Decomposing Permission and Obligation: Evidence from Korean

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Introduction This paper investigates the idea that the Korean strategy for expressing permission and obligation can be insightfully modeled using the logical technique of deontic reduction (Anderson 1956). Deontic reduction utilizes a special proposition δ and a conditional to characterize deontic concepts, where δ has previously been glossed as 'the good thing', 'all things are as required', or 'OK'. In deontic reduction, obligation is formulated as follows:

(1) $\text{OB } A =_{def} \Box(\delta \rightarrow A)$ 'It is obligatory that A'

There are two distinct notions of permission in deontic reduction: *weak* permission and *strong* permission. Weak permission is taken as a dual of obligation, as in Kratzer (1991). It asserts that an action is not prohibited. On the other hand, strong permission asserts that an action is explicitly ok. The definition in (2b) can be informally read as 'it is OK if A'.

(2) a. $\text{PE}_{weak}\ A =_{def} \Diamond(\delta \wedge A)$ 'It is *weakly* permitted that A'
b. $\text{PE}_{str}\ A =_{def} \Box(A \rightarrow \delta)$ 'It is *strongly* permitted that A'

Strong permission has been useful in analyzing free choice permission (Asher and Bonevac 2005). More importantly, distinguishing strong permission from weak permission implies that we need an articulated system where things can be neither permitted nor forbidden (von Wright 1983). There is a "deontic gap", and absence of prohibition does not imply permission unless it is explicitly stated so.

What has not been extensively studied is how the aforementioned articulated system relates to possible world semantics. This paper presents Korean data which provides a glimpse into it.

Data Barker (2010) notes that the naturalness of deontic reduction can receive empirical support from Japanese modal expressions because they are expressed in the form of a conditional construction. Korean also utilizes conditionals in conveying deontic modality: expressing obligation requires an *only if*-conditional, whereas permission is expressed via an *even if*-conditional. The antecedent of the conditional contains the proposition to be evaluated, and the morpheme *toy* appears in the consequent.

(3) John-un maykcwu-lul masi-**eya** **toy**-n-ta.
John-TOP beer-ACC drink-**only if** **TOY**-PRES-DECL
'John must drink beer.'
(Lit.) 'Only if John drinks beer, it is OK.'

(4) John-un maykcwu-lul masi-**eto** **toy**-n-ta.
John-TOP beer-ACC drink-**even if** **TOY**-PRES-DECL
'John may drink beer.'
(Lit.) 'Even if John drinks beer, it is OK.'

The significance of the provided data lies in that they let us probe deeper into the "interior" of deontic modal expressions. In many languages, deontic modality is conveyed by an auxiliary or an adverbial (e.g., English), so it cannot be further decomposed. But in Korean, there is morphological evidence that deontic modality consists of more primitive elements, one of which is a conditional and the other is *toy*. The question is whether the compositional semantics of these primitive elements is compatible with the preexisting analysis of deontic modality suggested in the literature. It is shown that the analysis of obligation is indeed compatible, but how permission is expressed in Korean suggests that there is an alternative way to "explicitly" grant permission.

Proposal I propose that Korean *toy* corresponds to δ in deontic reduction. The semantics of *toy* is provided in (5). The BEST operator selects the most ideal worlds, given the modal base and the ordering source (Portner 2009). The proposal implies that there is a division of labor between accessing the ideal worlds (*toy* 'δ') and relating those worlds to a given proposition (conditionals).

(5) $[\![\text{toy}]\!]^{w,f,g} = [\![\delta]\!]^{w,f,g} =_{def} \text{BEST}_{g(w)}(\cap f(w))$,
where f is a circumstantial modal base and g is a deontic ordering source (Kratzer 1991)

The meaning of permission and obligation can be derived from the compositional semantics of *toy* and the conditional morphemes.

Deriving Obligation I assume that *if*-conditionals are strict implications for simplicity, but the proposed analysis does not rely on this specific view of conditionals. As for Korean *-(e)ya* 'only if', I will treat it as a converse of the *if*-conditional.

(6) $[\![\text{-(e)ya}]\!]^{w,f,g} =_{def} \lambda p_{<s,t>}\lambda q_{<s,t>}.\ \forall w'\text{: } q(w') = 1 \rightarrow p(w') = 1$

The meaning of obligation naturally follows from the semantics of *–(e)ya* 'only if' and *toy* 'δ'. The formula in (7) asserts that all ideal worlds are worlds in which John drinks beer.

(7) $[\![\ (3)\ ]\!] = [\![\text{-(e)ya}]\!]^{w,f,g}([\![\text{John drink beer}]\!]^{w,f,g})([\![\text{toy}]\!]^{w,f,g})$
$= [\![\text{-(e)ya}]\!]^{w,f,g}([\![\text{John drink beer}]\!]^{w,f,g})([\![\delta]\!]^{w,f,g})$
$= \forall w'\text{: BEST}_{g(w)}(\cap f(w))(w') = 1 \rightarrow \text{drink(John)(beer)}(w') = 1$

Interpreting Permission The analysis of the Korean obligation example suggests that the proposed semantics of *toy* 'δ' is on the right track. However, if we continue to assume that *toy* 'δ' corresponds to a set of ideal worlds, two issues arise in interpreting permission. First, what (2b) would assert is that all *A*-worlds are ideal worlds, but it is not clear whether this interpretation can be understood as explicitly granting permission. Another problem is that on the contrary to (2b), Korean (and Japanese) permissions do not involve an *if*-conditional but rather an *even if*-conditional.

I claim that the additional *even* component is essential in conveying the meaning of permission. Specifically, I argue that the consequent-entailment property of *even if* (Bennett 1982) guarantees that the consequent, *toy* 'δ', is true in (4). As a result, the sentence conveys that *δ* is true in consideration of John's drinking beer. I suggest that this is what it means to "explicitly" grant permission, which is distinct from asserting the absence of prohibition.

The consequent-entailment property of *even if* refers to a phenomenon where the consequent of an *even if*-conditional is entailed in certain environments. An example is given in (8).

(8) Even if John drinks beer, Mary will be happy $\rightarrow_{\text{entails}}$ Mary will be happy

Guerzoni and Lim (2007) argue that the *even* component associating with a verum focus (AFF) is responsible for the consequent-entailment. The focus semantic value of a verum focus contains only the following two alternatives: the focused constituent itself and its logical opposite. Accordingly, the focus semantic value of (9a) consists of two propositions: 'If John drinks beer, Mary will be happy' and 'If John doesn't drink beer, Mary will be happy'.

(9) a. Even if [$_F$ AFF] John drinks beer, Mary will be happy.
b. Assertion: 'If John drinks beer, Mary will be happy.'
c. Additivity: $\exists q \in C\ [q \neq p \wedge q(w) = 1]$, *where C = { 'If John drinks beer, Mary will be happy', 'If John doesn't drink beer, Mary will be happy'}*

The additivity presupposition of *even* requires that at least one of the alternatives distinct from the asserted proposition is true. Given that there are only two focus alternatives of (9a), the additivity presupposition requires that "If John doesn't drink beer, Mary will be happy" is true. Thus the two alternatives are both true, and it can be inferred that Mary will be happy regardless of John's drinking.

Guerzoni and Lim's analysis carries over to the Korean permission example schematized in (10). The only difference between (9) and (10) is that the consequent has been replaced with *toy* 'δ'. Since there are only two focus alternatives and one of them is the asserted proposition, the additivity presupposition requires that the other alternative, "If John doesn't drink beer, δ", is true. Consequently, it can be inferred that *δ* is true regardless of John's drinking beer.

(10) a. Even if [$_F$ AFF] John drinks beer, δ.
b. Assertion: 'If John drinks beer, δ.'
c. Additivity: $\exists\ q \in C$ [q ≠ 'if John drinks beer, δ' ∧ q(w) = 1],
where C = { 'If John drinks beer, δ', 'If John doesn't drink beer, δ'}

REFERENCES. **Anderson 1956**, The formal analysis of normative systems. **Asher & Bonevac 2005**, Synthese 145(3). **Barker 2010**, S&P 3. **Bennett 1982**, L&P 5(3). **Guerzoni & Lim 2007**, SuB 11. **Kratzer 1991**, Modality. **Portner 2009**, Modality. **von Wright 1983**, Norms, Truth and Logic.