨ d(~pTp) ∨ d(~pT~p) ∨ f(pTp) ∨ f(pT~p) ∨ f(~pTp) ∨ f(~pT~p).

An action and its external denial are incompatible action ways. This means that both ways cannot be executed by the same agent, in the same occasion. An action and its internal denial are also incompatible.

Georg H. von Wright distinguishes between external and internal incompatibilities of actions[15]. Two actions are called externally incompatible when from the proposition that one of them has been executed (by some agent in some occasion) follows a proposition that the external denial of the other has been executed (by the same agent, in the same occasion). Two actions are denominated internally incompatible when from the proposition that one has been executed, follows a proposition that the internal denial of the other has been executed.

Exemplifying (the examples are Georg H. von Wright's): the actions described by d(pTp) ∧ d(qTq) and by d(pT~p) ∧ d(qT~q) are externally incompatible. The actions described by d(pTp) ∧ d(qTq) or d(pTp) ∧ f(qTq) are internally incompatible. Also the actions described by d(pTp) and f(pT~p) are externally incompatible and the actions described by d(pTp) and f(pTp) are internally incompatible.

This way, the internal incompatibility supposes external incompatibility, but not conversely.

Georg H. von Wright also introduces two operators to represent the character of a norm[16]. The character of obligation of a norm is represented by O, and the permission by P. The norms with character of obligation may also be called obligatory norms, and norms with character of permission are permissive norms.

15 Ibid. 81
16 Ibid. 88

The orders given to a same agent to open the window and to close the window can be represented by Od(~pTp) and Od(pT~p). For Georg H. von Wright, these two norms are incompatible, because, besides their contents being contradicted by each other, neither possess a common condition of application. The second mandate is applied to a world in which the state of things described by p is effective and does not disappear unless by means of action; the first, to a world in which this state is not effective and only acquires existence by means of action.

Compare the previous order with the order, for example, for opening a window and the order for leaving this same window shut. This can be represented by the expression Od(~pTp) and Of(~pTp). Both orders are contradicted because, no matter the agent's action, he will necessarily disobey one of them. In the circumstance that a certain window is shut and it does not open up by itself, an agent that dominates the art of opening windows must necessarily open the window or leave it shut. But he will not necessarily open or close this window. Therefore, he must necessarily disobey one of the orders Od(~pTp) and Of(~pTp), but he may not necessarily disobey one of the orders Od(~pTp) and Od(pT~p). The agent cannot obey or disobey it in this occasion.

Supposing that the orders Od(~pTp) and Od(pT~p) are given in one occasion only. They mean then, in relation to the example of the window, that the agent to which the orders were directed should close the window if it is open, and open it if it is shut. In practice, an authority would only give both orders if he did not know which is, or which will be, the state of the world in the occasion in question. For Georg H. von Wright, such cases are not strange nor rare.

Supposing that the orders are general in relation to the occasion (orders that are not directed to a particular circumstance, to a specific window). Then the orders mean, to its addressee, that he should close the window whenever he found it open and open it whenever he found it shut. Supposing that the agent obeys the first order and he closes the window. In this way he creates a situation in which the second order is applicable. Then he has to open the window. If he obeys it, he will create a situation in which the first order is applicable, and so forth *ad infinitum*. Georg H. von Wright denominates both general norms of this nature as a pair of *Sisifo-orders*[17].

Georg H. von Wright also introduces the notion of *deontic equilibrium*. The world can be placed in *deontic equilibrium* with a consistent set of orders, if it is possible to obey all the orders that apply to any state of the world in question without creating *ad infinitum* a new world state to which some of the orders apply. The two orders of opening a certain window whenever it is possible, and of closing it whenever it is possible, form a consistent group, but it is not possible to place the world in *deontic equilibrium* with them.

A third author that also deserves mention is Tecla Mazzarese, who published an important article in the *Revista Internazionale di filosofia del diritto*[18], where she

17 Ibid. 158–159

18 'Antinomie, paradossi, logica deontica' (sep 1984) S.IV LXI Revista internazionale di filoso-

made a detailed analysis of antinomies and of paradoxes in normative ambit and in deontic logic. There, she introduced an important distinction between the concepts of antinomy and of paranomy. We will describe her analysis, with the objective of considering with greater precision the phenomenon of normative contradictions and to illustrate the concepts with examples.

Tecla Mazzarese designates with the term antinomy an immediate incompatibility between norms or rules. According to the author, an antinomy can be deontic and non-deontic. It is possible to distinguish between deontic antinomy by contrary opposition (in which one only and same behavior is obligatory and forbidden) and deontic antinomy by contradictory opposition (one only and same behavior is prohibited and allowed or one only and same behavior is obligatory and optional). A deontic antinomy consists of two contrary or contradictory norms that either force, or allow, or prohibit. There are norms that do not necessarily use deontic modalities, as the juridical norm that establishes the legal capacity starting from a certain age.

An example mentioned by the author of a non-deontic antinomy consists of two norms: in the article 17 of the Italian Constitution: "the penal responsibility is personal"; and in the article 57 of the Italian Penal Code:

> Art. 57. For the crime commited by means of the press the following dispositions are observed: 1st when it is periodic press, the responsible editor answers, by himself, to the crime commited unless the responsibility of the publication's author.

Although antinomy, be it deontic or non-deontic, in its technical meaning, is only possible between norms of one and same juridical code, the term antinomy is used for any case of immediate incompatibility (deontic or non-deontic) between two norms.

By paranomy Tecla Mazzarese designates a incompatibility mediated by a fact between norms or rules. A canonical example is the case of Jephte.

Jephte promised to God that, if he won the battle, he would sacrifice the first living being that he would find during his return to his house. Jephte wins, and the first living being he finds after the battle is his own daughter. The obligation of keeping the promise to God and the obligation of respecting the human life are not in themselves conflicting, nor these two norms are immediately incompatible. The conflict is originated, in the case of Jephte, by the accidental coincidence of Jephte´s daughter being the first living being he found after the battle.

Another example of paranomy is the case of prisoners under the custody of a State that decide to start a hunger strike in order to press the authorities to satisfy some claim. Presume also that the prisoners have manifested their intention of taking the strike to the ultimate consequences, that is to say, were resolved even to die if their pretenses were not satisfied. The decision of the State to intervene or not, force-feeding them or ignoring their goals, makes for a conflict of

fia del diritto 419–463 (Antinomy, paradox, deontic logic – International review of philosophy of law – in italian)

norms of fundamental rights and of the right to the self-determination, or, in a broader sense, between the limits of private and public sphere.

Three are the cases in which it may be seen an antinomy or a paranomy: (1) in relation to one only and same norm; (2) in relation to two norms of one only and same code; (3) in relation to two norms of two different codes. The mentioned author analyzes each case in separate.

(1) *Antinomy and paranomy in relation to one only and same norm.* It would seem strange to speak of antinomy and paranomy of one only norm, because both involve at least two norms.

Another Italian author, Amadeo G. Conte, formulated a paradox[19] in one only normative statement, starting from the antinomy of Epimenide or of the liar[20]. Conte analyzed the so-called deontic paradox of Epimenide, or the deontic Epimenide, which is paradoxical in its very structure. His formulation consists in: "the present normative statement must be ineffective". The deontic Epimenide is effective if, and only if, it is ineffective. In it, the duty of being ineffective coincides with the duty of being effective, resulting in a structural antinomy, which is due to its very structure.

It might be the case of a norm that, not being in itself paradoxical, allows for the production of a second norm with which it is in conflict. This is the case proposed by Alf Ross. The article 88 of the Danish Constitution (an article that fixes the conditions for the modification of the Constitution) is not in itself paradoxical. But, if we admit that article 88' is a modification of the article 88, a modification made in agreement with the conditions foreseen in the same article 88, the new article 88' (in agreement with the interpretation proposed by Alf Ross[21]) conflicts with old article 88.

A case that gives an example of a norm which, in contact with an accidental configuration of the reality, results in the appearance of a paranomy is that of Oreste. Faced with the norm "it is obligatory to honor the parents", for Oreste it is impossible not to violate it, whatever his action, since Clitenestra, mother of Oreste, killed Agamenon, father of Oreste. The obligation of honoring the parents is split, for Oreste, in two obligations that cannot be executed jointly: the obligation of killing Clitenestra to avenge his father's death; and the obligation of not killing Clitenestra because she is his own mother.

19 Amadeo G. Conte, 'Ricerca d'un paradosso deontico. Materiali per una semantica del linguaggio normativo' (1974) S. IV LI Revista internazionale di filosofia del diritto 481–511 (Investigation of one deontic paradox: material for a semantics of normative language, International review of philosophy of law – in italian)

20 The liar's paradox or of Epimenede is constituted by the statement: "I am lying". If the statement is true, its content is false, and vice-versa. For a treatment purely formal of this paradox, see: Lennart Åqvist, 'How to handle the liar paradox in modal logic with sentential quantifiers and its own truth predicate' (1982) 1 Theoretical Linguistics 111–129

21 See Ricardo Guibourg, 'La autorreferencia normativa y la continuidad constitucional' in Eugenio Bulygin et al. (comp.), *El lenguaje del derecho: homenaje a Genaro R. Carrió* (Abeledo-Perrot, Buenos Aires s.d.) (*The language of law: homage to Genaro R. Carrió* – in Spanish)