

On Supererogation: One Should Go When Going Is Good Enough and Not Going Is Not*

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Abstract

Major existing approaches to prioritizing modality (which subsumes deontic and bouletic modality) suffer from the problem of supererogation ('giving too much'), validating the inference from the premises (i) that p should be the case and (ii) that ' p and q ' is better than ' p (and not q)' to the conclusion that q should be the case. I propose a novel account of *should* and related prioritizing-modal expressions, under which *should*(p) essentially means that making p happen is, or constitutes part of, the sole way (among the contextually prominent alternative options) to make the situation 'good enough'.

1 Introduction

The two major existing approaches to *prioritizing modality* (which subsumes deontic and bouletic modality), summarized in (1), suffer from the problem of *supererogation* ('giving too much'; Chisholm 1963).

- (1) i. *should*(p) is true if and only if p holds true in all highest-ranked (best) worlds within the modal base, where the ranking of worlds is based on how well they conform to the relevant set of rules, goals, etc. (e.g., Kratzer 2012).
- ii. *should*(p) is true if and only if the (expected) goodness of p significantly exceeds that of $\bigcup(\mathbf{ALT}(p))$, where goodness of propositions is determined by the relevant set of rules, goals, etc. and $\mathbf{ALT}(p)$ represents the set of the contextually prominent alternatives of p (e.g., Lassiter 2011).

These accounts support the invalid inference shown in (2), and fail to predict the consistency of (3), adapted from Lassiter (2017:197), and that of (4).

- (2) (premise 1) p should be the case.
(premise 2) ' p and q ' is better than ' p (and $\neg q$)'.
(conclusion) Therefore, ' p and q ' should be the case.
- (3) a. (On moral grounds,) Adam should visit his friend Bob, who has been ill.
b. Visiting *and* cooking dinner is morally better than just visiting.
c. However, cooking dinner is optional; it is not the case that (on moral grounds) Adam should visit and cook dinner.
- (4) a. According to my doctor, I should not have more than one cup of coffee in the morning.
b. He says it is best for my health if I avoid having any coffee.
c. However, he also says that having just one cup won't hurt too much; it is not the case that I should not have a cup of coffee in the morning.

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One might argue that the inference in (2) is actually valid (and thus supererogation is not a real issue), and the apparent consistency of (3)/(4) is to be attributed to implicit shifting of the ordering source; in the situation of (3), for example, one might suppose that the interpreter is inclined to accept the truth of (3c) with an unspoken qualifier along the lines of ‘If we take Adam’s personal desires into consideration in addition to what morality demands’. However, if such shifting is readily possible, then the interpreter would be at least as strongly inclined to refute the truth of (3b) as to accept the truth of (3c). If the interpreter adopts the same ordering source in (3a) and (3b), it is natural to expect him to maintain it when he evaluates (3c).

2 Proposal

I propose that *should*(p) essentially means that making p hold true is, or constitutes part of, the sole way (among the contextually prominent alternative options) to make the situation ‘good enough’. In other words, *should*(p) means that if p is (were) not the case, the situation cannot (could not) be good enough, and if p is (were) the case, the situation can (could) be good enough. Formally:

- (5) *should*(p) holds true with respect to modal base f and ordering source g if and only if:
- a. for any f' such that $f' \in \mathbf{F}_{\cup^*}(f, \{p\})$, (i) $\theta_g \prec \mathbf{V}_g(f')$, and (ii) for any q such that $q \in \mathbf{ALT}(p)$ and q does not entail p , there is no f'' such that $f'' \in \mathbf{F}_{\cup^*}(f, \{q\})$ and $\theta_g \prec \mathbf{V}_g(f'')$, or;
 - b. there is some r such that (i) r contextually entails p and (ii) *should*(r) holds true.

where

- (6)
 - a. $\mathbf{F}_{\cup^*}(P, Q)$ is a set of sets of propositions, such that each member of $\mathbf{F}_{\cup^*}(P, Q)$ is the union of (i) Q and (ii) some P' such that P' is maximally similar to (and potentially equal to) P but is compatible with Q .
 - b. \mathbf{V}_g is a function that assigns goodness values in view of ordering source g to situations (i.e. sets of propositions).
 - c. θ_g represents the context-sensitive acceptability threshold value relative to g , such that ‘ $\theta_g \prec \mathbf{V}_g(P)$ ’ means that situation P is ‘good enough’ in view of ordering source g .

In intuitive terms, $\mathbf{F}_{\cup^*}(P, Q)$ can be understood to be a (possibly singleton) set of realities alternative to P that are compatible with Q ; for example:

- (7)
 - a. $\mathbf{F}_{\cup^*}(\{p\}, \{q\}) = \mathbf{F}_{\cup^*}(\{p, q\}, \{q\}) = \mathbf{F}_{\cup^*}(\{p, \neg q\}, \{q\}) = \{\{p, q\}\}$
 - b. $\mathbf{F}_{\cup^*}(\{p, q\}, \{\neg[p \wedge q]\}) = \{\{p, \neg q\}, \{\neg p, q\}\}$

The modal base is typically the common ground (CG), and the ordering source is the relevant set of rules, goals, etc.

3 Illustration

3.1 The ‘sick friend’ scenario

I will now illustrate how the proposed analysis circumvents the supererogation problem with the scenario in (3). Let \mathbf{v} and \mathbf{d} represent ‘Adam visits Bob’ and ‘Adam cooks dinner for Bob’ respectively (\mathbf{v} is contextually entailed by \mathbf{d} , but this is not a crucial factor here). I take the contextually prominent alternatives of \mathbf{v} , $\mathbf{ALT}(\mathbf{v})$, to be $\{\mathbf{v}, \mathbf{d}, \mathbf{v}\wedge\mathbf{d}\}$, and further that $\mathbf{ALT}(\mathbf{v}) = \mathbf{ALT}(\mathbf{d}) = \mathbf{ALT}(\mathbf{v}\wedge\mathbf{d}) (= \{\mathbf{v}, \mathbf{d}, \mathbf{v}\wedge\mathbf{d}\})$. Intuitively, (i) situations (8a,b) are good enough, while (8c) is not, and (ii) (8a) is better than (8b) and can be said to be ideal and ‘supererogatory’.

- (8) a. {‘Adam and Bob are friends’, ‘Bob has been sick’, $\mathbf{v}, \mathbf{v}\wedge\mathbf{d}, \dots$ } (ideal/supererogatory)
 b. {‘Adam and Bob are friends’, ‘Bob has been sick’, $\mathbf{v}, \mathbf{v}\wedge\mathbf{d}, \dots$ } (good enough)
 c. {‘Adam and Bob are friends’, ‘Bob has been sick’, $\mathbf{v}, \mathbf{v}\wedge\mathbf{d}, \dots$ } (not good enough)

The addition of \mathbf{v} to the CG guarantees that the situation will be good enough, and \mathbf{v} does not have any alternative that (i) does not entail it and (ii) makes the situation good enough. $\mathbf{v}\wedge\mathbf{d}$ too will make the situation good enough, but it has an alternative, namely \mathbf{v} , that (i) does not entail it and (ii) makes the situation good enough. Thus, the proposed analysis rightly predicts the truth of *should*(\mathbf{v}) and the falsity of *should*($\mathbf{v}\wedge\mathbf{d}$). Furthermore, by (5b), it is guaranteed that ‘Adam should do something for Bob’, ‘Adam should go out’, etc., whose prejacent-propositions are contextually entailed by \mathbf{v} , will be true.

3.2 The ‘coffee’ scenario

Consider next the scenario in (4). (10) illustrates situations that are ‘more than good’, ‘just good enough’, and ‘not good enough’ in relation to how many cups of coffee the speaker of (4) has, with $\neg\mathbf{1}$ standing for ‘I do not drink one (or more) cup(s) of coffee’ and $\neg\mathbf{2}$ standing for ‘I do not drink two (or more) cups of coffee’.

- (9) a. {‘I have such-and-such health conditions’, $\neg\mathbf{2}, \neg\mathbf{1}, \dots$ } (ideal/supererogatory)
 b. {‘I have such-and-such health conditions’, $\neg\mathbf{2}, \neg\mathbf{1}, \dots$ } (good enough)
 c. {‘I have such-and-such health conditions’, $\neg\mathbf{2}, \neg\mathbf{1}, \dots$ } (not good enough)

The proposed analysis rightly predicts that *should*($\neg\mathbf{1}$) does not hold true, $\neg\mathbf{2}$ being an alternative that does not entail $\neg\mathbf{1}$ and makes the situation good enough.

4 Varieties of prioritizing modals

This section addresses some modal expressions other than *should*.

4.1 Strong vs. weak necessity

Expressions of obligation come in different strengths. For example, *must* is said to convey a stronger obligation than *should* and *ought* do (e.g. Portner and Rubinstein 2016); to illustrate, (10a–c) could all be true in the same discourse context where the interlocutors are interested in the academic standing of the addressee.

- (10) a. You must turn in at least one paper. (Otherwise, you will fail the class.)

- b. It is not the case that you must turn in two papers.
- c. You should turn in two papers. (Otherwise, your grade will be a B– or worse.)

Under the proposed analysis, the difference in strength between *must* and *should* can be attributed to the difference in threshold values associated with them. I suggest that the threshold value for *should*, θ , is set higher than that for *must*, θ' (i.e. $\theta' \prec \theta$), in a way similar to how the threshold values for *small* and *tiny* (or *very small*) differ. The goodness of a situation where the addressee receives, say, a C+, may exceed θ' while not exceeding θ .

4.2 Permission

The proposed analysis of prioritizing necessity (obligation) is fully compatible with the received wisdom that obligation and permission are duals of each other, so that the following approximation holds:

$$(11) \quad \text{may}(p) \approx \neg \text{must}(\neg p).$$

One caveat here is that it is not clear whether the threshold value associated with *may* is equivalent to, and has exactly the same degree and range of context-sensitive variability as, the value associated with *must* or any other particular expression of obligation. This is an empirical issue that calls for investigations.

5 Manifestation of conditional reasoning in Japanese and Korean modal constructions

In Japanese and Korean, prioritizing-modal statements are often and systematically expressed with idiomatic constructions—referred to as ‘conditional evaluative constructions’ by Kaufmann (2018)—along the lines of ‘If p is not the case, it will not be good’ (for obligations) or ‘Even if p is the case, it will be good’ (for permissions).¹

- (12) (Japanese)
- a. Ken wa tomato o tabenakereba ikenai.
K. Top tomato Acc eat.Neg.Prov go.Pot.Neg.Prs
‘Ken should eat tomato.’ (lit. ‘One cannot go if Ken doesn’t eat tomato.’)
 - b. Mari wa kaette mo yoi.
M. Top return.Ger also good.Prs
‘Mari may go home.’ (lit. ‘It will be good even if Mari goes home.’)

It is a matter of debate whether these constructions count as genuine, semantically transparent conditionals (Kaufmann 2018; Chung 2019); it seems fair to say, at any event, that they provide fairly strong evidence that conditional reasoning is a key component of prioritizing modality.

6 Priority under uncertainty

An adequate theory of prioritizing modality needs to account for the readings available to (14) under the premises described in (13) (Kolodny and MacFarlane 2010, Cariani *et al.* 2013).

¹The abbreviations in glosses are: Acc = accusative, Ger = gerund, Top = topic-marker, Neg = negation, Pot = potential, Prov = provisional, Prs = present.

- (13) Ten miners are trapped either in shaft A or in shaft B, but we do not know which. Flood waters threaten to flood the shafts. We have enough sandbags to block one shaft, but not both. If we block shaft A or shaft B, all the water will go into the other shaft, killing any miners inside it. If we block neither shaft, both shafts will fill halfway with water, and just one miner, the lowest in the shaft, will be killed.
- (14) We should block neither shaft.

Many judge (14) as TRUE on its prominent reading, called the *subjective* reading; note that this does not readily follow from the Kratzerian analysis described in (1-i), as in the ideal worlds the right shaft is blocked and all miners will be saved. (14) has a second, less prominent reading (the *objective* reading), on which it is judged by many as FALSE ('No, we should block the right shaft—whichever it is.'). We take the inferences leading to these judgements to involve calculation of the *expected utility*—the expected number of miners saved. We suggest that, we, more or less rational agents, tend to adopt an ordering source that dictates the maximization of the expected utility, so that 'One maximizes the expected number of people saved' is, or is entailed by, a top-priority condition (call it c_1) in g . Note that, unlike Lassiter (2011) and Chung (*forthcoming*), I do *not* take expected utility to be a hardwired component of the semantics of *should*. Rather, it is an extra-linguistic factor affecting what kind of goals we try to fulfill and what kind norms we try to abide by.

When the modal base is equivalent to the CG (as typically is the case), only the option of blocking neither shaft leads to the satisfaction of c_1 , saving nine miners (and losing one) instead of incurring a 50% chance of losing 10. We suggest that the modal base is allowed to be indeterminate to some extent, and could contain some relevant facts unknown to the interlocutors. When the modal base is taken to contain either 'the miners are in Shaft A' or 'the miners are in Shaft B' (although the interlocutors do not know which), the objective reading comes about, on which the only option to satisfy c_1 is blocking A or blocking B (although, again, the interlocutors do not know which).

Cariani *et al.* (2013) remark that the conditional statement in (15) too has two readings, called *reflecting* and *non-reflecting*.

- (15) If the miners are in shaft A, we ought to block shaft A.

In the described situation, (15) is TRUE on its typical, reflecting reading, while it is judged (by many) as FALSE on its non-reflecting reading, which is marginal but could be elicited as in the following.

- (16) If the miners are in shaft A, we (still) ought to block neither shaft, for their being in shaft A doesn't mean that we know where they are. Indeed, no matter where the miners are, we ought to block neither shaft. (Cariani *et al.* 2013: 227)

I suggest that the reflecting reading is brought about by (temporarily) adding 'the miners are in Shaft A' to the modal base as well as to the CG, whereas the non-reflecting reading is brought about by (temporarily) adding 'the miners are in Shaft A' only to the CG and not to the modal base.

7 *Or* under prioritizing modality

When embedded under *should*, *may*, etc. (on their prioritizing interpretation), the conjunction *or* allows and typically receives a 'non-disjunctive' interpretation.

7.1 *Or* under *should*

Generally, *should*(*p*) entails *should*(*q*) if *p* entails *q*.

- (17) a. Adam made chicken soup for Bob.
 entails: ‘Adam made something for Bob.’
 b. Adam should have made chicken soup for Bob.
 entails: ‘Adam should have made something for Bob.’

This pattern does not hold, however, when *q* involves *or*. (18b) allows two readings, and on the prominent one, it does not entail that Adam should have made chicken soup or a burrito for Bob.

- (18) a. Adam made chicken soup for Bob.
 entails: ‘Adam made chicken soup or a burrito for Bob.’
 b. Adam should have made chicken soup for Bob.

I propose that *should*(*[p or q]*) is typically interpreted as: ‘If *p* does not hold, then *should*(*q*) holds, and if *q* does not hold, then *should*(*p*) holds’ ($[\neg p \rightarrow \textit{should}(q)] \wedge [\neg q \rightarrow \textit{should}(p)]$), although it allows the straightforward disjunctive interpretation as well. The two readings of (19) can be approximated as in (20).

- (19) John should take the subway or the bus.
 (20) **Reading #1** (typical): ‘If John does not take the subway, then he should take the bus, and if he does not take the bus, then he should take the subway.’
Reading #2 (less common): ‘Either John should take the subway, or he should take the bus.’

It is not clear to me how the more prominent ‘conditional obligation’ interpretation comes about. It is interesting to note, however, that similar patterns are found in two other places that involve *or*. One is the ‘Imperative *or* Declarative’ construction, exemplified in (21).

- (21) Take the subway, or you will be late.
 entails: ‘If you do not take the subway, then you will be late; if you are not late, then you will have taken the subway.’

This construction shares the semantic scheme: ‘If the prejacent of one disjunct does not hold, then some component of the other disjunct holds’ with the *or*-under-*should* configuration.

Another is the projection of presuppositions in statements with *or*. According to Karttunen (1974), ‘either *p* or *q*’ presupposes that if *p* does not hold then the presupposition of *q* has to be common ground, and if *q* does not hold then the presupposition of *p* has to be common ground.

- (22) Either *p* or *q*.
 presupposes: $[\neg p \rightarrow \textit{ps}(q)] \wedge [\neg q \rightarrow \textit{ps}(p)]$
 (23) Either Mary doesn’t come, or her husband will come too.
 presupposes: ‘If Mary comes, then somebody other than Mary’s husband will come.’
 does not presuppose: ‘Somebody other than Mary’s husband will come.’

7.2 *Or* under *may*

A statement of the form: *may*($[p \text{ or } q]$) too allows two readings, again the straightforward disjunctive reading being less typical. In many cases, the typical reading appears to allow paraphrasing with *and*.

- (24) John may take the bus or (take) the subway.
 \approx John may take the bus, and he may take the subway.

I suggest that the two interpretations of *may*($[p \text{ or } q]$) are entirely parallel to those of *should*($[p \text{ or } q]$), the typical one being: ‘If p does not hold, then *may*(q) holds, and if q does not hold, then *may*(p) holds’ ($[\neg p \rightarrow \text{may}(q)] \wedge [\neg q \rightarrow \text{may}(p)]$). In the case of (25), the two readings are as in (26).

- (25) Mary may play video games or read comic books.
 (26) **Reading #1** (typical): ‘If Mary does not play video games, then she may read comic books, and if she does not read comic books, then she may play video games.’
Reading #2 (less common): ‘Either Mary may play video games, or she may read comic books.’

The data set in (27) endorses the supposition that *or* under *may* does not simply mean logical conjunction; rather, the typical interpretation of *may*($[p \text{ or } q]$) involves ‘conditional permission’.

- (27) a. Mary may play video games and read comic books. #But she is not allowed to do both.
 b. Mary may play video games or read comic books. But she is not allowed to do both.

Note that the ‘conditional permission’ interpretation leaves unspecified whether *may*($[p \wedge q]$) holds true or not, so that (25) is also compatible with the continuation: ‘And she is allowed to do both (too)’.

8 Summary

I proposed a novel analysis of *should*, where *should*(p) means that if p is (were) not the case, the situation cannot (could not) be good enough, and if p is (were) the case, the situation can (could) be good enough. The proposed account circumvents the issue of supererogation, as well as that of the miners’ paradox, which pose challenges for the major alternative accounts. The relation between *should* and *must*, *may*, etc. can be accounted for under the proposed account at least as straightforwardly as under the alternative accounts. The proposed account is also resonant with the fact that in some languages prioritizing modality is systematically expressed with constructions that look much like conditionals. I also discussed that the conjunction *or* embedded under a prioritizing modal induces a special interpretation, which may be dubbed as the conditional obligation/permission interpretation.

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