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ON THE OUGHT-TO-DO NATURE OF DEONTIC MODALITY

1. Introduction

The common philosophical distinction between *ought-to-do* and *ought-to-be* deontic sentences has frequently been employed in linguistic analyses to account for syntactic derivations and semantic interpretations of sentences containing modal verbs (Bhatt 1999, Brennan 1993, Butler 2003, Hacquard 2006). While in philosophy the term 'deontic' is used mainly as an attribute of practical reason, specifically, that which is concerned with moral, ethical, legal, and various other social norms, the use of the attribute 'deontic' in linguistics is aimed at one of the several subtypes of the linguistic category modality, that which is concerned with "necessity and possibility of acts performed by morally responsible agents" (Lyons 1977: 823). Whatever the primary interest in their approach to deontic statements is, both philosophers and linguists agree in that the central concepts covered by the term 'deontic' include obligations, permissions, and prohibitions. In the broadest use of the terms in linguistics, *ought-to-do* (and by extension *allowed-to-do*) deontic sentences are thus used to express obligations/permissions that are explicitly ascribed to individuals, as in the example (1a), whereas the *ought-to-be* (and by extension *allowed-to-be*) type of deontic statements are associated with structures in which no overt bearer of obligation/permission exists (1b):

- (1) a. You {*ought to/must/should/may*} feed the animals.
- b. There {*ought to/must/should/may*} be no hungry animals.

From the philosophical perspective, (1a) falls under the category of deontic sentences that involve agents and actions, support imperatives, and express reasoning about actual behaviour, while (1b) belongs to statements that are agentless, involve states of affairs, have nothing to do with imperatives, and express reasoning about an ideal or desired state of affairs (*cf.* Castañeda 1970: 452). On the linguistic view, originally introduced and advocated by Brennan (1993), the *ought-to-do* (1a)

is equivalent to a control structure in which the modal verb functions as a modal predicate (i.e. dyadic operator) denoting a relation between a property and an individual term, as presented in (2a), whereas the *ought-to-be* (1b) is attributed a raising structure as the modal is a monadic VP-operator denoting sets of properties, as shown in (2b):¹

- (2) a. $\lambda P \lambda x (\text{modal } (\wedge P)(x))$
 b. $\lambda P (\text{modal } (\wedge P))$ (Brennan 1993: 148)

There are two properties of *oughts* as defined above that I find most appealing and useful for the analysis of deontic modality. First, the language of obligation and permission is seen as mirroring practical reason of the type underlying *desire-* or *intention-*sentences, which, as is known from the philosophy of mind, is in contrast with theoretical reason implicated in *belief-*sentences. Second, deontic modals are viewed not as sentential/propositional operators, the approach standardly assumed in the majority of work on modality in the Kratzerian tradition (Kratzer 1981, 1991), but as VP-operators that, as seen in (2) above, operate on properties. The two aspects of *oughts* are, however, inextricable, and analysing one without referring to the other would prevent us from fully grasping the way obligations and permissions are conceptualised and expressed in natural language. It is the aim of this paper to propose a semantic-conceptual structure of obligation and permission sentences with modal verbs by employing the two properties of *oughts* as outlined above. In so doing, I will keep with the philosophical tradition in which *ought-to-do* and *ought-to-be* are given a different conceptual status, and argue that obligations and permissions have a semantic representation of the *ought-to-do* type, although syntactically they can take either the *ought-to-do* or *ought-to-be* disguise.

The paper is organised as follows. In Section 2, I discuss theoretical and practical reason in relation to complements of epistemic and deontic modal verbs in English and Serbian. On the basis of the evidence supporting a difference in the semantic and ontological status of complements to epistemic and deontic modals, a semantic-conceptual structure of deontic sentences is proposed in Section 3 and its implications are discussed and related to the two *oughts*. Section 4 contains concluding remarks on the position advanced throughout the paper.

1 For reasons of simplicity, I will use the term *ought* even when I refer to the two *alloweds*.

2. Reasoning and Complements to Modals

2.1. Theoretical and Practical Reason

That theoretical reason, which is implicated in beliefs and doubts, is reasoning about propositions, as it is concerned with what is the case in the world, whereas practical reason, which underlies desires, needs, promises, obligations, etc., is reasoning about actions, as it is concerned with what we would like the world to be or what we are to do in the world, is well established in philosophical literature. How the two types of reasoning are related not only to the world but to language as well, is discussed by Searle (1979, 1983, 2001, 2005) in terms of the familiar notions of conditions of satisfaction and direction of fit from his theory of speech acts (Searle 1969).

In bare outline, what accounts for the difference between theoretical and practical reason and, consequently, the manner of their expression in language is which direction of fit is established between the mind and the world. Thus, according to Searle, beliefs have *the downward mind-to-world/word-to-world* direction of fit, while desires or obligations are characterised by *the upward world-to-mind/world-to-word* direction of fit. The spatial metaphor that Searle uses is highly illustrative in that it depicts the perspective that the agent takes with respect to a state of affairs reasoned about: in theoretical reason, the agent looks at a state of affairs in the world from above and sees it as already settled, in practical reason he/she looks at the world from below and sees a state of affairs that is as yet to be settled. As a consequence, beliefs are said to be true or false depending on whether the propositional content of beliefs matches the actual world or not. In contrast, desires or obligations are neither true nor false, as the world has as yet to end up matching the content of the desire or obligation.

Having in mind that epistemic modality expresses necessity or possibility relative to some state of knowledge or beliefs, and deontic modality is concerned with acts that are necessary or possible relative to some normative system, the relatedness of epistemic and deontic modality with theoretical and practical reason, respectively, is straightforward. How much this distinction is applicable to its verbal manifestation in modal sentences is best appreciated if the focus of study is shifted from the perennial question of the lexical semantics of modals onto the semantics of their complements. As in modal sentences complements to modals stand for the content of epistemic and deontic states, it stands to reason that whatever is typical of the content as represented under a particular state should be traceable in the linguistic manifestation of that

content. In what follows, the basic properties of modalised complements are discussed.

2.2. *Properties of Complements to Modals*

First, that epistemic modals have propositional VP complements while deontics 'select' non-propositional VP arguments can easily be checked if the standard tests for propositionhood (Thomason and Stalnaker 1973) are deployed. The sentence in (3) is ambiguous between an epistemic and deontic reading but it is under epistemically (4-5) and not deontically (6-7) interpreted modals that the complement can be prefixed by *true* or *proposition*:

- (3) John may/must be in his office.
- (4) a. It is possibly *true* that John is in his office.
b. It is necessarily *true* that John is in his office.
- (5) a. The *proposition* that John is in his office is possibly *true*.
b. The *proposition* that John is in his office is necessarily *true*.
- (6) a. #It is obligatorily *true* that John is in his office.
b. #It is permissibly *true* that John is in his office.
- (7) a. #The *proposition* that John is in his office is obligatory.
b. #The *proposition* that John is in his office is permissible.

Second, consistent with the semantic status of VP complements to modals is the property that, when paraphrased, these syntactic units correspond to indicative *that*-clauses under an epistemic modal (8-10), whereas a VP under a deontically interpreted modal corresponds to the subjunctive *that*-clause (11):

- (8) a. He must/may [_{VP} be their teacher].
b. It must/may be the case [_{CP} that he *is* their teacher].
- (9) a. He must/may [_{VP} have been their teacher].
b. It must/may be the case [_{CP} that he *was* their teacher].
- (10) a. He must/may [_{VP} be sleeping now].
b. It must/may be the case [_{CP} that he *is sleeping* now].
- (11) a. He must/may [_{VP} be their teacher].
b. It is obligatory/permitted [_{CP} that he *be* their teacher].

While in English this distinction is manifest upon paraphrase, in some languages such as Serbian syntactic complementation in modal sentences is dependent on a specific use of a modal, thereby serving as a grammatical reflex of the mode of content representation. An epistemi-

cally interpreted modal takes an indicative CP clause (12-13), whereas a deontically interpreted modal takes a subjunctive CP (14):²

- ☒ . PSE☒ P[3F]JUX☒_{CP} da *znaju* šta se dešava].
Must/May-Pres3Sg be that know-Pres3Pl what se-Cl is-going-on
(It must/may be that they know what is going on.)
- ☒ . PSB☒ P[3F]JUX☒_{CP} da *su znali* šta se dešava].
Must/May-Pres3Sg be that Aux know-PastPrt3Pl what se-Cl is-going-on
(It must/may be that they knew what was going on.)
- ☒☒☒☒. PSE☒ P[3F]UX☒_{CP} da *dodeš* u 5].
Must/May-Pres2Sg that come-PresSubj2Sg at 5
(You must/may come at 5 o'clock.)

Third, the two syntactic entities that stand for complements to modals essentially differ in their temporal semantics. While the embedded verb in epistemic sentences exhibits a full range of temporal orientations with respect to the modal, as indicated by the italicised tense forms in (8-10) for English and (12-13) for Serbian above, the verb embedded under deontics is temporally located as posterior to the reference time of the matrix modal.³ In both English and Serbian, the embedded verb cannot bear a form other than the default subjunctive (English (15b) and Serbian (16) below), as illustrated by the ungrammaticality of (15c) in English and (17) in Serbian:

- (15) a. He must/may [_{VP} be their teacher].
b. It is obligatory/permitted [_{CP} that he *be* their teacher].
c. It is obligatory/permitted * [_{CP} that he *will* be their teacher].
- ☒☒☒☒. PSE☒ P[3F]UX☒_{CP} da *dodeš* u 5].
Must/May-Pres2Sg that come-PresSubj2Sg at 5
(You must/may come at 5 o'clock.)
- ☒☒☒☒. PSE☒ P[3F]UX☒_{CP} da *ćeš doći* u 5].
Must/May-Pres2Sg that will-2Sg come at 5
(intended: *It is obligatory/permitted that you will come at 5.)

2 In Serbian, deontic modals can also take infinitival complements, but this alternative, although fully grammatical, is a less preferred option in both spoken and written language. Epistemic modals, however, do not allow complements other than indicative CPs. The only exceptions are infinitival complements with the statives *be*, *have* or *know*, but due to the ambiguity arising from this configuration, the one with an indicative CP is preferred.

3 The verb embedded under a deontically interpreted modal can also receive a habitual interpretation (e.g. *He must attend the classes every day/On mora da pohađa časove svaki dan*), but this case will not be discussed, as it is immaterial to the line of argumentation in this paper.

Note that although the eventuality denoted by the complement verb is future-oriented, the regular periphrastic future form in both English and Serbian deontically modalised complements is never available. This may seem surprising, as semantically nothing precludes the verb from licensing the future form syntactically.

I assume that the above contrast between ‘tensed future’ under epistemics and ‘non-tensed future’ under deontics is just another facet of the mechanisms underlying the two reasoning types, which was transparently referred to by Castañeda (1990) as the *contemplative-practical* ambiguity of future. Recalling Searle’s spatial metaphor, but using a horizontal rather than vertical dimension, the effect in (15c) and (17) can be stated as follows. A state of affairs that is reasoned about as obligatory or permitted is “forwarded” from the utterance time to a future time where it will obtain only after the relevant agent undertakes some action following the utterance time. By contrast, a state of affairs that is reasoned about as being possibly or necessarily true at a future time is “backwarded” from the future time to the utterance time and is seen at the utterance time as already obtaining at some future time. This amounts to saying that in the case of practical future the speaker sees a particular state of affairs as a *goal* that is to be achieved, while in the case of contemplative future, the state of affairs is seen as a *framed image*. The ambiguity between contemplative and practical future is thus consistent with the type of complements to modals: contemplative future is a derivative of theoretical reason and is, therefore, keyed to the contents of *that*-indicatives/propositional VPs under epistemic states, while practical future is a derivative of practical reason manifest in the contents of *that*-subjunctives/non-propositional VPs under deontic states. While the former has its morpho-syntactic expression in Serbian (it is precisely the augmentation of the verb with tense in the Serbian examples that makes the complement a full proposition), the latter is but an epiphenomenon of the goal-oriented mind. The same argumentation also applies to the impossibility of embedding past tense in deontics, as the content under deontic states is represented with an upward rather than downward direction of fit.⁴

4 The standard account of the ban on the past tense on deontically embedded verbs is related to the pragmatic constraint on directives and permissives, i.e. that one cannot obligate or permit someone to fulfill an obligation/permission in the past (cf. Palmer 1990, Ninan 2005). I find this approach rather unsatisfactory as there are verbs which are not directive or performative in nature (e.g. *decide*) and yet they do not allow past tense forms and interpretations in their complements. The approach that assumes that the state a verb denotes is responsible for how the content of that state is represented is thus more plausible, especially if we know that performative verbs also have their non-performative uses.

Finally, epistemic modals in Serbian are found as parts of parenthetical phrases (18-19), which suggests that the argument of an epistemic verb can otherwise have an independent status of an assertion in a discourse, thus expressing, as is the case with propositions, what state of affairs obtains, obtained, or will obtain in a world w at a location l and a time t . The arguments of deontic modals, on the other hand, are integrated into the sentence itself as a deontic verb can never be found in structures such as (18-19), but when stripped off the matrix modal, these arguments correspond to analytical imperatives (henceforth DA-imperatives), i.e. non-assertive syntactic units (20b):⁵

- (18) Oni su, ~~NP~~ ~~VP~~ ~~CP~~, znali šta se dogodilo.
 they Aux may be know-PastPrt3Pl what se-Cl happened
 (They may have known what had happened.)
- (19) Doputovao je iz Pariza, *mora biti*, juče.
 return-PastPrt3SgMsc Aux from Paris must be yesterday
 (It must be yesterday that he came back from Paris.)
- (20) a. Moraš [*da dođeš u 5.*]
 b. Da dođeš u 5!

To sum up the discussion so far, the main properties of complements to epistemic and deontic modals support a clear distinction in their semantic and ontological status. While complements to epistemic modals can be said to be propositions, what exactly is the semantic and ontological type of complements to deontic modals is, however, the issue that I am reluctant to give a straight answer to for reasons that will become obvious in Section 3.⁶ Moreover, I am not even convinced that specifying their exact type is a crucial question to deal with, as long as we assume that complements to modals, irrespective of a modal interpretation, refer to states of affairs whose representations, in the spirit of Searle, vary with the nature of the induced modal state. This further implies that complements in both *ought-to-do* and *ought-to-be* sentences will each be about states of affairs, but given the conceptual difference between the two *oughts*, their conceptual representation will differ in some crucial elements arising from the specifics of the two states. With these assumptions, I proceed to the proposal.

5 DA-imperatives in Serbian are not mere paraphrases of imperatives proper, as the former are abundantly used in everyday language for issuing various commands, and their directive force is even greater than that of sentences with imperative morphology.

6 For proposals concerning the status of deontically embedded complements see, for example, Jackendoff 1999 and Portner 2007, 2009, who treat them as actions (thus ultimately implying the property approach), although within different theoretical frameworks.

3. Representing Obligations and Permissions

3.1. Proposal

Keeping with Jackendoff (1972), I will assume that modal verbs can be treated on a par with adverbs, so they basically function as modifiers of the content in complements they take: epistemic modals modify propositions about states of affairs as being necessarily or possibly true relative to the available evidence, deontic modals modify states of affairs as being necessary or possible for the relevant agent relative to some norms. This means that rather than expressing that there is such-and-such a state of affairs in a world w at a location l and a time t , the complement of deontic modals must express that such-and-such a state of affairs is to be brought about. In a very rough sketch, this idea can be translated as in (21), where $V(Y)$ stands for the relevant state of affairs in which the participant Y is related to the eventuality denoted by the verb V :⁷

- (21) a. NECESSARY/POSSIBLE ($\exists (V(Y))$)
 b. NECESSARY/POSSIBLE (BRING-ABOUT ($\exists(V(Y))$))

The epistemic structure (21a) should be read as it is possibly or necessarily true that there *exists*, *existed*, or *will exist* a state of affairs of a particular kind in the world, while the deontic structure in (21b) says that it is necessary or possible that a state of affairs of a certain kind *be brought into existence*. This, I believe, reflects in its most rudimentary form the image-goal perspective upon states of affairs as discussed in Section 2.2.

However, in order for a state of affairs to come to fruition there must be some action undertaken that will result in the relevant state of affairs, and, moreover, for an action to take place there must be some agent initiating the action, that which will bring it about that the state of affairs under consideration obtains. The structure that I propose for deontic sentences, taking into account these additional ingredients, is reminiscent of the Chisholm-style treatment of intentions (Chisholm 1970) and is given in (22):

- (22) NECESSARY [(ACT (X, (BRING-ABOUT (X, (V(Y)))))]
 POSSIBLE [(ACT (X, (BRING-ABOUT (X, (V(Y)))))]

⁷ The notational representation in (22) is syntactically improper as what the existential operator should bind is the Davidsonian event argument of the verb, not the verb itself (Davidson 1967, Parsons 1990). As I will abstract away from the existential operator in the forthcoming text, I will not bother developing a full formalism. The very idea that embedded states of affairs are existentially quantified can also be found in Recanati 2004, where complements to propositional attitude verbs are treated as existentially quantified NPs.

and $X=Y$ or $X \neq Y$

The structure in (22) says that it is necessary/possible that the agent X act in order to bring about a state of affairs in which Y and V are related in some way, and X can be identical to V -related Y or not. Thus, the simplest cases of sentences in which $X=Y$ (23a) and $X \neq Y$ and X is the addressee (24a) are understood as in (23b-c) and (24b), respectively:

- (23) a. You must/may leave immediately.
 b. Necessary (you act (you bring about (you leave immediately)))
 c. Possible (you act (you bring about (you leave immediately)))
- (24) a. The papers must be on my desk by Friday!
 b. Necessary (you act (you bring about (the papers be on my desk by Friday)))

What are the implications of the structure in (22)? First, it predicts that all sentences involving deontically interpreted modals are semantically of the *ought-to-do* type in that (22) involves agents, actions and, therefore, implies reasoning about actual behaviour. Second, it predicts that an individual under obligation/permission to act (X), whom I will refer to as *deontic agent*, need not be the individual that is V -related (i.e. the logical subject Y of the embedded verb) and, consequently, need not be present in the surface structure at all. Dependent on this relation is the third implication, i.e. that the embedded verb need not denote an action to be undertaken, but, rather, the syntactically expressed content of the complement coincides with a state of affairs which, upon some action, will be brought about. At the semantic-conceptual level, however, the complement is taken to express a conjunction of an action, intention, and a state of affairs.⁸ This may be taken to reflect the familiar Aristotelian means-end deliberation, namely, that, given an end, individuals are not concerned with ends but means by which to achieve those ends. The abstract ACT predicate in (22) can then roughly be said to be to $V(Y)$ as means is to end. In what follows, I discuss each of the implications in detail.

3.2. Deontic Agents

In order for a modal sentence to be semantically of the *ought-to-do* type, it is irrelevant whether deontic agents are encoded in the syntax or not (*cf.* Bhatt 1997). In case deontic agents do surface in the structure, their status is in principle independent of either their syntactic position

⁸ For experimental support of intentions being involved in the understanding of deontic concepts among preschool children see Núñez and Harris 1998 and references therein.

or their semantic relation with the embedded predicate (*cf.* Barbiers 1995, Bhatt 1997, Hacquard 2006, Jackendoff 1972, Miletić 2006, Wurmbrand 1999). A deontic-agent-denoting DP can be found in the subject position (25a), in the object position within the *by*-phrase (25b), and does not even have to be the agent of the embedded verb, as illustrated by (25c), in which, as argued by Jackendoff (1972: 219), the sentential subject *you*, which is the patient object of the verb *examine*, is attributed the agentive status of the obligee. The interpretations of (25) are given in (26):

- (25) a. You must/may leave the office.
 b. Flowers may be picked by visitors. (Jackendoff 1972: 104)
 c. You must/should be examined by Dr. Schlepp. (Jackendoff 1972: 219)
- (26) a. Necessary/Possible (you act (you bring about (you leave the office)))
 b. Possible (visitors act (visitors bring about (visitors pick flowers)))
 c. Necessary (you act (you bring about (Dr. Schlepp examine you)))

In case a sentence does not contain an overt bearer of obligation/permission, its syntactic structure is either of the *ought-to-be* type (27) or is seemingly of the *ought-to-do* type (28), while at the same time not allowing for the syntactic subject to bear the agentive role in the circumstances in which the sentence is used:

- (27) a. There may be singing but no dancing on my premises!
 b. There will be no complaints when we go to Aunt Cassandra's!
 c. There can be a party as long as it's not too loud. (Wurmbrand 1999: 601)
- (28) a. The traitor must die.
 b. The old man must fall down the stairs and it must look like an accident. (Wurmbrand 1999: 610)
 c. Johnny must be in bed by 8 o'clock. (*as said to Johnny's nanny*)

Common to all the examples in (27) and (28) is the fact that in order for them to express obligations and permissions, i.e. be of the *ought-to-do* type, the states of affairs denoted by the complements must be assigned as obligatory or permissible to some contextually salient person(s). Dependent on the utterance situation, the state of affairs expressed in (27a), for example, can be attributed to my children or my tenants, and the state of affairs surfacing in (28b) can be required to be brought about

by a member of the secret service. In both examples, deontic agents are addressees, so simplified representations of (27a) and (28b) are given in (29a) and (29b), respectively:

- (29) a. Possible (you act (you bring about (singing))) possible (you act (you bring about (dancing)))
 b. Necessary (you act (you bring about (the old man fall down the stairs))) necessary (you act (you bring about (the man's falling down the stairs look like an accident)))

In natural language, however, there is a mechanism that can make syntactically unrealised but contextually accessible bearers of obligation/permission fully visible in the surface form. Since in all the examples in (27) and (28), the deontic agent is associated with the addressee, each sentence can be prefixed by a vocative DP referring to the intended obligee or permissée. How significant a function vocative DPs perform in deontic sentences can be best observed when we confront them with vocatives in epistemic sentences. The example in (30) is clearly ambiguous between an epistemic and deontic reading. When the sentence is given an epistemic interpretation (30a), the vocative *Mary* refers to the individual whose pragmatic role is that of the addressee. When the sentence is read as deontic, however, the vocative *Mary* plays the double role: it does not only serve as an indicator of the addressee role that *Mary* has in the discourse but can clearly be part of the semantic interpretation of the sentence in that it refers to the individual who is in the bringing about relation with the state of affairs denoted by the complement (30b):

- (30) *Mary*, the paper may be more than 10 pages long.
 a. (I am telling you (*Mary*)) it is possible that the paper is more than 10 pages long.
 b. (I am telling you (*Mary*)) for you (*Mary*), it is possible that you (*Mary*) act to bring about [the paper be more than 10 pages long].

Furthermore, these deontic-agent-referring vocatives can be fully available for binding processes, the possibility which is precluded if the matrix clause receives an epistemic reading. As seen in (31), the vocative DPs serve as control antecedents of the PRO subjects in the adjunct clauses:⁹

9 The examples in (31) are inspired by Chomsky's (Chomsky 1982: 46) pair in (i-ii) and Kratzer's (Kratzer 1991: 650) additional example in (iii):

- i. *The books were sold without PRO reading them.
 ii. The books can be sold without PRO reading them.
 iii. *The books might have been sold without PRO reading them.

- (31) a. (Mark,_i) there must be 50 chairs in the room without further PRO_i delay.
 b. (Students,_i) the papers must/may be on my desk without PRO_i spell-checking them.
 c. (Johni/You two_j), the old man must fall down the stairs without PRO_i/_j asking yourself_i/yourselves_j what for.

Although the vocatives in (31) can freely be omitted without spoiling the sentences and they need not necessarily be the binders of the PRO subjects in (31a-b), the fact that they *can* function as controllers is a significant piece of evidence in support of the presence of agents in the semantic-conceptual structure of deontic sentences. In addition, if we consider the vocatives in (30-31) as kinds of ‘disjoint agents’, analogous to so termed vocatives in imperatives of the type *Mary, (you) bring the chair!* (cf. Han 1999), then the possibility of control into adjuncts in seemingly agentless deontic sentences should not be surprising.

In view of the discussion so far, I assume that what the language user does when uttering an obligation/permission sentence or decoding its meaning is employ the conceptualisation of the world as represented in (22) and ‘insert’ a contextually available agent into the already existing ‘agent slot’. In language, this agent can emerge as an agent-denoting DP, including a vocative DP, or it can remain syntactically silent but still available for the processes of semantic binding, as is control into adjunct clauses in (31) in case vocatives are dropped.¹⁰

Finally, when related to the *ought-to-do/ought-to-be* distinction, the analysis of the examples in this section shows that what makes a sentence be of the *ought-to-do* type is not the issue of whether the deontic agent is available in the syntactic structure or not, but whether a state of affairs considered necessary or possible is attributed to an agent. This attribution, as seen above, is a highly language-user-dependent process which is keyed not to the syntax of a deontic sentence but to the properties of the context in which the sentence is used. The very possibility, however, of associating a state of affairs with an agent is the corollary of the

The contrasts in (i-iii) have sometimes been argued to support the hypothesis that deontic modals have implicit agents (Bhatt and Izvorski 1998, Bhatt and Pancheva 2000, Williams 1985). However, I do not take (i-iii) to be a good testing ground, because the examples in (i-iii), being passive, already contain implicit agents in the semantics, which makes it difficult to draw reliable conclusions. As argued in Miletić 2006, a better way to test whether agents are present in the semantics of an agentless syntactic form is to adjoin the *without*-clause to a clause headed by an active verb or a verb whose semantic class disallows passivisation, which is exactly what we have in (31) above.

¹⁰ Contrary to the mainstream (Chomskyan) generative tradition, I take control to be a semantic rather than syntactic relation, as supported by Culicover and Jackendoff (2001) and Jackendoff and Culicover (2003).

semantic-conceptual structure of obligation and permission sentences, as proposed in (22). Since obligations and permissions are three-place relations, holding between an authority, an agent, and a state of affairs, as is obvious from the argument structure of the verbs *obligate* and *permit* (32), and since the primary purpose of obligations and permissions is to regulate behaviour among people, these two concepts cannot hold vacuously, i.e. independent of an individual or a group of individuals they are directed at. Even when 'the agent slot' is occupied by generically interpreted or kind-referring DPs (33), such sentences do not merely express ideal or desirable states of affairs (*ought-to-be*), but states of affairs that each member of the intended individual kind should conform to (33a-b) or is free to make use of (33c) (*ought-to-do*):

- (32) a. X (authority) obligates Y (agent) to Z (state of affairs).
 b. X (authority) permits Y (agent) to Z (state of affairs).
 (33) a. Thou shalt not kill.
 b. Soldiers must obey their superiors.
 c. Employees can park their vehicles in A2 zone.

In light of this argument, the relation between *ought-to-do* and *ought-to-be* sentences is clearly one of entailment. Every *ought-to-do* sentence entails an *ought-to-be* one, but not *vice versa*. Thus the bolded sentence that appears in both (34) and (35) can have either the *ought-to-do* (34) or *ought-to-be* semantics (35). The surrounding material clearly favours one or the other reading, but neither reading is dependent on the syntactic composition. It is the communicative intention of the speaker and the perception of the context in which the sentence is used that will ultimately result in whether the structure in (22) will be evoked or not, i.e. whether the expressed state of affairs will be ascribed to a salient agent (34) or simply considered necessary (35):

- (34) **All the traitors** in the Bureau must die. Make sure their deaths look like accidents.
 = (necessary (you act (you bring about (all the traitors in the Bureau die)))
 (35) If you ask me, **all the traitors** in the Bureau must die. I know this sounds radical, but this is what I think.
 = (necessary (be-brought-about (all the traitors in the Bureau die)))

3.3. Actions and States of Affairs

The assumption that overtly expressed contents of obligations or permissions correspond to obligatory or permissible states of affairs

rather than obligatory or permissible actions can be supported if we imagine an exchange of words such as the one in (36):

(36) (Mom to Mary)

Mom: Did you hear what I said? You must pass that exam. Otherwise, you can't go to the seaside this summer.

(An hour later Mary is in her room studying when the phone rings. She picks up the phone and hears her friend Hannah on the line.)

Hannah: Shall we go out tonight?

Mary: I can't. I have to study. Mom won't let me go to the seaside this summer if I don't pass that exam.

The bolded sentence which Mary uses as a reply to Hannah's question clearly shows that what Mary understood as her obligation is do something (i.e. study) that would have as a result her passing of the exam. Although we do not know whether Mary's mom would find it permissible if Mary had taken a different course of action to pass the exam (e.g. cheating), what we can reliably say is that authorities are sometimes indifferent as to how obligations are to be fulfilled as long as they are. That this is the case in the everyday use of normative language can be illustrated by the lines in (37) exchanged between the professor (A) and one of his students (B):

(37) A: The seminar papers must be on my desk by Friday next week.

B: Are we supposed to bring them to you personally, or can someone else bring them instead?

A: Either is fine with me as long as you conform to the deadline.

Note that whichever course B chooses to take, i.e. coming to A's office and putting the paper on top of A's desk or giving the paper to the best friend who will act on B's behalf, it is essentially B's action that will eventually lead to the paper being on A's desk and it will be B who will fulfil the obligation irrespective of the scenario B follows.

Similarly, when given permission, the agent can consider steps leading to the permitted state of affairs (38), or the speaker can constrain the course of action by which the permitted state of affairs is to be reached (39):

(38) A: You may leave now.

(B is walking towards the front door but suddenly changes his mind)

B: I think I'd better take the back door.

(39) You may leave now. (watching the addressee walking towards the front door) No, not that way! Take the back door!

It is along the same lines of argumentation that the status of lexically stative verbs in deontic sentences such as (40-42) can be apprehended:

- (40) You must be here at 5!
 (41) After a year spent here, you must know how to use Mac OS.
 After the same period, you may have two days off every other month.
 (42) Rusty: You must have something to sell.
 Ellen: What makes you think that I do?!
 Rusty: Actually, that was an ORDER! You MUST have something to sell!
 (as heard in *The Ellen Show*, the ATG Production Company)

If we were to adopt the position that overtly expressed contents of complements to deontic modals denote actions that relevant agents must or may undertake, then we would have to be able to say that in (40) you must undertake *the action of being* at the relevant place at five o'clock, that in (41) you must undertake *the action of knowing* how to use Mac OS and you may undertake *the action of having* two days off every other month, and that in (42) Ellen must take *the action of having* something to sell. This, as we see, can be worded but does not make sense at all, precisely because the embedded verbs in (40-42) do not denote actions.

One may argue, as is standardly done, that statives under deontics always receive dynamic readings. On this view, *be* in (40) would correspond to *show up*; *know* and *have* in (41) would get the meaning of *learn/master* and *ask for*, respectively; and *have* in (42) would mean something like *provide* or *find*. The question, however, remains what makes these interpretations possible. Given the structure in (22), the dynamic readings could be argued to be due to the ACT ingredient which would turn the embedded stative predicate into an eventive one. Furthermore, different dynamic interpretations of a single stative, e.g. *become* for *be* in *John must/may be our new teacher*, or *show up* for *be* in *You must be here at 5*, could be said to arise from the type of action subsumed under ACT by inference.

However, the very possibility of thinking about various readings of statives in terms of the contextually salient or inferred ACT type is the reason not to treat them in this manner, however contradictory this may sound. Instead of assuming that the action type under ACT percolates onto a stative verb, the representation in (22), in which actions are separated from states of affairs, is theoretically more desirable as it manages to provide a unified account of all the properties of *ought-to-do* sentences discussed so far, irrespective of their syntactic form, the presence or absence of agent-denoting DPs, and the semantic class of the complement

verb. Most importantly, the structure in (22) reflects the main idea about *ought-to-do* sentences as linguistic manifestations of practical reason, i.e. that an agent, when reasoning about obligations or permissions, actually reasons about actions that will lead to the fulfillment of the states of affairs considered obligatory or permissible. Again, this implies the entailment relation between *ought-to-do* and *ought-to-be*. An obligatory state of affairs is certainly desirable or ideal in the eyes of the authority, and a permitted state of affairs is probably considered desirable or ideal by the permittee, but what the authority desires or takes as ideal need not be conceived of as obligatory, nor can what is considered desirable or ideal by the agent be seen as permissible.

3.4. Oughts and Imperatives

The final question that has to be tackled concerns the status of imperatives in *ought-to-do* sentences. While it is quite uncontroversial that the deontic sentence and imperative in (43) are related, one can rightly pose the question of how it is possible for the sentences in (27-31), a few of which are repeated in (44), to support imperatives under the assumption that they are of the *ought-to-do* type and their syntactically expressed contents denote states of affairs rather than actions:

- (43) a. You must leave immediately.
 b. Leave immediately!
- (44) a. The papers must be on my desk by tomorrow.
 b. There will be no complaints when we go to Aunt Cassandra's!
 c. John must be in bed by 8 o'clock.

The answer is straightforward: they can't and they don't, but not because sentences of the type in (44) do not formally support imperatives due to some language-induced universal rule, but because the general structure of English is devoid of formal devices that can provide them with a formal substantiation. As soon as we turn to Serbian, we find that whatever the structure of a deontic sentence is, its imperative mate is freely available, as illustrated in (45-47):

- (45) Da radovi budu na mom stolu do sutra!
 THAT papers be-Pres3Pl on my desk by tomorrow
 (The papers must be on my desk by tomorrow!)
- (46) Da te ne čuveno žalim!
 THAT you-ACC not hear-Pres1Sg THAT se-Cl complain-
 Pres2Sg
 (I don't want to hear you complaining!)

The most important conclusion to be drawn from the analysis of DA-imperatives in (45-47) is that no element in the imperative syntax is needed in order to ensure that the surfacing state of affairs is assigned to the contextually salient addressee-agent. When related to *ought-to-do* sentences, and when the *ought-to-do* structure in (22) is compared with that of *do*-imperatives in (50), repeated below as (52) and (53), respectively, this observation implies that the agentive status of syntactically expressed obligees or permisseses should not be taken to originate from the modal verb (contra Jackendoff 1972: 219) but should be associated with the ACT ingredient in the conceptual structure. Moreover, the assumption put forward by Brennan (1993: 148) that *ought-to-do* modals are lexically specified for agents,¹¹ is shown to be untenable, in light of the discussion above. Even though agents have to be in the obligation/permission relation with the states of affairs, they, above all, have to be perceived as ‘executors’ of the relevant states of affairs:

- (52) NECESSARY [(ACT (X, (BRING-ABOUT (X, (P(Y))))]
 POSSIBLE [(ACT (X, (BRING-ABOUT (X, (P(Y))))]
 and X=Y or X≠Y
- (53) ! ACT (X, (BRING-ABOUT (X, (P(Y))))]
 and X=Y or X≠Y

Returning to the problem introduced in this section, i.e. the formal substantiation of imperatives in *ought-to-do* sentences, the discussion has shown that this requirement is too strong, as the issue of whether a sentence supports the imperative formally or not is primarily determined by the structure of the language analysed. However, this is the point where obligation sentences must clearly be distinguished from permission sentences. Although it is possible for the latter to support imperatives, they do so only exceptionally, i.e. as a reply to the permission already asked for (54) or when backed up by additional material (55):

- (54) A: May I come in?
 B: Yes, of course, come on in.
- (55) Feel free to call me whenever/if you need any help.
 (≈ You have my permission to call me whenever/if you need any help)

11 Instead of ‘agent’, Brennan uses the term ‘subject’. The reason I have made this change is that I find her terminology rather misleading, as any modal, irrespective of its interpretation and status, requires a subject. If I understand Brennan’s idea properly, the crucial difference between the modal predicate and the modal VP-operator (see Introduction) is not in the requirement of the former to take a subject, but in its ability to be semantically related to the subject.

The same applies to Serbian, and the fact that DA-imperatives cannot be used to enable the addressee to bring about some state of affairs should not be taken as an argument against the structure in (22/52). If (22/52) is taken to be valid at the semantic-conceptual level, the issue of whether (22/52) supports imperatives or not should be attributed to the difference in the modal force underlying the notions of deontic necessity and deontic possibility such that the semantics of the former allows directive uses, while the latter supports them marginally. However, the fact that agent-referring vocatives can be adjoined even to permission sentences (see the examples (30) and (31b) above), which is the property typical of imperative sentences, is a sufficient piece of evidence to qualify permissions as belonging to the *do*-type.

4. Conclusion

The paper has argued for the *ought-to-do/allowed-to-do* semantics of deontic sentences with modal verbs as stemming from the practical character of obligations and permissions. The two main properties of *ought-to-do/allowed-to-do* sentences - the focus on agents and reasoning about actions leading to obligatory or permissible states of affairs - have been substantiated with the linguistic material from English and Serbian. That these properties are intrinsic to the concepts of obligations and permissions should not come as a surprise. As noted by Jackendoff (1999: 70) in his discussion on rights and obligations, the two concepts belong to the domain of social cognition and are, therefore, “related to the understanding of the social context in which the individuals find themselves. The fundamental unit of this domain [...] is a person, a seat of intentions and volition.”

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Соња Милетић

О OUGHT-TO-DO ПРИРОДИ ДЕОНТИЧКЕ МОДАЛНОСТИ

Резиме

Полазећи од филозофске дистинкције између модалности типа *ought-to-do* и *ought-to-be*, испитујемо могућност да све деонтички интерпретиране реченице са модалним глаголима имају семантичку репрезентацију модалности типа *ought-to-do*, без обзира на то да ли се синтаксички реализују као први или други тип. Семантичко-концептуална структура коју предлажемо узима у обзир практичан карактер деонтичког расуђивања, који подразумева постојање свести о агенсима, радњама и актуалном понашању. Овакав карактер деонтичког расуђивања подржава анализа комплемената деонтичких модала (њихов синтаксички, семантичко-онтолошки и темпорални статус), агентивна функција вокатива, могућност проширења садржаја исказа адјунктним клаузама са анафорама или PRO-субјектима, као и специфичан однос између деонтичких реченица и императива.

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