



NORMATIVE LOGIC IN THE LATE MIDDLE AGES: AN ANALYSIS OF DEONTIC MODALITIES IN ROGERIUS ROSETUS'S *LECTURA SUPER SENTENTIAS*

Marcus P.R. Boeira¹

“De modalibus non gustabit asinus”

ABSTRACT: This article investigates the emergence of deontic modalities in late medieval logic through an analysis of Rogerius Rosetus's *Lectura super Sententias*. Situating Rosetus within the broader context of fourteenth-century modal logic, the study examines how deontic operators such as obligation, permission, and prohibition were incorporated into scholastic discussions of modality. Particular attention is given to the distinction between *de re* and *de dicto* modal propositions, the analogical relationship between alethic and deontic modalities, and the theological questions that motivated these developments. By comparing Rosetus's approach with those of thinkers such as Peter Abelard, William of Ockham, Robert Holcot, and Gregory of Rimini, the article argues that late medieval logicians developed sophisticated logical tools for analyzing normative discourse, anticipating important themes of modern deontic logic.

Keywords: Deontic Logic; Rogerius Rosetus; Medieval Logic; Modal Logic; Scholasticism.

¹ Adjunct Professor, Law School, Federal University of Rio Grande do Sul (Brazil). Professor at COR Academy.

Introduction

The fourteenth century represents a period of profound transformation, not only for the advancement of the sciences and the arts, but also for the institutional consolidation of universities as centres for the production of thought and cultural change in the West. Several fields of knowledge underwent major changes. Logic, certainly, was an area extraordinarily affected, both by the way nominalists constructed new and more sophisticated linguistic systems and by the manner in which the reception of Aristotle in scholasticism coexisted with the so-called logic of the properties of terms.

The logicians of the fourteenth century, especially those active in English universities, debated a wide variety of issues whose repercussions echoed through subsequent generations. Many topics that today are commonly discussed within symbolic logic were already under consideration in the Anglo-Saxon schools of the late Middle Ages. After the arrival in the Latin West of the *Corpus Aristotelicum*, specifically the books of the *Analytics*, the *Topics*, and the *Sophistical Refutations*, logicians began to investigate with greater precision the major semantic problems inherent in the properties of terms and in the doctrine of propositions. The entire study of syllogism and categories, already prominent in the works of Porphyry and Boethius, now received a considerable analytical refinement. Among the major contributions that the *Corpus Organon* brought to the habitual manner of dealing with the liberal art of logic during this period, one of the most important was certainly the classification of themes and disciplines within the curricular *index*. After the contributions of the *logica antiquorum*, the so-called *logica modernorum*, also known as the logic of the *proprietas terminorum*, transformed both the treatment of logic and the course of debates concerning the study of terms. The rigorous semantic analysis of terms through a rereading of Aristotelian logic, now made more accessible, resulted in an authentic doctrine of method, developed and refined amid the disputes taking place within the University of Ox-

ford. Logicians proceeded from Latin grammar—the scientific language of the age—in order to extract from its models, analytical structures, and semantic considerations under the vigilance of rigor and attention to the issues previously confronted by the Arab philosophers, the earlier interpreters of Aristotle’s works.

The logic of this period introduced new topics of discussion into the Faculties of Arts, themes that had previously been uncommon and that became central problems within the discipline. Indeed, the scholastics proposed a new way of dealing with formal logic, focusing on the semantic and syntactic issues surrounding the signs and meanings of terms within the semiotic spectrum of Latin. Just as contemporary logicians study the discipline through the distinction between constants and variables, medieval thinkers also proceeded implicitly from this duality. Constants corresponded to matters relating to what, in the formation of statements, always remained unchanged, functioning as logical rules; that is, terms appearing in any proposition while performing a role that, in itself, contained no meaning, yet carried out a fundamental task, especially in the formation of hypothetical propositions. This is the case with syncategorematic terms. Moreover, the properties of terms, semantic antinomies (*insolubilia*), consequences, the rules of syllogism, and the conditions for argumentative validity, as well as the *sophismata*, occupied a prominent place among the current topics of discussion. Yet, if there was one issue that particularly occupied the attention of late medieval logicians, it was the theory of supposition, a watershed theme fundamental for the use of terms in propositions.

One of the most pressing themes of the period was the problem of enunciation, which appeared on the horizon of logic both as an art and as a *scientia specialis*. The formation of the proposition, its determination in relation to *vox*, *significatio* (a property of isolated terms), and *suppositio* (a property of terms within propositions), demanded a certain analytical distinction in which three models were established: (i) *modus essendi*, (ii) *modus intelligendi*, and (iii) *modus significandi*. *Modus essendi* corresponds to ontological planes taken as objects of predication. *Modus intelligendi* concerns the planes

of thought, that is, the levels of intelligibility of beings of first and second intention. Finally, *modus significandi* corresponds to the way in which the composition and division of terms in propositions—categorematic and syncategorematic—result in a proposition endowed with a truth value.

The determination of the mode of signifying realities led to the investigation of the term, its properties, and the conditions for its use in propositions. Fourteenth-century terministic logic may be viewed as a great effort to penetrate spoken language—Latin—and project itself into another field of analysis in which syntactic functions conditioned and stimulated the development of semantic study. The works *Introductiones in Logicam* and *Summulae Logicales*, by William of Sherwood (1279) and Peter of Spain (1205–1277), respectively, were fundamental for the development of the *logica modernorum* and served as guiding manuals for later deepening into the canonical themes of the logic of the period. Indeed, late medieval logic should be understood as a point of convergence between Aristotelian logic—concerning categories, the *Peri Hermeneias* (*logica nova*), and the doctrine of the properties of terms, which here corresponds to the effort toward semantic investigation grounded on the basic postulates of Aristotle's *Analytics*, *Topics*, and *Sophistical Refutations*.

The great aspiration of the *logica modernorum* was centred on presenting itself as a *loquendi vel disserendi ratio*, simultaneously intended to deal both with the themes proper to the *ars disserendi* and with the *logica docens*, understood as that which makes logic not merely an art but also a *scientia specialis*.

Modal logic was always a frontier discipline. Since the twelfth century, the modal syllogism had emerged bringing with it numerous difficulties for the logicians in Oxford and Paris, even though the basic text of study—the point of departure, so to speak—was the *Organon*, not only the *Peri Hermeneias* and the *Analytics*, but also, and in a singularly strong manner, the *De Sophisticis Elenchis*².

2 It is worth noting the effort of certain logicians of the period, such as Adam of Balsham, to

As early as Abelard and Sherwood, the theme of the nature and meaning of modal propositions occupied a prominent place, not only because of the formation of propositions, but also because of the way propositional content was taken as the judicative factor for determining truth value. From the time of Pierre d'Ailly (1350–1420), the notions of truth and falsity had been treated in relation to mental propositions—mental names and verbs: *conceptus naturaliter significans aliquid vel aliqua*—and to the propositional contents that formed the *complexe significabilia*³. Paul of Venice, in *Logica Magna* I, 10, when dealing with the meaning of propositions, addresses the *complexe significabilia* and states that complex signification corresponds to the integral and complex meaning of a proposition taken as a whole, irreducible to its properties and terms⁴. Within this framework, how should the meaning of a modal proposition be understood?

An overview of modal logic in the fourteenth century

It is well known that fourteenth-century logicians received both Aristotle's predicate logic and the propositional logic of the Stoics, considerably expanding them. Firstly, they perfected the Stagirite's logic of predicates through the logic of the properties of terms, especially by the distinctive attention that Peter of Spain and later logicians in Oxford and Paris devoted to the theory of *suppositio*, within which the notions of quantification

confront the numerous challenges of modal logic in this era, particularly with a view toward mastering the *ars sermocinalis* in order to avoid the errors produced by sophisms. Balsham published his *Ars Disserendi* in 1132. KNEALE, Willian and Martha. *The development of logic*. Oxford: Clarendon, 2013, Chapter IV, 3. 211.

3 Peter d'Ailly. *Conceptus et insolubilia magistri Petri de Ahyaco*. National Central Library of Rome, 1515, available at https://archive.org/details/bub_gb_iN45NCeMr7gC.

4 Paul of Venice. *Logica Magna* (Classical and Medieval Logic Texts). Oxford Press, 1990.

and reference were developed. Secondly, they addressed numerous problems of paralogsms (*insolubilia*), in which semantic antinomies and *sophismata* led to the formation of false arguments lacking logical validity. Finally, they refined the study of the nature and meaning of propositions, a topic in which the *consequentiae* emerged and received a more sophisticated investigative apparatus than that available in the classical world. These contributions were situated within two programs of logical study: (i) the *logica magna*, or major logic, also called Dialectic, whose literary genre consisted in commentaries on Aristotle's works, particularly the books of the Organon concerning the *Categories*, *Peri Hermeneias*, *the Topics*, and the *Sophistical Refutations*; and (ii) the *logica parva*, or minor logic, or simply formal logic, devoted to the study of method, science, and demonstration, as well as first principles and the truth conditions of propositions, themes usually treated in the *Summulae Logicales*, the logical compendia that became widespread in the Middle Ages.

Fourteenth-century logicians treated the syllogism in a peculiar manner and with certain distinctions from the approaches of the Stoics and Aristotle. In the context of modal syllogism, the differences between *de re* and *de dicto* modal sentences, as we shall see, resulted in the fact that the analysis of the logical properties of different statements, the terms constituting them, and the relations among concepts presupposed an exceptional expansion in the treatment of modal propositions. Concepts bearing properties similar to the basic notions of traditional alethic modalities thus came to receive increasingly rigorous treatment within the logic of the period.

Compared with classical modal logic, medieval logic introduced four major innovations:

- I. Differences in the analysis of modal premises without any uniform interpretation that would render them consistent within the Aristotelian form, which was considered insufficient. Medieval modal logic became fragmented and diversified into broader and more sophisticated analytical styles and methods, enriching the investigative scope regarding the underlying semantics and ontology;

- II. Late medieval modal logic was accompanied by a semantics akin to modern possible worlds, especially owing to the importance of the synchronic conception elaborated by John Duns Scotus;
- III. The logic of pure modal terms implied models of relations and behaviors among concepts, particularly regarding the basis of the rules pertaining to *de dicto* modal sentences;
- IV. Analogical equivalence between alethic modes and other modalities⁵.

One of the great challenges faced by medieval logicians was the effort, within modal logic, to add various modes analogically equivalent to the traditional alethic modalities of possibility, necessity, and contingency, such as *dubium*, *scitum*, *opinatum*, *apparens*, *volitum*, and *dilectum*⁶. How could *de dicto* modal sentences be composed using these equivalent modes? Would it be possible to establish analogical equivalences between necessity, possibility, and contingency, for example, with modal expressions such as *obligatum*, *licitum*, and *illicitum*?

According to Simo Knuuttila and Olli Hallamaa, medieval thinkers developed a modal treatment for deontic operators. In the fourteenth century, normative operators began to be employed within theology as extensions of modal operators, particularly in addressing difficult questions such as the effects of volitional acts, the power of God, and the application of divine law⁷. Although he was not the first to do so, since Peter Abelard⁸ and others had preceded him in this undertaking, Rogerius Rosetus,

5 KNUUTTILA, Simo. *Modalities in Medieval Philosophy*. 1^a ed. London: Routledge, 1993, p. 182.

6 KNEALE, Willian and Martha. *The development of logic*, Op.cit., p. 211 e ss.

7 KNUUTTILA, Simo and HALLAMAA, Olli. *Roger Roseth and medieval deontic logic*, in *Logique & Analyse* 149 (1995), 75-87.

8 In his *Ethics*, Abelard takes nature as the point of departure for the analysis of modal questions. Thus, necessity, possibility, and impossibility correspond respectively to natural demand (what nature requires), natural permission (what nature allows), and natural prohibition (what nature forbids). ABELARD, P. *Ethics*, Edited with an introduction English translation, and notes by

one of the most prominent logicians of the period, carried out the task of confronting several theological problems of his time by employing the method of analogical equivalence between alethic and deontic modes. In this context, theological inquiries were commonly conducted through syntactic and semantic tools developed within the *logica modernorum*.

An important distinction appearing in Shyreswood, which would occupy a prominent place in subsequent centuries, is the distinction between modal propositions that (i) add modes to the statement, such as possibility, necessity, contingency, or impossibility (called propositions “of mode”), and (ii) propositions that qualify the statement modally by attributing characteristics directed toward the subject and which, through the addition of a primitive quantifier such as “all,” “some,” or “none” (*omnis, quidam, nullus*), may apply to however many subjects appear. Kneale tells us that “propositions which qualify modally (that is, in a qualified manner) do so by adding characteristics to subjects other than *dicta*, which means that terms such as necessarily, possibly, or impossibly accompany the quantifiers and are not restricted to the singularity of the subject inserted in the sentence of the first type, which in some cases would be better classified as *secundum rem*. It is surprising that in his *Summulae*, Shyreswood did not advance much further in the analysis of modal propositions, something that would occur among subsequent authors⁹.

The application of syncategorematic terms such as the aforementioned quantifiers, together with the already known connectives and terms indicating motion—*incipit* and *desinit*, beginning and end—was common in the treatment of categorical statements, mnemonic verses, and varied models of sentence formation.

After Shyreswood, Peter of Spain’s *Summulae Logicales* achieved even greater popularity in universities. Didactic in style and highly current within

D. E. LUSCOMBE, Oxford University Press, 2002 p. 1 e ss.

9 KNEALE, William and Martha. *The development of logic*. Op.cit., p. 217.

the context of the *logica modernorum*, the twelve treatises therein present the logic of the properties of terms clearly and precisely. Peter tells us that a mode “is a determination adjacent to a thing, and it may be expressed through an adjective.” Generally recognized, the adjective may qualify either the noun or the verb. The latter case is called an adverb, which is employed when the verb is qualified. Some adverbs determine the verb by reason of composition: necessarily, contingently, possibly, impossibly, truly, and falsely. There are other ways of determining the verb, such as temporal adverbs, or adverbs expressing mode, such as exhortation or command. Peter does not mention any deontic operator here, but he already prepares the ground for what would emerge a century later by inserting among the modes determining verbs what he calls the “adverb by reason of mode”¹⁰.

When dealing with modes pertaining to what he calls composition, such as necessarily or possibly, he clarifies that the addition of such a mode to the sentence implies rendering the composition necessary. Thus, if we say that A necessarily paid B, then the act of paying was realized in this relation between A and B. If, on the other hand, I say that A argues eloquently or virtuously, this means that A’s arguing is eloquent or virtuous, so that here what is determined is the thing of the verb, in contrast to what determines the composition. This is extremely important in this context because only the insertion of the mode in the determination of composition renders a proposition modal: “only the mode that determines the composition makes the proposition modal”¹¹.

Modes may be taken adverbially, as in necessarily or possibly, and nominally, as in necessary or possible. Although Peter restricts the *simpliciter* form of modal propositions to the six adverbial expressions—necessarily, possibly, contingently, impossibly, truly, and falsely—he does not exclude

10 HISPANO, Pedro. *Summulae Logicales*. 1^a ed. Mexico: Universidad Autonoma de Mexico, 1986, p. 14 e ss.

11 Op.cit., p. 14 e ss.

from what he calls “*adverbs by reason of mode*” any other adjectives that may qualify the verb, such as obligatorily or prohibitively.

Now, if in modal propositions the verb is subjected to the reason of the end and the adverb is predicable, unlike propositions *de inesse*, then the opposition among the four adverbial modes, excepting truly and falsely, which are also applicable in categorical propositions, will appear in a table of oppositions. According to the established analogy, the modes will occur similarly or dissimilarly according to affirmation or negation. Similarity occurs when the mode is affirmed in both propositions or denied in both, and likewise for dissimilarity.

How, then, did the modes traverse the interval between the thirteenth and fourteenth centuries?

Knowledge is an analogical operation in which the intellect possesses the object either perfectly or imperfectly. When we attend to the modality of what is thinkable, the necessary mode explicates the highest degree of perfection, since according to the principle of non-contradiction, proper to the analysis of modality within the cognitive sphere, certain meanings concerning Being may be affirmed more perfectly, thereby determining a greater degree of truth in relation to the object. Modalities determine and specify the being present in judgment, since they affirm a corresponding predicative mode.

In *De Modalibus*, uncertain authorship but attributed to Thomas Aquinas, a distinction is established between *de re* modal propositions and *de dicto* modal propositions. *De re* modalities correspond to propositions in which the modal sign has an internal character, when the mode is inserted into the dictum, as in “Plato possibly walks.” By contrast, *de dicto* modal propositions correspond to second-order statements in which something is universalized according to the way the intellect possesses the object, namely when the *dictum* is taken as subject and the mode treated as predicate, as in “That Plato walks is possible.” These are two kinds of modality according to distinct modes.

Whereas *de dicto* modality always results in a singular proposition, since it possesses a *dictum* as subject, *de re* modality may be either singular or universal, depending on the quantity sign—that is, the quantificational extension—pertaining to each case. In *de re* modality, the mode expresses an adverb inserted within the sentence, performing a predicative function aimed at modalizing the action expressed by the verb, so that “Plato possibly walks” could be viewed as a sentence in which the mode renders the action possible.

Thus, when the subject is accompanied by a universal quantifier such as “all,” the mode appears as an adverb pertaining not merely to one individual but to every individual belonging to the corresponding genus. Accordingly, the nominal essence of the attributive subject—whether an individual, a species, or a genus, following Porphyry’s tree concerning the Predicables—determines whether possibility or necessity corresponds to an individual (a proposition formed by a singular subject) or to a species or genus (a universal proposition). In the latter case, the nominal essence designates in the statement a mode proper to a specific nature or genus, as in “a human being necessarily dies” or “a bird possibly flies.”

Therefore, *de re* modal sentences either designate true things, to the extent that the matter referred to by the terms of the sentence designates real things, or possible things, insofar as the matter referred to by the composition of terms indicates only things that may occur. In *de dicto* modal sentences, by contrast, the mode is placed as the subject of the sentence, so that the action or relation conveyed by the verb has as its subject not the name of an agent but the mode itself. Thus, phrases such as “it is possible that A runs in the park” or “it is obligatory to pay income tax” emerge as *de dicto* modal sentences in which the action or relation is modalized because the verb followed by a mode is inserted at the beginning of the utterance. The modalities express adverbs and determine and specify the truth conditions of the verb “to be” within the judgment of a simple categorical proposition, given that they complement the verb of the

sentence and thereby gradually determine the degree of correspondence between subject and predicate united by the verbal copula¹².

The discussion concerning *de re* and *de dicto* modalities posed numerous challenges for medieval logicians, who debated important issues in this regard, such as divine knowledge of future contingents, the consignification of time by verbs—a thesis denied by nominalists—and other points. One of the central issues, which would provoke reactions within the primitive deontic logic of the period, concerns divine power and foreknowledge of future contingents. In other words: can a divine determination be revoked or altered? Under what conditions? To what extent do statements expressing such determinations correspond analogically to human action or to certain relations among human beings? Is a deontic statement—that is, a *de dicto* modal sentence in which a deontic modal appears at the beginning of the utterance—capable of truth?

In *de dicto* modal sentences dealing with deontic operators there is considerable correspondence with standard alethic operators, especially necessity and possibility, although deontic operators as such, modal in their own way, require the configuration of a human act according to ideal, utopian, and maximally conceived conditions. This is a variation very characteristic of fourteenth-century modal logic, in which the properties adjacent to modal notions underwent new forms of understanding that exceeded the thematic boundaries of the classical definitions inherited from Aristotle.

The question concerning the contingency or necessity of a divine normative determination requires, for adequate analysis, attention to whether a statement may undergo changes in its truth value.

Thomas Aquinas tells us in the *Summa contra Gentiles* that “*the contingency of things does not remove certainty and truth from divine knowledge.*”

12 Op.cit., p. 14 e ss.

This is because “*the things known by God are not prior to divine knowledge, as occurs in human knowledge, but posterior.*”¹³

The question concerning the truth value of statements does not require an analysis of the subject who understands and knows contingent facts and situations, whether present or hypothetically future ones. God therefore possesses ever-present, actual, and absolute knowledge of all future contingents. However, the issue of whether the statement has a true or false value depends upon whether it expresses something possessing value in time. Even in divine knowledge, this is the perspective with which one must deal.

Let us consider what Thomas says in continuation of the argument:

“When we say that God knows or knew some future thing, we add an intermediate element between divine knowledge and the known thing, namely the time in which the utterance occurs, in relation to which what is said to be known by God is future; but it is not future relative to divine knowledge itself, before which all things are present, since the things God knows are not prior to divine knowledge, as occurs in human knowledge, but posterior, for it exists in an eternal instant [present time].”¹⁴

Thus, the determination of truth value is conditioned by the time in which the statement expresses what it expresses, singularly, regarding the way an action or relation is posited in the proposition.

If in Aristotle’s work we encounter a statistical-frequentist conception of modality, as Hintikka emphasized, then in the fourteenth century the ampliative and synchronic notions of modality—especially after the popularization of the Scotist conception—transformed modal logic

13 AQUINO, Tomas de. *Summa Contra los Gentiles, Lib. I, cap. LXVII*. 1ª ed. Mexico: editorial Porrúa, 2004, p. 92 e ss.

14 Op.cit., p. 94.

into a broader field, vast enough to deal not only with alternative semantic worlds, akin to the primitive conception of possible worlds beginning to emerge, but also with issues concerning human reasoning and human acts in general.

Regarding the behavior of finite beings, whether through natural determinations or conformity to intellectual and volitional powers, particularly in the human case, began to orient investigations which, originating from modal logic, reached an expanded horizon of objects. The motion of soul and body, from the standpoint of modalities, required more rigorous investigation into epistemic and deontic modalities, the *scire* and the *obligatum*. Knuuttila informs us of the famous list attributed to Duns Scotus concerning terms that could be understood within the proper method of alethic modal logic, in which words such as *scitum*, *creditum*, and others could be treated through the logical analysis of modal operators.

Because some fourteenth-century logicians treated syllogism differently from Aristotle and his commentators in preceding centuries, the rules of inference typical of modal logic received new treatments, particularly within the scope of sentences in their two principal groups: *de re* and *de dicto* modal sentences.

Thus, one may ask: when we use deontic expressions such as obligatory or forbidden, especially in dealing with propositional contents difficult to evaluate, such as divine power and will, do we employ them in *de re* or *de dicto* modal sentences?

Just as in the sphere of epistemic belief there exists a variation in which objects are arranged along scales of assent, within an intensional logic capable of measuring the stature of the degree of knowledge obtained and expressed through a proposition—for example, the assent to a believed truth corresponding to an object expressed (*dictum*) by a proposition—the fourteenth century, largely owing to the space gained by voluntarism within theology, witnessed the positioning of the *voluntas* within intensional logic. This had repercussions not only in epistemic logic, in which free assent emerged as one of the epistemic statuses at stake,

but also in deontic logic, a logic extending the free assent of the free will into the domain of determinations and norms.

***De re* and *de dicto* modal sentences**

How are normative modes to be expressed in propositions? Could a mere theory of truth be postulated to deal with norms? What sort of truth value might deontic operators claim within fourteenth-century modal logic?

Furthermore, would a deontic sentence employing *de re* modality to express deontic states of affairs be valid? Could a proposition be true if, despite using a modality grounded in nominal essence — whether particular or universal — it expressed an obligation or a prohibition directed toward someone, a species, or a genus?

In the epistemic sphere, a simple *de re* substitution in which the verb *scire* were substitutive of valid knowledge concerning a state of affairs *x* would not yield a satisfactory result, since the substitution of a variable in this field according to *salva veritate* would imply an invalid inference, such as: in situation *x*, A knows that B is flying, and A knows that B is a bird *z*; therefore A knows that bird *z* is flying. The same difficulty could be inferred in deontically utopian situations when employing, *ad exemplum*, a modal inference according to which *x* is obligatory, A ought to realize *x* in B, and if B is realized, *x* is true. Or would *x* remain true as a utopically consistent situation even if B were never realized?

It seems that the proper use for sentences of this sort would require the *de dicto* mode, since the propositional content required in order for the proposition to possess truth value is not tied to the existential condition of a singular individual, nor even to a determined species or genus, but rather to the proposition as such.

According to Knuuttila, deontic concepts had already been treated within the interior precincts of modal logic since the twelfth century.

The idea that nature requires, forbids, or permits was already present in Peter Abelard, such that this plane of determinations, so common in classical ethics and physics, also belonged to the domain of the *ars sermocinales*, directed toward the refinement of the way such rules were expressed and articulated¹⁵.

Second-order deductions such as prohibitions understood as obligations not to act, or equivalent deontic concepts of the form: $\neg O \neg q \equiv Pq$ where, if q is not obligatory, then q is permitted, or inferences of the form: if $p \rightarrow q$ and p is obligatory, then q must also be obligatory—what today belongs to the set of axioms and rules of standard deontic logic—were in the past arguments employed by authors such as Abelard himself and even William of Ockham, especially in dealing with modal consequences subsisting not only within ethics and natural philosophy, but also within theology. Questions concerning the deontic consequences of divine determinations populated the world of the *quaestiones quodlibetales* and disputed questions of the period, not only within the religious orders but also in the academic environments of Oxford and Paris.

Analogical equivalences among deontic operators such as:

$$\begin{aligned} Op &\equiv F \neg p \\ O \neg p &\equiv Fp \\ \neg Op &\equiv P \neg p \\ Fp &\equiv O \neg p \\ \neg Fp &\equiv Pp \\ F \neg p &\equiv Op \end{aligned}$$

were common among the Oxford logicians, especially when confronting semantic antinomies (*insolubilia*), semantic expansions, and reductions, as well as the indelible problems corresponding to the *significatio et suppositio*

15 KNUUTTILA, Simo. *Modalities in Medieval Philosophy*. Op.cit., p. 182.

of terms. In these equivalences we witness borderline deontic states within semantically consistent worlds.

But when dealing with equivalences of permission, such as: $Op \equiv Pp$ something common in the contemporary deontic logic of G. H. von Wright¹⁶ and Georges Kalinowski¹⁷, how did fourteenth-century theologians confront such difficulties?

How could one deal, within the classical modal logic of the period, with deontic inferences such as:

$$O(p \rightarrow q) \rightarrow Op \wedge Oq$$

or ampliative inferences such as:

$$O(p \rightarrow q) \rightarrow P(p \rightarrow q)$$

so that everything obligatory can also be permitted? Or rather: must it be permitted for the agent to carry out the determination contained in the obligation for it to be realized?

Situations of this sort were not yet common, since deontic logic remained anchored in the basic structure of the division of the sciences inherited from the School of Toledo¹⁸. Consequently, the variation and extension of propositions still encompassed a relatively restricted horizon of hypotheses and situations which, *pari passu*, were situated predominantly among theological themes and challenges pertaining to prescience, divine power and will, as well as divine knowledge of future contingents.

16 WRIGHT, George H. von. *Norm and Action*. ^a ed. London: Routledge, 1963, 232 pgs.

17 KALINOWSKI, Georges. *Introduction à la logique juridique : éléments de sémiotique juridique, logique des normes et logique juridique*. Paris: Librairie Générale de Droit et de Jurisprudence, 1965.

18 Regarding the division of demonstrative sciences in the School of Toledo and the Arabic reception in the Latin West, see: JIMÉNEZ TORRES, Óscar. *Elementos de las ciencias demostrativas en Aristóteles*. 1^a ed. Pamplona: EUNSA, 2006, 570 pgs. And FIDORA, Alexander. *Domingo Gundisalvo y la teoría de la ciencia arábigo-aristotélica*. 1^a ed. Pamplona: EUNSA, 2009, 274 pgs.

Primitive deontic logic belongs to the family of applied modal logics, which implies that within the semantic dilemmas of modal operators, the squares of opposition among these operators, and the postulation of modal syllogism, many modes are treated according to analogical equivalence, such as the necessary and the obligatory, the possible and the permitted, the impossible and the forbidden, the facultative and the contingent. Do the validity conditions of inferential rules applied to modal sentences extend, by enlargement and extension, to the same conditions of validation when we deal with normative operators?

For example, when

$$L(p \rightarrow q) \equiv Lp \wedge Lq$$

may we infer, within deontic sentences:

$$O(p \rightarrow q) \equiv Op \wedge Oq$$

And further: is a derivative permission from an obligation—for example,

$$Op \rightarrow Pp$$

—also assumed within the implication:

$$L(p \rightarrow q) \equiv Pp \wedge Pq?$$

Among medieval thinkers, Robert Holcot (1290–1349), a prominent member of the Oxford logicians, in *Quodlibet* I, q. 8, as well as in certain questions from *Quodlibet* III¹⁹, assumes the viability of introducing de-

19 HOLCOT, Robert. *Quodlibet* III, q. 1 in *Seeing the future clearly, Questions on Future Contingents* by Robert Holcot, Edited by Paul a. Streveler and Katherine h. Tachau. 1^a ed. Toronto: Pontifical Institute of Mediaeval Studies, 1995, p. 73 e ss. HOLCOT, Robert. *Quaestiones Quolibetales* I, q. 8, in *Quodlibeta*. London: British Library, Royal 10, C, VI. Ver também: Moody EA, A quodlibetales question of Robert Holcot, O.P. On the problem of the objects of knowledge and of belief, in Holcot Robert, *Quaestiones quodlibetales*, *Speculum*, 1964, 39:53–74. Sobre os *Quodlibetales* de Robert Holcot, ver também *Archivum fratrum praedicatorum* 26, 1956, 7-28

ontic operators into the internal sphere of conditional modality, though not exhaustively as Rogerius Rosetus would later do. Even Gregory of Rimini (1300–1358), who also argues in his Commentary on the Sentences (*Sententiarum* II, d. 38–41) that the introduction of a deontic consequent within a modal implication is valid, regards the insertion of an obligatory or prohibitive mode as capable of truth within a *de dicto* modal sentence²⁰.

The validity of deontic consequence appears in both thinkers, demonstrating that primitive deontic logic had already begun to establish itself not only in Oxford but also elsewhere in Europe. Rimini goes even further than Holcot by specifying the diachronic temporal character of the truth value of the conditional sentence. As Knuuttila states:

“Rimini seems to accept $[L(p \rightarrow q) \equiv Op \rightarrow Oq]$ for simple inferences and thinks that the consequence in alleged counterexamples is a consequence ‘as of now’ and not simple. In fact he explicitly says only that $[L(p \rightarrow q) \equiv Op \rightarrow Oq]$ does not hold for consequences ‘as of now’, i.e. for the cases when p implies q in the sense that the conjunction $p \ \& \ -q$ is false now, while $M(p \ \& \ -q)$ is true”²¹

A thing true only now and not at other times indicates that the truth condition of the statement depends upon the semantic world within a determinate temporal frame. This is a form of assertion expressing a diachronic conception of modality. The truth of the conditional $p \rightarrow q$

e archivum fratrum praedicatorum 63, 1993, 207–228. Ver ainda Holcot Robert-Quaestiones quodlibetales. Seeing the future clearly: questions on future contingents, ed. Streveler P, Tachau K with Courtenay WJ, Gelber HG. 1995, Pontifical Institute of Mediaeval Studies, Toronto.

20 RIMINI, Gregorio. *Super primum et secundum sententiarum*, Volumes 1–2. 1^a ed. Madison (Wisconsin University): F. Schöningh, 1955, reimpressão- 2012, 620 pgs.

21 KNUUTTILA, Simo. *Modalities in Medieval Philosophy*. Op.cit., p. 183.

and the falsity of a negative consequent are truth values corresponding to the relevant time, even though in alternative times these values may vary.

Thus:

$$T1: [L(p \rightarrow q) \equiv O p \rightarrow O q]$$

But:

$$T2: M(p \rightarrow q) \vee \neg p$$

Hence, the mere formulation requires additional explanation, without which the logical sentence would lack truth value. Necessity requires an unconditional movement, whereas an obligation, even a *de dicto* one, presupposes a relation in which the norm is determined.

What, then, is the place of primitive deontic logic? What is its semantic background? The discussions surrounding *de dicto* modal sentences composed by deontic modes took place within moral theology. The problem of the will and free choice demanded an intensional analysis capable of measuring, across alternative semantic worlds, the truth conditions of statements formed by normative modalities.

A brief analysis of conditional modalities in William of Ockham: is there any space for a logic of norms?

Certain elements exceed the merely axiomatic analysis of deontic operators, such as freedom, the will, and the realization of specific acts within semantically consistent worlds. Alongside the will, freedom likewise occupied a central position in the ethical debates of the period. Authors such as William of Ockham, Duns Scotus, Jean Buridan, and others devoted considerable attention to questions of this nature, resolving difficulties through a precise logical and semantic analysis of the problems involved.

William of Ockham confronts the logic of conditionals and the rules of implication in various parts of his work. The nature of implication in conditional propositions already appear in at least three manuscripts attributed to the author, according to Philotheus Boehner²²: (i) *Summa Logicae* (in *Three Sums of Logic* attributed to William of Ockham, in *Franciscan Studies* XI [1951], 173–193); (ii) *Tractatus medius Logicae Ockham–Elementarium* (Munich Staatsbibliothek manuscript 1060, written in 1348); and (iii) *Tractatus minor logicae Ockham* (a fourteenth-century manuscript preserved in the Convent of Assisi 690). In these three manuscripts, Ockham treats conditional propositions and the rules of consequence by beginning from the classes of hypothetical propositions and then advancing into the domain of material implication. The author carefully analyzes the truth conditions of conditional propositions: *ad veritatem conditionalis exigitur, quod antecedens non possit esse verum sine consequente*.

The attention devoted to the analysis of categorical propositions in these manuscripts is extended elsewhere in Ockham's work to modal propositions. The relations between antecedent and consequent find in truth rules the conditions for assigning truth to categorical sentences. But what of modal propositions? Would modalities constitute the proper truth-*loci* for the treatment of the will and freedom?

Although Ockham does not explicitly treat the topic of ampliation (*ampliationibus*), he does so implicitly. According to Normore, the author postulates three kinds of ampliation, defined according to the internal mode of interaction among predicative objects belonging to the corresponding semantic set: ampliation toward the past, ampliation toward the future, and ampliation toward possibles. The articulation between ampliation toward future events and ampliation toward possibles becomes

22 BOEHNER, Philotheus. *Does Ockham know of material implication*, in *Collected Articles on Ockham*, 2^a ed. New York: Franciscan Institute Publications, 1992, pp. 319–351.

central for conditional modalities, insofar as it concerns future contingents and possible worlds²³.

In Ockham, the question of will and freedom is central to the treatment of conditional modal sentences. The contingency of the effects of free acts demonstrates that the truth conditions of modal statements concerning obligations and prohibitions encounter major logical challenges. The relation between divine power, the determinations of divine and natural law, as well as the free realization of human action and its conformity with divine determinations, are themes fundamental to moral theology.

Do the determinations of divine law confer necessity upon free acts? That is, does the realization of the act correspond to what the rule requires, such that rule and fact converge toward the necessity of obligation? Should moral truths therefore be viewed as necessary truths? Are moral truths necessary? To what extent do divine precepts constitute necessary modal propositions? And deontically speaking, are obligations and prohibitions contained within divine determinations necessary? It is well known that deontic sentences correspond to rules, not to facts.

From the standpoint of free acts, there exists an underlying sphere of indeterminacy that coincides semantically with the alternative actions available to the agent. These multiple alternatives are simultaneous within the same present time, such that a synchronic—and not diachronic—conception coincides with the standpoint of the agent who, before multiple possibilities for action, may or may not realize the determination. Thus, there subsists a distinction between possibilities and determinations, between human action and the realization of a utopian situation concretizing the deontic *dictum*.

23 NORMORE, Calvin. *The Logic of time and Modality in the later middle ages*. Toronto University, 1975, p 6.

For Ockham, an act is virtuous only when it coincides with the commandment of divine law, such that the habit assumed by the agent is not by itself capable of acquiring intrinsic moral quality. Good and evil are not, as such, necessary truths, but correspond to divine will, which approves or reproves an act, thereby rendering it good or evil. The qualification of the act is not limited to its realization but requires consideration of the agent's intention. The acquisition of moral qualification is posterior to the free deliberation of the will which, in pursuing the good proper to human action within a given circumstance, produces an additional character that qualifies the act itself. The addition of moral quality, therefore, depends upon the will and is consequently subordinated to it.

Ockham calls the volitional power freely moved toward opposites the "second freedom of the will." At the same instant t , the agent may both will and not will x ²⁴. At the same instant t in which the will wills x , there exists a variety of instants of nature within which (i) the volitional power remains free toward opposites and (ii) decides in favour of one of them. Upon deciding for one opposite, the will nevertheless retains the capacity not to will x within the same instant t ²⁵. Thus the will potentially wills and does not will within the same instant of nature. A clear modal synchronicity appears here: the agent decides and thereby establishes a new condition. Not even God can make the unrealized potency become realized, since such realization would imply the simultaneous realization of the contradictory of x in the same instant, which is impossible. From the standpoint of divine power, one would otherwise be forced ad absurdum to admit that contradictory propositions such as "God wills something according

24 OCKHAM, William de. *Ordinatio* I, d. 38, q. única, p. 266.

25 OCKHAM, William of. *Ordinatio* I, d. 38, q. , p. 266 e SCOTUS, Duns. *Lectura* I, d. 39, q.1-5, n. 62.

to x” and “God does not will something according to x” are simultaneously true²⁶.

The impossibility of simultaneity between contradictories leads to the following conclusion: in Ockham, only one of the opposites is selected and thereby becomes expressive of a contingent and true event. Since God cannot alter what has already occurred, even though He could have made the past otherwise than it was, if the past occurred in a certain manner, then this—and not its opposite—constitutes the truth condition of a proposition expressing it in the past tense: “this was thus.”

The necessity of the past and the contingency of the present characterize the modal conception of Duns Scotus and likewise constitute central postulates of Ockham’s conception. Unrealized potency corresponds to the contingent character of things before the necessary division among instants of nature. The human agent decides in an equally contingent manner, since every finite being possesses contingency as its defining characteristic: being while capable of not being. There is therefore contingency rather than necessity in moral judgment and practical truth as they imply the determination of divine and moral law *in concreto*. The agent, before synchronic compossibilities, elects one among several equally present alternatives. Moral truths are therefore not “necessary” as such, but contingent.

Nowhere in Ockham’s work do we find a definitive affirmation regarding the self-evidence of morality or of practical principles known independently of experience. He writes:

“It must be conceded that the will, when it causes, causes contingently. Yet this proposition may have two causes of truth. Either because it is possible that in the same instant it be true to say that it does not cause; and this is impossible, because, granted that in some instant it is causative, it is impos-

26 OCKHAM, William of. *Ordinatio* I, d. 38, q. única, p. 266.

sible that in the same instant it be non-causative. Or it is said to cause contingently because it can freely cease the act in another instant, without any variation occurring either to itself or to another, and not by the cessation of another cause, such that it becomes non-causative in another instant and not non-causative in the same instant. In this way the will causes contingently. But a natural cause is not so, since a natural agent always acts together with the cause unless it changes or something new occurs regarding it, or another cause ceases to cause, or by some other mode without which the will itself, solely through its freedom, can cease the act.”²⁷

Potency tends toward opposites, and the will causes one of them. The contingency lies in the fact that the realization of one member of the pair implies the rejection of the other, which could have been realized had the first not been actualized. Thus the will causes contingently. Yet it does so within temporal succession, since the realization of one opposite results in the non-manifestation of the alternative.

How, then, does Ockham’s conception of future contingents articulate itself with the theory of conditional modalities? And what of divine determinations?

In the same passage from *Ordinatio* I, d. 38, Ockham suggests that

“The divine will is determined in such a way that it still remains possible that it never would have been determined. Therefore certain and infallible evidence cannot be had through such a determination, since it simply could never have been. And thus it appears that the determination of the divine will, if it existed, would accomplish little.”²⁸

27 *Idem.*

28 OCKHAM, William of. *Ordinatio* I, d. 38, single question, p. 266.

Unlike human beings, God knows future contingents. Aristotle had argued that no one can know the truth or falsity of propositions concerning future contingents. Ockham goes beyond the Aristotelian conception developed in the *De Interpretatione* by considering divine attributes according to Christian revelation. The idea of contingency appears throughout Ockham's *Opera Omnia*, but especially in *Quodlibeta Septem* I, q. 17²⁹, where Ockham asks whether it is necessary to posit freedom of the will to preserve chance and fortune in things. There he distinguishes among several forms of contingency: (i) *ad utrumlibet*, when the contingent corresponds directly to an action undertaken by human will; (ii) chance, when the contingent corresponds to an unexpected consequence arising from natural causes but having human will as a mediated and partial cause; and (iii) fortune, when the consequence results directly from action, though unexpectedly, because the agent intended a different result³⁰.

Are divine determinations necessary or contingent? Are divine precepts always necessary, or may they be instituted otherwise? Even if determined at instant *t*, could they not have been determined at that same instant? It does not follow that if divine will is contingently determined, then secure evidence regarding its content is thereby available. Between contingency and evidence there remains an epistemic and logical distance.

Furthermore, one cannot infallibly assume that the determination of the divine will necessarily extend to human acts which, from the standpoint of the human agent, remain future contingents marked by alternative and compossible instants. The fulfillment of a divine determination depends not solely upon divine absolute power, but also upon whether created will follows the determination necessarily or contingently.

29 WILLIAM OF OCKHAM, *Quodlibeta Septem*, ed. Joseph C. Wey, C.S.B. (Guillelmi de Ockham Opera theologica, 9.) St. Bonaventure.: University, Franciscan Institute, 1980.

30 OCKHAM, W. *Quodlibet* I, q. 17.

How, then, should one deduce the relation between the determinations of the *lex statuta Dei* and their contingent effects in human acts?

Normative determination requires deontic qualification. Obligation, prohibition, and permission are not, as deontic modalities, necessary truths, nor are they *de re*. Rather, they derive from divine and moral/natural law and depend upon the agent and the circumstances. The semantic worlds obtained from *de dicto* deontic sentences are utopian referential domains, semantically consistent worlds projected from rules. Norms are therefore taken as ideal and utopian horizons of complete effectiveness.

Even God may alter certain principles and precepts. As Osborne notes:

“Ockham thinks that God can change many principles that can be known through reason, such as the precepts to love God, avoid adultery, and avoid theft.¹¹⁰ Hating God, committing adultery, and stealing could have been good if God had willed to make these acts good. In one text he qualifies his position by stating that the names would change because the names themselves connote that act’s badness by connoting the act’s bad circumstances. Perhaps he is taking into account Aristotle’s statement that theft and adultery are always bad and that the names themselves indicate the badness.¹¹¹ Ockham explicitly claims that his position on the connotation of such terms rightly interprets the “saints and philosophers.” We have seen that Ockham states that the moral science not known through experience is that taught by the saints and philosophers. Consequently, one part of moral science, namely that acquired through teaching, contains unchangeable truths, such that the terms “adultery” and “theft” connote wrong actions, and changeable truths, such as that the acts of adultery and theft are intrinsically wrong. But these truths are known by many without the aid of revelation. For Ockham, God could have made a world in which the same acts that are now evil would be good and even meritorious”³¹.

31 OSBORNE JR, Thomas M. *Human Action in Thomas Aquinas, John Duns Scotus and William of*

Ockham's assertion that God could modify certain principles according to possible semantic worlds reveals the analytical emphasis he places upon the role played by the free will of the agent in realizing lawful action. The truth conditions of such principles are not sustained by a simple concept-act-object relation, nor by the indemonstrability of the good, as Thomas Aquinas maintains, but by the interplay between divine will and the expression of command itself.

The value of *enuntiabilia praeceptiva* could, therefore, become false depending upon a change introduced by divine decision. Certain truths belonging to moral science could have been false had God altered the preceptive parameters of the normative attributes accompanying them.

Could God modify the precepts? Or alter their effects?

Something can be a future contingent only if free actions exist. Ockham does not deny that, from the standpoint of Christian revelation, God knows all future contingents and that this is true. Yet from the standpoint of philosophy and science, drawing upon Aristotle, propositions expressing future contingent states of affairs cannot presently possess determinate truth value. The challenge lies in reconciling divine immutability, perfection, and foreknowledge with the preservation of human freedom. God knows the future contingent, but the truth of such an enuntiabile does not render the contingent necessary unless it is realized at the determinate temporal instant. The realization depends upon human agency. The decision itself establishes truth—an effective truth occurring *ipso facto*³².

Ockham. Washington: Catholic University of America Press, 2014, p. 98.

32 ARISTÓTELES. *Peri Hermeneias [Sobre La Interpretación]*. 1ª ed. Gredos: Madrid, p. 43 e ss. For a more detailed discussion of this point among the Oxford Calculators: HOLCOT, Robert. *Quodlibet III, q. 1* in *Seeing the future clearly, Questions on Future Contingents* by Robert Holcot, Edited by Paul a. Streveler and Katherine h. Tachau. Op.cit., p. 60. “*Et isto modo loquendi consueverunt homines communiter dicere quod in futuris contingentibus non est veritas determinata, et sic loquitur Aristoteles, I Perihennias, ubi dicit quod in singularibus vero et futuris non est simpliciter veritas vel falsitas, sicut in propositionibus de praeterito et de praesenti, ubi vocat futura 40 propositiones de futuro*”.

Normative statements prescribe actions and abstentions for human agents. By establishing determinations, they condition the future. How then should one handle deontic operators within Ockham's conception of future contingents?

Ockham clarifies that some intrinsically practical principles are known through their terms, whereas others are acquired through experience. Certain principles appear as commands dependent upon divine will, leaving to the human agent the decision to conform action to rule. There is no explicit indication in Ockham concerning a necessary connection between principle and command, or between good and rule. Yet if one attends to the rules themselves—determinations as such within the framework of free agency—further questions emerge. Could the agent, before multiple possibilities of action, also alter the rules or their determined contents? Could an obligation become a prohibition? Could God alter His own commandments? Or does divine sovereignty exclude the *ex post facto* alteration of the rules constituting the *lex statuta*?

When we inquire into the normative nature of the final cause of human acts—that is, whether ends imply duties and powers for the agent—we presuppose a distinction between what is categorically determinative for the agent before a rule and what remains merely hypothetical, depending upon some additional condition qualifying the determination of action.

Unconditional determinations, marked by rules ordering toward an end without qualification, postulate deontic modalities attributing a quality to the verb that should be viewed as necessary with respect to the end, though contingent with respect to the agent. Hypothetical determinations, by contrast, depend upon some further condition, rendering the order toward the end contingent and the position of the agent within the utopian world of the end conditional upon some prior act satisfying the conditions for entry into that semantic world³³.

33 Ockham, *Ordinatio* I, d. 1, q. 6 505.5-6.

Conditional determinations³⁴, dependent upon the selection of a conditional means for attaining a given end, logically imply statements containing ampliative terms encompassing within their *significatio* the several normative options underlying these choices. Deliberation requires, within classical propositional logic, the connective of disjunction, such that one option excludes another alternative.

Categorical/unconditional deontic sentence: $Ox \forall (x) \equiv Ox \rightarrow x$

Conditional deontic sentence: $Oz \forall (z) \equiv z(x \vee y) \rightarrow Oz$

Between categorical and conditional deontic sentences there are sharp differences. The former preserve normative stature *ad semper*, without condition for realization, whereas the latter depend upon a variable before being modalized deontically.

Ockham clearly opposes the necessity of moral truths. In his thought, obligations and prohibitions deriving from imperatives for action demand further conditionals subject to the free and volitional decision of the agent, who in choosing a means also chooses what follows from that choice. The object of practical knowledge concerns the rectitude of conduct. Moral action is ordered toward the desired end, and the possibility of adopting a norm as directive principle implies qualifying the ordering of the act according to obligation or prohibition within a specific circumstance³⁵.

For Ockham, the will becomes determined when choice implies a bound consequence, such that the direction of free action necessarily attains the intended result, though this necessity depends entirely upon the will itself. A change in the direction of action would remove the necessary linkage.

In Rep. II, q. 20, Ockham writes:

34 Knuuttila said that "there has been some question of whether the hypothetical imperatives are prescriptions". KNUUTTILA, Simo. *Modalities in Medieval Philosophy*. Op.cit., p. 183.

35 OCKHAM. *Ordinatio* Prol. Q. 11 316.8-25; Sent. III q. 12, 420.3-10.

“No object, neither good nor bad, can be known through sensitive or intellectual cognition unless the appetite following such a power can have an act concerning that same object.”³⁶

Commenting on this passage, Osborne states:

“With respect to the intellectual substance, there is no distinction between intellect and will. The ability to know the good entails an ability to make a decision about it. Ockham writes that “no object, neither good nor bad, can be known by some sensitive or intellectual cognition unless the appetite following such a power can have an act concerning the same object”³⁷.

Thus Ockham understands freedom as the capacity of human action to produce contingent effects. Osborne further explains:

“The word “freedom” denotes either the will itself or “an intellectual nature in connoting that something can be done contingently by it.”¹⁴¹ Ockham again uses the principle of parsimony to argue that freedom is not something that exists apart from the will, which is the same as the intellectual substance. As with previous thinkers, Ockham’s discussion of an act’s causation focuses on the relationship between the will and the act of knowing. But for Ockham, this relationship is between the acts themselves, and not two distinct faculties. Nevertheless, the discussion of the acts is also a discussion of the relationship between the “intellect” and the “will,” if these two terms are correctly understood as denoting the same intellectual substance but as

36 OCKHAM. Rep. 2 q. 20 *Opera Theologica*, 5.440–41: “nullum obiectum, nec bonum nec malum, potest congosci ab aliquo cognitione sensitiva vel intellectiva quin appetitus sequens talem potentiam possit habere actum circa idem obiectum”.

37 OSBORNE JR, Thomas M. *Human Action in Thomas Aquinas, John Duns Scotus and William of Ockham*. Op.Cit., p. 49.

having different connotations that are based on the real distinction between the acts produced”³⁸.

The effects obtained through deliberation concerning the mode of action can therefore be understood, in conditional deontic modalities, only as results necessarily linked to a first-order choice—a free deliberation which, before alternative semantic worlds, contingently decides in favour of a desired objective.

For Ockham, freedom corresponds to the capacity to produce contingent effects. Freedom coincides with the will itself, not with some idealized standard of perfection and virtue, as in Thomas Aquinas or Duns Scotus³⁹. Within the free act, the agent intellectually assents that some action may be realized and that deliberation concerning the chosen mode of action will produce contingent effects⁴⁰. Since Ockham does not radically distinguish between the powers of the soul and the soul itself, nor between intellect and will as separate faculties, every distinction depends necessarily upon the external object and the extent to which it produces effects within the soul of the agent⁴¹.

The intellect is potentially passive, whereas the will is an active efficient cause moving the agent toward the object within a contingent circumstance where equally contingent effects arise. Thus distinctions always require the external domain of (i) objects and (ii) acts. Ockham does not begin from the powers of the soul to confront their terms and operations. Rather, he attends to objects and the contingent effects of human acts. The choice

38 Op.cit., p. 49.

39 SCOTUS, Duns. *Ordinatio I*, d. 10, nn. 30-32 (Vatic. 4.352); e AQUINAS, Thomas. ST I-II q. 49 e ss.

40 OSBORNE JR, Thomas M. *Human Action in Thomas Aquinas, John Duns Scotus and William of Ockham*. Op.Cit., p. 40 e ss.

41 OCKHAM, Ord. 1, d. 10, q. 2 *Opera Theologica*, 3.335–44.

regarding the meaning of action is not guided by external perfection arising from cognition of the end or from an ideal of perfection and sanctity qualifying the act as free. Instead, it depends upon the deliberation achieved by the agent himself, who absorbs the consequences of his decision within his active circumstance. The will determined by choice carries with it the norms accompanying that choice, thereby binding the agent within his own decision.

Deontic modality, for Ockham, is conditional. Volitional deliberation implies, before the object and the pursued model of action, a derivative set of contingent effects capable of affecting the existential sphere of the agent, normatively impelling him toward something or some relation⁴². The will therefore plays an active role. Normativity does not arise from any necessitarianism concerning final causality, as suggested by the Thomistic notion of *beatitudo*, but is grounded in the contingency of choice. A subject's will may conform itself to divine will, but it may also choose an alternative path, and even this occurs through free decision. This does not imply that divine power does not somehow concur in the contingent realization of action. Rather, the human will preserves autonomy with respect to external determination, which participates in the circumstance of the agent only through the agent's own volitional decision⁴³.

As is well known, the doctrine of human acts requires a primary distinction among the elements constituting an act: (i) objects, (ii) circumstances, and (iii) states of affairs. This constitutes an authentic moral science of future contingents, since directly voluntary acts (*per se*) presuppose convergence among these three elements, whereas indirectly voluntary acts (*per accidens*) arise through some additional condition involving contingent rather than necessary relations between causes and effects. The conditions

42 OCKHAM. *Ordinatio* I, d. 1, q. 6 *Opera Theologica*, 1.504–5.

43 OSBORNE JR, Thomas M. *Human Action in Thomas Aquinas, John Duns Scotus and William of Ockham*. Op.Cit., p. 56.

for realizing an act are satisfied when the expected effects are present after practical reasoning converges with the concrete realization of action within praxis. Contingency remains because the act itself, expressed in future tense — for example, A will build a machine next week — indicates a contingent fact that may or may not occur. One cannot know whether the proposition is true or false. The proposition concerns a contingent future event dependent upon the deliberation of a free agent. Medieval thinkers commonly referred to this type of proposition as *ad utrumlibet*.

Thus discussions concerning deontic consequences require clarification of the logical and epistemic status of the will within implications. In a conditional form $x \rightarrow y$, in which w wills x and therefore wills y, what does this “willing” signify logically? Is the transition to “w wills y” in the consequent valid?

The placement of a faculty of the soul within logic introduces difficulties unknown to the thinkers of the *logica antiquorum*, requiring a more extensive analysis than classical alethic modalities alone permit. The amplification of terms, the extensionality of new modal operators, and a developed treatment of implication and syllogism become indispensable.

What is the nature of the will within logic? What are the extensional limits for modal operators when freedom and the future contingency of human acts are considered? May one validly suppose that if w wills the antecedent of a conditional, the consequent will also necessarily be desired through effective will?

According to Hallamaa’s diagnosis, the demand for answers to these questions compelled fourteenth-century logicians to refine the treatment previously offered by Abelard, since in this new conception the way a rational agent would desire a consequent through efficient willing in ideal situations—or reject it in others—emerges as a relevant notion for confronting logical-semantic questions. These exceptionalities also relate to modal implications arising in deontic situations qualified by obligatory and prohibitive modalities.

The theme of will is not confined to the deliberative domain of future contingents. It also plays a decisive role within conditional obligations, particularly because it forces us to confront alternative and simultaneous states of affairs within a single act in the present time. The deontic qualification required for addressing these issues may be regarded as the antechamber to the developments that later led Rogerius Rosetus to apply deontic modalities within modal concepts and theological difficulties concerning the divine will.

We may, therefore, envisage modal extensions and deontic sentences in which (i) the will, (ii) possibility, and (iii) normative determination converge within simultaneous acts and states of affairs, such that willing, the possibility of realizing an action (whether impediments natural or artificial exist), and ideal states of affairs resulting from obligation (O: realization of determination), prohibition (F: normative impediment), or permission (P: facultative action) are all postulated as modal extensions.

WILL	ALETHIC MODALITY	DEONTIC MODE	DEONTIC EXTENSION
Wants x	Can x	Px	$\neg O-x \equiv \neg Fx$
Wants x	Cannot x	Fx	$O-x \equiv \neg Px$
Does not want x	Can x	Px	$\neg O-x \equiv \neg Fx$
Does not want x	Cannot x	Fx	$O-x \equiv \neg Px$

As can be seen, deontic modality follows from a capacity or incapacity, independently of the agent's will. The will performs a logical function only when it can alter the truth-value of the normative determination, as in Ockham's conditional, in which the will that chooses one means while excluding others will have as its consequent a deontic conditional necessarily derived from the antecedent choice. Of the form:

If W willed d in a circumstance y, then z will follow as a consequence, such that

*YWr $d \rightarrow \Box Ywrz$, so that if z is a deontic consequence of type O, then

*Ywr $d \rightarrow \Box YOwrz$

In this case, given that d implies deontic conditionals, we then have some examples:

WILL	ALETHIC MODALITY	DEONTIC MODE	DEONTIC EXTENSION
Wants d	z is contingent	$d \rightarrow Oz$	$d \rightarrow F-z$
Wants g	s is contingent	$g \rightarrow Ps$	$g \rightarrow -Fs$
Does not want t	l is contingent	$l \rightarrow Fv$	$l \rightarrow O-v$

In these conditional examples, we observe certain deontic reactions to the motions of the will and to contingent states of action, such that the choice of a means implies the contingent actualization of an act, which in turn entails deontic consequences.

How will Rogerius Rosetus deal with these notions? Is it possible to speak of normative logic in the fourteenth century?

Could someone, in violation of his own will and conscience, nevertheless, be obliged to act by virtue of some commandment? The Oxonian Calculators dealt with questions involving modal domains in matters of *physica* by employing notions of intensity, with *minimum* and *maximum* degrees, extending this gradation to the fields of *ethica* and *logica*, especially when the problems revolved around volitional acts.

How can a proposition constructed with the expression *voluntas* be susceptible to *conversio* when, within the framework of the classical modal syllogism, we employ the possible or contingent operator? Of the type $\Diamond x \rightarrow \Box y \vee \neg \Box x \rightarrow x \vee \Diamond x \rightarrow \neg \neg \Box x$?

By establishing the *conversio* of the modal operator and the subsequent substitution, may we assume that if *x* is desired, then its consequence will assume the same conditions possessed by conditional consequents in the traditional syllogism?

It seems difficult to justify this conversion without recourse to conditional modality. In fact, deliberation demands a logical solution capable of semantically encompassing the moral dilemma. And the path toward this lies in the insertion of the will into the modal syllogism and implication.

The decision concerning the object implies a consequence. Hence, a consequence results in a sphere of application of the rule relative to divine law. The binding of the normative determination to the conditional hypothesis requires: (i) the prior deliberation of the will concerning the conditional antecedent; (ii) the extension of the modal argument into the deontic field; (iii) the logical conversion of the alethic mode into a deontic mode; (iv) the determination of the deontic operator over the consequent.

To this end, there are three ways of conceiving the deontic sentence within conditional modality: 1) to have the obligation to...; 2) to be obliged to...; 3) it is obligatory that...

In case 1), we have what contemporary deontic logic calls the insular conception, which occurs when the deontic operator is present both in the antecedent and in the consequent, pervading the entire conditional statement. Thus, “to have the obligation to” means that there is a prior norm applying to a given sphere, and that it will subsequently fall to the decision-maker to evaluate whether the situation under examination falls within this sphere of application, so that the hypothesis may then be decided on the basis of the obligation. This is the case of an insular obligation⁴⁴, since the normative determination radiates both to the antecedent and to the consequent.

44 ACHOURRON, Carlos y Bulygin, Eugenio. *Análisis Logico y Derecho*. 1ª ed. Madrid: Centro de

In case 2), by contrast, currently called the bridge conception, the antecedent is qualified by a descriptive statement of a situation in which an agent “is obliged to act or refrain from acting with respect to a given objective,” and only afterward is the application of a possible conditional normative determination ascertained. In this case, the antecedent is factual and the consequent normative. This appears to be the case of conditional modality according to Ockham. The will, antecedent to the determination of the rule, is fundamental so that, after the decision concerning the means, the applicability of the rule may then be examined.

In case 3), the deontic operator is expressed at the beginning of the statement, performing a logical-truth-functional role of describing consistent deontic worlds, in which certain relations among hypothetical agents in ideal normative situations fill the referential field of the normative proposition. If the demands of deontic semantics presuppose that, within deontic worlds, descriptions may express with truth-value the relations required for the truth of a proposition of this kind, then the previously mentioned conceptions will present advantages and disadvantages when we test the dependence or independence of deontic logic vis-à-vis modal logic.

It seems that case 2), by reason of the conditional structure presented, appears to have been the most common among the Oxford logicians of the fourteenth century, since the factual antecedent dependent upon volitional deliberation concerning the means admits substitution by traditional alethic operators, such as possibility, contingency, and necessity, thereby positing a structure of modal argumentation in which alethic modes function as antecedents of deontic consequents. In short, deontic logic here would be an extension of modal logic, which does not necessarily occur in case 1).

estudios constitucionales, 1991, p. 25 e ss.

Was the act prescribed by the rule carried out? To what extent? Does the description expressing the human act restrict itself to what in fact occurred, or does it expand beyond semantic limits?

Rogerus Rosetus and the deontic mode: a normative logic in the fourteenth century?

Rogerus Rosetus was very likely the first Scholastic author to deal with theological problems based on the internal dilemmas of deontic logic, a branch of modal logic concerned with deontic worlds and normative operators. The subject is addressed in the *Lecturae super Sententiis* quaestiones 1 articulus 1. Usque ad v. potest numquam tamen descendet infinita tarditate typis editus est tamquam art. 1 quaest. 1 Determinationum, or simply *Lectura super Sententias*, Commentaries on Peter Lombard's Book of Sentences, dated approximately between 1335–1337. In its complete form, the *Lecturae* are preserved in three manuscripts: (1) Biblioteca Comunale di Assisi, 173 – fols. 1r–61r, the manuscript consulted in this article; (2) Stadsbibliotheek of Bruges, 192, fols. 1r–44v; (3) Biblioteca Apostolica Vaticana, Vat. Lat. 1108 fols. 45r–52, 96r–102v, also consulted here and only partially available in the Vatican Library digital collection⁴⁵. Questions 3, 4, and 5, edited by Olli Hallamaa, were transcribed and published in a 2005 edition released in Helsinki by Luther Agricola Publishers. This latter edition is likewise consulted for the purposes of the present article.

Around these questions orbit theological discussions concerning divine power, the will, free choice, the normativity of conscience and action, as well as variations within the system of divine laws. Taken as a whole, Rosetus investigates the conditions under which someone could be obliged to something even while consciously opposed to doing it. This requires an examination of the theory of norms and of the way deontic operators

45 Biblioteca Vaticana, R.G.Teol.IV.9052.

are employed in dealing with logically modalized situations. Already in the fourteenth century, questions of natural philosophy (*physica*) were receiving analyses whose argumentative scope included logical and mathematical models employed in the treatment of specific problems. Knuuttila emphasizes that, in the analysis of the first question of the Commentaries, Rosetus confronts the application of the *maximo et minimo* formula not only to natural questions, but also to questions concerning human acts, that is, to the performance of agency. The problem of human acts from a logically conditional standpoint must contain the idea that an act may be qualified by a norm, by a duty; the determination of its deontic status demands an answer concerning the intentionality of the agent⁴⁶.

Thus, a human act would be measured, according to objective logical standards, by the way it is assimilated within the semantic world corresponding to the deontic operators *obligatum*, *licitum*, and *illicitum*. For the sake of convenience, we shall use the variables O, P, and F to designate the operators.

Since God is the sovereign authority to decide, according to His Will, that the determinations of the law established by Him are imperative, Rosetus maintains that, in addition to those already promulgated, He could institute and promulgate new laws or even modify laws previously established. This manner of understanding divine legislative power leads to the problem of the stability of rules. If God can modify the rules, one must ask: under what justification? Given that God is absolute, simple, perfect, and immutable, are all laws promulgated by Him likewise immutable? Or could He revoke them? If He can revoke them with justification, under what conditions?

The entire dilemma concerning the logic of norms within the Commentary on the Sentences revolves around four major problems: first,

46 HALLAMAA, Olli and KNUUTTILA, Simo. *Roger Roseth and Medieval Deontic Logic*, in *Logique & Analyse* 149 (1995), 75-87, acessível em <https://www.jstor.org/stable/44084460>.

discerning what is obligatory, prohibited, and permitted according to divine law; second, determining when the agent may act freely in conformity with divine law; third, establishing when the free will of the human agent is a condition for the selection of the divine precept to be applied; and finally, determining when the human act is a condition not only for selection, but also for the addition of new precepts as further determinations, whether or not modifying the conditions of effectiveness of the corresponding precepts. At bottom, there subsists a deontic sphere between the will of the human agent and the divine will. The ground of free actions is judged according to the divine precepts. Although the agent voluntarily brings about and establishes the state of affairs, it is the subsequent normative qualification that constitutes the motive and rationale for fulfilling or violating the obligation.

Thus, between the rule and the action there exists a conditional space. The rule is brought forth only through the irruption of the human act. Here, there is a conditional relation: the agent acts and, by reason of his action, the rule is applied. Yet the problem remains. Could God modify or even revoke His laws by reason of a new condition?

To address the tension between human will and the absolute divine power expressed through divine laws, Rosetus establishes a complex scheme for validating rules subsequently added within the legal ordering of divine precepts⁴⁷. Knuuttila⁴⁸ explains with considerable clarity the well-known five axiomatic rules that introduce rational requirements for the new norms of the normative system, from which proceed the conditions for the formal and material validity of human acts according to the divine precepts:

47 ROSETUS, Rogerius. *Lectura super sententias*, q. 1, a.1. Manuscrito acessível no link: http://www.internetculturale.it/it/16/search/detail?instance=&case=&id=oai%3Awww.internetculturale.sbn.it/%2FTeca%3A20%3ANT0000%3APG0213_ms.173&q=lectura+super+sententias

48 KNUUTTILA, Simo. *Modalities in Medieval Philosophy*. Op.cit, p. 190.

- I. Every precept by which I am obligated to something permitted which is in my power and which I am allowed to will according to the divine law without any precept is a rational precept according to the divine law.
- II. No such precept is rational according to the divine law, by which I am obligated to something permitted which I cannot will in a permitted way according to the divine law except when I am so obligated.
- III. Not everything which is not against the salvation of the soul can be prescribed according to the divine law (The second ‘not’ is mistakenly missing from the manuscript I have used).
- IV. Not everything which is for the salvation of the soul can be prescribed according to the divine law.
- V. Whatever is permitted in the second way can, by the absolute power of God (*De potentia Dei absoluta*), become something which can be willed in a permitted way⁴⁹.

This list of axioms⁵⁰ appears at the very beginning of the first question of the *Lectura*, already in the first article. Here, Rosetus develops at length a wide range of properties of terms belonging to normative sentences within conditional modalities, especially rules that imply restrictions upon the effective will of a human agent in relation to the determinations of divine precepts, as well as the manner in which the exercise of contingent will may appear as the conditional antecedent for the realization of the precept within an act of agency. For any judgment whatsoever to apply to human acts, it is fundamental that the agent be capable either of acting or of refraining from acting, without which no evaluation concerning the exercise of the will can reach him. It is

49 ROSETUS, Rogerius. *Lectura super sententias*, q. 1, a.1. Manuscrito acessível no link: http://www.internetculturale.it/it/16/search/detail?instance=&case=&id=oai%3Awww.internetculturale.sbn.it%2FTeca%3A20%3ANT0000%3APG0213_ms.173&qt=lectura+super+sententias

50 KNUUTTILA, Simo. *Modalities in Medieval Philosophy*. Op.cit, p. 190.

necessary that the realization of the act subjected to positive or negative evaluation lie within the agent's power of decision.

In the first two rules, we note that an obligatory precept implying an action that is not prohibited and that is not subject to the dominion of some contrary law will be rational according to divine law; likewise, the contrary situation holds, namely, that a precept will not be rational according to divine law when it obliges one toward something that one could not desire without thereby violating the said law. At bottom, both axioms express rules concerning antinomies, akin to solutions for conflicts of norms within a positive legal system. The objective here is to provide consistency to the body of divine precepts, trimming contradictions and eventual incongruities between the will of the agent and the divine will through the employment of deontic modalities capable of extending modal scope into the field of human conduct. An agent cannot behave simultaneously in a manner contrary to and in conformity with the law. The system contains no gaps. Thus, every human behavior may be classified within deontic modes.

Conducts conforming to rules cannot be adequately understood when the norms within the system themselves contain contradictions. Thus, an agent cannot act simultaneously in violation of and in conformity with the normative system, since the norms of the system cannot, on pain of the normative order losing its formal rationality, contain contradictions among themselves⁵¹.

An obligation instituted by a new norm [a precept instituted by God] cannot impose either an obligation to act or an obligation to refrain from acting that contradicts a rational determination already present within the normative system. The commissions or abstentions determined

51 ROSETUS, Rogerius. *Lectura super sententias*, q. 1, a.1. Manuscrito acessível no link: http://www.internetculturale.it/it/16/search/detail?instance=&case=&id=oai%3Awww.internetculturale.sbn.it%2FTeca%3A20%3ANT0000%3APG0213_ms.173&q=lectura+super+sententias

by new precepts must already have been foreseen by prior rules as rationally admissible forms of conduct or omission, ascertainable within the corresponding semantic worlds. The determinations were already indicated by right reason, yet they receive an additional confirmation that renders them express precepts within the system. Rosetus thus anticipates by centuries what the classical theorists of legal positivism and the sources of modern law would later formulate as rules for the resolution of antinomies⁵².

A second point derived from the rules established by Rosetus lies in separating normative content from the will. There are forms of conduct that are permitted, yet it is not licit for the agent to desire them. The prohibition directed toward the will does not accompany the permission inherent in the description of the deontic world semantically designated by the rule. The prescribed action is permitted. Yet it is forbidden to move the volitional power in that direction. Because it cannot be licitly desired, it cannot reside within the normative system, on pain of admitting the possibility that opposites coexist within the system. Following Ockham, Rosetus also absorbs the notion of a will free toward opposites, but without compromising the normative system. The will and its prohibition constitute primary criteria: the impediment of the will entails exclusion from the system, even when the act itself is not prohibited⁵³.

Just as the will emerges as a criterion for the conditionality of prohibition and permission, so too the effective will of the agent — Ockham's potency toward opposites — is a criterion for the realization of obligation. The completeness of the precept requires the participation

52 RAZ, Joseph. *The Concept of a Legal System*. Oxford: Clarendon Press, 1970.

53 ROSETUS, Rogerius. *Lectura super sententias*, q. 1, a.1. Manuscrito acessível no link: http://www.internetculturale.it/it/16/search/detail?instance=&case=&id=oai%3Awww.internetculturale.sbn.it%2FTeca%3A20%3ANT0000%3APG0213_ms.173&q=lectura+super+sententias

of the will within the conditional modality: willing implies conformity to the rule.

What is desirable is compatible with the intelligible object. For Rose-tus, the motion of the will toward the content of the normative precept establishes an adequation between the human act and the deontically consistent world, between right reason concerning action (*recta ratio agibilium*) and normatively modelled agency. Within the same extensional sequence, axioms (iii) and (iv) maintain that the range of prohibitions extends beyond the precepts positively present in divine law, as well as beyond the determinations (obligations) corresponding to the plan of salvation according to medieval Christian doctrine, as Hallamaa observes⁵⁴. Thus, deontic modes reach semantic worlds and states of affairs alternative to those already designated by established normative statements, encompassing numerous additional acts and abstentions. Certainly, underlying this are the determinations of natural and civil law, indispensable for the qualification of human action. At bottom, the application of the rules of *consequentiae* usual in categorical and modal logic to primitive deontic logic introduces numerous demands for qualification, capable of validating the substitution of variables, as well as substitutions between alethic modal operators and normative operators.

The intermediate space between God's absolute power to modify the conditions of application of the law, or even to revoke certain rules in favour of new ones — as occurred between Mosaic law and Evangelical law in the Christian tradition — presupposes a mediating sphere between the will of God and the participation of the human act in the consummation of the application of divine law. The law is applied

54 HALLAMAA, Olli and KNUUTTILA, Simo. *Roger Roseth and Medieval Deontic Logic*, in *Logique & Analyse* 149 (1995), 75-87, acessível em <https://www.jstor.org/stable/44084460>.

because the agent has provided the cause. Human freedom, manifested in the decision regarding the mode of action, establishes a new situation: namely, that the rule, to be applied, presupposes a condition of applicability. A justification for its application. Divine power here is legislative power: God legislates to determine that certain acts be performed and others prohibited. Yet it is the agent who, by performing a certain act, establishes a new factual condition: namely, that the law applies either to conform the human act or to condemn it.

The agent possesses the relative power to assent or not assent to divine law. Absolute divine power establishes obligations, prohibitions, and permissions. If licitly desired by the agent, normative determinations conform themselves to the act. If not desired, yet nevertheless fulfilled, there is partial assent, though certain rules will still be violated, especially those requiring rectitude and assent of conscience for their fulfillment. This is the case with determinations concerning conduct that challenges right conscience. The theological notions of sin provide examples in which rules of this sort may be violated by the agent solely on grounds of conscience, even though none of the agent's acts outwardly reveal opposition to the letter of the law. This paradigmatic example shows that the power to conform oneself to the rule lies largely within the care of the human agent himself. The notions of natural law and right conscience are predicates of moral theology that seek to provide mediating reasons for the contrast between divine power and human freedom. The agent is therefore also responsible for completing the meaning of obligation — when he performs an obligatory act — and the meaning of prohibition — when he abstains from performing a prohibited act.

In this sense, the human agent may be viewed within two scenarios, each with three distinct specifications of its own. The scenarios correspond to the deontic operators of obligation and prohibition. The three specifications suggest a distinction between “having an obligation”

and “being or standing under an obligation to...,” which encompasses two specific situations: “being obliged to...” and “obligating oneself to...” Thus, we would have three specifications: (i) having an obligation or prohibition...; (ii) being obliged or forbidden to...; (iii) obligating oneself or forbidding oneself to....

The general distinction between “having an obligation” and “being or standing under an obligation to” can only be properly diagnosed through examination of the use of these expressions and their terminological combinations within alternative semantic contexts.

Rosetus did not make this diagnosis explicitly. Nevertheless, his multiple approaches to conditional deontic modalities, especially in the first articles of Question 1 of the *Lectura*, suggest that underlying his investigation there resides a deep, dense, and implicit level of signification concerning deontic expressions related to the *lex statuta Dei*. Thus, “having an obligation” appears as part of a deontic sentence that denotes a distinct field of reference in relation to the expression “being obliged to.” In fact, “having an obligation” leads to a conditional determination. That is, within the conditional antecedent there is a deontic operator that projects its normative effects upon the consequent. In the second case [being obliged to], the antecedent is qualified by a factual description in which someone is obliged to act or refrain from acting through coercion, threat, or an imperative command, but this only appears in the consequent. There is an action or abstention that is described. This action or omission is expressed as such, even though motivated by coercion, threat, or a determination intended to move the addressee. The agent is obliged to obey and thus acts or abstains by virtue of the command. Yet the manifestation of the command appears only in the consequent. The description of the action precedes the normative consequence.

In the first case, in which “having an obligation” corresponds to the combination of the verb “to have” with the expression “obligation,”

there is a general model of normative signification. For this reason, the universality of the deontic condition implies the insertion of the normative operator into the conditional antecedent, since the determination precedes any factual or hypothetical situation in which the addressee-agent may find himself.

Scenario I: Obligation

Let us consider a first scenario in which divine law imposes an Obligation on the agent. The obligation can be expressed in three ways: the agent (i) has the obligation to...; (ii) is obliged to...; (iii) obligates himself to... .

The agent (i) has the obligation to do something when there is a prior norm that obliges him to perform a determinate action, under penalty of suffering consequences. In this first case, the norm precedes the action and, thus, there is no conditional modality opposing the obligation. The rule precedes the agent, constraining him to act in a given x-way.

$$Ox \rightarrow x$$

The agent (ii) will be obliged to perform an action when, due to a circumstance of his behavior, he instantiates a new condition in which he assumes the obligation to perform an act in order to satisfy an extemporaneous requirement. This is the case of someone who, due to a procedural error, is obliged to repair it.

$$x \rightarrow Oy$$

The agent (iii) obligates himself to perform an act when, by his own decision, he places himself within the scope of application of the rule, binding himself to a future act that will satisfy the requirement thus absorbed.

$$(x \rightarrow y) \equiv Ox \equiv Ox \rightarrow Oy$$

In the first case, there is no participation of the agent in the choice regarding the obligation. The deontic mode is imperative and admits no exceptions. The agent is bound by a condition that is independent of his will.

In the second and third cases, the agent participates in the formulation of the obligation. Humans will occupy a space in the determination of the rule. The completion of the obligation presupposes the participation of the human agent, who, by deciding, instantiates a new situation. Examples of these two types are quite common in contexts involving cases of right conscience, natural law, and acts of piety and charity.

Scenario 2: Prohibition

Prohibition can also be expressed in the three modes already seen above: (i) to have a prohibition against...; (ii) to be prohibited from...; (iii) to prohibit oneself from...

In the first case, the agent (i) has a prohibition that prevents him from acting in a given way, determined by a prior rule. If obligation constrains action, prohibition determines inaction. Either because any movement could distort the order, or because transgression could lead the agent to self-destruction.

In cases (ii) and (iii), the agent decides to bring about the prohibition, through an act of decision that instantiates a new situation. The prohibited operator is subsequent. It results in a new condition, a new path, opened by the encounter between divine power and human freedom.

In cases (ii) and (iii), both in obligation and in prohibition, there is a conditional modal relation: insofar as the agent decides to act in an x-way, the normative operator subsequently arises to constrain him to act or to prevent him from acting.

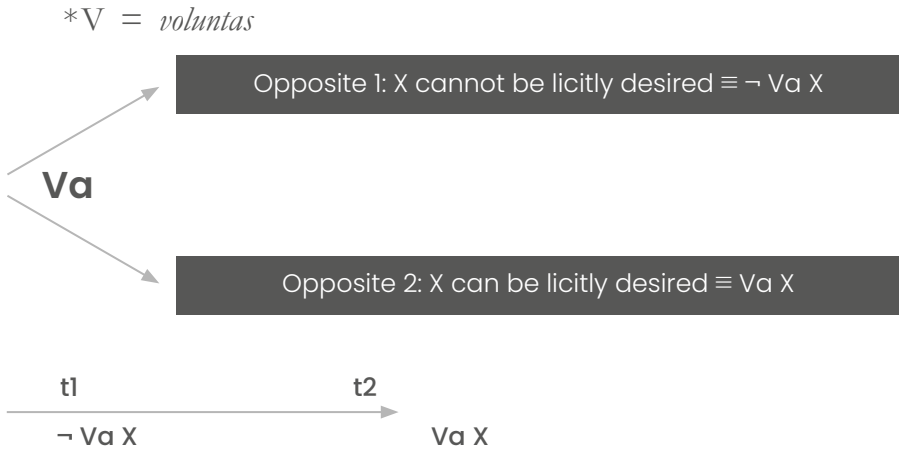
5th axiom of Rogerius Rosetu's normative system

But the central point that concerns us here is the one stated in the fifth axiom: “whatever is permitted in the second way can, by the absolute power of God (*De potentia Dei absoluta*), become something which can be willed in a permitted way.” In this fifth rule, we have a derivation of what was already present in the previous axioms. A conduct or omission that is permitted, but which cannot be licitly desired, becomes licitly desirable through a new divine determination that institutes a new normative situation.

What is meant by this second way? If human beings can, according to their own will, change the direction of their own acts and still remain under the protection of divine law—sometimes because the action is permitted, sometimes because it is obligatory—one may ask: can God's absolute power, given a law He has established, modify its pattern of effectiveness? That is, can a law that establishes an act as lawful, but which could not be licitly desired, be modified by God so that it also becomes licitly desirable? Can God change the licitness of the agent's intention with respect to an act that has always been lawful? Can an action whose will was previously forbidden become permitted by divine law?

In this situation, we are faced with an exceptional case in which the agent wills and decides to pursue something that is lawful, but not lawful for him in his condition. Could God then revoke this prohibition and render the act permitted?

The key to the answer appears clearly in the *Lectura* and goes back to the notion of succession treated by Ockham in the solution of future contingents. To will something differs, in principle, from willing the consequences of something. Thus, in temporal diachrony, the will toward opposites can have as its effect unlawfulness at time t_1 and lawfulness at time t_2 , where...



The contingency of the will is rooted in the present time, but its corresponding effects conform to the determinations of divine precepts within temporal succession, such that a prohibition against desiring x at $t1$ may be altered so that at $t2$ the desire becomes permitted. This permission must already be present in divine law. However, in the current condition, it becomes expressed as an explicit normative effect within the system of norms.

$$*t1 \equiv FVaX \wedge \neg PVaX$$

$$*t2 \equiv PVaX \vee PVa\neg X$$

Based on the synchronic conception of contingent will and the diachronic conception of temporal modality, it seems that the path toward a positive answer regarding the juridical recognition of the subsequent alterity of the rule would lie in situating the prohibition in question within cases (ii) and (iii) previously outlined in Scenario 2.

Certainly, per se prohibitions, typical of case (i), are extensive to the whole of humankind independently of the agent's condition. However, in certain situations, especially in conditional contexts where the agent's decision-making power is a criterion for the determination of the rule,

Rosetus holds that the value of the act that revokes the prohibition is supported by divine law, since this new legal option is also present as a rule-conforming alternative. In other words, the new condition that revokes the prohibition is also licit, because if the agent's condition is a criterion for modifying the determination, then a subsequent condition that institutes a new state of affairs will reconfigure the incidence of the law upon the agent's condition. In these cases, the revocation of the determination is grounded in divine law.

This is because the situations described in (ii) and (iii), unlike those in (i), presuppose that deontic worlds designated by normative sentences are not previously determined as rules *tout court*, but are subsequently brought about by a decision of the human agent himself⁵⁵. The agent, given a new condition, also sees the effects of his free will requiring a further modification, which institutes a new optimal condition for the realization of an act according to the *lex statuta Dei*.

In the *Lectura*, Rosetus seems to presuppose two levels of realization of divine determinations (*De potentia Dei absoluta*): a total level, corresponding to cases (i), in which the human agent can only conform to a previously determined rule, either by fulfilling an obligation or by refraining from a prohibited act; a partial level, in which the divine rule is determined sub conditione, since the human agent is granted the freedom to participate in the formulation of the normative act, whereby the conscious or unconscious decision of the agent institutes a new condition, requiring a further deontic treatment that conforms to the rule posited by God. This second level encompasses cases (ii) and (iii).

It should be noted that in this second type, in which conditional modality appears with full clarity, a *de dicto* deontic sentence may designate

55 ALCHOURRÓN, Carlos E. (1993) "Philosophical Foundations of Deontic Logic and the Logic of Defeasible Conditionals", en Meyer, J.J. and Wieringa, R.J. (ed.), *Deontic Logic in Computer Science: Normative System Specification*, pp. 43-84, Wiley & Sons, 1993.

a variety of semantically derived and simultaneously licit states of affairs. A single general determination may, under a condition introduced by a human act, result either in an obligation or in a prohibition, depending on the circumstance in which the agent finds himself. A deontic operator may be realized, under different conditions, in alternative worlds.

Acts prescribed by divine law cannot undergo modification unless the normative system itself specifies the conditions and exceptions under which a revoking act will hold, as is the case in the law of sacrifices present in the Decalogue. In non-specified situations, or those arising from conditional deontic modality, licitness depends on a present judgment regarding the future contingency of the involved possibilities.

The fulfillment of a rule cannot allow other rules of the normative system to be violated, nor can it allow the general content of the rule upon which the condition is based to be violated. The recognition of the revocation of a previous condition and the assent to a new condition must not violate either the rules of type (i), applicable to cases (i), nor the general matrix of rules of type (ii), applicable to cases (ii) and (iii).

Moreover, the satisfaction condition for the revocation of the antecedent condition is subject to the requirements of practical rationality of natural law and right conscience. Rosetius presents a careful system of deontic conditionals for revocatory acts.

The situation in which the antecedent condition establishes a permission to act, and the consequent expresses a prohibition, but which becomes permitted in virtue of the antecedent, entails—as we have seen—a new rule. For example: someone may freely walk in a park and, if threatened with death, may act in self-defence even if this results in the death of the aggressor. The consequent — “to kill the aggressor”—is a prohibited act, but in virtue of the conditional antecedent, namely the fact that the victim has no other means to defend himself than self-defence resulting in the aggressor’s death, the consequent becomes permitted in this case.

Cases of this kind, in which obligations, permissions, and prohibitions are simultaneously present in the consequent but only one of these operators is validly selected in virtue of the conditional antecedent, are present in Rosetu's treatment of conditional modality. The rationality of new rules and precepts will be extensively analysed from the second article of Question 1 onward⁵⁶.

Conclusion

Many other deontic hypotheses and situations appear within Rosetu's *Lectura*. However, it seems that the solution to the underlying semantic problems of conditional deontic modalities requires a prior distinction between cases belonging to model (i), in which the normative operator precedes the case, and cases belonging to models (ii) and (iii), in which the deontic operator and the consequent normative determination arise only after an action or omission by the agent that results, sub conditione, in a further regulation.

There is a deep connection between Ockham's treatment of conditional modality in his conception of freedom and the treatment of deontic conditionals offered by Rosetus, as we have seen. Nevertheless, Rosetus provides a more exhaustive development of the issues and articles in the *Lectura* concerning the properties of terms in deontic sentences characterized by conditional de dicto modalities, especially when compared with Ockham and other contemporaries from Oxford and Paris.

56 ROSETUS, Rogerius. *Lectura super sententias*, q. 1, a.2. Manuscrito acessível no link: http://www.internetculturale.it/it/16/search/detail?instance=&case=&id=oai%3Awww.internetculturale.sbn.it%2FTeca%3A20%3ANT0000%3APG0213_ms.173&q=lectura+super+sententias

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