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The Frege-Geach Problem for Normative Propositions

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Abstract. The aim of this dissertation is to provide support for the following claim: if Hanks’ theory of propositions as act-types is correct, then there exists a plausible extension of this theory that solves the Frege-Geach problem for normative propositions. I assume that Hanks’ theory is correct, and in this framework develop an account of semantic expressivism that addresses three versions of the Frege-Geach problem: the embedding, inference and negation problems.

First, I examine in detail one existing attempt to support the claim, due to Hom and Schwartz. I argue that their extension is not plausible for two reasons: it does not satisfy a key expressivist constraint, and it encounters a problem with interrogatives. Then I argue that even if their extension were plausible, it would not solve the embedding problem for conditionals, for two reasons: it does not place suitable constraints on applications of force-indicators, and it encounters a problem with mixed descriptive-normative conditionals.

Second, I give a new extension of Hanks’ theory for atomic normative sentences, and argue that it is plausible. Then I extend it further by defining force-indicators that are generalizations of assertion and of normative endorsement (and of denial and anti-endorsement) and by defining logical relations that apply uniformly to assertive and normative propositions. I argue that this extension provides a neutral logical framework within which the embedding, inference and negation problems for normative propositions can be more effectively addressed.
The Frege-Geach Problem for Normative Propositions

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Introduction

The aim of this dissertation is to determine whether the following claim, due to Hom and Schwartz (2013), can be given adequate support:

If Peter Hanks’ (2011, 2015, 2016) theory of propositions is correct, then there exists a plausible extension of it that readily solves the Frege-Geach problem for normative propositions—and, as a consequence, solves the Frege-Geach problem for expressivist semantics more generally.

The Frege-Geach problem for expressivist semantics is due primarily to Geach (1965), drawing on Frege (1879, 1892, 1918-1919). Numerous solutions have been proposed since Geach’s initial formulation of the problem, prominent examples of which are Hare (1970), Blackburn (1984, 1988), Gibbard (1992, 2003) and Schroeder (2008).

In its most general form the problem pertains to providing a compositional expressivist semantics for sentences containing normative terms, where such terms are interpreted as being primarily used to express non-representational and action-guiding attitudes of endorsement, disapproval or toleration. For example, an expressivist semantics for the normative term ‘required’ may interpret it as expressing an attitude of endorsement, and may interpret the sentence ‘truth-telling is required’ as express-
ing an attitude of normative endorsement towards the act of truth-telling. Given this, the “classical” Frege-Geach problem typically comes in two (related) versions.

The first version is to explain the meaning of conditionals that have embedded normative sentences as antecedent and consequent. For example, the problem essentially amounts to explaining the meaning of a conditional like ‘if truth-telling is required then promise-keeping is required’ as a function of the meaning of ‘truth-telling is required’, of ‘promise-keeping is required’ and of ‘if_then_’. The problem that is encountered here is that neither truth-telling nor promise-keeping are endorsed when this conditional is uttered by a speaker, and so the meaning of this conditional is not explained by the meaning of its sub-sentences (and the meaning of ‘if_then_’). This is the embedding problem for expressivist semantics.

The second version of the classical Frege-Geach problem is to explain why the following argument is valid:

P1. if truth-telling is required then promise-keeping is required
P2. truth-telling is required
C. promise-keeping is required

The problem that is encountered here is that while truth-telling is endorsed with an utterance of premise 2, it is not endorsed with an utterance of premise 1. That is, the meaning of ‘truth-telling is required’ equivocates between the first and second premise, which should not occur if the argument is valid. But since the argument is assumed to be valid, this equivocation of meaning implies there is a problem with the expressivist semantics for the term ‘required’, namely that it cannot be used to explain why this argument is valid.
This, very briefly, is the general structure of the classical Frege-Geach problem(s) for expressivist semantics. These and other related problems will be investigated in more detail below. For now, however, it is enough to simply note that if adequate support can be given for Hom and Schwartz’s claim, it would follow that there is a solution to these problems, at least as they pertain to normative propositions. This would be a welcome result for advocates of expressivist semantics.

There are essentially two parts to this dissertation. The first part (Chapters 2-4) consists of an investigation and criticism of Hom and Schwartz’s support for the claim, and arrives at the conclusion that their extension cannot be considered plausible (given a particular definition of “plausible”), and that even if it were plausible, it would not solve the embedding problem for normative propositions. The second part of the dissertation (Chapters 4-5) is largely constructive in nature, and consists of an attempt to give alternative support for the claim by sketching two new extensions and a set of solutions to the Frege-Geach problems. The conclusion of this part is that these two new extensions can be used to more effectively address the Frege-Geach problems.

The dissertation is structured as follows: in Chapter 1, Hom and Schwartz’ argument in defense of their claim is rehearsed. This involves describing their extension of Hanks’ theory, as well as their solutions to the Frege-Geach problems. Along the way, I will use information from Hanks’ (2015) to provide some relevant details and to make some charitable additions and refinements to their argument.

In Chapter 2, Hom and Schwartz’s extension is examined, and I attempt to determine if it is “plausible,” (given a particular definition of the word). I will conclude
that the extension does not meet the standard of plausibility that is considered here, due to two problems that arise. The first problem is that the extension fails to satisfy a key expressivist constraint, and the second problem is that it does not provide an adequate account of the meaning of certain interrogative sentences.

In Chapter 3, I will turn to Hom and Schwartz’s proposed solutions to one variant of the Frege-Geach problem, the embedding problem for normative conditionals. In §3.1 I will argue that their solution to the problem rests on an explanation that they are not licensed to use, and hence that their solution is problematic. In §3.2 I will consider several alternative explanations, and conclude that even if one of these explanations is adequate, a further problem with mixed descriptive-normative conditionals arises that is not so easily addressed.

In Chapter 4, I consider a variant of the Frege-Geach problem pertaining to negated normative sentences. In a footnote, Hom and Schwartz express optimism that their extension can provide a solution to the problem, but they do not provide any details. In this chapter I investigate the prospects of their claim, and consider several possible solutions to the problem. I conclude that the two most plausible solutions face problems, and as a consequence I am unable to provide an acceptable solution to the negation problem here.

Finally, in Chapter 5 I give two new extensions of Hanks’ theory that are designed to address several of the problems that were raised in the previous chapters. In §5.1 I give an extension for atomic normative sentences that is designed specifically to avoid the two problems that arose in Chapter 2. In §5.2 I construct another extension by defining a new set of force indicators that are generalizations of assertion
and normative endorsement (and of denial and anti-endorsement), and by defining logical relations that apply uniformly to assertive and normative propositions. This extension is designed to provide a neutral logical framework within which the Frege-Geach problems can be effectively addressed. In §5.3 I apply this extension to the Frege-Geach problems, and then in §5.4 I consider two possible objections to it.
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Chapter 1

The Frege-Geach Problem for Normative Propositions

In their 2013 paper “Unity and the Frege-Geach Problem,” Christopher Hom and Jeremy Schwartz argue that if Peter Hanks’ theory of propositions is adopted and extended to include a new class of propositions, the so-called normative propositions, then there exists a solution to the Frege-Geach problem for normative propositions. An implicitly stated consequence of this is that there exists a solution to the Frege-Geach problem for expressivism more generally.

The aim of this chapter is to rehearse Hom and Schwartz’s argument. In describing the argument, I will break it down into four steps, given in §§1.1.1-1.1.4, and will at points draw on Hanks’ (2015, 2019) to provide some supplementary information intended to refine the argument. I will not criticize or assess the argument here—that is left to Chapters 2-4.
1.1 Hom and Schwartz’s Argument

The main claim that Hom and Schwartz (2013:15) make and defend in their paper is the following:

**Main Claim.** If Hanks’ theory of propositions is successful, then there is a plausible extension of it that readily solves the Frege-Geach problem for normative propositions.

The primary aim of this dissertation is to determine whether this claim is defensible. In this chapter I will rehearse Hom and Schwartz’s argument in defense of this claim. However, since their (2013) argument was made prior to the publication of Hanks’ (2015), their argument does not contain relevant information from Hanks’ more recent work. Consequently, in the course of rehearsing Hom and Schwartz’s argument I will make charitable additions and refinements to it by drawing on Hanks’ (2015).

In an attempt to explain their argument as clearly as possible, and to make additions to it as charitably as possible, I will describe the argument by breaking it down into four steps. The first step, given in §1.1.1, consists in accepting Hanks’ (2007, 2011) theory of propositions as act-types. This involves, among other things (to be specified), marking a three-way disjoint partition of the set of all propositions, here called *Hanks propositions*, into *assertive*, *interrogative* and *imperative* propositions.

The second step, described in §1.1.2, consists in observing that there exists a Frege-Geach problem for assertive Hanks propositions, and that this problem can be solved by utilizing Hanks’ (2011) concept of *force-cancellation*. In describing this step of Hom and Schwartz’s argument I will draw on Hanks’ more recent (2015) to
provide a slightly more detailed account of the solution.

For the third step, to be described in §1.1.3, Hom and Schwartz extend the set of Hanks propositions to include a set of so-called *normative* propositions. In this section I will simply rehearse their account of the extension, and will leave an investigation of it for Chapter 2.

The fourth and final step of Hom and Schwartz’s argument consists in arguing that just as force-cancellation can be used to solve the Frege-Geach problem for assertive Hanks propositions, a similar solution, also using force-cancellation, can be given for the Frege-Geach problem for normative propositions. In §1.1.4 I will simply rehearse this step of their argument, and will leave criticism of it for Chapter 3.

The final conclusion that Hom and Schwartz draw from these four steps is that there is a solution to the Frege-Geach problem for normative propositions, and, consequently, there is a solution to the Frege-Geach problem for expressivism more generally. As they say (2013:20), “this makes the theory of HP’s quite a find!”

1.1.1 Step 1: Hanks’ Theory of Propositions

The first step of Hom and Schwartz’s argument consists in accepting Hanks’ theory of propositions (Hanks 2007, 2011, 2015, 2019). Hanks’ theory is motivated primarily by the problem of the *unity of the proposition*, which Hanks (2015:42) describes as the problem of explaining how the constituents of the proposition expressed by a declarative sentence are unified into a single, structured abstract entity that has truth-conditions. This particular problem is not of interest here, however. What is of interest are the possible implications that accepting this theory of propositions
might have for the Frege-Geach problem for expressivism. Consequently, for the remainder of this dissertation, Hanks’ theory will be accepted uncritically (that is, I will assume that the antecedent of Hom and Schwartz’s Main Claim is true), and only the features of it that are essential for understanding Hom and Schwartz’s proposed solution to the Frege-Geach problem will be discussed. This section provides the relevant basic features.

Hanks’ theory of propositions takes as a central tenet that what a speaker thinks and says, and in particular their actions of judging, asserting and (most importantly) predication are the critical ingredients that function to unify the constituents of a proposition into a unified whole with representational content and truth-conditions. On this view of propositional content, in sincerely uttering an atomic declarative sentence like

(1)  \textit{a is F}

a speaker performs a complex type of action of predication that commits them to the truth of the object \textit{a} being \textit{F}. In explaining this, Hom and Schwartz refer to the following passage from Hanks’ (2013:16):

When a speaker predicates a property \textit{F} of an object \textit{a} [as in an assertive utterance of (1)] she commits herself to \textit{a}’s being \textit{F}. To predicate \textit{F} of \textit{a} is to affirm that \textit{a} has this property; it is to apply this property to \textit{a} (Hanks 2011:4).

As Hanks explains this in his more recent (2015:25), in asserting that \textit{a is F}, an speaker performs a complex act of simultaneously (i) referring to the object \textit{a}, (ii)
expressing the property F, and (iii) predicing F of a. Formally, this action of assertion is represented by the following string of symbols:

(1a) \( \vdash \langle a, F \rangle \)

Here, \( 'a' \) is a reference-act type of the speaker’s token action of referring to the object \( a \), \( 'F' \) is a predicative expression type of their token action of expressing the property F, and the symbol \( \vdash \) represents a tokening act of predication. The object in (1a) the Hanks proposition expressed by (1), and is a type of action that is tokened by individual acts of predication.

Note that this proposition contains as a constituent the symbol \( \vdash \), and as such predication is a part of the propositional content of the sentence (1). This act of predication manifests itself in two different ways, according to Hanks (2015). In the case where a speaker sincerely utters that \( a \) is F, it manifests itself through a speech act of assertion, and in the case where a speaker judges that \( a \) is F, their act of predicing \( a \) of F manifests itself in thought (in the form of a judgment). So, for Hanks, assertion and judgment are particular, but distinct, ways a speaker can perform the act of predication, and since predication is an essential component of the propositional content of a sentence, so too are the acts of assertion or judgment (depending on how the speaker predices F of \( a \)). Hence, in Hanks’ theory of propositions, the classical distinction between force and propositional content is rejected.\(^1\)

The act of predication is not the only way that a speaker may apply a property to an object in Hanks’ theory. Just as a speaker can assert that \( a \) is F by predicing F of \( a \), they can also ask whether \( a \) is F, or command that \( a \) be F by combining

\(^1\)See Hanks (2007, 2015) for a detailed argument in defense of his rejection of the distinction between content and force. His argument will not be reproduced or critiqued here.
propositional constituents by using the interrogative or imperative mood to combine object and property. For example, if a speaker asks whether \( a \) is \( F \), they sincerely utter the sentence
\[
(2) \quad \text{is } a \text{ F?}
\]
and they perform the complex act of simultaneously (i) referring to \( a \), (ii) expressing the property \( F \), and (iii) applying \( F \) to \( a \) in the interrogative mood. In this case, the interrogative sentence (2) expresses the interrogative Hanks proposition
\[
(2a) \quad ?(a, F)
\]
where ‘?’ represents a speaker’s act of applying \( F \) to \( a \) interrogatively. Similarly, where ‘!’ stands for a speaker’s act of applying \( F \) to \( a \) in the imperative mood, the imperative sentence
\[
(3) \quad a, \text{ be } F!
\]
expresses the imperative Hanks proposition
\[
(3a) \quad !(a, F)
\]
In general, the form of an atomic Hanks proposition is given by the following schema:\(^2\)
\[
\textbf{s1.} \quad \lambda(a, F) \quad \lambda \in \{\top, ?, !\}
\]
where the proposition \( \lambda(a, F) \) is a type of a speaker’s token action of simultaneously (i) referring to the object \( a \), (ii) expressing the property \( F \), and (iii) applying \( F \) to \( a \) in the \( \lambda \)-mood. So a given sentence expresses a particular kind of proposition (assertive, interrogative or imperative) depending upon the force with which it is uttered, and this force is a part of the propositional content expressed by the sentence.

\(^2\)Hom and Schwartz’s (2013:17) version of this uses slightly different notation: the general form of a Hanks proposition is \( M(A, B) \), where \( M \in \{\top, !, ?, \ldots\} \). Nothing critical hangs on this difference in notation, however.
For Hanks, there is a disjoint partition of all sentences into declarative, interrogative and imperative sentences, and correspondingly there is a disjoint partition of the set of all Hanks propositions into assertive, interrogative and imperative Hanks propositions, respectively. As will be explained below in §1.1.3, Hom and Schwartz claim that the set of Hanks propositions can be extended by defining a new force indicator for normative endorsement that is intended to capture the meaning of normative predicates. However, prior to investigating this step of their argument, in §§1.1.2.1-2 it will be briefly described how assertive Hanks propositions encounter two sub-problems of the more general Frege-Geach problem, and in §§1.1.2.3-4 it will be shown how partial solutions to these problems given in Hanks (2015) and Hom and Schwartz (2013) can be extended to give full solutions to these problems. This is important to the overall dialectic because Hom and Schwartz’s strategy for solving the Frege-Geach problem for normative propositions essentially consists of porting the solution for assertive propositions over to one for normative propositions, and of course this strategy cannot be implemented unless there first exists such a solution for assertive propositions.

1.1.2 Step 2: A Problem for Assertive Propositions

In the previous section some key features of atomic Hanks propositions were described, following Hom and Schwartz’s (2013) along with some supplementation from Hanks’ (2015). In this section, I will describe the second step of the argument that Hom and Schwartz give in defense of their Main Claim. This step consists in first observing that assertive Hanks propositions encounter a Frege-Geach problem,
and then claiming that this problem can be solved with Hanks’ concept of force-cancellation.

In an attempt to make things slightly clearer, I will break the so-called Frege-Geach problem down into two sub-problems: the embedding problem (§1.1.2.1), and the inference problem (§1.1.2.2), respectively (a third version of the problem, the negation problem, is the topic of Chapter 4).

1.1.2.1 Problem 1: The Embedding Problem

Consider the following three declarative sentences:\footnote{Hom and Schwartz (2013:18) first characterize the embedding problem using a disjunction. However, a conditional will be considered here since it figures essentially in their characterization of the inference problem (in §1.1.2.2).}

\begin{align*}
(1) & \quad \textit{a is F} \\
(4) & \quad \textit{b is G} \\
(5) & \quad \textit{if a is F then b is G}
\end{align*}

The sentences (1) and (4) are said to be embedded in sentence (5), for the reason that they fall under the scope of the material conditional. Note that because of this, if a speaker asserts sentence (5), then they utter both (1) and (4), but they neither assert that \textit{a is F} nor do they assert that \textit{b is G}. Similarly, if they judge (5) to be true, they neither judge that \textit{b is F}, nor do they judge that \textit{b is G}.

This embedding causes a problem. The problem is that since neither (1) nor (4) are asserted or judged to be true when the sentence (5) is sincerely uttered, neither of these subsentences express a Hanks proposition with truth-conditions (since in Hanks’ theory the act of predication, manifested either through assertion or judg-
ment, is required to unify propositional constituents into an assertive proposition).

Hom and Schwartz characterize the problem as follows: in asserting sentence (5), [neither (1) nor (4) are] being asserted, and yet must be truth-evaluable as input to [their] respective logical operator[s]. Since assertoric propositions provide truth-conditions for sentences, any adequate account of them must explain their unified, truth-conditionally significant role when logically embedded (Hom and Schwartz, 2013:17).

The point that Hom and Schwartz are making is that for the declarative sentence (5) to express a Hanks proposition with truth-conditions, its subsentences must also express propositions with truth-conditions (or make some other relevant semantic contribution to the proposition it expresses). But since the agent’s act of asserting (or judging) that a is F (or that b is G) does not occur in an assertion of (5), no such propositions are expressed, on the given definition of Hanks propositions. So solving the embedding problem essentially amounts to explaining how a sentence like ‘a is F’, when embedded, expresses an assertive Hanks proposition with truth-conditions if (i) by definition this can only be done if the speaker asserts (or judges) that a is F, but (ii) they do not assert (or judge) that a is F when they utter an embedded instance of ‘a is F’. More generally, the problem amounts to explaining how the meaning of the conditional sentence (5) is a function of the meanings of its subsentences and the meaning of ‘if...then...’.
1.1.2.2 Problem 2: Inference

The second problem for assertive propositions, which I will call the inference problem, is closely related to the embedding problem. It essentially amounts to explaining why a valid argument is in fact valid. To see the problem, consider the following argument, constructed out of sentences (1), (4) and (5):

\[ \text{P1}_{A1}. \text{ if } a \text{ is } F \text{ then } b \text{ is } G \]
\[ \text{P2}_{A1}. \ a \text{ is } F \]
\[ \text{C}_{A1}. \ b \text{ is } G \]

Call this argument \( A1 \). On the surface, this argument appears to be an instance of the valid argument form \textit{modus ponens}, where each of the premises and the conclusion express propositional contents with truth-conditions, and where the truth of the propositions expressed by the premises necessitates the truth of the proposition expressed by the conclusion.

Recall, however, that in Hanks’ theory of propositions, it is only with the act of assertion (or judgment) that a unified proposition with truth conditions is expressed by a speaker’s use of a sentence. So, with the act of asserting premise \( P2_{A1} \), a speaker asserts that \( a \) is \( F \), and with the act of asserting the conclusion, they assert that \( b \) is \( G \). As a result the assertive Hanks propositions \( \vdash \langle a, F \rangle \) and \( \vdash \langle b, G \rangle \) are expressed with an assertion of premise \( P2_{A1} \) and the conclusion, respectively. But in asserting the first premise, the speaker neither asserts that \( a \) is \( F \), nor do they assert that \( b \) is \( G \), since both are embedded in the conditional sentence. This means that neither \( \vdash \langle a, F \rangle \) nor \( \vdash \langle b, F \rangle \) are expressed with the assertion of the first premise, so the antecedent and consequent of the conditional do not express assertive
Hanks propositions with truth conditions. As a result, the meaning of the sentence ‘a is F’ equivocates between the first and second premises, and so there is no readily available explanation for the apparent validity of the argument A1. In short, solving the inference problem amounts to providing an explanation for why this apparently valid argument, and others like it, are in fact valid.

1.1.2.3 A Solution to the Embedding Problem for Assertive Propositions

Hanks is aware of the embedding problem for assertive propositions, and proposes an outline for a solution to it in his (2011) using the notion of what he calls cancellation contexts. These are contexts where an assertive proposition (with assertive force as a propositional constituent) is expressed by a declarative sentence, but where the assertive force is cancelled. As Hom and Schwartz quote Hanks as saying,

\[ \text{in certain contexts, for example, when a sentence is used inside a conditional, the assertive element is canceled by the presence of the conditional} \]

(Hanks, 2011:5).

This is what Hanks calls force cancellation. A speaker who utters the declarative sentence (1) in a cancellation context performs the act of predicating F of a, and so a proposition is expressed by the sentence, but the speaker neither judges that a is F nor asserts that a is F with her utterance. More precisely, using Hanks (2015), in such contexts a speaker simultaneously performs the acts of (i) referring to the object a, (ii) expressing the property F, and (iii) predicating F of a (thus expressing the proposition \( \vdash \langle a, F \rangle \)), but the context functions to cancel the assertive force of
To indicate formally that sentence (1) is uttered in a cancellation context, the following notation is used by Hanks:

\[ (1b) \sim \vdash \langle a, F \rangle \]

The symbol ‘\( \sim \)’, which is neither a sign for sentential negation nor a sign for force, is used to indicate that the assertive force of the proposition \( \vdash \langle a, F \rangle \) is canceled. So (1b) is not itself a proposition, but is rather the proposition \( \vdash \langle a, F \rangle \) as it occurs in a cancellation context.

The concept of force-cancellation allows Hanks (2011) to sketch a solution to the embedding problem for assertive propositions, as follows: when a speaker asserts the conditional sentence (5), they utter the antecedent ‘\( a \) is F’ (and the consequent ‘\( b \) is G’), but since the conditional induces a cancellation context, the assertive force of the antecedent (and consequent) is cancelled. Formally, according to Hom and Schwartz (2013) (drawing on Hanks (2011)), the proposition expressed by the declarative sentence (5) is

\[ (5a) \vdash \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle, \text{COND} \rangle \]

where \( \text{COND} \) is the act-type of a speaker’s token act of expressing the material conditional relation, and where the symbol ‘\( \vdash \)’ takes wide scope, indicating that this is an assertive Hanks proposition.\(^5\)

For Hom and Schwartz, specifying the assertive proposition (5a) that is expressed

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\(^4\)Force cancellation may seem like little more than a convenient technical trick, as it is presented here. However, it is discussed and defended in detail by Hanks in his (2015:90-107). Only the basic features of cancellation will be discussed here, and like other features of Hanks’ theory, the concept of force cancellation will be accepted without criticism.

\(^5\)This terminology is from Hanks (2015), and replaces the symbol ‘IF’ from Hom and Schwartz’s (2013) with ‘COND’.
by the declarative conditional (5) is sufficient to provide a solution to the embedding problem. The reason they give for this is that in asserting the conditional (5),

\[ \text{the speaker is asserting that two unasserted propositions stand in the conditional relation – a relation that is defined by the standard truth-table in first-order logic (Hom and Schwartz, 2013:18).} \]

This is their explanation for what the proposition (5a) is, and constitutes their proposed solution to the embedding problem for assertive propositions.

However, Hom and Schwartz’s proposed solution is not complete as it is stated, even though it uses the concept of force cancellation to specify the proposition that is expressed by the conditional (5). This is because it does not explain (i) what the truth-conditions of proposition expressed by the embedded antecedent (and consequent) are, (ii) what the meaning of the symbol ‘COND’ is, nor does it explain (iii) how the truth-conditions of the conditional are determined recursively by the truth-conditions of its constituents. All three of these explanations need to be provided if the embedding problem is to be solved. So, in the remainder of §1.1.2.3 I will address these three issues. Fortunately, Hanks (2015) provides some indication as to how the first two of these three explanations might be obtained, and from that the third can be inferred.\(^6\)

\(^6\)Hanks (2015) does not discuss conditionals in any detail. When explaining why he does not consider indicative conditionals he says that doing so would be “too difficult and the debate about them is too complicated – treating these issues properly would take us too far from our main themes. The only claim I will make about ‘if’ is that, at least on some of its uses, it creates a cancellation context for the utterances of sentences embedded inside it” (Hanks, 2015:108). As a result, much of what follows on conditionals in this section is based on less than a handful of short comments made by Hanks in his (2015).
First, an explanation of what the truth-conditions for the atomic proposition (1a) must be given. In Hanks’ theory of propositions, the truth-conditions of the assertive proposition (1a) expressed by an atomic declarative sentence like (1) are explained in terms of a speaker’s act of predicating F of a, and such acts are the primary bearers of truth. This is represented by the following:

s2. A speaker’s act of predicating F of a is true iff a is F

In Hanks’ theory, to the extent that a declarative sentence like (1) is true, it is only true derivatively, and in virtue of the speaker’s act of predicating F of a being true. And to the extent that the assertive proposition (1a) expressed by the sentence (1) is true, it is only true derivatively and in virtue of the speaker’s act of predicating F of a being true. That is, sentences and the propositions (as act-types) that they express inherit their truth-conditions from particular tokening acts of predication that a speaker performs. This inverts the standard “Fregean” (to use Hanks’ (2015) word) account of propositions, where propositions are the primary bearers of truth, and to the extent that sentences, judgments and assertions have truth-values, they do so only in virtue of the propositions they express (or are used to express).

That explains what the truth-conditions of the proposition (1a) expressed by the atomic declarative sentence (1) are. Now an explanation of the meaning of the propositional constituent COND must be given. The only information that Hom and Schwartz (2013:18) provide about it is that it denotes the material conditional relation defined by the “standard truth-table in first-order logic.” In one of the few places where Hanks discusses conditionals, he says that “COND is the type of act of expressing the material conditional relation that holds between two propositions, p
and $q$, iff either $p$ is false or $q$ is true” (Hanks 2015:127). Using his (2015:106) description of the conjunction and disjunction relations, the conditional relation can be characterized as *either__is false or__is true*. Given this, in asserting the conditional sentence (5) a speaker performs the complex act of simultaneously

(i) referring to $a$, expressing the property $F$, and predicating $F$ of $a$, making the proposition $\vdash \langle a, F \rangle$ available for reference,

(ii) referring to $b$, expressing the property $G$, and predicating $G$ of $b$, making the proposition $\vdash \langle b, G \rangle$ available for reference,

(iii) expressing the material conditional relation *either__is false or__is true* (generating a cancellation context), and

(iv) predicating the material conditional relation *either__is false or__is true* of the two propositions $\vdash \langle a, F \rangle$ and $\vdash \langle b, G \rangle$ (in a cancellation context).

Following Hanks’ (2015) notation, this complex act is a token of the following type (which I will use from here on out in place of Hom and Schwartz’s (5a)):

(5b) $\vdash \uparrow \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND}$

Here, the subscripted turnstile ‘$\vdash \uparrow$’ is intended by Hanks to indicate that the target of predication is a pair of propositions, and not the object $a$, as was the case in the atomic proposition (1a). This is called *target shifting* by Hanks (2015:99). It is an act of predication that targets a type of action that the speaker performs—in this case, the types $\vdash \langle a, F \rangle$ and $\vdash \langle b, G \rangle$.

This explains what the symbol ‘COND’ is, and what it denotes. Finally, now, an explanation of the truth-conditions of the Hanks proposition (5b) must be given.
This follows directly from Hanks (2015:127) and can be written as follows, where $p$ and $q$ are assertive Hanks propositions:

**s3.** A speaker’s act of predating *either is false or is true* of $p$ and $q$ is true iff either $p$ is false or $q$ is true

This, along with the truth-conditions for a speaker’s act of predating $F$ of $a$ (given above in **s2**), are enough to explain what the truth-conditions of the proposition (5b) are: a speaker’s act of predating the material conditional relation of $\vdash \langle a, F \rangle$ and $\vdash \langle b, G \rangle$ is true iff either $\vdash \langle a, F \rangle$ is false or $\vdash \langle b, G \rangle$ is true, iff the speaker’s act of predating $F$ of $a$ is false or the speaker’s act of predating $G$ of $b$ is true, iff it is not the case that $a$ is $F$ or it is the case that $b$ is $G$.

Since in Hanks’ theory acts of predication are the primary bearers of truth, and since propositions inherit their truth-conditions from such acts, it follows that the proposition (5a) is true if the speaker’s act of predating the conditional of $\vdash \langle a, F \rangle$ and $\vdash \langle b, G \rangle$ is true.

This provides the details required to explain how the embedding problem for assertive propositions can be solved. Recall that the solution to the problem that Hom and Schwartz referred to invoked force-cancellation as an explanation. However, as the foregoing is intended to illustrate, there is more going on than just an invocation of cancellation contexts—a complete solution to the embedding problem requires an explanation of what the truth-conditions of the proposition (5b) are, and how they are determined recursively by the truth-conditions of its constituents. As described above, the truth-conditions of the embedded antecedent and consequent are given

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7The meaning of ‘it is not the case that $a$ is $F’ in Hanks’ theory of propositions is discussed below in Chapter 4, where the topic is negation.
by s2, the truth-conditions of the conditional proposition (5b) are explained by s3, and the latter are a function of the former given the definition of the material conditional relation. This completes the explanation of how a declarative conditional sentence like (5) can express an assertive Hanks proposition with truth-conditions even though the subsentences embedded in the antecedent and consequent position are not asserted by a speaker when they assert the whole sentence (5).

1.1.2.4 A Solution to the Inference Problem for Assertive Propositions

Recall that providing a solution to the inference problem consists of explaining why the argument A1 from §1.1.2.2 is valid. While Hanks does not directly address this problem in his (2015), Hom and Schwartz (2013) provide what they claim is a solution to the problem. Here is their proposed solution: since the conditional (5) expresses the assertive Hanks proposition (5b), the sentences in the argument A1 express the following sequence of assertive Hanks propositions:

\[
P_{A1}^{1} \vdash \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND}
\]

\[
P_{A1}^{2} \vdash \langle a, F \rangle
\]

\[
C_{A1}^{1} \vdash \langle b, G \rangle
\]

Call this argument A1′. After presenting this argument, Hom and Schwartz say the following:8

For Hanks, propositional form and logical form come apart (i.e. [Hanks Propositions] don’t always wear their logical form on their sleeves). In

8In place of ‘a is F’ Hom and Schwartz use the sentence ‘George is clever’, and in the place of ‘b is G’ they use the sentence ‘Karla is foolish’. Consequently, their versions of arguments A1 and A1′ differ in notation from the versions presented in this chapter. Nothing essential to the overall argument depends on this change in notation, however.
other words, the proposition that \([a \text{ is } F]\) has distinct logical forms in premises 1 and 2 of the modus ponens argument above and yet the validity of the inference is supposedly preserved because of successful cancellation (Hom and Schwartz, 2013:18).

Hom and Schwartz do not provide any details as to why the argument is in fact valid, but suppose that it is due to cancellation. Fortunately, given the results from §1.1.2.3 above, it is relatively straightforward to explain why this argument is valid.\(^9\) All that needs to be shown is that if a speaker’s act of predicating the material conditional of \(\vdash \langle a, F \rangle\) and \(\vdash \langle b, G \rangle\) is true, and if that speaker’s act of predicating \(F\) of \(a\) is true, then their act of predicating \(G\) of \(b\) must also be true.

To see this, first consider premise \(P_{2A1}\), and suppose that the speaker’s act of predicating \(F\) of \(a\) is true. Then, given the assumption that it is impossible for \(a\) to both be \(F\) and to not be \(F\), it follows from statement \(s2\) that the speaker’s act of predicating \(F\) of \(a\) is not false.

Second, consider premise \(P_{1A1}\), and suppose that the speaker’s act of predicating the conditional relation of the propositions \(\vdash \langle a, F \rangle\) and \(\vdash \langle b, G \rangle\) (in a cancellation context) is true. Then, from the statement \(s3\) it follows that either \(\vdash \langle a, F \rangle\) is false or that \(\vdash \langle b, G \rangle\) is true. That is, either the speaker’s act of predicating \(F\) of \(a\) is

\(^9\)I will leave aside the issue of what Hom and Schwartz mean by “logical form” and “propositional form” here, and what they might take the differences between these two kinds of form to be. I will simply take them to be using these terms to illustrate that the sentence (1) expresses the proposition (1a) when the speaker asserts the second premise, that the subsentence (1) expresses the (cancelled) proposition (1b) when the speaker asserts the first premise, and that the propositions (1a) and (1b) have different syntactic structure due to the presence of the symbol ‘\(~\)’ prefixing the latter. However, since ‘\(~\)’ is not a constituent of the proposition \(\vdash \langle a, F \rangle\), it does not necessarily follow that (1a) and (1b) have different syntactic (or propositional or logical) structure. I will leave this issue aside here, however.
false, or the speaker’s act of predicating G of b is true.

Third, note that since the speaker’s act of predicating F of a is not false (from the first assumption, above), it follows that the speaker’s act of predicating G of b must be true. That is, if a speaker’s act of predicating the material conditional relation of the propositions ⊢ ⟨a, F⟩ and ⊢ ⟨b, G⟩ is true, and if that speaker’s act of predicating F of a is true, then their act of predicating G of b must also be true. Consequently, the argument is valid.

This explains why the argument is valid. Hom and Schwartz are correct when they say that the argument is valid because of “successful” cancellation, since that is essential for the first premise to express the proposition (5b), as the solution to the embedding problem in §1.1.2.3 illustrates. However, the argument is not valid just because of cancellation, since there is more to the story having to do with the truth-conditions of acts of predication performed by a speaker, as has been illustrated here. This is relevant to Hom and Schwartz’s proposed solution to the inference problem for normative propositions, since it shows that invoking cancellation contexts as an explanation is not sufficient—a complete explanation of validity depends on certain properties of the acts that a speaker performs in uttering sentences in particular sentential moods. As will become evident in Chapter 3 where Hom and Schwartz’s solutions to the problems for normative propositions are assessed, these additional details matter.
1.1.2.5 Recap

In §1.1.2, the second step (out of four) of Hom and Schwartz’s argument in defense of their Main Claim was described. This step consists in showing that assertive Hanks propositions encounter problems with embedding (§1.1.2.1) and inference (§1.1.2.2), and that these problems can be solved (§1.1.2.3 and §1.1.2.4). In the course of this, I claimed that the solutions given by Hom and Schwartz lack certain details that are required to provide full explanations, so I provided the relevant details. Again, the purpose of doing so is that their proposed solutions to the embedding and inference problems for normative Hanks propositions (given in §1.1.4 below) rely crucially on their solutions to the embedding and inference problems for assertive propositions, and for this to work it must be ensured that the solutions to the problems for assertive propositions are complete and that all relevant details are available.

1.1.3 Step 3: The Extension

In the previous section, the embedding and inference problems for assertive Hanks propositions were described, and solutions to these problems were given in part by referring to Hanks (2015). In this section, the third step of Hom and Schwartz’s argument will be rehearsed. This step of their argument consists of extending the set of Hanks propositions to include normative propositions. The reason that Hom and Schwartz perform this extension is that it allows them to demarcate a domain of expressivist discourse separate from declarative, interrogative and imperative discourse. In this short section and the next my aim is simply to reproduce Hom and Schwartz’s account of their extension, along with their proposed solutions to the
embedding and inference problems for normative proposition. In Chapter 2 and Chapter 3 their extension and their proposed solutions will be examined in more detail.

Hom and Schwartz’s starting point for their extension is the following characterization of expressivism, as a semantic theory:

[..] expressivists hold that normative terms express non-cognitive semantic contents, that is, they are a demonstration of certain attitudes of endorsement that play no role in the truth-conditions of the overall sentence (Hom and Schwartz, 2013:18)

The normative term that Hom and Schwartz are primarily concerned with is the predicate ‘required’. In an attempt to model this predicate semantically in a way that is consistent with their characterization of expressivism, they begin by adding a symbol for the speech act of normative endorsement to the already existing set of force-indicators \{\vdash, ?, !\}, as follows:

Assume for the moment that normative prescription or endorsement is a kind of speech act on a par with asserting, interrogating or commanding.

We denote its associated speech act force with the symbol ‘†’. We are now in a position to extend the logic of [Hanks propositions] to solve the classical Frege-Geach problem (Hom and Schwartz, 2013:19).

The extension of Hanks’ theory that is alluded to in this quote is not defined in general terms, but rather is described with the use of an example. Hom and

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\[^{10}\] Strictly speaking, there are three examples: the first for the atomic normative sentence (6), the second for a conditional (sentence (7) below), and the third for a disjunction.

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Schwartz consider the following sentence, where ‘φ-ing’ is a gerund like ‘stealing’, ‘sharing’ or ‘murdering’:

(6) φ-ing is required

In Hom and Schwartz’s (2013:20) terminology, the sentence (6) is normatively endorsed when it is sincerely uttered by a speaker, and it expresses the normatively endorsed Hanks proposition

(6a) †⟨you, Φ-ING⟩

In this proposition, the sign for normative endorsement ‘†’ takes wide scope, and just as was the case with assertion, the mood with which a speaker utters the sentence is a part of its propositional content.\(^\text{11}\)

This is all of the information that Hom and Schwartz provide about their extension of Hanks’ set of assertive, interrogative and imperative propositions. In Chapter 2 I will investigate this extension in more detail, with the goal of determining whether it is “plausible,” as they state it to be in their Main Claim.

1.1.4 Step 4: The Problem for Normative Propositions

Extending Hanks propositions to include normatively endorsed propositions is intended by Hom and Schwartz to demarcate a domain of expressivist discourse. Famously, expressivist domains of discourse encounter the Frege-Geach problem, which Hom and Schwartz characterize as follows:

[The problem] is that when a normative sentence is embedded in a more

\(^{11}\)Hom and Schwartz’s version of the sentence (6) is ‘stealing is required’, and their version of the proposition (6a) is †⟨you, STEALING⟩. I will use the more general ‘φ-ing’ and ‘Φ-ING’ in most of what follows.
complex sentence, like a disjunction or a conditional, it lacks its relevant attitude. This presents difficulties for accounting for ordinary inference patterns like modus ponens and thus casts doubt on the expressivist analysis (Hom and Schwartz, 2013:18).

As was done above in §1.1.2 for assertive propositions, this problem can be broken down into two sub-problems, the embedding problem and the inference problem. In §1.1.4.1 and §1.1.4.2 I will briefly state the embedding and inference problems for normative propositions (respectively). Then in §1.1.4.3 and §1.1.4.4 I will rehearse Hom and Schwartz’s proposed solutions to these two problems.

1.1.4.1 The Embedding Problem for Normative Propositions

The embedding problem for normative propositions consists of explaining how a conditional sentence containing normative terms in its antecedent (and consequent) positions, like

\[(7) \text{ if } \phi\text{-ing is required, then } \psi\text{-ing is required}\]

expresses a Hanks proposition, given that when it is uttered by a speaker the antecedent “lacks its relevant attitude,” as Hom and Schwartz (2013:18) say. In other words, the embedding problem for normative propositions essentially amounts to explaining how the antecedent (6) of the conditional (7) makes a relevant semantic contribution to the proposition expressed by that conditional, given that (6) is not normatively endorsed when a speaker sincerely utters (7), and given that the act of normative endorsement is (presumably) required for (6) to express the normative proposition (6a).
1.1.4.2 The Inference Problem for Normative Propositions

The second problem, the inference problem for normative propositions, essentially amounts to explaining why instances of (apparently) valid arguments containing normatively endorsed sentences are in fact valid. To see this, consider the following argument:

\[ P_{1A_2} \text{. if } \phi\text{-ing is required, then } \psi\text{-ing is required} \]
\[ P_{2A_2} \text{. } \phi\text{-ing is required} \]
\[ C_{A_2} \text{. } \psi\text{-ing is required} \]

Call this argument \( A_2 \). It appears, on the surface, to be an instance of the valid form modus ponens. And indeed, Hom and Schwartz (following expressivists more generally) make the assumption that it is in fact valid. However, there is a problem, which Hom and Schwartz diagnose as follows:

\[ \text{[B]ecause the attitude of endorsement is present in premise 2 but absent in the antecedent of premise 1, the expressivist analysis threatens the obvious validity of the inference (Hom and Schwartz, 2013:19).} \]

By this they mean that when the speaker sincerely utters premise \( P_{2A_2} \), they normatively endorse sentence (6) and perform a token act of the type \( \uparrow(\text{you, } \Phi\text{-ING}) \), but when the speaker utters the embedded sentence (6) in the course of sincerely uttering the conditional premise \( P_{1A_2} \), they do not perform a token action of that type. Consequently, the normative proposition \( \uparrow(\text{you, } \Phi\text{-ING}) \) is not expressed by the antecedent of premise \( P_{1A_2} \), and hence there is no apparent explanation for the validity of the argument, despite it being “obviously” valid. So, providing a solution
to the inference problem consists in explaining why the argument A2 is valid.

1.1.4.3 The HS Solution to the Embedding Problem

Hom and Schwartz’s proposed solution to the embedding problem for normative propositions closely follows the one they give for assertive Hanks propositions, using force cancellation. They stipulate that when a speaker normatively endorses the conditional sentence (7), the sentence expresses the following normatively endorsed Hanks proposition:\textsuperscript{12}

\[(7a) \uparrow\langle(\sim\uparrow\langle\text{you}, \Phi-\text{ING}\rangle, \sim\uparrow\langle\text{you}, \Psi-\text{ING}\rangle), \text{COND}\rangle\]

Hom and Schwartz do not provide an explanation as to what exactly this Hanks proposition is intended to represent. They do however note that because the symbol ‘\(\sim\)’ indicates that the speech act represented by ‘\(\uparrow\)’ is cancelled, the antecedent of the conditional is “unendorsed” (Hom and Schwartz, 2013:20) and thus explains how a speaker can normatively endorse the conditional sentence (7) without normatively endorsing the sentence (6) embedded in its antecedent position. For Hom and Schwartz, this explanation is sufficient to count as a solution to the embedding problem for normative propositions. Whether it is in fact sufficient is the topic of Chapter 3, below.

1.1.4.4 The HS Solution to the Inference Problem

Given that on Hom and Schwartz’s account the normatively endorsed conditional sentence (7) expresses the normative Hanks proposition (7a), the premises and con-\textsuperscript{12}Hom and Schwartz (2013) do not include the ‘\(\uparrow\)’ subscript indicating an act of target-shifting, but I have included it here to conform with Hanks’ (2015).
clusion of the problematic argument \( A_2 \) express the following set of normative Hanks propositions:

\[
P_1'_{A_2} : \uparrow(\sim \uparrow(\text{you}, \Phi\text{-ING}), \sim \uparrow(\text{you}, \Psi\text{-ING})), \text{COND}
\]

\[
P_2'_{A_2} : \uparrow(\text{you}, \Phi\text{-ING})
\]

\[
C'_A_{2} : \uparrow(\text{you}, \Psi\text{-ING})
\]

Call this argument \( A_2' \). For the inference problem to be solved, an explanation of the apparent validity of this argument must be given. Here is the explanation that Hom and Schwartz provide:

\[\text{Note that the practical and theoretical conditionals [viz. (7a) and (5a), respectively] share the same semantic structure. Recall that on Hanks’ proposal, the tilda [sic] stands for the cancellation of the speech act. This allows for the antecedent of premise 1 to be unendorsed. But the speaker is endorsing the entire conditional, and, so, the validity of the inference is preserved (Hom and Schwartz, 2013:20).}\]

Note that this explanation relies on (at least) two claims, the second of which is stated only implicitly.

The first claim is that the assertive proposition (5b) and the normative proposition (7a) share the same “semantic structure.” Hom and Schwartz do not specify what exactly they mean by this, but it seems reasonable to assume that what they mean by this is that the assertive proposition (5b) and the normative proposition (7a) are both of the general form \( \lambda \uparrow(\sim \lambda(a, F), \sim \lambda(b, G), \text{COND}) \) for \( \lambda \in \{\vdash, \uparrow\} \), for some objects \( a \) and \( b \) and predicates \( F \) and \( G \), and where the speaker’s act of applying the material conditional relation cancels the \( \lambda \)-force of the embedded propositions.
The second claim that Hom and Schwartz appear to (implicitly) be stating in the above quote is that since (5b) and (7a) have the same semantic structure, they have at least some of the same semantic properties. Hom and Schwartz do not specify exactly which semantic properties are shared (for example, they do not discuss truth-conditions), but as is evident from their overall argument, at a minimum they are committed to the two propositions sharing some semantic properties pertaining to force cancellation.

These two claims are essential to Hom and Schwartz’s proposed solutions to both the embedding and inference problems for normative propositions. Since, as they claim (and as was discussed in §1.1.2.3), force cancellation solves the embedding problem for assertive propositions, and since (5b) and (7a) have the same semantic structure (from the first claim) and hence have the same semantic properties with respect to force cancellation (from the second claim), force cancellation also (allegedly) solves the embedding problem for normative propositions. Similarly, since, as Hom and Schwartz claim (and as is discussed in §1.1.2.4), force cancellation explains why the assertive argument $A_1$ is valid, and since premise $P_{1_{A_1}}$ of $A_1$ and premise $P_{1_{A_2}}$ of the normative argument $A_2$ have the same semantic structure (and hence have the same semantic properties with respect to force cancellation), force cancellation also (allegedly) explains why the normative argument is valid. Hence, according to Hom and Schwartz, because of force cancellation the embedding and inference problems for normative propositions have solutions.

As a brief preview of Chapter 3, it should be noted that these proposed solutions are missing some important details for essentially the same reasons that Hom and
Schwartz’s solutions to the problems for assertive propositions were missing important details (as was noted in §1.1.2 above). Force cancellation may explain why a speaker can normatively endorse a conditional without normatively endorsing its antecedent, but that does not explain how the meaning of the conditional is determined recursively by the meaning of its constituents and the truth-functional conditional relation, nor does it explain why if premise 1 and premise 2 of the argument A2 are true the conclusion must also be true. These issues and others will be explored in Chapter 3.

1.2 Summary

Recall that Hom and Schwartz’s Main Claim is that if Hanks’ theory of propositions is successful, then there exists a plausible extension of it that readily solves the Frege-Geach problem for normative propositions. In this chapter, I presented the argument that they give in support of their Main Claim in terms of four steps. The first, given in §1.1.1, consisted in providing an overview of Hanks’ theory of propositions, based on Hom and Schwartz’s account of Hanks’ (2007, 2011), along with additional relevant information from Hanks’ (2015). Then, in the second step (§1.1.2), the embedding and inference problems for assertive propositions were described, and Hom and Schwartz’s proposed solutions to the problems were rehearsed. I claimed that their proposed solutions were missing some important details, and provided those details by drawing from Hanks’ (2015). The third step of Hom and Schwartz’s argument, described in §1.1.3, consisted of extending Hanks’ theory to include a new
force of normative endorsement and a new set of normative propositions. Finally, in the fourth step (§1.1.4), the embedding and inference problems for normative propositions were rehearsed, along with Hom and Schwartz’s proposed solutions to these problems. In short, the strategy pursued by Hom and Schwartz here consists of taking the solutions to the problems for assertive propositions and porting them over to solutions for the analogous problems for normative propositions.

For the remainder of this dissertation, Hanks’ theory of propositions, as it is described in §1.1.1, will be accepted uncritically. Given this, the aims to be met are to (i) determine whether Hom and Schwartz’s proposed extension of Hanks’ theory of propositions is “plausible” (to use their word) and (ii) if the extension is plausible, determine whether it in fact solves the Frege-Geach problem for normative propositions. That is, in what follows I will accept without criticism the first step of Hom and Schwartz’s argument. Then, in Chapter 2 and Chapter 3 I will examine the second, third and fourth steps (respectively), and identify several problems with each. Finally in Chapter 5 I will offer an alternative extension that is designed with the intention of avoiding these problems, and show how it also addresses the Frege-Geach problems.
Chapter 2

An Assessment of the Extension

Recall that in their Main Claim, Hom and Schwartz state that there is a “plausible” extension of Hanks’ theory of propositions that solves the Frege-Geach problem for normative propositions. In the third step of their argument in defense of their Main Claim (described above in §1.1.3) they provide a brief account of what this extension is, and they give an example of an atomic normatively endorsed sentence and the normative proposition it expresses (sentence (6) and proposition (6a), respectively). However, they provide little in the way of details. Nor do they specify what it is exactly for an extension of Hanks’ theory, in general, to be plausible (or implausible), or if their extension meets such plausibility constraints.

The goal of this chapter is to determine whether Hom and Schwartz’s proposed extension is plausible. I will stipulate that the extension is plausible if it both (i) satisfies four core expressivist constraints (to be given in §2.1 below), and if (ii) introducing normative propositions into Hanks’ theory does not cause any significant
problems to Hanks’ base theory (the topic of §2.2). One might certainly argue that the definition of ‘plausible’ that I use in this section is too demanding (or not demanding enough), but in my view it sets out the minimal constraints that the extension should meet—that it captures core commitments of expressivism, and that it does not disrupt or necessitate unreasonable revisions to Hanks’ theory of propositions.

In §§2.1.1-4 I argue that of the four core expressivist constraints, three are satisfied if certain stipulations are made about the properties of normative propositions, but that one constraint is not satisfied. I consider one method for satisfying this constraint, and then reject it. In §2.2, I argue that introducing normative propositions into Hanks’ theory gives rise to a problem with certain interrogative sentences, and in §§2.2.1-3 I will consider three possible solutions to this problem and reject them. I will conclude that because one of the four constraints is not satisfied, and because of this problem with interrogatives, it is not clear that Hom and Schwartz’s extension is plausible, given the present definition of ‘plausible’. However, it is in the vicinity of a plausible extension, which I will give later in §5.1.

2.1 Four Expressivist Constraints

Hom and Schwartz introduce their extension for the purpose of modeling expressivist semantics within the framework of Hanks’ theory of propositions. As a consequence, their extension can only be considered plausible if it succeeds in adequately satisfying certain constraints that make up the minimal commitments of expressivist semantics.
So, in this section I will enumerate four core expressivist constraints that I think need to be satisfied for the extension to model expressivism. Then I will ask whether the constraints are satisfied.

Enumerating these constraints is complicated somewhat due to the fact that Hom and Schwartz aim to model modern ‘pure’ expressivism (Blackburn (1984, 1988), Gibbard (1992, 2003)) in the semantic framework of Hanks propositions, which may be more aptly designed to model older noncognitivist or speech-act accounts of normativity (Ayer, (1936), Hare (1952)). The relevant difference between these two views is that modern pure expressivists take the primary semantic difference between normative and descriptive language to be a difference in thought (non-cognitive mental states as opposed to beliefs), and explain the meaning of normative sentences in terms of the mental states that they are conventionally used to express. On the other hand, speech-act accounts characterize the salient difference between normative and descriptive sentences in terms of how these sentences are used in discourse, and the meaning of normative sentences is explained in terms of the speech acts that they are conventionally used to perform (see Schroeder 2008a:3-4). In Hanks’ theory, however, sentences express Hanks propositions, and these are described as being abstractions of individual speech or mental acts, that function primarily to classify such acts, and that are mind-independent entities whose existence does not depend on particular tokening acts of these types (see Hanks (2015:27, 31, 102)).

I will not dwell on the fine-grained distinctions between pure expressivism, the

---

1This abstract nature is explained by Hanks (2015:25, 27) in terms of propositions being shareable and repeatable types of token speech or mental acts whose existence is independent of speech or mental acts that are token instances of them.
various speech-act accounts, and how versions of each might fit within the framework of Hanks propositions. Instead, I will give the following four constraints, which I view as being the minimal conditions that should be met if Hom and Schwartz’s extension is to plausibly capture some version of expressivism:

**c1.** Normatively endorsed sentences express normative Hanks propositions, and the normative predicate ‘required’ expresses (or semantically contributes) a force of normative endorsement to the proposition expressed by the sentence.

**c2.** Normatively endorsed sentences do not express representational propositions with truth-conditions.

**c3.** Normatively endorsed sentences and normative propositions have a world-to-word (or world-to-mind) direction of fit.

**c4.** The following conditions must hold for the atomic sentences (1) and (6):

   a. sentence (1) must not express a normative proposition.

   b. sentence (6) must not express an assertive proposition.

Taken together, these four conditions are intended to capture the non-representational and motivational properties of the semantic contents of normatively endorsed sen-

---

2Not all versions of expressivism are captured by these four conditions, so these are simply intended to be a starting point for present purposes. The first condition is from Hom and Schwartz (2013:18). The second is implied by Schroeder’s (2009:264) (which Hom and Schwartz reference), the third is from Blackburn’s (1988:504), and is included because direction of fit is a property of Hanks propositions that is used to classify kinds of propositions. The fourth is from Schroeder (2008a) and is implicit in Hom and Schwartz’s (2013).

3I consider only the particular atomic sentences (1) and (6) here, but a generalized version of this constraint applying to all descriptive and normative sentences must also hold (see §3.2). Here as elsewhere, the word ‘express’ is interchangeable with the phrase ‘be conventionally used to express’.
tences like (6). The normative proposition that is expressed by a normatively endorsed sentence is intended to provide motivational force to an agent who accepts the sentence to make the world conform to the content of that state, or to make the world ‘fit’ to it (hence constraints $c1$ and $c3$). Under the assumption that normative sentences are inherently non-representational, and that representational content is essentially explained in terms of truth-conditions, constraint $c2$ prohibits normatively endorsed sentences from expressing truth-apt propositions. Finally, constraint $c4$ ensures that a boundary between atomic descriptive and normative sentences (1) and (6), respectively, is maintained.

The aim of this section is to determine whether Hom and Schwartz’s extension satisfies these four constraints. For the purposes of simplicity I will restrict attention to the normatively endorsed sentence (6) and the normative proposition (6a), and stipulate that the extension satisfies the constraints if (6) and (6a) have the properties specified by the four constraints. I argue that if certain reasonable stipulations are made about properties that (6) and (6a) have, then the extension satisfies the first three constraints, but that it fails to satisfy constraint $c4$. Before doing this, however, I will enumerate three important properties of propositions that Hanks discusses in his (2015). These three properties will be essential in framing the distinction between normative and assertive propositions.

The first property of propositions to be noted is that of satisfaction conditions. In Hanks’ theory, every proposition (assertive, interrogative or imperative) has conditions under which it is satisfied (Hanks 2015:24, 186, 197). For assertive propositions, these conditions are those under which the proposition is true, and hence
for assertive propositions, satisfaction conditions are just truth-conditions. For interrogative propositions, satisfaction conditions are a set of answers to the question being asked, and so interrogative propositions have answerhood conditions. Finally, imperative propositions are satisfied by states of affairs under which they are fulfilled, and so their satisfaction conditions are fulfillment conditions.4

The second distinguishing property is that of a proposition’s (or a sentence’s) direction of fit (Hanks, 2015:24, 186, 188, 197). For Hanks, assertive propositions have word/mind-to-world direction of fit, insofar as they aim to ‘fit’ to the world (or accurately represent it). Interrogative propositions have word/mind-to-word/mind direction of fit, since the aim of asking a question is to obtain (or specify) information (a correct answer) that manifests itself in speech or thought. Finally, imperative propositions have world-to-word/mind direction of fit, in that the aim of issuing a command is to make the world ‘fit’ to what is commanded.

The third distinguishing property pertains to the kinds of mental states that are typically associated with a kind of proposition. Hanks (2015:24-25, 165-66, 194) discusses this only briefly, but for present purposes it is important to note that, in general, assertive propositions are associated broadly with belief states, interrogative propositions with general states of wondering, and imperative propositions with broadly desire-like states (wishes, intentions, requests, promises, hopes or orders).5

These three kinds of properties can be used to classify Hanks propositions, as

4A detailed discussion of the differences between these kinds of satisfaction conditions is beyond the scope of this chapter. The interested reader is referred to Hanks (2015:186, 197).

5For example, a speaker believes that \( a \) is \( F \) if they have performed a token action of predicating \( F \) of \( a \) iff they have performed a token of the type \( \vdash \langle a, F \rangle \) iff they have either asserted that \( a \) is \( F \) or has judged it to be true that \( a \) is \( F \). The same general outline applies to the speaker wondering whether \( a \) is \( F \) and commanding that \( a \) be \( F \).
illustrated by the following table (see also Hanks’ (2015:197) Table 9.1):

<table>
<thead>
<tr>
<th></th>
<th>Assertive</th>
<th>Interrogative</th>
<th>Imperative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Force</strong></td>
<td>⊢</td>
<td>?</td>
<td>!</td>
</tr>
<tr>
<td><strong>Sat. Conditions</strong></td>
<td>Truth</td>
<td>Answerhood</td>
<td>Fulfillment</td>
</tr>
<tr>
<td><strong>Mental State</strong></td>
<td>Belief</td>
<td>Wondering</td>
<td>Desire</td>
</tr>
<tr>
<td><strong>Direction of Fit</strong></td>
<td>word/mind</td>
<td>word/mind</td>
<td>world</td>
</tr>
<tr>
<td></td>
<td>↓ to</td>
<td>↓ to</td>
<td>↓ to</td>
</tr>
</tbody>
</table>

Table 2.1

In conjunction with the four constraints c1-c4 given above, the properties listed in Table 2.1 can be used to provide more details about normative propositions (and how they differ from other Hanks propositions) than Hom and Schwartz do in their description of the extension. This will be helpful not only in determining if the extension is plausible, but also whether complete solutions to the embedding and inference problems for normative propositions can be given.

To assist with seeing if the constraints are satisfied, first consider how Hom and Schwartz’s account of (6) and (6a) suggests the following semantic mapping of terms in the sentence (6) to objects in the proposition (6a):

- **m:** $\phi$-ing is required $\mapsto \uparrow \langle \text{you}, \Phi-\text{ING} \rangle$
- $\phi$-ing $\mapsto \Phi-\text{ING}$
- required $\mapsto \uparrow$
- $\_\_$ $\mapsto \text{you}$
The blank space ‘___’ indicates that there is no sub-sentential item mapped to the propositional constituent you. I will address this issue in §2.2.4 and in §4.2.2.2. For now, the question is if the extension with this mapping satisfies the four constraints.

2.1.1 Is Constraint c1 Satisfied?

Constraint c1 demands that the normative term ‘required’ expresses (or “is a demonstration of” (Hom and Schwartz, 2013:18)) the speech-act correlate of an attitude of normative endorsement, namely the force of normative endorsement †. As the map m demonstrates, ‘required’ is semantically associated with (or ‘expresses’) †. So, this constraint is satisfied.

2.1.2 Is Constraint c2 Satisfied?

The second constraint requires that normatively endorsed sentences do not express propositions with truth-conditions. Expressivist views that adopt this position do so because they assume that propositions with truth-conditions are inherently representational, that normative sentences are not representational, and therefore that normative sentences cannot express propositions with truth-conditions. However, in Hanks’ theory of propositions, there exist kinds of propositions that are not representational, and that do not have truth-conditions (for example, the set of imperative propositions). So, this constraint is satisfied if it is stipulated that normatively endorsed sentences express Hanks propositions that do not have truth-conditions (and more broadly, that are not representational). As Table 2.1 illustrates, such a stipulation is a theoretical possibility in Hanks’ theory, and so constraint c2 is
satisfied by the extension if it is stipulated that normative propositions do not have truth-conditions, but rather have some other kind of satisfaction conditions.

2.1.3 Is Constraint c3 Satisfied?

The third constraint requires that normatively endorsed sentences have world-to-word (or world-to-mind) direction of fit. Recall from above that in Hanks' theory some kinds of propositions (namely imperative propositions) have world-to-word/mind direction of fit. As a consequence, it is theoretically possible for normatively endorsed sentences to have the requisite direction of fit. So, constraint c3 is satisfied by the extension if it is stipulated that normative propositions have world-to-word/mind direction of fit.

2.1.4 Is Constraint c4 Satisfied?

First, c4.b is satisfied because the predicate ‘required’ is mapped to the force-indicator †, and this makes it impossible for any other force-indicator to take wide scope in the proposition expressed by (6). That is, the expressivist’s mapping m and constraint c1 jointly function (in part) to place restrictions on the force with which the sentence (6) can sincerely be uttered. In particular, the mapping and the constraint prohibit the sentence from being asserted. So this sub-constraint is satisfied.

However, the restriction imposed by this mapping of terms does not apply in the case of any other atomic sentence in Hanks’ theory that does not contain ‘required’. That is, in Hanks’ base theory there are no apparent semantic restrictions on predi-
cates that limit the forces that can be used by a speaker \( S \) to combine propositional constituents. For example, with any predicate \( F \) and subject term \( a \), \( S \) can use any of \( \vdash \), ? or ! to combine the propositional constituents \( a \) and \( F \), depending on the mood that they intend to utter the sentence in. That there are no restrictions in Hanks’ base theory is not a problem, but now with Hom and Schwartz’s extension, in uttering the descriptive predicate ‘\( F \)’ the speaker \( S \) is free to choose any force that they wish from the set of force-indicators \( \{ \vdash, \dagger, ?, ! \} \). In particular, there are no restrictions prohibiting the following expression relation from obtaining, when \( S \) sincerely utters (1):
\[
\begin{align*}
a \text{ is } F & \underset{\text{expresses}}{\longrightarrow} \dagger(a, F)
\end{align*}
\]
As a result, it is in principle possible for (1) to express a normative proposition. That is, the sub-constraint \( c4.a \) is not satisfied.

One way to attempt to resolve this problem would be to stipulate that ‘\( F \)’ expresses the force of assertion \( \vdash \), just as ‘required’ expresses \( \dagger \). The purpose of doing so would be to impose restrictions on possible combinations of the act-type \( F \) with other propositional constituents, just as the meaning of ‘required’ in effect functions to place restrictions on the forces with which propositional constituents can be combined (in that case, only with the force of normative endorsement). This would prohibit ‘\( a \text{ is } F \)’ from expressing \( \dagger(a, F) \), hence satisfying the sub-constraint \( c4.a \).

However, doing things this way is too restrictive. To see this, recall that in this case ‘\( F \)’ expresses the force-indicator \( \vdash \) and not the act-type \( F \). Consequently, ‘\( a \text{ is } F \)’ does not express the assertive proposition \( \vdash (a, F) \), and ‘is \( a \) \( F \)’ does not express the interrogative proposition \( ?(a, F) \), since in both cases there is no sub-sentential
item semantically corresponding to the propositional constituent F (furthermore, in the case of interrogation the force-indicator ? is simply unavailable for use). So, this attempt to resolve the problem results in significant disruptions to Hanks’ base theory, and hence must be rejected. The upshot of this is that, as things stand, the sub-constraint \( c4.a \) is violated, and therefore the full constraint \( c4 \) is not satisfied.

### 2.1.5 Results

The results of §§2.1.1-2.1.4 are as follows: \( c1 \) is satisfied if it is stipulated that sentence (6) expresses a normative proposition, and if it is stipulated that the map \( m \) holds (and that in particular ‘required’ maps to the force-indicator †). Furthermore, both constraints \( c2 \) and \( c3 \) are satisfied if it is stipulated that normatively endorsed sentences express Hanks propositions that have non-truth-conditional satisfaction conditions (and that are more generally non-representational) and if it is stipulated that they have world-to-word/mind direction of fit. But, constraint \( c4 \) is not satisfied. Since if any of the constraints fail to be satisfied, Hom and Schwartz’s extension cannot be considered plausible (on the given interpretation of ‘plausible’), I will state this result as an objection:

**Objection 2.1.** The extension does not satisfy constraint \( c4 \). Consequently, it cannot be considered plausible.  

**End Objection 2.1.**

**Reply.** In §5.1 I will give an alternative extension that does not encounter this problem, and I will directly address this objection with **Example 5.1.a** and **Ex-**
ample 5.1.b. Until then, however, this objection will remain unresolved. End Reply.

Before moving on to the next section, I will briefly note that normative propositions have several properties in common with imperative propositions. Both normative and imperative propositions have world-to-word/mind direction of fit, both are associated with a desire-like mental state, and neither have truth-conditions as satisfaction conditions. This suggests, but does not conclusively demonstrate, that normative propositions may be a kind of imperative proposition. However, if normative propositions are a kind of imperative proposition, then Hom and Schwartz’s extension does not result in extending Table 2.1 by appending an additional column for normative propositions, but rather it locates the set of normative propositions naturally in the currently existing right-most column of the table as a sub-category of imperative propositions. Whether the extension functions to specify a new category of Hanks proposition, or whether it simply demarcates a subset of imperative propositions, is a question that I will leave open here since it does not have an immediate bearing on Hom and Schwartz’s overall argument pertaining to the Frege-Geach problem.

2.2 A Problem With Interrogatives

The aim of the previous section was to determine whether Hom and Schwartz’s proposed extension satisfies four basic expressivist constraints. I argued that the extension satisfies constraints c1, c2 and c3 if certain stipulations are made about
the properties of normative propositions, but also argued that c4 is not satisfied. To conclude whether the extension is plausible or not, which is the overall goal of the chapter, it remains to be determined whether the introduction of normative propositions introduces any problems into Hanks’ theory. As I will argue in this section, extending Hanks’ theory to include normative propositions results in a problem with specifying the proposition expressed by certain interrogative sentences.

To see this, consider the following interrogative sentence:

(8) is φ-ing required?

It is an observable feature of natural language that a speaker can ask this question (and obtain an answer to it). So Hanks’ theory, with Hom and Schwartz’s extension to it, must have an account of the proposition it expresses, and one that is consistent with the account of interrogative propositions given in Hanks’ base theory. Here are three possible solutions to the problem of specifying the proposition expressed by (8), along with assessments of these solutions.

2.2.1 Solution 1

Perhaps the most natural way to analyze sentence (8) would be as follows:

(8a) ?⟨φ-ing, REQUIRED⟩

Initially, this may look promising, since read naively it appears to represent a speaker’s act of asking if φ-ing is required. Furthermore, it seems to be the type of a speaker’s tokening act of a speaker simultaneously (i) expressing the property of being required, (ii) referring to the object φ-ing, and (iii) applying the property of being required to φ-ing in the interrogative mood. This is along the lines of an
analysis of the proposition expressed by (8) that might be expected in Hanks’ base theory, without Hom and Schwartz’s extension.

However, there are two problems with this. First, recall from constraint \(c1\) and the map \(m\) from §2.1 that ‘required’ expresses the force for normative endorsement \(†\), and does not express the property of being required. As a result, the instance of ‘required’ in the interrogative sentence (8) maps to a propositional constituent that does not appear in the proposition (8a). Furthermore, there is no other lexical item in sentence (8) that maps to the propositional constituent \(\text{REQUIRED}\) in the proposition (8a). Therefore, if constraint \(c1\) holds, it follows that (8a) is not an adequate account of the proposition expressed by (8).

The second problem is that (8a) in effect is asking whether it is the case that \(\phi\)-ing is required, and so an answer to it would express a representational proposition with truth-conditions, thus violating clause \(c2\) above. Another way of seeing this is to note that for Hanks (2015) answering in the affirmative to the question (8a) would be equivalent to asserting that \(\phi\)-ing is required, which is equivalent to asserting sentence (6) and expressing the following assertive proposition:

\[
(6b) \vdash (\phi\text{-ing}, \text{REQUIRED})
\]

When the speaker performs the act that this proposition is a type of, they are either asserting that \(\phi\)-ing is required or judging that \(\phi\)-ing is required, and the sentence expresses an assertive proposition with truth-conditions and word/mind-to-world direction of fit. This is a problem, however, since the expressivist clauses \(c2\) and \(c3\) from §2.1 stipulate that the proposition expressed by (6) cannot have truth-conditions, and must have world-to-word/mind direction of fit. This implies that if
the interrogative sentence (8) expresses the proposition (8a), then in answering this question a speaker must express a proposition that is prohibited by the expressivist semantics. The two problems described here give sufficient reason to reject this solution to the problem with the interrogative (8).

2.2.2 Solution 2

As an alternative to having (8) express (8a), one could simply replace the symbol ‘†’ in the normative proposition (6a) with the symbol ‘?’ indicating that the speaker applies the property of φ-ing to the object you in the interrogative mood. Doing this yields the proposition

\[(8b) \ ?(you, \Phi\text{-ING})\]

However, this is problematic because it is the interrogative proposition that is expressed by the sentence ‘are you φ-ing?’, and not the proposition expressed by the sentence ‘is φ-ing required?’ That is, proposition (8b) is the type of a token act of asking whether a particular individual (or set of individuals) is in fact φ-ing, not whether φ-ing is required. Furthermore, providing an affirmative answer to the question (8b) would be equivalent to asserting that the individual you is in fact φ-ing, and not that they endorse φ-ing. So (8b) is a problematic account of the proposition expressed by (8), hence this proposed solution must be rejected.

2.2.3 Solution 3

The third possible account of the proposition expressed by (8) requires some setup. So, before giving the proposition that is expressed by (8) here, first I will define
a binary acceptance relation on speakers and propositions, and then I will briefly explain how I will interpret the propositional constituent \textit{you} that Hom and Schwartz use (but do not explain) in their (2013).

First, consider the following equivalence:\footnote{The topmost equivalence is based on Unwin (1999, 2001) and Schroeder (2008:45,57) (though Schroeder uses a ‘thinks that’ locution in place of ‘accepts’), and is inspired in part by the following equivalence: a speaker accepts that \(a\) is \(F\) iff they believe that \(a\) is \(F\), for a declarative sentence \(a\) is \(F\). Hanks (2015:151) also defines an ‘accepts’ relation. As a side note, the equivalence \textbf{s4} will be cited again in Chapter 4 as part of the negation problem for normative propositions.}

\textbf{s4.} A speaker \(S\) accepts that \(\phi\)-ing is required iff

- \(S\) normatively endorses \(\phi\)-ing, iff
- \(S\) performs the act of simultaneously (i) referring to \textit{you}, (ii) expressing the property of \(\phi\)-ing and (iii) applying the property of \(\phi\)-ing to \textit{you} in the mood of normative endorsement.

The \textit{accepts that} relation in this equivalence is true of a speaker \(S\) and a normative proposition \(p\) if \(S\) accepts that \(p\).\footnote{This essentially defines a propositional attitude relation that partitions the set of all speakers into those that endorse \(\phi\)-ing and those that do not (as distinct from those that endorse \textit{not} \(\phi\)-ing, which is the subject of the negation problem in Chapter 4).} With this relation, it becomes possible to provide the conditions under which one can correctly assert that a speaker endorses \(\phi\)-ing.

Second, note that Hom and Schwartz do not explain anywhere in their (2013) what the propositional constituent \textit{you} is, nor what the object \textit{you} is. In what follows it will be important to specify how these items should be interpreted. Hanks (2015:111-112) uses the symbol ‘\textit{you}’ twice as part of a discussion of imperatives, and there takes the symbol to represent the speaker’s act of referring to the audience.
of their speech act. Given this, I will follow Hanks’ account of the symbol in the remainder of the chapter, and stipulate that when a speaker sincerely utters the sentence (6) they perform the act of simultaneously (i) referring to the audience of their utterance, (ii) expressing the property of \( \phi \)-ing, and applying the property of \( \phi \)-ing to their audience in the mood of normative endorsement.\(^8\) This action is represented by the familiar proposition (6a).

These accounts of the *accepts that* relation and the propositional constituent *you* will figure more prominently in later sections (especially Chapter 4), but for now they can be used to suggest an account of the proposition expressed by (8). To do this, first suppose that the domain of speakers consists of just two interlocutors \( S_1 \) and \( S_2 \) (though this domain could be expanded), and suppose that in this context \( S_1 \) asks \( S_2 \) if \( \phi \)-ing is required. So, \( S_1 \) sincerely utters the interrogative sentence (8) in this context, and the audience of their utterance is \( S_2 \). As I argued above, the proposition that is expressed cannot be (8a), nor can it be (8b). In this case, however, \( S_1 \) is expressing a proposition of the following form:

\[
(8c) \ ?\langle \langle S_2, \sim \langle \langle \text{you}, \Phi \text{-ING} \rangle \rangle \rangle, \text{ACCEPT} \rangle
\]

This represents the speaker \( S_1 \)'s act of simultaneously (i) referring to \( S_2 \), (ii) referring to the normative proposition \( \langle \langle \text{you}, \Phi \text{-ING} \rangle \rangle \), (iii) expressing the relation *accepts that* and (iv) applying the *accepts that* relation to the speaker \( S_2 \) and the proposition \( \langle \langle \text{you}, \Phi \text{-ING} \rangle \rangle \) in the interrogative mood (where this application of the property

---

\(^8\)An alternative interpretation would take *you* to be identical to the speaker (and only the speaker) in every context of utterance. That interpretation is rejected here. Instead, I will take ‘*you*’ to be a proper name of the set \( \{a_i\}_{i \in I} \) of individuals that are the speaker’s audience in a context of utterance, which may or may not contain the speaker as a member. Furthermore, I will interpret the act of applying a property to *you* as the act of applying the property to each individual member of the set \( \{a_i\}_{i \in I} \), and not the set itself.
generates a cancellation context, canceling the force of normative endorsement).\footnote{Here I have assumed that the set of individuals referred to by ‘you’ is determined by the context of \( S_2 \)’s sincere utterance of ‘\( \phi \)-ing is required’, if they do so utter it. Their context of utterance could differ from the context of \( S_1 \)’s utterance of the interrogative (8), and so there are two hidden indexical components in the sentence (8). For the sake of simplicity, I will not specify what the members of the set ‘\( you \)’ are here. Also note that (8c) does not involve target-shifting (on this point I have followed Hanks’ (2015:112) account of ‘supposition’, see his proposition 20). Finally, step (ii) is an abbreviation of the complex act that is a token of the type \( \uparrow(\text{you}, \Phi \text{-ING}) \).} In short, (8c) represents \( S_1 \)’s act of asking of their audience whether they accept that \( \phi \)-ing is required, or, equivalently (from \( s4 \)) whether they endorse \( \phi \)-ing.

Recall that in the case of both (8a) and (8b), problems became apparent when their answerhood conditions were considered: in the case of (8a), an affirmative answer to it yielded an illicit assertive proposition, and an affirmative answer to (8b) resulted in an assertion that an individual was performing an act of \( \phi \)-ing, and not that they endorsed that act (which was the target interpretation). So, to verify that (8c) is an acceptable account of the proposition expressed by (8), its answerhood conditions need to be investigated for possible problems.

To this end, suppose that \( S_2 \) does in fact endorse \( \phi \)-ing. Then there are at least two ways that \( S_2 \) can reply in the affirmative to the question that \( S_1 \) asks of them when \( S_1 \) utters the interrogative sentence (8). The first way to respond would be by sincerely uttering

\[
(6) \quad \phi \text{-ing is required}
\]

in response, indicating that they endorse \( \phi \)-ing. This sentence of course expresses the familiar normative proposition

\[
(6a) \quad \uparrow(\text{you}, \Phi \text{-ING})
\]

Then, from the equivalence \( s4 \), this demonstrates that with their sincere utterance
of (6), S₂ accepts that φ-ing is required, thus providing an answer in the affirmative to S₁’s question. Importantly, none of the core expressivist constraints listed in §2.1 are violated with this answer to the question (8).

The second way that S₂ can reply in the affirmative to the question is by asserting that they normatively endorse φ-ing. The simplest way would be for S₂ to respond ‘yes’ when posed the question ‘is φ-ing required?’ by S₁. Another way would be for S₂ to assert that they endorse φ-ing. In either of these two cases, the proposition expressed is the assertive proposition

\[(8d) \vdash \langle \langle S_2, \sim \langle \text{you}, \Phi\text{-ING} \rangle \rangle, \text{ACCEPT} \rangle\]

This proposition is true if S₂ endorses φ-ing, and is false otherwise. Hence it accurately describes whether S₂ endorses φ-ing or not. Furthermore, none of the core expressivist constraints are violated by it, since (8d) is expressed by a declarative sentence, and not a normatively endorsed sentence.¹⁰

This shows that the set of answers to the question (8) is composed at least in part by the propositions (6a) and (8d), both of which are consistent with the core expressivist clauses given in §2.1. So, this account of the proposition expressed by (8) avoids the problems encountered by (8a) and (8b).

However, this account encounters a different problem. The problem is that (8c) is the proposition expressed by the sentence

\[(8e) \text{ does } S_2 \text{ accept that } \phi\text{-ing is required?}\]

A result of this is that, relative to a context of utterance (with salient feature that S₁ and S₂ are interlocutors), this sentence is equivalent in meaning to ‘is φ-ing required?

¹⁰It is expressed by (at least) either ‘Is φ-ing required? Yes’ or ‘I endorse φ-ing’ when uttered by S₂, or by ‘S₂ endorses φ-ing’ when uttered by anyone.
required?’ But this then implies that the sentences ‘φ-ing is required’ and ‘S₂ accepts that φ-ing is required’ are equivalent in meaning. However, these sentences are not synonymous, for much the same reason that ‘a is F’ is not semantically equivalent to ‘S₂ believes that a is F’. The result of this is that while having the sentence (8) express the interrogative proposition (8c) avoids the problems that were encountered with the previous two propositions, namely (8a) and (8b), a new problem arises. Therefore, this account of the proposition expressed by sentence (8) must be rejected.

2.2.4 Results

In this section a problem with the interrogative sentence (8) was identified. I considered three possible solutions to the problem, and gave arguments against each. The end result is that the problem still stands, and therefore the introduction of normative propositions into Hanks’ theory leads to a problem with characterizing interrogative Hanks propositions with normative predicates. This suggests that unless and until this problem is resolved, Hom and Schwartz’s extension cannot be considered plausible. Here is this result, in the form of an objection:

Objection 2.2. There apparently is no satisfactory account of the interrogative proposition expressed by sentence (8). Each of the propositions (8a), (8b) and (8c) are problematic candidates. As a consequence, it cannot be concluded that Hom and Schwartz’s extension is plausible. 

End Objection 2.2.

\footnote{In terms of the taxonomy of non-descriptivist semantics for normative terms, if ‘φ-ing is required’ and ‘S₂ accepts that φ-ing is required’ are synonymous, then expressivism would collapse into speaker subjectivism (see Schroeder (2008a):16-17), which would be a very unwelcome result.}
**Reply.** In §5.1 an account of the proposition expressed by (8) will be given, such that the problems encountered above are avoided. This will answer the objection.

*End Reply.*

The reply to the objection that is given in §5.1 relies on three related things that are not presently available: (i) a different account of the meaning of ‘required’, (ii) a new mapping of terms in (6) to replace the map m from §2.1, and (iii) a new account of the proposition expressed by (6) (to be given in a reply to an objection in §4.2.2.2). For now, however, I will bracket this particular concern about the plausibility of Hom and Schwartz’s extension, and carry on.

### 2.3 Summary

The goal of this chapter was to determine whether Hom and Schwartz’s extension is plausible. I stipulated that the extension would be considered plausible if it both (i) satisfies the four core expressivist commitments c1-c4, and if (ii) no significant problems arise with the introduction of normative propositions.

In §2.1 I argued that if it is stipulated that ‘required’ semantically maps to the force-indicator †, if it is stipulated that normative propositions do not have truth-conditions, and if it is stipulated that they have world-to-word/mind direction of fit, then clauses c1, c2 and c3 are satisfied. However, I argued that the fourth constraint c4 does not hold. I considered a possible way of resolving this, but did not reach a
satisfactory resolution. This is noted in **Objection 2.1**.

Then in §2.2 I observed that there is a problem with specifying the proposition expressed by the interrogative sentence (8). I considered three ways of addressing this problem, but did not find a satisfactory solution. This is noted in **Objection 2.2**.

Because of these two objections, it presently cannot be concluded that the extension is plausible (on the given definition of ‘plausible’). However, the extension does appear to be very much in the vicinity of something that satisfies all of the requisite constraints. In fact, as I will argue in §5.1, an alternative extension that is in many ways similar to (but also in several key ways critically different from) Hom and Schwartz’s extension can be given that avoids the problems that are encountered here. Given this, for Chapters 3 and 4 I will temporarily bracket the two objections, assume that Hom and Schwartz’s extension is plausible, and go on to assess their claim that it solves the Frege-Geach problems for normative propositions. In Chapter 3 I will address Hom and Schwartz’s proposed solutions to the embedding and inference problems. Then in Chapter 4 I will consider a variant of the embedding problem, the *negation* problem. Then, finally, in Chapter 5 I will give an alternative extension that is plausible (or at least more plausible than Hom and Schwartz’s) and show how it can be used to more effectively address the Frege-Geach problems.
Chapter 3

Embedding Normative Sentences in Conditionals

Recall that Hom and Schwartz’s Main Claim is that if Hanks’ theory of propositions is successful, then there is a plausible extension of it that readily solves the Frege-Geach problem for normative propositions. For the purposes of argumentation, I have assumed that Hanks’ theory of propositions holds, and in what follows I will also assume that Hom and Schwartz’s extension is plausible, despite the objections to it that were raised in Chapter 2. Now I will turn to the question of whether the extension solves the Frege-Geach problems for normative propositions. In this chapter, I will focus primarily on Hom and Schwartz’s proposed solution to the embedding problem for the conditional (7).

As was described in §1.1.4.3 above, Hom and Schwartz’s solution to the embedding problem essentially consists of a three-step argument. The first step, which was
described in §1.1.2.1, consists of observing that there is an embedding problem with the declarative sentence

\[(5) \text{ if } a \text{ is } F \text{ then } b \text{ is } G\]

but that this problem can be solved (as described in §1.1.2.3) by noting that (5) expresses the assertive proposition

\[(5b) \vdash \langle \langle \neg \vdash \langle a, F \rangle, \neg \vdash \langle b, G \rangle \rangle, \text{COND} \rangle\]

and that force-cancellation explains the embedding. (However, as was also noted in §1.1.2.3, more than just reference to force-cancellation is required to fully explain this embedding.)

The second step of Hom and Schwartz’s solution consists of observing that there is an embedding problem for sentences containing normative antecedents and consequents like the following sentence:

\[(7) \text{ if } \phi\text{-ing is required, then } \psi\text{-ing is required}\]

And, the embedding problem for this sentence is analogous to the embedding problem for the declarative conditional (5). This was described in §1.1.4.1.

In the third and final step, as described in §1.1.4.3, Hom and Schwartz claim that (7) expresses the normative proposition

\[(7a) \dagger\langle \langle \neg \dagger\langle \text{you}, \Phi\text{-ING} \rangle, \neg \dagger\langle \text{you}, \Psi\text{-ING} \rangle \rangle, \text{COND} \rangle\]

Their argument then is that since force cancellation solves the embedding problem for the assertive proposition (5b), and since the normative proposition (7a) is syntactically isomorphic to (5b), it follows that the solution to the problem for the sentence (5) can be ported over to the problem for the sentence (7), and hence that force cancellation in the proposition (7a) also solves the embedding problem for (7).
In this chapter I will investigate the third step of Hom and Schwartz’s proposed solution to the embedding problem. In particular, I will place pressure on their claim that the conditional (7) expresses the normative proposition (7a).

In §3.1 I investigate Hom and Schwartz’s claim that sentence (7) expresses a normative proposition. As justification for their claim, Hom and Schwartz cite an “explanation” from Schroeder (2009). In §3.1.2 I examine the relevant details from Schroeder’s (2009), and in §§3.1.3-4 use this to argue that Hom and Schwartz’s argument does not provide sufficient support for their claim that (7) expresses a normative proposition.

Then in §3.2 I examine two constituents of the proposition (7a), the force-indicator † and act-type COND, and identify problems with each. In §3.2.1 I argue that neither of the two most plausible explanations for why † takes wide scope in (7a) are acceptable. In §3.2.2 I argue that by its definition the material conditional relation cannot be applied to the other propositional constituents of (7a). From this I conclude that (7) does not express the proposition (7a), and furthermore that even if it could be shown that (7) expresses some other normative proposition, significant challenges then arise with mixed descriptive-normative conditionals.

The conclusion that I draw in this chapter is that the third step of Hom and Schwartz’s proposed solution to the embedding problem encounters significant problems, and consequently that their extension of Hanks’ theory does not readily solve the embedding problem for the conditional (7). Later, in Chapter 5, I will give an alternative extension of Hanks’ theory that is designed to avoid the problems that are encountered here with Hom and Schwartz’s extension.
3.1 Should (7) be Normatively Endorsed?

In giving their solution to the embedding problem, Hom and Schwartz claim that the
conditional sentence (7) expresses the Hanks proposition (7a). With this proposition,
the sign for normative endorsement takes wide scope, indicating that the speaker of
(7) is applying the material conditional relation to two propositions in the mood of
normative endorsement. However, one might reasonably expect that when a speaker
sincerely utters the sentence (7) they are not performing an act of normative en-
dorsement, but rather are making an assertion and expressing a proposition like the
following:

\[(7b) \vdash \langle \langle \sim\langle you, \Phi-ING\rangle, \sim\langle you, \Psi-ING\rangle \rangle, \text{COND} \rangle\]

With this proposition, the sign for predication takes wide scope, and, as was ex-
plained in §1.1.2.3 above, the symbol ‘COND’ represents the act-type of expressing
the material conditional relation either is false or is true. This is very much the
sort of relation that one might plausibly argue is apt for being predicated of the
propositions expressed by the antecedent and consequent of (7).

Hom and Schwartz acknowledge the possibility that the conditional sentence (7)
is asserted and is not normatively endorsed, saying that having it express a normative
Hanks proposition

[...] might seem counterintuitive. After all the entire conditional seems
to be submitted for our belief rather than our normative endorsement.

What could it even mean to normatively endorse a conditional sentence?

(Hom and Schwartz 2013:20)
Indeed, it is not immediately clear what it means to normatively endorse sentence (7), and speculating what it could mean is beyond the scope of the present chapter. While Hom and Schwartz do not discuss this issue, they do present an argument in defense of the claim that (7) expresses a normative proposition like (7a), and not an assertive proposition like (7b). I will write the claim that they make as follows:\footnote{The subscript ‘HS’ in this and subsequent claims is meant to indicate that the claims are being made by Hom and Schwartz. This is to be distinguished from the subscript ‘Sc’ used in later sections, which is meant to indicate that the claim is being made by Schroeder (2009).}

\textbf{Claim 3.1}_\textit{HS}. Sentence (7) expresses a normative proposition.

The remainder of §3.1 will be concerned primarily with the argument that Hom and Schwartz give in support of this claim. In §3.1.1, I will reproduce their argument, show how their argument depends crucially on one additional claim, and then give two objections to their argument. In the course of their argument, Hom and Schwartz reference an “explanation” from Schroeder (2009), but they do not discuss this explanation in much detail. So in §3.1.2 I will examine the relevant features of Schroeder’s (2009), with the intent of using information obtained there to provide a revised version of Hom and Schwartz’s argument that might address the two objections. In §§3.1.3-3.1.4 I will give this revised argument, along with replies to the two objections. Then I will give three objections to this new revised argument, and will conclude from this that Hom and Schwartz’s argument, in both its original and revised form, does not provide sufficient support for their claim that sentence (7) expresses a normative proposition.

Note that in §3.1 I will not be arguing that sentence (7) expresses an assertive proposition. Nor will I be arguing that sentence (7) does not express a normative proposition.
proposition. Rather, I will only be arguing that Hom and Schwartz’s Claim 3.1 is not supported by the argument that they give, and that as a consequence they do not have sufficient justification to claim that the conditional sentence (7) expresses a normative proposition. This has implications for their proposed solution to the embedding problem for the conditional (7), since if they do not have sufficient justification to claim that (7) expresses a normative proposition, then they do not have justification to claim that it expresses the proposition (7a), and consequently, they do not have sufficient justification to make the third step of their proposed solution to the problem (as it is described above).

3.1.1 Hom and Schwartz’s Argument

Recall from §1.4.2 that the *modus ponens* argument \(A2\) is as follows:

\[
P1_{A2}. \text{ if } \phi\text{-ing is required, then } \psi\text{-ing is required}
\]

\[
P2_{A2}. \phi\text{-ing is required}
\]

\[
C_{A2}. \psi\text{-ing is required}
\]

Note that the major premise \(P1_{A2}\) of this argument is just the familiar conditional sentence (7). Now, here is the argument that Hom and Schwartz give in support of their claim that the conditional (7) expresses a normative proposition:

[…] as Schroeder (2009, pp. 271-272) explains, any premise that appears as the major (conditional) premise of an argument could also appear as the minor premise in a different argument. But if the minor premise is
always normatively endorsed then the very same sentence is both norma-
tively endorsed in one argument and asserted in another. For example,
consider the argument [call this argument \textbf{A3}):

\begin{align*}
P_{1A3}. & \quad \text{If it is the case that if } \phi\text{-ing is required then } \psi\text{-ing is} \newline
& \quad \text{required, then } \psi\text{-ing is required.} \\
P_{2A3}. & \quad \text{If } \phi\text{-ing is required then } \psi\text{-ing is required.} \\
C_{A3}. & \quad \psi\text{-ing is required}
\end{align*}

But since $C_{A3}$ is certainly normatively endorsed then either $P_{1A3}$ or $P_{2A3}$
is normatively endorsed. But $P_{2A3}$ is just [premise 1 from argument \textbf{A2},
equivalently sentence (7)]. And if it expresses a normative proposition
in the second argument [\textit{viz. A3}] then it ought to in the first [\textit{viz. A2}]
(Hom and Schwartz, 2013:20).\footnote{Note that where Hom and Schwartz (2013:13) use ‘4’, ‘5’ and ‘6’ to designate the major premise, minor premise and conclusion of \textbf{A3}, respectively, I use ‘P$_{1A3}$’, ‘P$_{2A3}$’ and ‘C$_{A3}$’ in their place. Also, Hom and Schwartz use ‘stealing’ and ‘getting your brother to steal’ where I use ‘$\phi$-ing’ and ‘$\psi$-ing’, respectively.}

This argument does not explicitly rely on any structural properties of the sentence
(7) as it stands alone. Rather, it relies on certain properties that the \textit{modus ponens}
arguments \textbf{A2} and \textbf{A3} have. As a result the bulk of the explanatory work here is
being done by properties of instances of \textit{modus ponens} in which (7) appears as a
premise, and not by properties of (7) as a sentence in isolation. To emphasize this,
I will briefly state the relevant properties of the two arguments here. First, it may

\textbf{Note:}
be helpful to consider the general form of the two arguments in question. Here they are:\(^3\)

\[\text{A2 (general form):} \]
\[\text{P}_{1\text{A2}} \cdot P \supset Q \]
\[\text{P}_{2\text{A2}} \cdot P \]
\[\text{C}_{\text{A2}} \cdot Q\]

\[\text{A3 (general form):} \]
\[\text{P}_{1\text{A3}} \cdot (P \supset Q) \supset Q \]
\[\text{P}_{2\text{A3}} \cdot P \supset Q \]
\[\text{C}_{\text{A3}} \cdot Q\]

Notice that in both of these instances of \textit{modus ponens} the conclusion is \(Q\), and that \(P \supset Q\) occurs as the major premise in \text{A2} and as the minor premise of \text{A3}.

With that in mind, here are the relevant properties of the two \textit{modus ponens} arguments \text{A2} and \text{A3} that Hom and Schwartz use in their argument. The relevant property of argument \text{A2} is that its first (major) premise \(P_{1\text{A2}}\) is identical to the second (minor) premise \(P_{2\text{A3}}\) of argument \text{A3}. The relevant property of the argument \text{A3}, on the other hand, is given by the following claim:\(^4\)

\textbf{Claim 3.1.1}_{HS}. If the conclusion of argument \text{A3} expresses a normative proposition, then either premise \(P_{1\text{A3}}\) of \text{A3} expresses a normative proposition, or premise \(P_{2\text{A3}}\) of \text{A3} expresses a normative proposition.

This claim, along with a similar claim made by Schroeder (2009), will be a central focus in subsequent sections. For now, however, the claim can be used in conjunction with the observation that \(P_{1\text{A2}} = P_{2\text{A3}}\) to restate Hom and Schwartz’s argument as

\(^3\)In these general forms of the two arguments, ‘\(P\)’ replaces ‘\(\phi\)-ing is required’ and ‘\(Q\)’ replaces ‘\(\psi\)-ing is required’. Note that the use of the material conditional connective ‘\(\supset\)’ is merely used for the purposes of illustration, and is not intended to imply that the sentences in question have truth-conditions.

\(^4\)This claim is derived from Hom and Schwartz (2013:20): “since \([C_{\text{A3}}]\) is certainly normatively endorsed then either \([P_{1\text{A3}}]\) or \([P_{2\text{A3}}]\) is normatively endorsed.”
Argument 3.1.1\textsubscript{HS}. First, note that the conclusion of argument A3 is the following sentence:

(9) $\psi$-ing is required

Furthermore, note that this sentence expresses the normative proposition

(9a) $\dagger\langle\text{you}, \Psi\text{-ING}\rangle$

So, the conclusion of A3 expresses a normative proposition. Then it follows from Claim 3.1.1\textsubscript{HS} that either premise P1\textsubscript{A3} of A3 expresses a normative proposition, or that premise P2\textsubscript{A3} of A3 expresses a normative proposition. So there are two cases to consider:

Case 1: Suppose that premise P2\textsubscript{A3} of A3 expresses a normative proposition. Then since P1\textsubscript{A2} = P2\textsubscript{A3}, it follows that P1\textsubscript{A2} ought to express a normative proposition.

Case 2: Suppose that premise P1\textsubscript{A3} of A3 expresses a normative proposition. (This case is not considered by Hom and Schwartz.)

Conclusion: Since P1\textsubscript{A2} = (7), it follows that the conditional (7) ought to express a normative proposition.

End Argument 3.1.1\textsubscript{HS}.

\footnote{It is not entirely clear whether Hom and Schwartz are attempting to argue directly that (7) expresses a normative proposition, or if they are first assuming that (7) expresses an assertive proposition and then attempting to argue that this results in an absurdity (namely that (7) expresses both an assertive proposition and a normative proposition). I will leave aside the question of which of these two forms of argumentation Hom and Schwartz are using, however, since both forms encounter the same general objections concerning Claim 3.1.1\textsubscript{HS} that are raised below.}
Restating Hom and Schwartz’s argument this way is intended to illustrate how Claim 3.1.1$_{HS}$, along with the observation that $P_{1A2} = P_{2A3}$, is used to construct an argument by cases in support of the conclusion that sentence (7) expresses a normative proposition.

The question now is whether this argument does in fact provide sufficient support for the conclusion—and if it does not, whether it can be modified to provide such support. Here I will now give two objections to Hom and Schwartz’s argument, along with an attempted (and unsuccessful) reply to one of these objections.

**Objection 3.1.1.a.** Hom and Schwartz do not consider Case 2 of their argument, namely the case where premise $P_{1A3}$ of argument $A3$ expresses a normative proposition. This is a problem, since in order for the argument to support the claim that sentence (7) expresses a normative proposition, it must be shown that the sentence expresses such a proposition in each of the two cases.

*End Objection 3.1.1.a.*

**Reply.** One might try to remedy this defect by appealing to relevant properties of the two arguments, just as was done in the first case. To this end, first suppose that premise $P_{1A3}$ in argument $A3$ expresses a normative proposition. Now, the idea is to identify some property of argument $A2$ that would allow for it to be concluded that (7) expresses a normative proposition. In the first case, that property was that premise $P_{1A2}$ is identical to $P_{2A3}$. But in this case, there is no premise in argument $A2$ that is identical to premise $P_{1A3}$, so the line of reasoning that was used in the
first case cannot be used here. Nor is there any other property of argument \( A2 \) that seems to help with delivering the desired result. Consequently, given the presently available resources there does not appear to be any way to conclude that in Case 2 sentence (7) expresses a normative proposition.

Below in \( \S 3.1.3 \) I will give a generalized version of Claim 3.1.1\(_{HS}\) and a revised version of Hom and Schwartz’s argument, using information that is obtained by examining relevant aspects of Schroeder’s (2009). With this revised version of Hom and Schwartz’s argument the objection raised here can be addressed. For now, however, the objection still stands.

\textit{End Reply.}

**Objection 3.1.1.b.** The claim 3.1.1\(_{HS}\) is essential to Hom and Schwartz’s argument, since it is what is used to generate the two cases. However, no justification is given for this claim, nor is any explanation given for why it should be accepted. Without a justification (or a sufficiently persuasive explanation) for the claim, Hom and Schwartz are not warranted in using it in their argument.

\textit{End Objection 3.1.1.b.}

**Reply.** I will address this objection below in \( \S 3.1.4 \). The resources to address it are not presently available, however, so the objection still stands.

\textit{End Reply.}

Given these two objections, it must be concluded at this point that Hom and Schwartz’s argument does not provide sufficient support for the claim that sentence
expresses a normative proposition. However, it may be possible to modify their argument in such a way that sufficient support is provided. In particular, since in their argument they refer to an explanation given by Schroeder (2009), it seems reasonable to assume that an examination of this explanation might provide the details required to address the two objections. To that end, in §3.1.2 I will examine the relevant details of Schroeder’s explanation, and then in §3.1.3 and §3.1.4 will use these details in an attempt to give replies to the two objections.

### 3.1.2 Schroeder’s Explanation and Argument

In the course of making their argument, Hom and Schwartz (2013:20) refer to Schroeder’s (2009) explanation that any premise that appears as the major (conditional) premise of one *modus ponens* argument can also appear as the minor premise of another *modus ponens* argument. On the surface, this explanation may seem rather innocuous, if not trivial, and at best only supports Hom and Schwartz’s argument to the extent that it is consistent with the observation that the major premise $P_{1A_2}$ of the *modus ponens* argument $A_2$ is identical to the minor premise $P_{2A_3}$ of the *modus ponens* argument $A_3$. In particular, the explanation seems to do little, if anything at all, to address the two objections raised in the previous section.

However, there is more to Schroeder’s (2009) than just this explanation, and upon inspection it can be seen that the structure of Hom and Schwartz’s argument closely follows the structure of a particular argument that Schroeder (2009:268-272) gives. The content of these respective arguments and the conclusions that they support are different, but the structural similarities between the two strongly suggest that Hom
and Schwartz’s argument is intended to be an analogue of Schroeder’s argument, and that certain ways in which the arguments differ from one another in part explain why the two objections to Hom and Schwartz’s argument arise. Given this, examining Schroeder’s argument in more detail may indicate how the two objections to Hom and Schwartz’s argument might be addressed. So that is what I aim to do in this section.\textsuperscript{6}

First, it is important to note that Schroeder’s argument is given within the context of a critique of \textit{hybrid} expressivism, as opposed to what he calls \textit{pure} expressivism.\textsuperscript{7} For present purposes, all that needs to be known about hybrid expressivism is that it differs from pure expressivism in the following respect: pure expressivists claim that normative sentences like (6) express non-cognitive attitudes, and that descriptive sentences like (1) express beliefs. Hybrid expressivists agree that descriptive sentences express beliefs, but claim that normative sentences like (6) express both beliefs and non-cognitive attitudes (hence the ‘hybrid’ moniker).

In contrast with pure and hybrid expressivist views, Hom and Schwartz’s brand of expressivism, which I will refer to as ‘\textit{HS}-expressivism’ in the remainder of the dissertation, takes normative sentences like (6) to express normative propositions, and declarative sentences like (1) to express assertive propositions (and given constraint \textbf{c4} from §2.1, normative sentences do \textit{not} express assertive propositions). That is,

\textsuperscript{6}Given the wide range of topics that Schroeder’s (2009) covers, only the details that pertain directly to Hom and Schwartz’s argument will be discussed here. The interested reader is referred to the relevant sections of Schroeder’s text and the references contained in it for more detailed explanations and background information.

\textsuperscript{7}Blackburn (1984, 1988) and Gibbard (1992, 2003) are representatives of the pure expressivist view. For more information on hybrid expressivism, and for a taxonomic survey of expressivism more generally, see Schroeder (2009).
normative propositions and assertive propositions (respectively) play essentially the same theoretical role in HS-expressivism that non-cognitive attitudes and beliefs (respectively) play in pure expressivism. Given this, it seems reasonable to assume that HS-expressivism is an attempt to model pure expressivism in the framework of Hanks’ theory of propositions—and at a minimum it is clear that it is not intended to model hybrid expressivism.

The following table illustrates the relevant distinctions between these three varieties of expressivism for the atomic descriptive sentence (1), namely ‘a is F’, and for the atomic normative sentence (6), namely ‘φ-ing is required’.

<table>
<thead>
<tr>
<th></th>
<th>‘a is F’ expresses</th>
<th>‘φ-ing is required’ expresses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hybrid Expressivism</strong></td>
<td>BEL(F(a))</td>
<td>BEL(R(φ-ing)); ATT[6]</td>
</tr>
<tr>
<td><strong>Pure Expressivism</strong></td>
<td>BEL(F(a))</td>
<td>END(φ-ing)</td>
</tr>
<tr>
<td><strong>HS-expressivism</strong></td>
<td>⊢ ⟨a, F⟩</td>
<td>†⟨you, Φ-ING⟩</td>
</tr>
</tbody>
</table>

Table 3.1.2

Here, ‘BEL(F(a))’ and ‘BEL(R(φ-ing))’ denote beliefs with the propositional contents that a is F and that φ-ing is required, respectively, ‘END(φ-ing)’ denotes a non-cognitive attitude of endorsement directed towards the act of φ-ing, and ‘ATT[6]’

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8Here I use the notation ‘ATT[s]’, where s is a sentence, in place of Schroeder’s (2009:267-271) notation ‘ATT(n)’, where n ∈ N. I do this for two reasons: first, notation of the form ‘ATT(n)’ might be naturally read as denoting a desire-like attitude ATT towards or that is of an action n. However, this reading is not supported by Schroeder’s use of the notation. Rather, he takes n to simply be an index, at least in this section of his article. Second, in my view a more streamlined presentation of Schroeder’s argument can be given if the attitudes expressed by sentences are indexed by names for those sentences instead of natural numbers.
denotes the non-cognitive attitude that the hybrid expressivist takes to be expressed by the sentence (6). The term ‘expresses’ can simply be viewed as a binary relation on sentences and either mental states (BEL states, ATT states, or pairs thereof, in the case of hybrid and pure expressivism) or Hanks propositions (in the case of HS-expressivism). There is much more that could be said about the distinctions between pure and hybrid expressivism. For now, however, this is the only information that is needed. With it at hand, I will now turn to the aspects of Schroeder’s argument that are relevant for Hom and Schwartz’s argument in defense of their claim that the conditional (7) expresses a normative proposition.

To begin, consider the hybrid expressivist’s account of the mental states expressed by the premises and conclusion of the following generic modus ponens argument, which following Schroeder (2009:269) can be written as follows:

\[ \begin{align*}
\text{P1}_{\text{Sc1}} & \quad N \supset O \quad \xrightarrow{\text{expresses}} \quad \text{BEL}(P \supset Q); \text{ATT}[\text{P1}_{\text{Sc1}}] \\
\text{P2}_{\text{Sc1}} & \quad N \quad \xrightarrow{\text{expresses}} \quad \text{BEL}(P); \text{ATT}[\text{P2}_{\text{Sc1}}] \\
\text{C}_{\text{Sc1}} & \quad O \quad \xrightarrow{\text{expresses}} \quad \text{BEL}(Q); \text{ATT}[\text{C}_{\text{Sc1}}]
\end{align*} \]

Call this argument \( \text{Sc1} \). Here, \( N \) and \( O \) are generic normative sentences, ‘BEL\( (P) \)’ denotes the belief that \( N \), ‘BEL\( (Q) \)’ denotes the belief that \( O \), and \( \text{ATT}[\text{P1}_{\text{Sc1}}] \), \( \text{ATT}[\text{P2}_{\text{Sc1}}] \) and \( \text{ATT}[\text{C}_{\text{Sc1}}] \) are generic non-cognitive attitudes expressed by the premises and con-

---

9The generic state \( \text{ATT}[s] \) is intended by Schroeder (2009:267) to be general enough to accommodate a variety of hybrid views, and so nothing should be read into its internal structure here. For example, \( \text{ATT}[\text{(6)}] \) could be an attitude towards an action like END\( (\phi-\text{ing}) \), it could be a bare attitude of endorsement END undirected to any particular action, or it could be something more complex (for example, approval of an ideal observer (Schroeder 2009:273)). What exactly this state is does not matter for present purposes.

10Note that Schroeder’s (2009) version of this argument swaps premise \( \text{P1}_{\text{Sc1}} \) and premise \( \text{P2}_{\text{Sc1}} \), and as a consequence when he discusses \( \text{ATT}(1) \) and \( \text{ATT}(2) \) in his (2009), they correspond to \( \text{ATT}[\text{P2}_{\text{Sc1}}] \) and \( \text{ATT}[\text{P1}_{\text{Sc1}}] \) respectively, here. Note that here and elsewhere I will use ‘\( \text{Sc1} \)’ as an abbreviation of ‘Schroeder 1’. 
clusion of the argument, respectively.\footnote{It is not entirely clear why Schroeder takes the belief expressed by N to be \text{BEL}(P) instead of \text{BEL}(N). The most likely reason is that the content of the belief P is at a minimum assumed to be logically isomorphic (but not strictly identical) to the structure of the sentence N, however this is not certain. See Schroeder (2009:267) for this in a different context.}

Before proceeding any further with explaining Schroeder’s argument, I would like to briefly flag an observation that can be made about the argument \textbf{Sc1}.

**Observation 3.1.2.** On the account of hybrid expressivism that Schroeder (2009:269) gives, it is assumed that the premises and conclusion of the argument \textbf{Sc1} all express non-cognitive attitudes. In particular, it is assumed that premise P$_{1\text{sc1}}$ expresses a non-cognitive attitude (namely ATT$_{[P_{1\text{sc1}}]}$).

This observation may be unsurprising given the description of hybrid expressivism from above. However, it will be important later in §3.1.4, and so is worth flagging here. For now, however, I will set it aside and return to Schroeder’s argument.

Then, since \textbf{Sc1} is an instance of the valid argument form *modus ponens*, Schroeder (2009:269) thinks that for hybrid expressivism to be a plausible theory, it must be able to explain why, if a speaker accepts the premises of the argument (and hence is in the mental states expressed by the premises), they must also be committed to the conclusion (and hence be in the mental states expressed by it). Explaining why a speaker is committed to \text{BEL}(Q) if they are committed to the premises is straightforward: in short, if they are in the states \text{BEL}(P \supset Q) and \text{BEL}(P), then they are committed to be in the state \text{BEL}(Q). However, explaining why the speaker should be committed to having the attitude ATT$_{[C_{\text{sc1}}]}$ if they are in all of the states

\[11\text{It is not entirely clear why Schroeder takes the belief expressed by N to be \text{BEL}(P) instead of \text{BEL}(N). The most likely reason is that the content of the belief P is at a minimum assumed to be logically isomorphic (but not strictly identical) to the structure of the sentence N, however this is not certain. See Schroeder (2009:267) for this in a different context.}\]
BEL(P ⊃ Q), BEL(P), BEL(Q), ATT[P₁Sc1] and ATT[P₂Sc1] is not so straightforward. So, some explanation must be given for why, if a speaker is committed to each of the states in the set

\[ \Sigma = \{ \text{BEL(P ⊃ Q)}, \text{BEL(P)}, \text{BEL(Q)}, \text{ATT[P₁Sc1]}, \text{ATT[P₂Sc1]} \} \]

then they are also committed to the state ATT[CₜSc1]. Providing such an explanation for the hybrid expressivist is Schroeder’s (2009:268-275) aim.

To this end, Schroeder (2009:269) considers two general possibilities: either the state ATT[CₜSc1] is distinct from each of the states in \( \Sigma \), or it is identical to at least one state in \( \Sigma \). What exactly it means for two states to be identical, and what the full implications of this are for Hom and Schwartz’s argument, will be discussed below in §3.1.4.1. For present purposes, however, what these two possibilities mean is simply that either \( \text{ATT[CₜSc1]} \notin \Sigma \) or \( \text{ATT[CₜSc1]} \in \Sigma \).

Given this, Schroeder (2009:269) says that these two possibilities generate four explanations that the hybrid expressivist can consider. These explanations, and how they are arrived at, are illustrated in Diagram 3.1.2.a on the next page. Note that in what follows I will only be providing the minimum amount of detail that is needed to get a general understanding of Schroeder’s account of these four explanations, and of the reasons that he gives for concluding that the hybrid expressivist must reject the first three explanations and accept the fourth. The interested reader is referred to (Schroeder 2009:269-271) for further details and a more thorough explanation.
Either \( \text{ATT}[C_{\text{Sc1}}] \notin \Sigma \) or \( \text{ATT}[C_{\text{Sc1}}] \in \Sigma \).

Suppose \( \text{ATT}[C_{\text{Sc1}}] \notin \Sigma \). Then \( \text{ATT}[C_{\text{Sc1}}] \) is not identical to any of \( \text{BEL}(P) \), \( \text{BEL}(Q) \), \( \text{BEL}(P \supset Q) \), \( \text{ATT}[P_{1\text{Sc1}}] \) or \( \text{ATT}[P_{2\text{Sc1}}] \).

Suppose that \( \text{ATT}[C_{\text{Sc1}}] \in \Sigma \). Then \( \text{ATT}[C_{\text{Sc1}}] \) is identical to one (or more) of \( \text{BEL}(P) \), \( \text{BEL}(Q) \), \( \text{BEL}(P \supset Q) \), \( \text{ATT}[P_{1\text{Sc1}}] \) and \( \text{ATT}[P_{2\text{Sc1}}] \).

Explanation 4.
Since no non-cognitive attitude is a belief, either \( \text{ATT}[C_{\text{Sc1}}] = \text{ATT}[P_{2\text{Sc1}}] \) or \( \text{ATT}[C_{\text{Sc1}}] = \text{ATT}[P_{1\text{Sc1}}] \). In either case, by accepting the premises one is already in the state \( \text{ATT}[C_{\text{Sc1}}] \). This explains why a commitment to \( \text{ATT}[C_{\text{Sc1}}] \) “derives from” a commitment to \( \text{ATT}[P_{1\text{Sc1}}] \) and \( \text{ATT}[P_{2\text{Sc1}}] \).

Explanation 1.
A commitment to \( \text{ATT}[C_{\text{Sc1}}] \) “derives from” a commitment to some combination of \( \text{BEL}(P) \), \( \text{BEL}(P \supset Q) \) and \( \text{BEL}(Q) \).

Explanation 2.
A commitment to \( \text{ATT}[C_{\text{Sc1}}] \) “derives from” a commitment to some combination of \( \text{ATT}[P_{1\text{Sc1}}] \) and \( \text{ATT}[P_{2\text{Sc1}}] \).

Explanation 3.
A commitment to \( \text{ATT}[C_{\text{Sc1}}] \) “derives from” a commitment to some combination of \( \text{BEL}(P) \), \( \text{BEL}(P \supset Q) \), \( \text{BEL}(Q) \) and \( \text{ATT}[P_{1\text{Sc1}}] \) and \( \text{ATT}[P_{2\text{Sc1}}] \).

Diagram 3.1.2.a
This diagram gives the four explanations that hybrid theorist can consider. Here now, briefly, are the reasons that Schroeder gives for rejecting the first, second and third explanations, and for accepting the fourth.

First, with **Explanation 1**, a commitment to the non-cognitive attitude $\text{ATT}[\text{C}_{\text{sc}1}]$ is explained entirely in terms of a prior commitment to a set of belief states. This implies that ordinary cognitivist or descriptivist theories of normativity can readily explain how actions can be motivated by just beliefs, and Schroeder (2009:269) finds this explanation “dialectically unpromising” for the hybrid expressivist, since it undercuts one of the main reasons for pursuing expressivist semantics (in both its pure and hybrid forms). So, the argument goes, this explanation should be excluded by both the pure and hybrid expressivist.

Second, **Explanation 2** involves explaining a commitment to a non-cognitive attitude in terms of a prior commitment to a set of non-cognitive attitudes. But this is exactly how the pure expressivist explains the validity of *modus ponens* arguments like $\text{A}_2$, and so is subject to all of the usual Frege-Geach problems. And since hybrid expressivism is intended to be an alternative to pure expressivism that is designed specifically to avoid these problems, accepting this explanation would defeat the primary purpose of the view. So this explanation must be rejected by the hybrid expressivist.

Third, **Explanation 3** involves explaining a commitment to a non-cognitive attitude in terms of a prior commitment to a set of beliefs and non-cognitive attitudes. But explaining rational relationships between beliefs and non-cognitive attitudes is even more complicated than explaining rational relations between just...
non-cognitive attitudes (as is done in the previous pure expressivist explanation). So, says Schroeder (2009:270), it is hard to see how this explanation is an improvement over the pure expressivist’s Explanation 2, and consequently it is hard to see how hybrid expressivism can be considered an improvement over its pure counterpart if it adopts this explanation. So this explanation must be ruled out by the hybrid expressivist.

Finally, since these four explanations exhaust all of the available possibilities, and since the first three have been rejected, by process of elimination the hybrid expressivist is left with Explanation 4. So, Schroeder (2009:271) argues, the explanation for why a commitment to $\text{ATT}_{[C_{Sc1}]}$ follows from a commitment to the mental states in $\Sigma$ is that either $\text{ATT}_{[C_{Sc1}]} = \text{ATT}_{[P1_{Sc1}]}$ or $\text{ATT}_{[C_{Sc1}]} = \text{ATT}_{[P2_{Sc1}]}$. More simply put, the explanation can be reduced to just the following:

\textbf{Explanation 4.} For the generic normative \textit{modus ponens} argument $\text{Sc1}$,

either $\text{ATT}_{[C_{Sc1}]} = \text{ATT}_{[P1_{Sc1}]}$ or $\text{ATT}_{[C_{Sc1}]} = \text{ATT}_{[P2_{Sc1}]}$.

Since $\text{Sc1}$ is a “generic” normative \textit{modus ponens} argument, this explanation is making a general claim about all normative \textit{modus ponens} arguments. However, due to an ambiguity with the scope of the universal quantifier, there are two possible readings of the explanation: a wide scope reading and a narrow scope reading.\footnote{I will use the phrase “normative \textit{modus ponens} argument” as a shorthand for the more cumbersome “\textit{modus ponens} argument the conclusion of which expresses a non-cognitive attitude.”} While Schroeder does not explicitly state which of these two readings he is using, I argue

\footnote{The wide scope reading is that for every normative \textit{modus ponens} argument $\mathcal{M}$, either the attitude expressed by the conclusion of $\mathcal{M}$ is identical to the attitude expressed by the major premise of $\mathcal{M}$, or the attitude expressed by the conclusion of $\mathcal{M}$ is identical to the attitude expressed by the minor premise of $\mathcal{M}$. The narrow scope reading is given by \textbf{Claim 3.1.1}_{Sc} below. See \textbf{Appendix A} for details.}
that the narrow scope reading must be used if his argument is to work as intended (my argument in defense of the narrow scope reading is given in Appendix A, and is omitted here due to space constraints). Given this reading of the explanation, it can be rewritten in terms of the following claim:

**Claim 3.1.1 Sc.** Either for every normative *modus ponens* argument $\mathcal{M}$ the attitude expressed by the conclusion of $\mathcal{M}$ is identical to the attitude expressed by the major premise of $\mathcal{M}$, or for every normative *modus ponens* argument $\mathcal{M}$ the attitude expressed by the conclusion of $\mathcal{M}$ is identical to the attitude expressed by the minor premise of $\mathcal{M}$.

This claim is just **Explanation 4** rewritten to clarify the scope distinction.

Now that this claim has been given, the rest of Schroeder’s argument, and in particular the part of it that Hom and Schwartz rely more heavily on, can also be given. While Schroeder maintains that the hybrid expressivist is committed to **Explanation 4** (and hence also to **Claim 3.1.1 Sc**), this explanation does not specify which of $\text{ATT}_{[P1_{\text{Sc}1}]}$ and $\text{ATT}_{[P2_{\text{Sc}1}]}$ are identical to $\text{ATT}_{[C_{\text{Sc}1}]}$ in the argument $\text{Sc}1$. And, Schroeder (2009:271) claims, we ought to be able to say in general which of these holds. In particular, he argues that if **Claim 3.1.1 Sc** holds, then for the generic normative *modus ponens* argument $\text{Sc}1$, the attitude expressed by the major (conditional) premise is identical to the attitude expressed by the conclusion.

To see how Schroeder’s argument works, first consider the *modus ponens* arguments $\text{A2}$ and $\text{A3}$ again. In hybrid semantics, the premises and conclusions of $\text{A2}$ and $\text{A3}$ express the following pairs of belief and non-cognitive states:\footnote{Note that in Schroeder (2009) the argument considered is a slight variation of $\text{A3}$ here, where...}
P1_A2. \( R(s) \supset R(b) \quad \rightarrow \quad \text{BEL}(R(s) \supset R(b)); \text{ATT}[P1_A2] \)

P2_A2. \( R(s) \quad \rightarrow \quad \text{BEL}(R(s)); \text{ATT}[P2_A2] \)

C_A2. \( R(b) \quad \rightarrow \quad \text{BEL}(R(b)); \text{ATT}[C_A2] \)

P1_A3. \( (R(s) \supset R(b)) \supset R(b) \quad \rightarrow \quad \text{BEL}((R(s) \supset R(b)) \supset R(b)); \text{ATT}[P1_A3] \)

P2_A3. \( R(s) \supset R(b) \quad \rightarrow \quad \text{BEL}(R(s) \supset R(b)); \text{ATT}[P2_A3] \)

C_A3. \( R(b) \quad \rightarrow \quad \text{BEL}(R(s)); \text{ATT}[C_A3] \)

Note that \( P1_A2 = P2_A3 \) and that \( C_A2 = C_A3 \), so \( \text{ATT}[P1_A2] = \text{ATT}[P2_A3] \) and also \( \text{ATT}[C_A2] = \text{ATT}[C_A3] \). Given this and the claim from above, Schroeder’s argument can be written as follows:

**Argument 3.1.1_{Sc}.** Suppose that Claim 3.1.1_{Sc} holds. Then, there are two cases to consider, given by the two disjuncts of the claim.

**Case 1_{Sc}:** Suppose that for every normative *modus ponens* argument \( \mathcal{M} \) the attitude expressed by the conclusion of \( \mathcal{M} \) is identical to the attitude expressed by the minor premise of \( \mathcal{M} \). In the particular case of \( A_3 \), this implies that \( \text{ATT}[C_A3] = \text{ATT}[P2_A3] \). But since \( P1_A2 = P2_A3 \), it follows that \( \text{ATT}[C_A3] = \text{ATT}[P2_A3] = \text{ATT}[P1_A2] \). Finally, since \( C_A3 = C_A2 \), it follows that \( \text{ATT}[C_A2] = \text{ATT}[P1_A2] \).

**Case 2_{Sc}:** Suppose that for every normative *modus ponens* argument \( \mathcal{M} \) the attitude expressed by the conclusion of \( \mathcal{M} \) is identical to the attitude premises \( P1_A3 \) and \( P2_A3 \) are swapped.
expressed by the major premise of \( M \). (Schroeder does not consider this case.)

**Conclusion:** Since \( \text{ATT}_{[CA_2]} = \text{ATT}_{[P1A_2]} \), it follows that for every normative *modus ponens* argument \( M \), the attitude expressed by the conclusion of \( M \) is identical to the attitude expressed by the major (conditional) premise of \( M \).\(^{15}\) 

End Argument 3.1.1Sc.

Recall that at the beginning of §3.1 I suggested that Hom and Schwartz’s argument in defense of their claim that sentence (7) expresses a normative proposition is based on an argument that Schroeder gives in his (2009). This is that argument.

I will not criticize or assess Schroeder’s argument here (though it is evident that it is incomplete, since Case 2 is not even considered—see ft. 16 below). Instead, I will briefly summarize the results of the section, and move on to use the information obtained in this section to provide a revised form of Hom and Schwartz’s argument that addresses the two objections to it that were raised in §3.1.1.

As a recap of this section, recall that Schroeder’s aim is to provide a general hybrid expressivist explanation for why the attitude expressed by the conclusion of a given normative *modus ponens* argument follows validly from the attitudes and beliefs

\(^{15}\)In Schroeder’s (2009:272) words: “if there is any general guarantee that the attitude expressed by the conclusion is always expressed by at least one of the premises, it must guarantee that the conditional [major] premise always expresses the same attitude as the conclusion.” The antecedent of this conditional claim is just **Explanation 4**. The consequent, however, is ambiguous as to whether it is referring to the major premise of argument **A2** or to the major premise of argument **A3**, and it is ambiguous as to whether it is referring to the conclusion of **A2** or to the conclusion of **A3** (though they happen to be identical). Furthermore, it is ambiguous as to what “always” means here. Fortunately, if the narrow scope reading of **Explanation 4** is used (as it is with **Claim 3.1.1Sc**, see **Appendix A**), these ambiguities are removed. This is reflected in the argument, as it is given here.
expressed by the premises. He considers four possible explanations (Explanation 1-4), and via a process of elimination settles on the fourth explanation. I rewrote this fourth explanation in terms of Claim 3.1.1 Sc to reflect a scope distinction. Then, I used this claim to describe Schroeder’s argument with Argument 3.1.1 Sc, the conclusion of which is that for every normative *modus ponens* argument \( M \), the attitude expressed by the conclusion of \( M \) is identical to the attitude expressed by the major (conditional) premise of \( M \).

In the next two sections I will argue that with these details of Schroeder’s argument at hand, it is possible to provide replies to both Objection 3.1.1.a and Objection 3.1.1.b against Hom and Schwartz’s argument. However, before doing this, in §3.1.2.1 I will briefly draw some comparisons between the two arguments.

### 3.1.2.1 A Comparison of the Arguments

In this section a handful of observations will be made about how Schroeder’s argument compares with Hom and Schwartz’s argument. In particular, certain structural similarities between the two arguments will be illustrated, and two analogies between the arguments will be identified.

The first point of comparison was already presented in Table 3.1 from §3.1.2 above, where it was illustrated that normative Hanks propositions play essentially the same theoretical role in *HS*-expressivism that non-cognitive attitudes play in hybrid expressivism. In general, for a normative sentence \( s \), the hybrid expressivist takes \( s \) to express both a belief \( \text{BEL}(s) \) and a non-cognitive attitude \( \text{ATT}_s \), but the *HS*-expressivist takes \( s \) to express a particular normative proposition. So hybrid and *HS*-
expressivism take the expression relation to hold between sentences and objects that are of different kinds (pairs of mental states and Hanks propositions, respectively) that perform similar functional roles in the respective semantic theories. In this way, Hom and Schwartz’s argument implicitly relies on the drawing of an analogy between normative propositions and non-cognitive states. A particular example of this analogy is that the normative proposition $\uparrow\langle\text{you, }\Phi\text{-ING}\rangle$ expressed by sentence (6) is taken to be analogous to the hybrid theorist’s non-cognitive attitude $\text{ATT}[6]$.

The second point of comparison is that there are structural similarities between Hom and Schwartz’s and Schroeder’s arguments, as illustrated here:

**H & S’s Argument:**

<table>
<thead>
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<th>n/a</th>
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</table>

**Claim 3.1.1$_{HS}$**

**Argument 3.1.1$_{HS}$**

**Case 1**

implies:

$P1_{A2}$ expresses a $\uparrow$-prop

**Case 2**

implies:

n/a

**Schroeder’s Argument:**

| Explanation 4 |

rewritten as:

**Claim 3.1.1$_{Sc}$**

**Argument 3.1.1$_{Sc}$**

**Case 1$_{Sc}$**

implies:

$\text{ATT}[C_{A3}] = \text{ATT}[P1_{A2}]$

**Case 2$_{Sc}$**

implies:

n/a

**Diagram 3.1.2.b**

There are three important observations that can be made about this diagram.

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First, it illustrates how Hom and Schwartz’s Claim 3.1.1$_{HS}$ plays the same role in their argument that Schroeder’s Claim 3.1.1$_{Sc}$ plays in his argument, and it illustrates how each of these two claims is used to construct an argument by cases (Argument 3.1.1$_{HS}$ and Argument 3.1.1$_{Sc}$, respectively). It also illustrates an important difference: while Hom and Schwartz’s claim is not given any justification (hence Objection 3.1.1.b from §3.1.1), Schroeder’s claim is justified by the reasoning that he gives in support of ruling out Explanation 1-3 and accepting Explanation 4. So, Hom and Schwartz’s argument lacks support where Schroeder’s has it, and in this respect the two arguments differ.

Second, just as Hom and Schwartz do not consider Case 2 of their argument (which was the basis for Objection 3.1.1.a in §3.1.1), neither does Schroeder consider Case 2$_{Sc}$ in his argument. So in this sense the two arguments are similar.\(^{16}\)

Third, and finally, where Hom and Schwartz’s Case 1 implies that the conditional sentence P1$_{A2}$ (viz. (7)) expresses a normative proposition, Schroeder’s Case 1$_{Sc}$ implies that the non-cognitive attitude expressed by P1$_{A2}$ is identical to the non-cognitive attitude expressed by the conclusion C$_{A2}$. In this respect, the two arguments differ.

With Diagram 3.1.2.b and these three observations at hand, it is now possible to assess Hom and Schwartz’s argument. In particular, it is now possible to provide replies to the two objections that I gave to their argument in §3.1.1 (Objection 3.1.1.a and Objection 3.1.1.b). In §§3.1.3-3.1.4 I will give those replies, and then

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\(^{16}\)However, it is nearly trivial to provide the second case for Schroeder’s argument, assuming the narrow scope reading of Explanation 4 is given. If the wide scope reading is given, Case 2$_{Sc}$ does not deliver the intended results, see Appendix A.
give three new objections that I argue undermine Hom and Schwartz’s argument.

### 3.1.3 A Reply to Objection 3.1.1.a

Recall from §3.1.1 that Objection 3.1.1.a charges that Hom and Schwartz do not consider Case 2 of their argument, and as a result they are not justified in concluding that the conditional (7) expresses a normative proposition. Now, however, with information from Schroeder’s (2009) argument, it is possible to provide a revised version of Hom and Schwartz’s argument with a completed Case 2 that renders the desired result. I will do this simply by replacing Hom and Schwartz’s Claim 3.1.1$_{HS}$ with a generalized version that is more directly analogous to Schroeder’s Claim 3.1.1$_{Sc}$, and then revising their argument using this new claim. Here is the new generalized claim:\[17\]

**Claim 3.1.1$^{gen}_{HS}$**. Either for every *modus ponens* argument $\mathcal{M}$, if the conclusion of $\mathcal{M}$ expresses a normative proposition, then the major premise of $\mathcal{M}$ expresses a normative proposition, or for every *modus ponens* argument $\mathcal{M}$, if the conclusion of $\mathcal{M}$ expresses a normative proposition, then the minor premise of $\mathcal{M}$ expresses a normative proposition.

Recall that Hom and Schwartz’s original claim made a statement about the particular *modus ponens* argument $A_3$, namely that if its conclusion expresses a normative proposition...\[17\]Here the ‘gen’ superscript indicates that the claim has been generalized. As was the case with Claim 3.1.1$_{Sc}$, this claim will be given a narrow scope reading. Also, here I have dispensed with the “normative *modus ponens* argument” terminology (see ft. 12 above) and have replaced it with the conditional claim “if the conclusion of $\mathcal{M}$ expresses a normative proposition” to more closely cohere with Hom and Schwartz’s original claim.
proposition then at least one of its premises also expresses a normative proposition. That this claim pertained only to the particular argument \(A_3\) and not to *modus ponens* arguments more generally prevented it from being used to construct **Case 2** in Hom and Schwartz’s argument, since for that case to be completed the claim would also have to be applicable to the argument *modus ponens* \(A_2\). But now with this new generalized claim that applies to all instances of *modus ponens*, a revised version of Hom and Schwartz’s argument can be given as follows:

**Argument 3.1.1\(_{HS}^{revised}\).** Note that the respective conclusions of the *modus ponens* arguments \(A_2\) and \(A_3\) are both the sentence (9), and that this sentence expresses the normative proposition (9a). Given this, it follows from **Claim 3.1.1\(_{HS}^{gen}\)** that there are two cases to consider:

**Case 1:** Suppose that for every *modus ponens* argument \(M\), if the conclusion of \(M\) expresses a normative proposition, then the minor premise of \(M\) expresses a normative proposition. Then, since the conclusion of \(A_3\) expresses a normative proposition, it follows that the minor premise \(P_{2A_3}\) of \(A_3\) expresses a normative proposition. But since \(P_{1A_2} = P_{2A_3}\), it follows that \(P_{1A_2}\) ought to express a normative proposition.

**Case 2:** Suppose that for every *modus ponens* argument \(M\), if the conclusion of \(M\) expresses a normative proposition, then the major premise of \(M\) expresses a normative proposition. Then, since the conclusion of argument \(A_2\) expresses a normative proposition, it follows that the major premise \(P_{1A_2}\) of \(A_2\) also expresses a normative proposition.
Conclusion: In both cases, the major premise $P_1A_2$ of the *modus ponens* argument $A_2$ expresses a normative proposition. But since $P_1A_2$ is just the conditional (7), this implies that (7) expresses a normative proposition.

This argument provides support for Hom and Schwartz’s original claim that sentence (7) expresses a normative proposition. So, with the new generalized claim, a reply to the objection has been given.

3.1.4 A Reply to Objection 3.1.1.b

Recall that Objection 3.1.1.b from §3.1 charged that Hom and Schwartz do not provide a justification for accepting Claim 3.1.1$_{HS}$, and that without such a justification they are not warranted in using that claim in their argument. Now that this claim has been replaced by the more general Claim 3.1.1$^{gen}_{HS}$, and given that Hom and Schwartz’s original claim is just a particular instance of this more general claim, the objection should now really be directed towards acceptance of this new general claim. So, a justification for accepting Claim 3.1.1$^{gen}_{HS}$ must be given.

After examining Schroeder’s (2009) argument in §3.1.2, I argued that Hom and Schwartz’s argument is intended to be an analogue of Schroeder’s. In particular, I argued, their Claim 3.1.1$_{HS}$ is intended to be an analogue of Schroeder’s Claim 3.1.1$_{Sc}$. Moreover, their acceptance of this claim and their use of it in their argument is based on Schroeder’s acceptance of and use of Claim 3.1.1$_{Sc}$ in his argument. But since Schroeder’s claim is just Explanation 4 rewritten to clarify the scope distinction, and since he presents an argument in defense of this explanation (namely
by eliminating the other three possible explanations), the acceptance of Hom and Schwartz’s claim can be justified by appealing to two observations: first, that it is sufficiently analogous to Schroeder’s Claim 3.1.1_{Sc}, and second, that acceptance of this claim is justified by Schroeder’s argument in defense of Explanation 4. Here is a diagram representing the line of reasoning involved in this justification:

Ruling out Explanations 1-3

- explains the hybrid theorist’s acceptance of:

Explanation 4

- is rewritten (via scope distinction) as:

Claim 3.1.1_{Sc}

- is analogous to the HS-expressivist claim:

Claim 3.1.1_{gen}^{HS}

- is used to construct the argument:

Argument 3.1.1_{rev}^{HS}

- Case 1 implies:
  - P1_{A2} expresses a \dag-prop

- Case 2 implies:
  - P1_{A2} expresses a \dag-prop

Diagram 3.1.4.a

As this diagram illustrates, the acceptance of the HS-expressivist Claim 3.1.1_{gen}^{HS} can be ultimately justified, via an analogy with Schroeder’s hybrid expressivist Claim 3.1.1_{Sc}, by the hybrid expressivist’s elimination of the first three explanations and acceptance of the fourth explanation. This is consistent with the structure
of Hom and Schwartz’s argument (in both its original and revised forms), and is implied by their reference to Schroeder’s (2009) in their original argument. So, I take this to constitute a reply to the objection.

Since replies have been given to both of the objections that I raised to Hom and Schwartz’s original argument, it may seem that they have sufficient justification to conclude that the conditional (7) expresses a normative proposition. However, with these replies available, three new objections arise, which I will give in §§3.1.4.1-3.1.4.3. The first two of these objections place pressure on Hom and Schwartz’s revised argument by identifying two important disanalogies between it and Schroeder’s argument. The third objection pertains to problems with the HS-expressivist’s reliance (via analogy) on Schroeder’s argument that the hybrid expressivist must rule out the first three explanations and accept the fourth. Given these objections, I will conclude that Hom and Schwartz’s argument in defense of their claim that (7) expresses a normative proposition (in both its original and revised forms) is problematic, and that it does not provide adequate support for this claim.

3.1.4.1 Objection 3.1.4.a

There is an important disanalogy between the HS-expressivist’s Claim 3.1.1$^{gen}_{HS}$ and Schroeder’s Claim 3.1.1$^{Sc}$. To see the disanalogy, note the following two observations. First, Schroeder’s Explanation 4 says something about an identity relation holding between non-cognitive attitudes that are expressed by the premises and conclusion of the generic modus ponens argument $Sc_1$, namely that either $ATT[C_{Sc1}]$ is identical to $ATT[P_{1Sc1}]$, or that $ATT[C_{Sc1}]$ is identical to $ATT[P_{2Sc1}]$. Similarly,
Schroeder’s Claim 3.1.1\textsubscript{Sc} says something about the identity of particular non-cognitive attitudes expressed by sentences in normative \textit{modus ponens} arguments more generally.

Second, observe that the \textit{HS}-expressivist’s Claim 3.1.1\textsuperscript{gen} does not say anything about the identity of particular propositions expressed by sentences in any \textit{modus ponens} argument, either directly or by implication. Rather, it says something about the \textit{kind} of proposition that is expressed by a premise of a given argument, if the conclusion of that argument expresses a normative proposition. That is, to the extent that the claim establishes the identity of certain entities that are expressed by sentences in a \textit{modus ponens} argument, it only establishes that some of these entities are of the same kind (normative propositions, as opposed to assertive, interrogative or imperative propositions).\textsuperscript{18}

A result of these two observations is that while the \textit{HS}-expressivist Claim 3.1.1\textsubscript{HS} makes a statement about the identity of kinds of Hanks propositions that are expressed, Schroeder’s Claim 3.1.1\textsubscript{Sc} (and Explanation 4) makes a claim about the identity of particular non-cognitive attitudes. But identity of particular attitudes is not the same as identity of kinds of mental states (though the former implies the latter), and identity of particular Hanks propositions is not the same as identity of kinds of Hanks propositions (though the former implies the latter).

To make this point a bit more precisely, I will refer to Schroeder’s (2009:260) account of what it is for two mental states (beliefs or non-cognitive attitudes) to be distinct, as opposed to those two states being identical.\textsuperscript{18}

\textsuperscript{18}This observation also holds of Hom and Schwartz’s original Claim 3.1.1\textsubscript{HS}, so everything said here applies to that claim as well.
• Two states \( \text{STATE}_1 \) and \( \text{STATE}_2 \) are \textit{distinct} iff for any speaker \( S \), \( S \) can be in \( \text{STATE}_1 \) without being in \( \text{STATE}_2 \), and \textit{vice versa}.

• Two states \( \text{STATE}_1 \) and \( \text{STATE}_2 \) are \textit{identical} iff for any speaker \( S \), \( S \) is in \( \text{STATE}_1 \) iff \( S \) is in \( \text{STATE}_2 \).

An example might help clarify the distinction between these two terms (this example is a modified version of one given by Schroeder (2009:260)). Consider the following two familiar sentences, where \( \phi \)-ing and \( \psi \)-ing are different actions:

(6) \( \phi \)-ing is required
(9) \( \psi \)-ing is required

A pure expressivist might take these sentences to express non-cognitive attitudes of endorsement towards different actions, as follows:

(6) \( \phi \)-ing is required \( \xrightarrow{\text{expresses}} \) END(\( \phi \)-ing)
(9) \( \psi \)-ing is required \( \xrightarrow{\text{expresses}} \) END(\( \psi \)-ing)

The states END(\( \phi \)-ing) and END(\( \psi \)-ing) are \textit{distinct}, because a speaker could be in one state without being in the other. (And, on the pure expressivist analysis these states should be distinct, to explain the difference in meaning of (6) and (9).)

On the other hand, the hybrid expressivist that Schroeder considers in his argument would take these two sentences to express some generic non-cognitive attitudes (and beliefs) as follows:\(^{19}\)

\(^{19}\)Here, ‘\( K \)’ denotes some property that is semantically associated with ‘required’, see (Schroeder 2009:276). Also, as a point of clarification, Schroeder (2009:260) says that the “majority” of hybrid expressivist views take this to hold, which leaves open the possibility that some do not. But, the main conclusion that he draws is that this is “by far the most promising option, and possibly the only real option” (Schroeder 2009:275). See Schroeder (2009:260-275) for the full argument, only part of which I examined in §3.1.2. So, at a minimum, I will take this to hold of the kind of hybrid
(6) $\phi$-ing is required $\xrightarrow{\text{expresses}} \text{BEL}(\phi\text{-ing is K); } \text{ATT}_{(6)}$
(9) $\psi$-ing is required $\xrightarrow{\text{expresses}} \text{BEL}(\psi\text{-ing is K); } \text{ATT}_{(9)}$

To say that the states $\text{ATT}_{(6)}$ and $\text{ATT}_{(9)}$ are identical is to say that a speaker $S$ is in state $\text{ATT}_{(6)}$ if and only if they are in state $\text{ATT}_{(9)}$. Referring to a similar example, Schroeder says the following:\textsuperscript{20}

[‘$\phi$-ing is required’] and [‘$\psi$-ing is required’] express the very same desire-like state. Not just both states of [endorsement] but the very same state, in the sense that if you are in the desire-like state expressed by the former, then you are ipso facto in the desire-like state expressed by the latter (Schroeder 2009:260).

On this account of identity, Schroeder is not just saying that if two states are identical then they are the same kind of state (possibly to different actions), but something stronger: that a speaker cannot be in one without also being in the other.

I give this example to illustrate the disanalogy between the $HS$-expressivist \textbf{Claim 3.1.1}$_{HS}$ and Schroeder’s \textbf{Claim 3.1.1}$_{Sc}$. The $HS$-expressivist claim makes a statement about the kinds of propositions that are expressed by certain sentences (normative propositions, as opposed to assertive, interrogative or imperative propositions), but it does not state that these propositions are identical, in the sense defined above. In the particular case of the \textit{modus ponens} argument $A_2$, this claim implies that the major premise expresses the same kind of proposition as the conclusion

\textsuperscript{20}I have replaced his uses of ‘stealing’, ‘murder’ and ‘disapproval’ with ‘$\phi$-ing’, ‘$\psi$-ing’ and ‘endorsement’, respectively.
(namely a normative proposition), but it does not state or imply that these propositions are identical, in the sense that \( S \) accepts the proposition expressed by the major premise if and only if \( S \) accepts the proposition expressed by the conclusion. In contrast, Schroeder’s Claim 3.1.1\(_{sc} \) implies that the non-cognitive attitudes expressed by the major premise and by the conclusion of the modus ponens argument \( A2 \) are identical. That is, the claim implies that these are not just the same kind of state (say, an attitude of endorsement), but that they are identical states, in the sense that \( S \) is in the state expressed by the major premise if and only if \( S \) is in the state expressed by the conclusion.

The foregoing is intended to highlight a disanalogy between the HS-expressivist Claim 3.1.1\(_{HS}^{gen} \) and Schroeder’s Claim 3.1.1\(_{sc} \).\(^{21}\) If this disanalogy holds, it undermines the justification for the claim that was given earlier in §3.1.4, and as a consequence undermines Hom and Schwartz’s overall argument in defense of the claim that the conditional (7) expresses a normative proposition. Given this, in the remainder of this section I will consider what I take to be the most plausible method for fixing this disanalogy. Then I will argue that doing this results in the violation of a key semantic principle, and hence that this method is unsatisfactory.

The most plausible method of fixing the disanalogy consists of modifying Claim 3.1.1\(_{HS}^{gen} \) to bring it into alignment with Schroeder’s Claim 3.1.1\(_{sc} \). In particular, it consists of restating the claim in terms of the identity of Hanks propositions, as follows:\(^{22}\)

\(^{21}\)Since this HS-expressivist claim is just a generalization of Hom and Schwartz’s original Claim 3.1.1\(_{HS} \), this original claim is similarly disanalogous to Schroeder’s claim.

\(^{22}\)Another possible strategy would be to modify Schroeder’s claim such that a weaker notion than identity is used in it. However, doing so would threaten to undermine the original argument that
Claim 3.1.1_{HS}^{gen}. Either for every *modus ponens* argument $\mathcal{M}$, if the conclusion of $\mathcal{M}$ expresses a normative proposition $p_1$, then the minor premise of $\mathcal{M}$ expresses a proposition $p_2$ that is identical to $p_1$, or for every *modus ponens* argument $\mathcal{M}$, if the conclusion of $\mathcal{M}$ expresses a normative proposition $q_1$, then the major premise of $\mathcal{M}$ expresses a proposition $q_2$ that is identical to $q_1$.

This claim is not disanalagous to Schroeder’s in the way described above, since it makes statements about the identity of particular propositions. In this respect, it is an improvement over the previous claim.

However, this new claim gives rise to a problem. To see the problem, consider the following sentences, which are just the major premise, the minor premise and conclusion, respectively, of the familiar *modus ponens* argument $A2$:

(7) if $\phi$-ing is required then $\psi$-ing is required
(6) $\phi$-ing is required
(9) $\psi$-ing is required

Now, observe that the sentences (6), (7) and (9) differ in meaning from each other, and that the HS-expressivist explains this difference in meaning in terms of a difference in the Hanks propositions that they each express. In particular, this difference is explained in terms of a difference between the satisfaction conditions of acts that he gives in defense of **Explanation 4**, since his entire argument is predicated on the assumption that either $\text{ATT}_{[C_{\text{sc}}]}$ is *distinct* from all of the states in $\Sigma$, or $\text{ATT}_{[C_{A2}]}$ is *identical* to at least one of the states in $\Sigma$ (see §3.1.2). So the right disjunct would have to be replaced with a notion that differs in meaning from both ‘distinct’ and ‘identical’, and that delivers the desired results. It may be possible to give such a notion, but I will not pursue that issue here.

This is based on §2.1 above, where satisfaction conditions from Hanks’ (2015) are discussed. Hanks, however, says little directly about meaning, so I am assuming that in his theory satisfaction conditions determine, or are constitutive of, meaning.
are tokens by the propositions that are expressed. In the present context, this means that the propositions expressed by these three sentences are distinct, in that it is possible for a speaker $S$ to accept any one of them without accepting any of the others. But since these three sentences are just the major premise, the minor premise and the conclusion of the modus ponens argument $A_2$, the foregoing implies that following constraint holds:

\[ \text{c5.} \] The propositions expressed by the major premise $P_{1A_2}$, by the minor premise $P_{2A_2}$ and by the conclusion $C_{A_2}$ of the modus ponens argument $A_2$ are distinct from one another.

For the $HS$-expressivist, this constraint is uncontroversial, and exactly as the semantic theory predicts.

Now, recalling that the conclusion of the modus ponens argument $A_2$ is the sentence (9), and that this sentence expresses the normative proposition (9a), assuming that Claim $3.1.1^{*_{gen}}_{HS}$ holds, it follows that at least one of the following two cases also holds:

**Case 1.** Suppose that the left disjunct of Claim $3.1.1^{*_{gen}}_{HS}$ holds. Then since the conclusion $C_{A_2}$ of the modus ponens argument $A_2$ expresses a normative proposition $p_1$, it follows that the minor premise $P_{2A_2}$ expresses a proposition $p_2$ that is identical to $p_1$. That is, the propositions expressed by $P_{2A_2}$ and $C_{A_2}$ are not distinct, and constraint c5 is violated.

**Case 2.** Suppose that the right disjunct of Claim $3.1.1^{*_{gen}}_{HS}$ holds. Then since the conclusion $C_{A_2}$ of the modus ponens argument $A_2$ expresses a
normative proposition $q_1$, it follows that the major premise $P_{1A2}$ expresses a proposition $q_2$ that is identical to $q_1$. That is, the propositions expressed by $P_{1A2}$ and $C_{A2}$ are not distinct, and constraint $c5$ is violated.

In both of these two cases, the constraint $c5$ is violated.

The result of this line of reasoning is that Hom and Schwartz must either (i) accept that clause $c5$ is violated, in which case there is no $HS$-expressivist explanation for why the sentences (7), (6) and (9) differ in meaning, or (ii) maintain clause $c5$, in which case they must reject Claim $3.1.1^{gen}_{HS}$. The clear preference for the $HS$-expressivist would be to maintain clause $c5$ and reject Claim $3.1.1^{gen}_{HS}$. In this case, however, the most plausible attempt to fix the disanalogy described in this section is not acceptable. Consequently, the objection still stands, and there is a disanalogy between the claims Claim $3.1.1^{gen}_{HS}$ and Claim $3.1.1_{HS}$ that undermines Hom and Schwartz’s argument (in both its original and revised forms) that the conditional (7) expresses a normative proposition.

### 3.1.4.2 Objection 3.1.4.b

In Schroeder’s Explanation 4, and in Claim $3.1.1_{Sc}$, a statement is being made about which of the two premises of a *modus ponens* argument expresses a non-cognitive attitude that is identical to the non-cognitive attitude expressed by the conclusion. Note, however, that for this explanation (and claim) to hold, it must be assumed that both the major and minor premises of the argument in question argument already express non-cognitive attitudes. In particular, it is assumed that the major premise of the argument expresses a non-cognitive attitude
This should not come as a surprise. Recall that back at the beginning of §3.1.2 I flagged this with Observation 3.1.2, which stated that for the generic normative *modus ponens* argument *Sc1*, it is assumed that the major premise $P_{1\text{Sc1}}$ expresses a non-cognitive attitude, namely $\text{ATT}[P_{1\text{Sc1}}]$.

However, Hom and Schwartz do not assume that the major (conditional) premise of argument *A2* expresses a normative proposition in the course of their argument, nor does Claim 3.1.1$^{\text{gen}}_{\text{Sc}}$ (or their original claim) assume that $P_{1\text{A2}}$ expresses a normative proposition. On the contrary, the point of their argument is to *show* that this premise expresses a normative proposition. In this respect, their claim (and their argument more generally) is disanalogous to Schroeder’s claim (and argument more generally). So, this disanalogy must be fixed.

The problem is that what is likely the most plausible attempt to fix this disanalogy renders Hom and Schwartz’s argument circular, and hence problematic. To see this, suppose that Hom and Schwartz’s Claim 3.1.1$^{\text{gen}}_{\text{HS}}$ has built into it the assumption that the premises and conclusion (and in particular the major premise) of the relevant *modus ponens* arguments already express normative propositions. That would yield the following:

**Claim 3.1.1$^{**gen}_{\text{HS}}**. Either for every *modus ponens* argument $\mathcal{M}$, if the major premise, minor premise and conclusion of $\mathcal{M}$ express the normative propositions $p_1$, $p_2$ and $p_3$, respectively, then the minor premise of $\mathcal{M}$ expresses a normative proposition, or for every *modus ponens* argument $\mathcal{M}$, if the major premise, minor premise and conclusion of $\mathcal{M}$ express the normative propositions $q_1$, $q_2$ and $q_3$, respectively, then the major premise
of $\mathcal{M}$ expresses a normative proposition.

With this claim the disanalogy described above is eliminated. However, the resulting claim is at best uninformative.\textsuperscript{24} Furthermore, if it were to be used in Hom and Schwartz’s argument in place of their original claim, it would result in a circular argument. This is because it assumes what is intended to be proven by the argument, namely that premise $P_{1A2}$ of the *modus ponens* argument $A2$ expresses a normative proposition.

The result of this is that if the disanalogy described here is not fixed, then Schroeder’s argument cannot be used to justify Hom and Schwartz’s Claim 3.1.1$_{HS}$. On the other hand, if the most plausible fix is made to the claim to resolve the disanalogy, then Hom and Schwartz’s argument is rendered circular, since it assumes what it is intended to show, namely that $P_{1A2}$ of the *modus ponens* argument $A2$ expresses a normative proposition.

### 3.1.4.3 Objection 3.1.4.c

With the previous two objections I argued that there are important disanalogies between Hom and Schwartz’s argument and Schroeder’s argument. Furthermore, since the justification for the $HS$-expressivist Claim 3.1.1$^{gen}_{HS}$ that I gave at the beginning of 3.1.4 depended crucially on these analogies holding, if fixes for these

\textsuperscript{24}It is also is disanalogous from Claim 3.1.1$_{Sc}$ in the way described in the previous objection, and so is subject to the same criticism. To see this, modifying the claim to eliminate the disanalogy would yield “either for every *modus ponens* argument $\mathcal{M}$, if the major premise, minor premise and conclusion of $\mathcal{M}$ express the normative propositions $p_1$, $p_2$ and $p_3$, respectively, then $p_2$ is identical to $p_3$, or for every *modus ponens* argument $\mathcal{M}$, if the major premise, minor premise and conclusion of $\mathcal{M}$ express the normative propositions $q_1$, $q_2$ and $q_3$, respectively, then $q_1$ is identical to $q_3.” In both of these two cases, constraint c5 is violated. Hence this version of the claim must be rejected.
disanalogies cannot be provided, then the original Objection 3.1.1.b still stands. Here, I will very briefly argue that even if fixes for these disanalogies can be given, there is another way in which Hom and Schwartz’s reliance on Schroeder’s argument is problematic.

To see this, recall that ultimately the justification for Hom and Schwartz’s Claim 3.1.1$^{gen}_{HS}$ depends (via analogy) on Schroeder’s argument in defense of ruling out the first three explanations and accepting Explanation 4 (this was illustrated in Diagram 3.1.4.a above). However, Schroeder’s process of ruling out the first three explanations was done within the context of, and according to criteria that are unique to, hybrid expressivism, and not to pure or HS-expressivism. While it may be the case that the argument he gives in ruling out Explanation 1 applies just as well to the pure and to the HS-expressivist, in the case of Explanation 2, things are not so straightforward.

Recall that Schroeder (2009:270, also §3.1.1 above) argues that Explanation 2 should be ruled out for the reason that it is exactly the kind of explanation that the pure expressivist would give for why modus ponens arguments like A2 are valid. However, the reasons that the hybrid expressivist has for ruling this explanation out are precisely the reasons that a pure expressivist has for accepting it. Furthermore, it is likely the most plausible explanation that an HS-expressivist would appeal to (modulo a replacement of the term ‘non-cognitive attitude’ with ‘normative proposition’) if it were the case that the conditional (7) expresses a normative proposition. That is, if Hom and Schwartz’s original claim is correct, and (7) expresses a normative proposition, then an HS-expressivist version of Explanation 2 would explain
the validity of \textit{A2} (hence the inference problem for normative propositions). So the \textit{HS}-expressivist cannot rule out this explanation. Furthermore, the \textit{HS}-expressivist cannot rule out \textbf{Explanation 3}, since if Hom and Schwartz’s original claim is incorrect, and if the conditional (7) expresses an assertive proposition, then this third explanation (modulo a change of terms) would be what the \textit{HS}-expressivist would use to explain the validity of the \textit{modus ponens} argument \textit{A2}.

The point is that while Schroeder’s hybrid expressivist has reason to rule out the first three explanations, and hence by process of elimination accept \textbf{Explanation 4}, the \textit{HS}-expressivist does not have sufficient reason to rule out either \textbf{Explanation 2} or \textbf{Explanation 3}. Consequently, if Hom and Schwartz rely on Schroeder’s (2009) argument in the way described in \textit{Diagram 3.1.4.a} and in §3.1.2 more generally, then they are committed to an explanation that they should not be committed to. This is because they, unlike the hybrid expressivist, cannot rule out \textbf{Explanation 2} or \textbf{Explanation 3}, and hence cannot argue \textit{via} a process of elimination in favor of accepting \textbf{Explanation 4}. But if they do not have sufficient reason to accept this explanation, then they are not justified in relying on Schroeder’s (2009) argument in general, and hence they are not justified in accepting \textbf{Claim 3.1.1}\textsubscript{HS}\textsuperscript{gen} (or their original claim) in particular. That is, \textbf{Objection 3.1.1.b} still stands.

\textbf{3.1.5 Summary}

In §3.1 I considered Hom and Schwartz’s \textbf{Claim 3.1}_\textit{HS} that the conditional (7) expresses a normative proposition. In §3.1.1 I rehearsed their argument in defense of this claim, and gave two objections to it. With \textbf{Objection 3.1.1.a} I charged
that Case 2 of their argument is not considered, and hence that their argument is incomplete. With Objection 3.1.1.b I charged that their acceptance of Claim 3.1.1_{HS} is not given any justification, which undermines their argument.

No adequate replies were immediately available to these objections, so in §3.1.2 I investigated the relevant aspects of Schroeder’s (2009), and argued that Hom and Schwartz’s argument (and claim) are closely analogous to an argument (and claim) that are given by Schroeder. I laid out the similarities between the two arguments in §3.1.2.1, with the aim of using this information to address the two objections.

In §3.1.3 I addressed the first objection by arguing that a generalized version of Hom and Schwartz’s Claim 3.1.1_{HS} could be given that completes the missing Case 2 of their argument. In §3.1.4 I addressed the second objection by explaining how the acceptance of Claim 3.1.1^{gen}_{HS} can be justified by appealing to (i) an analogy to Schroeder’s Claim 3.1.1_{Sc}, and (ii) his argument for Explanation 4. In §§3.1.4.1-3.1.4.2 I argued that there are important disanalogies between the two arguments that are not easily fixed. In §3.1.4.3 I argued that even if these could be fixed, Hom and Schwartz do not have justification to base their argument on Explanation 4.

The conclusion that I draw in this section is that Hom and Schwartz’s argument, in both its original and revised forms, does not provide sufficient support for the claim that the conditional (7) expresses a normative proposition.
3.2 The Propositional Constituents \( \dagger \) and COND

In the previous section I argued that Hom and Schwartz are not justified in using Schroeder’s (2009) argument to defend their claim 3.1\(_{HS}\) that (7) expresses a normative proposition. Even if my argument is successful, it does not necessarily follow that (7) does \textit{not} express a normative proposition, since it may be possible to construct an alternative defense of Hom and Schwartz’s claim. In this section I will consider the possibility that (7) expresses the normative proposition (7a), as Hom and Schwartz claim in the third step of their solution to the embedding problem, but I will approach this question from a different methodological perspective. Whereas Hom and Schwartz largely ignored the syntactic features of the sentence (7) in isolation, and advanced their argument by observing certain properties of instances of modus ponens containing (7) as either major or minor premise, here I will examine the conditional (7) by itself, as a standalone sentence. I do this because, in my view, one plausible method (though certainly not the only method) for giving an account of the proposition expressed by a sentence is to consider the sentence in isolation (in particular, independent if its appearances in modus ponens arguments), and to specify the proposition that it expresses based primarily on the syntactic structure of the sentence and the semantic values of its individual constituents (perhaps with additional contextual parameters).

For this reason, in this section I will examine certain structural features of the conditional (7) and the normative proposition (7a). In particular I will consider the presence of the normative predicate ‘required’ in the sentence (7) and the presence of the propositional constituents \( \dagger \) and COND in (7a). Using three expressivist con-
straints, I will argue (in §3.2.1) that the most plausible explanations for why (7) expresses a proposition with the force-indicator † taking wide scope encounter problems, and (in §3.2.2) that due to the definition of the material conditional relation either _is false or_ is true, the conditional (7) does not express the proposition (7a), at least as Hom and Schwartz write it, without suitably redefining COND. Then I consider a new, more challenging problem with mixed descriptive-normative sentences that arises, and show how it does not admit of an easy solution.

Before proceeding, as setup for the following discussion I will briefly recall three relevant expressivist constraints imposed by Hom and Schwartz’s extension of Hanks’ theory, as described in §2.1. The first, from constraint c1, is that the normative predicate ‘required’ expresses the force-indicator for normative endorsement †. The second, from constraint c2, is that normative propositions (those with † taking wide scope) are not truth-apt and do not have truth-conditions. The third is a generalization of c4, namely that no sentence can express (or be ‘conventionally used’ to express) both a normative proposition and an assertive proposition. This latter condition serves to sharply demarcate normative sentences from descriptive sentences, based on the kind of proposition they express. These three constraints will inform the remainder of the discussion in this section, and will be cited periodically below.

### 3.2.1 Is the Wide Scope Occurrence of † in (7a) Justified?

Notice that there are two distinct occurrences of the normative predicate ‘required’ in the conditional sentence (7), but that there are three occurrences of the sign for normative endorsement ‘†’ in the proposition (7a). Given that ‘required’ expresses † (by
the first constraint c1 mentioned above), the presence of the two narrow scope normative force indicators in (7a) can be explained by the presence of the two embedded instances of ‘required’ in the sentence (7). However, there is no similar explanation for the appearance of the third (wide scope) indicator for normative endorsement in (7a), since there is no third instance of the normative predicate ‘required’ in the sentence (7) that might express it. This can be illustrated as follows:

(7): \[ \text{If } \phi \text{ is } \text{required} \text{ then } \psi \text{ is } \text{required} \]

(7a): \[ \uparrow \langle \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \sim \uparrow \langle \text{you}, \Psi-\text{ING} \rangle, \text{COND} \rangle \]

**Figure 3.2.1.a**

For the conditional sentence (7) to express the proposition (7a), there must be some explanation for why \( \uparrow \) (as opposed to \( \vdash \)) takes wide scope in the proposition, despite there being no instance of ‘required’ directly corresponding to it.

In the remainder of this section I will consider two possible explanations. The first, which I call ‘\( \uparrow \)-dominance’, holds that if a complex proposition contains at least one propositional constituent that is a normative proposition, then the whole proposition must be normative. This is the topic of §3.2.1.1. The second explanation, to be discussed in §3.2.1.2, involves holding that a discrete instance of the normative predicate ‘required’ in a non-atomic sentence is *sufficient* for a corresponding discrete instance of \( \uparrow \) to occur in the proposition expressed by the sentence, but that it is not *necessary*, which allows for wide scope normative endorsement in the proposition.
(7a) without a corresponding normative predicate appearing in the conditional (7). \(^{25}\)

### 3.2.1.1 Explanation 1: †-dominance

Suppose that for every sentence \( \gamma \), if \( \gamma \) contains at least one subsentence that expresses a normative proposition, then \( \gamma \) also expresses a normative proposition (a proposition with † in wide scope position). I will call this property ‘†-dominance’, since normative endorsement takes semantic priority over, or dominates, assertion.

**Example 3.2.1.1.a.** Consider the mixed normative and descriptive sentence

(10) if it is the case that if \( a \) is F then \( \phi \)-ing is required, then \( b \) is G

The proposition expressed by this is of the following form:

(10a) \( \langle \langle \sim \langle \langle \sim \langle a, F \rangle \rangle \rangle \rangle, \sim \langle \langle you, \Phi-ING \rangle \rangle \rangle \rangle, COND \rangle, \sim \langle \langle b, G \rangle \rangle \rangle, COND \rangle \)

where the blank spaces ‘ ’ indicate that neither the force-indicator taking wide scope nor the force-indicator for the embedded conditional have been determined yet.

However, †-dominance can be used to determine what these missing force-indicators are. Since the sentence ‘if \( a \) is F then \( \phi \)-ing is required’ contains a subsentence that

\[^{25}\]One might try to provide an explanation by simply adding a third occurrence of ‘required’ to (7) corresponding to the external †. The most plausible way to do this would be to rewrite (7) as (7\(^*\)) if \( \phi \) is required then \( \psi \) is required, is required

Then the rightmost instance of ‘required’ expresses † in wide scope of the proposition expressed by the sentence. However, this will not work, since (7\(^*\)) differs in meaning from (7), and the proposition expressed (if it exists) would be something like

(7\(^^*\)) †\(\langle you, \langle \langle you, \Phi-ING \rangle \rangle \rangle, \sim \langle \langle you, \Psi-ING \rangle \rangle \rangle \rangle, COND \rangle \)

This has † in wide scope, but no force is specified for one of the propositional constituents. If the force used here is †, then there is no corresponding occurrence of ‘required’ in the original sentence corresponding to it (and if another instance of ‘required’ is added to (7\(^*\)), the original problem simply iterates). On the other hand, if the force used is ⊢, then (7) expresses the assertive proposition (7b), which provides a counterexample to Hom and Schwartz’s claim that (7) expresses the normative (7a), which is clearly not what they would want. So this proposed solution is problematic, and I will not investigate it any further here.
expresses a normative proposition, by †-dominance it must also express a normative proposition, namely ††⟨⟨∼⊢⟨a, F⟩, ∼†⟨you, Φ-ING⟩⟩, COND⟩. But then since the sentence (10) contains a subsentence that expresses a normative proposition (namely ‘if a is F then φ-ing is required’), by †-dominance it must also express a normative proposition. That is, (10a) is actually the following normative proposition:

(10a) ††⟨⟨∼†⟨⟨∼⊢⟨a, F⟩⟩, ∼†⟨you, Φ-ING⟩⟩⟩⟩, COND⟩, ∼⊢⟨b, G⟩⟩, COND⟩

This line of reasoning can also be illustrated by considering the following decomposition tree for the proposition (10a):26

\[
\begin{array}{c}
\vdash\langle a, F \rangle & \vdash\langle you, \Phi-ING \rangle \\
\vdash\langle you, \Phi-ING \rangle, \text{COND} & \vdash\langle b, G \rangle \\
\vdash\langle a, F \rangle, \text{COND} & \vdash\langle you, \Phi-ING \rangle, \text{COND} \\
\vdash\langle a, F \rangle, \text{COND} & \vdash\langle b, G \rangle
\end{array}
\]

Notice how the atomic normative proposition †⟨you, Φ-ING⟩, taken in conjunction with †-dominance, forces the sign for normative endorsement to propagate upwards from this base atomic proposition through each successively more complex proposition. This provides a systematic determination of (and explanation for) what the wide scope force-indicator of the complex proposition (10a) is.

End Example 3.2.1.1.a.

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26This decomposition tree of a Hanks proposition is a non-rigorous and imprecise analogue of the notion of a decomposition tree for a formula of sentential logic (Cori and Lascar, 2000:13). I include it merely for the purposes of illustrating how the complex proposition (10a) can roughly be decomposed into simpler sub-propositions.
**Example 3.2.1.1.b.** Consider the following familiar sentence:

(7) if φ-ing is required, then ψ-ing is required

This sentence contains a subsentence that expresses a normative proposition (namely ‘φ-ing is required’), and so by †-dominance (7) must also express a normative proposition. That is, (7) expresses the normative proposition

(7a) †↑⟨⟨∼†⟨you, Φ-ING⟩⟩, ∼†⟨you, Ψ-ING⟩⟩, COND⟩

So †-dominance explains why † takes wide scope in the proposition expressed by the conditional sentence (7).

End Example 3.2.1.1.b.

As **Example 3.2.1.1.b** demonstrates, †-dominance explains why the proposition (7a) contains a sign for normative endorsement in wide scope position. This provides a straightforward defense of Hom and Schwartz’s **Claim 3.1** \( HS \) that (7) expresses the normative proposition (7a), and not the assertive proposition (7b). However, there are at least two objections to †-dominance. In the remainder of §3.2.1.1 I will present these two objections, along with one reply.

**Objection 3.2.1.1.a.** Consider the following four sentences:

(7) if φ-ing is required, then ψ-ing is required

(11) is it the case that if φ-ing is required then ψ is required?

(12) S accepts that φ-ing is required

(13) does S accept that φ-ing is required?

Notice in particular that (7) and (11) have different meanings, and that (12) and (13) have different meanings. Hence if \( HS \)-expressivism is to be considered a plau-
sible semantic theory, it must predict that (7) and (11) (and (12 and (13)) express propositions with different satisfaction conditions.

Now, since ‘φ-ing is required’ is a subsentence of each of these four sentences, they each contain a subsentence that expresses the normative proposition †⟨you, Φ-ING⟩. So, from †-dominance it follows that these four sentences must express the following normative propositions (respectively), with † taking wide scope in each:

(7a) †↑⟨⟨∼†⟨you, Φ-ING⟩, ∼†⟨you, Ψ-ING⟩⟩, COND⟩
(11a) †↑⟨⟨∼†⟨you, Φ-ING⟩, ∼†⟨you, Ψ-ING⟩⟩, COND⟩
(12a) †⟨⟨S, ∼†⟨you, Φ-ING⟩⟩, ACCEPT⟩
(13a) †⟨⟨S, ∼†⟨you, Φ-ING⟩⟩, ACCEPT⟩

On the one hand, this result would be welcome to Hom and Schwartz, since it supports their Claim 3.1HS that (7) expresses the normative proposition (7a), and explains why † takes wide scope in that proposition. On the other hand, it would be unwelcome for HS-expressivism more generally, since it leads to two problems.

The first problem is that since (7a) = (11a), it follows that (7) and (11) have the same satisfaction conditions, which contradicts the assumption (from above) that they do not. Furthermore, since (12a) = (13a), this implies that (12) and (13) have the same satisfaction conditions, contradicting the assumption (from above) that they do not. This is clearly a problem, since HS-expressivism (augmented by †-dominance) should not predict that two sentences express propositions with identical satisfaction conditions when those sentences mean different things.

The second problem is that according to the HS-extension of Hanks’ theory, the sentences (11), (12) and (13) should express the following Hanks propositions,
respectively.\footnote{Given complications with uttering normative sentences in the interrogative mood (see §2.2 for a discussion of the atomic case), it might be argued that (11) actually expresses a proposition of the general form
\begin{equation}
(11^*) \; \langle \langle \text{you}, \ldots, \text{ACCEPT} \rangle \rangle
\end{equation}
where the blank spot contains the propositional constituent expressed by the sentence (7) (and which is omitted here for the sake of simplicity). This, however, would not change the outcome of the objection raised here, since no matter how the blank position is filled in, it would follow that (11a) $\neq (11^*)$, and hence that $\dag$-dominance is incompatible with HS-expressivism.}

\begin{align*}
(11b) & \; \langle \langle \sim \langle \text{you}, \Phi-\text{ING} \rangle, \sim \sim \langle \text{you}, \Psi-\text{ING} \rangle \rangle, \text{COND} \rangle \\
(12b) & \; \vdash \langle \langle \text{S}, \sim \sim \langle \text{you}, \Phi-\text{ING} \rangle \rangle, \text{ACCEPT} \rangle \\
(13b) & \; ? \langle \langle \text{S}, \sim \sim \langle \text{you}, \Phi-\text{ING} \rangle \rangle, \text{ACCEPT} \rangle
\end{align*}

But these are not the propositions that are expressed by the sentences if $\dag$-dominance is assumed to hold. That is, (11a) $\neq$ (11b), (12a) $\neq$ (12b) and (13a) $\neq$ (13b).

This is a problem, because it implies that $\dag$-dominance is incompatible with Hom and Schwartz’s extension of Hanks’ theory of propositions, since $\dag$-dominance and the HS-extension disagree on the propositions that are expressed by the three sentences (11)-(13). Consequently, the HS-expressivist must either (i) accept the HS-extension of Hanks theory and reject $\dag$-dominance, or (ii) accept $\dag$-dominance and reject the HS-extension of Hanks theory. Given the stakes, it is clear that the HS-expressivist must reject $\dag$-dominance.

The result of this is that while $\dag$-dominance explains why (7) expresses (7a), and hence provides support for Hom and Schwartz’s \textbf{Claim 3.1}_{HS}, there are two problems with it. Unless these two problems are addressed, $\dag$-dominance cannot count as an explanation for why $\dag$ takes wide scope in the proposition expressed by the conditional sentence (7). \textit{End Objection 3.2.1.1.a.}
Reply to Objection 3.2.1.1.a. The two problems above only occur because †-dominance is too permissive in how it allows † to proliferate up through more complex sentences. Placing suitable restrictions on †-dominance can solve this problem. To this end, redefine †-dominance as follows:

Definition. Restricted †-dominance. Suppose that $S$ is a speaker and $\gamma$ is a sentence such that all of the following three conditions hold:

1. $S$ does not utter $\gamma$ in the imperative or interrogative mood
2. $\gamma$ is of the form ‘if $n$ then $m$’, ‘either $n$ or $m$’, ‘$n$ and $m$’ or ‘not-$n$’
3. at least one of $\gamma$’s subsentences expresses a normative proposition

Then $\gamma$ also expresses a normative proposition.

The condition r1 is intended to restrict the wide scope force indicator of the proposition expressed to be one of $\vdash$ and † (and in particular to exclude $?$), condition r2 is intended to allow † to propagate upwards through logical connectives only, and condition r3 is simply the familiar antecedent of unrestricted †-dominance.

Despite being somewhat clunky, and also arguably quite ad hoc, this definition delivers Hom and Schwartz’s intended results. It provides an explanation for why † takes wide scope in the proposition expressed by (7), and it also avoids the two problems enumerated above.

To see this, consider the sentences (7), (11), (12) and (13) again. First, since (7) satisfies the three conditions r1-r3, restricted †-dominance applies, and hence the sentence (7) must express the normative proposition (7a). This explains why
† takes wide scope in this proposition, and consequently provides support for Hom and Schwartz’s Claim 3.1HS. Second, since (11) is uttered by the speaker in the interrogative mood (as indicated by the ‘?’ symbol in the sentence), condition r1 fails to hold, and so restricted †-dominance does not apply in this case. Consequently, (11) expresses (11b), as HS-expressivism predicts. Finally, since neither (12) nor (13) are of any of the forms listed in condition r2, this condition fails to be satisfied (with (13), condition r1 also fails to be satisfied). Consequently, restricted †-dominance does not apply here, and hence (12) expresses (12b) and (13) expresses (13b), as HS-expressivism predicts.

This illustrates how both of the two problems can be solved (albeit in a somewhat ad hoc manner). Placing these restrictions on †-dominance eliminates the problematic incompatibilities between HS-expressivism and the original †-dominance, and does so in a way that still explains why (7) expresses (7a). So, restricted †-dominance provides a justification for Hom and Schwartz’s Claim 3.1HS.

End Reply.

Objection 3.2.1.1.b. There is no principled reason to suppose that †-dominance is a more plausible explanation than a symmetrically defined concept of ⊢-dominance. This is not a problem for conditionals that contain sub-propositions that are only of one kind (assertive or normative), but it is a problem for mixed conditionals like (10). Recall from Example 3.2.1.1.a above that with †-dominance, (10) expresses

(10a) ††⟨⟨∼†⟨⟨∼⊢⟨a, F⟩⟩, ∼†⟨you, Φ-ING⟩⟩, COND⟩, ∼⊢⟨b, G⟩⟩⟩, COND

But if ⊢-dominance holds, then (10) expresses
\((10\text{b}) \vdash \langle \langle \sim \vdash \langle \sim \vdash (a, F), \sim \vdash (\text{you}, \Phi\text{-ING}), \text{COND}, \sim \vdash (b, G) \rangle \rangle, \text{COND} \rangle\)

Which of these two propositions is expressed by (10)? (It cannot be both, since they have different satisfaction conditions). If there is no principled reason to accept \(\dagger\)-dominance over \(\vdash\)-dominance (or vice versa), then there is no principled reason to argue in support of the claim that (10) expresses (10a) (or that (10) expresses (10b)).

Even so, there may be intuitive reason to think that \(\vdash\)-dominance is in general theoretically more compelling than \(\dagger\)-dominance. As Hom and Schwartz (2013:20) remark (and as was quoted above in §3.1), in sincerely uttering the conditional (7), intuitively it seems that the sentence is asserted, and not normatively endorsed. Furthermore, it is hard to even make sense of what normatively endorsing a conditional might mean. So, there may be good intuitive reason to prefer \(\vdash\)-dominance over \(\dagger\)-dominance. Now, intuitions should probably not play a decisive role in choosing one explanation over another here, especially since the typical person’s intuitions about normative endorsement are likely fairly unrefined. But this does still lend some weight to the view that \(\vdash\)-dominance is preferable.

On the other hand, the primary reason for preferring \(\dagger\)-dominance seems to be that it happens to provide an explanation for why \(\dagger\) takes wide scope in the proposition expressed by (7). But accepting an explanation simply because it delivers the results that you may desire is not necessarily a methodologically respectable reason to accept that explanation—especially if \(\vdash\)-dominance provides an equally persuasive reason for why \(\dagger\) does not take wide scope.  

\textit{End Objection 3.2.1.1.b.}

In my view, this second objection provides sufficient reason to be skeptical that
†-dominance provides an acceptable explanation for why † takes wide scope in the proposition expressed by (7). Even if the reply I gave to the first objection is accepted (which would required ignoring the *ad hoc* nature of its construction), there is apparently no compelling reason to think that †-dominance should be accepted over ⊢-dominance (or *vice versa*). Given this, I will not pursue †-dominance any further here, and will go on to consider another possible explanation for why † takes wide scope in the proposition (7a).

### 3.2.1.2 Explanation 2: Necessary and sufficient conditions for †

Suppose, as is illustrated in Figure 3.2.1.a at the beginning of §3.2.1, that there does not exist an occurrence of the term ‘required’ in the conditional sentence (7) that uniquely and directly corresponds to the wide scope occurrence of the force indicator † in the proposition (7a). That is, suppose that the presence of an instance of ‘required’ that uniquely and directly corresponds to an occurrence of † in wide scope position is not *necessary* for the sentence to express a normative proposition. However, given clause c1, which states that ‘required’ expresses †, it follows that the presence of a specific instance of ‘required’ is *sufficient* for there to be a unique corresponding † in the proposition expressed (at least for atomic normative sentences). So a partial explanation for why the conditional (7) expresses the normative proposition (7a) (as opposed to the assertive proposition (7b)) is that the presence of a discrete instance of ‘required’ is sufficient but not necessary for † to occur in wide scope position of the proposition expressed by the sentence. This would explain why † *can* be present without a unique and directly corresponding instance of ‘required’ being present.
So what explains why † is present in the proposition (7a)? Presumably the same explanation that Hanks would give for why a speaker $S$ can use (1), (2) and (3) to express assertive, interrogative and imperative propositions (respectively) with just the sentential constituents ‘$a$’ and ‘$F$’, namely by choosing to combine the propositional constituents $a$ and $F$ in one of the moods $\lambda \in \{\vdash, ?, !\}$. That is, the explanation for why † is present in wide scope in (7a) is the same reason for why any particular one of $\lambda \in \{\vdash, ?, !\}$ takes wide scope in $\lambda(a, F)$. What exactly that reason is is not explained by Hanks (2015), but it is clear that in general in Hanks’ theory $S$ is permitted to combine these propositional items in a mood of their choice. So the burden of explanation for why (7) expresses (7a) ultimately rests on Hanks’ theory, and not on the $HS$-expressivist.

So $S$ is permitted to use any $\lambda \in \{\vdash, ?, !, \dagger\}$ when combining given propositional constituents. The benefits of this are that it is largely consistent with the way that Hom and Schwartz initially describe their extension of Hanks’ theory, namely simply adding ‘$\dagger$’ to the set $\{\vdash, ?, !\}$. Furthermore, this explains why (7) expresses (7a), since in sincerely uttering (7), a speaker simply chooses to combine the relevant propositional constituents in the $\dagger$-mood, as opposed to the $\vdash$-mood. This explanation supports Hom and Schwartz’s Claim 3.1$_{HS}$. However, there is at least one objection to this explanation.

**Objection 3.2.1.2.a.** Consider the following sentence:

\[(5) \text{ if } a \text{ is } F \text{ then } b \text{ is } G\]

Notice that there is no occurrence of the normative predicate ‘required’ in this sen-
tence. But since the presence of ‘required’ is sufficient but not necessary for $S$ to utter (5) in the mood of normative endorsement, there is nothing preventing $S$ from using (5) to express the following normative proposition:

$$(5c) \vdash \langle \langle \neg \vdash \langle a, F \rangle, \neg \vdash \langle b, G \rangle \rangle, \text{COND} \rangle$$

However, as was explained above in §1.1.2.3, Hanks’ theory predicts that (5) expresses the assertive proposition

$$(5b) \vdash \langle \langle \neg \vdash \langle a, F \rangle, \neg \vdash \langle b, G \rangle \rangle, \text{COND} \rangle$$

So, (5) can be used to express both an assertive proposition and a normative proposition. However, this violates the third expressivist constraint mentioned at the opening of §3.2 (the generalization of c4), namely that a given sentence cannot (or cannot be ‘conventionally used’ to) express both a normative proposition and an assertive proposition, on pain of blurring the distinction between normative and descriptive discourse. But this is precisely what happens with (5).

The result is that while the explanation considered in this section does support Hom and Schwartz’s Claim 3.1$_{HS}$ that (7) expresses (7a), it also violates the third core expressivist commitment referenced at the beginning of §3.2.1, and that is unacceptable. So this explanation should not be accepted by the $HS$-expressivist.

End Objection 3.2.1.2.a.

Reply to Objection 3.2.1.2.a. A reply to this objection can be given, though the tools to do so will not be available until §§5.1-5.2. In the meantime, it is worth simply noting that this objection illustrates the importance of having some systematic and theoretically sound method for restricting the forces with which given propositional
constituents can be combined by a speaker, in a context. Such a method is not given in Hanks’ (2015), so in §§5.1-5.2 I will give a way of doing this. For now, however, the objection raised here stands.

3.2.1.3 Results

In this section (§3.2.1) I considered the puzzle of explaining how † can occur in wide scope of the proposition expressed by the conditional sentence (7) without any directly corresponding instance of ‘required’ occurring in the sentence itself. In §3.2.1.1 I presented the †-dominance explanation, which holds that if a given sentence contains at least one subsentence that expresses a normative proposition, then that sentence must express a normative proposition as well. Then I presented two objections to this explanation, gave a reply to one, and concluded that because of these objections †-dominance should not be accepted.

Then in §3.2.1.2 I considered another explanation, which took the presence of ‘required’ in a sentence to be a sufficient but not necessary condition for the presence of a unique corresponding † in the proposition expressed by the sentence. This explanation had the benefit of confirming Hom and Schwartz’s claim that (7) expresses the normative proposition (7a). However, it also implies the unhappy result that there exist compound sentences that express both normative and assertive propositions, which violates a core HS-expressivist commitment. I indicated that a solution to this problem may exist, but that I will defer it to Chapter 5, and hence that I provisionally reject this explanation for being incomplete.
In conclusion, neither of the two explanations canvassed here provide adequate explanations for why † takes wide scope in the proposition expressed by the conditional (7). Consequently, I have been unable to provide any compelling new support for Hom and Schwartz’s Claim $3.1_{HS}$ here.

3.2.2 The Act-Type COND

In the previous section I identified a problem with the appearance of the force-indicator † in the wide scope position of proposition (7a). In this section I will consider the appearance of the propositional constituent COND in (7a), and I will argue (in §3.2.2.1) that given Hanks’ (2015) definition of this object, it cannot correctly be applied to the normative propositions expressed by the antecedent and consequent of (7). This results in a problem for Hom and Schwartz’s claim that (7) expresses (7a). In §3.2.2.2 I will show how these problems can be solved (with some caveats, and given some assumptions) by defining a normative variant of COND. However in §3.2.2.3 I will show how this solution encounters a more challenging problem pertaining to mixed normative-descriptive conditionals, and that this problem is not so easily solved.

3.2.2.1 A Problem With COND in (7a)

Recall from §2.1 that every Hanks proposition has satisfaction conditions of some kind. For assertive propositions, these are simply truth-conditions. For normative propositions these are non-truth-functional satisfaction conditions that semantically encode that such propositions are non-representational and have world-to-mind di-
rection of fit (see Table 2.1 and constraints c2-c4 from §2.1). I will call these latter conditions SATN-conditions to distinguish them from truth-conditions.28

Recall also that the propositional constituent COND is the act-type of a speaker’s token act of expressing the material conditional relation either _is false or _is true, and also recall from s3 in §1.1.2.3 and from Hanks (2015:127) that for propositions p and q the act of predicating this conditional relation of p and q is true (or in Hanks’ words, the relation “holds”) iff either p is false or q is true. This in effect defines the material conditional connective by specifying the conditions under which it holds.

Given this definition of COND and the distinction between SATN-conditions and truth-conditions, it is possible to identify a potential problem with the proposition (7a). To see this, first assume that (7) expresses (7a). Then, when a speaker sincerely utters (7), they perform a token act of the type (7a) by simultaneously

(i) referring to you, expressing the property φ-ing, and applying φ-ing to you in the †-mood, making the proposition †⟨you, Φ-ING⟩ available,

(ii) referring to you, expressing the property ψ-ing, and applying ψ-ing to you in the †-mood, making the proposition †⟨you, Ψ-ING⟩ available,

(iii) expressing the material conditional relation either _is false or _is true (generating a cancellation context), and

(iv) applying the material conditional relation either _is false or _is true to the two propositions †⟨you, Φ-ING⟩ and †⟨you, Ψ-ING⟩ in the †-mood (in a cancellation context).

28Here and elsewhere in §3.2, the symbol ‘N’ stands for ‘normative’, and the symbol ‘D’ stands for ‘descriptive’.

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This complex act is a token of the type (7a). Of interest here is that the sub-act (iii) is a token of the type COND, which is a constituent of the proposition (7a).

The potential problem with this has to do with the application of the material conditional relation either—is false or—is true to pairs of normatively endorsed propositions in the mood of normative endorsement. Recall that this relation is defined as holding of two propositions \( p \) and \( q \) (when it is predicated of these propositions by a speaker) if either \( p \) is false or \( q \) is true. But the normative propositions \( \hat{\langle \text{you}, \Phi-\text{ING} \rangle} \) and \( \hat{\langle \text{you}, \Psi-\text{ING} \rangle} \) are neither true nor false, so this relation does not hold of these two propositions (if and when a speaker predicates it of these two propositions), by definition. Similarly, assuming that ‘φ-ing is not required’ and ‘ψ-ing is not required’ express normative propositions \( n \) and \( m \), the material conditional relation does not hold of them either (if and when a speaker predicates it of these two propositions).\(^{29}\) To mark this distinction, I will say that it is appropriate to apply the material conditional relation to pairs of assertive propositions in the assertive mood, and it is inappropriate to predicate it of pairs of normative propositions (or pairs of mixed assertive and normative propositions) in the assertive mood.

Is it appropriate to apply the material conditional relation to these propositions in the \( \hat{\cdot} \)-mood, as in the case of (7a)? If it is, then the \( \text{SAT}_N \)-values of the normative proposition (7a) must be a function of the relation either—is false or—is true and of the \( \text{SAT}_N \)-values of the normative propositions \( \hat{\langle \text{you}, \Phi-\text{ING} \rangle} \) and \( \hat{\langle \text{you}, \Psi-\text{ING} \rangle} \). But this relation is only defined to be applied to propositions with truth-values (not \( \text{SAT}_N \)-values). So by definition it cannot be used to specify the \( \text{SAT}_N \)-conditions for

\(^{29}\)See Chapter 4 for how the propositions expressed by the negations of (6) and (9) might be characterized.
(7a), since these cannot be generated recursively from it and the $\text{SAT}_N$-conditions of the normative propositions expressed by the antecedent and consequent of the sentence (7). As a result, it is not appropriate to apply the material conditional relation to these two normative propositions in the $\dag$-mood.

This is potentially a problem for Hom and Schwartz’s claim that the sentence (7) expresses the proposition (7a). It shows that it is not appropriate to apply the material conditional relation $\text{either}_\_\text{is false or}_\_\text{is true}$ to pairs of normative propositions in the $\dag$-mood to generate a unified proposition whose $\text{SAT}_N$-conditions are a function of the $\text{SAT}_N$-conditions of its constituents. That is, if the proposition expressed by the conditional sentence (7) contains the propositional constituent COND, then the embedding problem still stands.

3.2.2.2 A Solution: Redefining COND

Perhaps the most obvious way to address this problem would be to provide an alternative definition of COND such that it characterizes the act of expressing a different conditional relation, one that can appropriately be applied to pairs of normative propositions, and that outputs a $\text{SAT}_N$-value for inputs of pairs of $\text{SAT}_N$-values (in the expected way). So, suppose that there exists a binary $\mathcal{N}$-conditional relation given by $\text{either}_\_\text{is NOT-SAT}_N \text{ or}_\_\text{is SAT}_N$ such that for any normative propositions $n$ and $m$, the act of applying this $\mathcal{N}$-conditional relation to $n$ and $m$ in the $\dag$-mood is $\text{SAT}_N$ iff either $n$ is NOT-$\text{SAT}_N$ or $m$ is $\text{SAT}_N$. I will call this the $\mathcal{N}$-conditional relation. For the moment, and for the purposes of argumentation, put aside whether this account of the relation is coherent, and put aside questions about what exactly ‘NOT-
SAT₇ means, and suppose that COND₇ is the act of expressing this ⁷-conditional relation. Then, given any conditional sentence, one of the following two cases may obtain:

Case 1. Suppose that both the antecedent and consequent of a given conditional γ express normative propositions, say ⌧⟨you, Φ-ING⟩ and ⌧⟨you, Ψ-ING⟩ (respectively), that both have SAT₇-conditions. Then, all of the following hold:

1.1. in sincerely uttering γ, a speaker S performs a complex act that contains as sub-acts (i) expressing the ⁷-conditional relation either_is NOT-SAT₇ or_is SAT₇ (creating a cancellation context), and (ii) applying either_is NOT-SAT₇ or_is SAT₇ to ⌧⟨you, Φ-ING⟩ and ⌧⟨you, Ψ-ING⟩ in the mood of normative endorsement.

1.2. S’s act of applying the ⁷-conditional relation either_is NOT-SAT₇ or_is SAT₇ to ⌧⟨you, Φ-ING⟩ and ⌧⟨you, Ψ-ING⟩ in the ⌧-mood is SAT₇ iff either ⌧⟨you, Φ-ING⟩ is NOT-SAT₇ or ⌧⟨you, Ψ-ING⟩ is SAT₇.

1.3. γ expresses ⌧↑⟨⟨∼⌧⟨you, Φ-ING⟩, ∼⌧⟨you, Ψ-ING⟩⟩, COND₇⟩.

Case 2. Suppose that both the antecedent and consequent of a given conditional γ express assertive propositions, say ⊢⟨a, F⟩ and ⊢⟨b, G⟩ (respectively), that both have truth-conditions. Then, all of the following hold:

2.1. in sincerely uttering γ, a speaker S performs a complex act that contains as sub-acts (i) expressing the material conditional relation either_is NOT-SAT₇ or_is SAT₇ (creating a cancellation context), and (ii) applying either_is NOT-SAT₇ or_is SAT₇ to ⌧⟨you, Φ-ING⟩ and ⌧⟨you, Ψ-ING⟩ in the ⌧-mood is SAT₇ iff either ⌧⟨you, Φ-ING⟩ is NOT-SAT₇ or ⌧⟨you, Ψ-ING⟩ is SAT₇.

Note that the use of ‘may’ here is intentionally designed to be a hedge to account for the possibility of mixed conditionals, to be considered below. Also note that for the sake of simplicity, in the remainder of the section I will ignore the interrogative and imperative moods.

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false or _is true, and (ii) predicating the relation either _is false or _is true of \( \vdash \langle a, F \rangle \) and \( \vdash \langle b, G \rangle \).

2.2. S's act of predicating the material conditional relation either _is false or _is true of \( \vdash \langle a, F \rangle \) and \( \vdash \langle b, G \rangle \) is true iff either \( \vdash \langle a, F \rangle \) is false or \( \vdash \langle b, G \rangle \) is true.

2.3. \( \gamma \) expresses \( \vdash \uparrow \langle \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle \rangle, \text{COND} \)

These conditions determine, based on the kinds of propositions (normative or assertive) expressed by the antecedent and consequent, which of the acts are performed by a speaker with their utterance of ‘if _then_’ (tokens of the type \( \text{COND}_N \), or tokens of the type \( \text{COND} \)). That is, distinguishing between Case 1 and Case 2 functions to sharply demarcate normative from assertive uses of conditionals based on the (canceled) forces of the propositions expressed by their subsentences.

These conditions allow for a possible solution to the problem given in §3.2.2.1 to be given. Since the antecedent and consequent of the conditional (7) express normative propositions, Case 1 obtains, and from 1.1 in sincerely uttering (7) a speaker (in short) expresses the \( N \)-conditional relation either _is NOT-SAT_\( N \) or _is SAT_\( N \) and applies it to \( \dagger\langle \text{you}, \Phi\text{-ING} \rangle \) and \( \dagger\langle \text{you}, \Psi\text{-ING} \rangle \) in the \( \dagger \)-mood. That is, (7) does not express (7a), but rather expresses the normative proposition

(7c) \( \dagger\langle \langle \sim \dagger\langle \text{you}, \Phi\text{-ING} \rangle, \sim \dagger\langle \text{you}, \Psi\text{-ING} \rangle \rangle, \text{COND}_N \rangle \)

Then, from 1.2, this proposition is SAT_\( N \) iff either \( \dagger\langle \text{you}, \Phi\text{-ING} \rangle \) is NOT-SAT_\( N \) or \( \dagger\langle \text{you}, \Psi\text{-ING} \rangle \) is SAT_\( N \). This is a possible solution to the problem raised in §3.2.2.1.

Before concluding this section, there are two observations that I want to make:
**Observation 1.** This solution depends on the following two assumptions about the \( \mathcal{N} \)-conditional relation and about the material conditional relation:

**a1.** If a conditional relation takes as input two \( \text{SAT}_{\mathcal{N}} \)-values, it outputs a \( \text{SAT}_{\mathcal{N}} \)-value, and if it takes as input two truth-values, it must output a truth-value.

**a2.** If a conditional relation is defined to output a \( \text{SAT}_{\mathcal{N}} \)-value, then it is only appropriate to apply it in the mood of normative endorsement. If a conditional is defined to output a truth-value, then it is only appropriate to apply it in the assertive mood.\(^{31}\)

I will not assess these assumptions, nor will I defend them here. I simply want to flag them, and note that if they hold, they have consequences for Hom and Schwartz’s **Claim 3.1\(_{HS}\).** Since \( \dagger\langle \text{you}, \Phi\text{-ING}\rangle \) and \( \dagger\langle \text{you}, \Psi\text{-ING}\rangle \) have \( \text{SAT}_{\mathcal{N}} \)-values, by assumption **a1** the conditional relation in the proposition expressed by (7) must output a \( \text{SAT}_{\mathcal{N}} \)-value. But then by assumption **a2**, it follows that \( \dagger \) must be the force-indicator in wide scope of the proposition expressed by (7). This means that if these two assumptions hold, then it follows that the conditional (7) must express a normative proposition. This would vindicate Hom and Schwartz’s claim that (7) expresses a normative proposition, and would provide an explanation for why \( \dagger \) takes wide scope in the proposition expressed by (7), answering the main question posed in §3.2.1.  

*End Observation 1.*

---

\(^{31}\)Again, for the sake of simplicity I will temporarily ignore applications of the material conditional relation or the \( \mathcal{N} \)-conditional relation in the interrogative or imperative moods.
Observation 2. This solution comes with two significant caveats. The first is that SAT-conditions for atomic normative propositions have not yet been defined, and so it is reasonable to be skeptical that the SAT-conditions given in 1.2 above are intelligible. The second caveat is that the concept NOT-SAT has not been defined, and given the complexities inherent in explaining the meanings of negated atomic normative sentences (the topic of Chapter 4), one might reasonably object to the use of this concept here.

In summary, given these assumptions and caveats, and given the four conditions that are used to characterize the act-types COND and COND, a possible solution to the embedding problem for normative propositions can be given. Instead of attempting to defend the assumptions and eliminate these caveats, I will go on in the next section to consider another, and more challenging problem with mixed normative-descriptive conditionals, and will argue that the existence of this problem suggests that the possible solution presented in the present section is ultimately unsatisfactory.

3.2.2.3 A Problem: Embedding in Mixed Conditionals

In the previous section, a new N-conditional relation was given to supplement the material conditional relation from Hanks’ base theory. The former relation is defined to be appropriately applied in the mood of normative endorsement to pairs of normative propositions, and the latter is defined to be appropriately applied to pairs of assertive propositions in the assertive mood. However, in natural language there
exist conditionals like the following:

(14) if \( a \) is \( F \) then \( \phi \)-ing is required

According to the \( HS \)-expressivist extension of Hanks’ theory, when unembedded the antecedent of (14) expresses an assertive proposition and the consequent expresses a normative proposition. So, call this a mixed descriptive-normative conditional. The proposition it expresses is of the form

\[(14a) \quad \uparrow\langle\langle \sim \vdash \langle a, F \rangle, \sim \uparrow \langle you, \Phi-\text{ING} \rangle \rangle, \quad \rangle\]

Here there are two open positions that need to be filled in in order for (14a) to be completely specified, namely the open position for wide scope force-indicator and the open position for the act-type of expressing a conditional relation. Given the currently available resources, viable candidates for the wide scope force operator are limited to \( \vdash \) and \( \uparrow \), and candidates for the act-type of expressing a conditional relation are limited to COND and \( \text{COND}_N \). Unfortunately, since this conditional is mixed descriptive-normative, neither Case 1 nor Case 2 from the previous section obtain here, and so they cannot be used to determine which of these force indicators and act-types should appear as constituents in this proposition. Fortunately, however, it is relatively straightforward to at least show that both COND and \( \text{COND}_N \) are problematic candidates, and hence that they should be excluded from consideration. The reasoning goes as follows.

Since the proposition (14a) contains a (canceled) assertive proposition \( \vdash \langle a, F \rangle \) with truth-conditions and a (canceled) normative proposition \( \uparrow \langle you, \Phi-\text{ING} \rangle \) with \( \text{SAT}_N \)-conditions, neither the material conditional relation nor the \( \text{N} \)-conditional relation are defined in such a way that they can be applied to these two propositions,
since the former is defined to be appropriately applied only to pairs of assertive propositions, mapping pairs of assertive propositions to truth-values. The latter is defined to be appropriately applied only to pairs of normative propositions (mapping pairs of normative propositions to $\text{SAT}_N$-values). Neither is defined to be appropriately applied to mixed pairs of assertive and normative propositions, and so does not map pairs of such propositions any sort of satisfaction condition.

The result of this is that neither COND nor $\text{COND}_N$ are plausible candidates for appearance in the proposition (14a). Any admissible conditional relation must (i) be able to be appropriately applied by a speaker to pairs of assertive and normative propositions $\vdash \langle a, F \rangle$ and $\updownarrow \langle \text{you}, \Phi-\text{ING} \rangle$ in a particular mood (which also must be specified), and (ii) be defined in such a way that it can be used to recursively determine the satisfaction conditions of (14a) in terms of the truth-conditions of $\vdash \langle a, F \rangle$ and the $\text{SAT}_N$-conditions of $\updownarrow \langle \text{you}, \Phi-\text{ING} \rangle$. Neither the material conditional nor the $\mathcal{N}$-conditional satisfy these criteria.

The most plausible way of approaching this problem is to do as was done above, and attempt to define a new descriptive-normative conditional relation that satisfies these criteria. So, define a new $\mathcal{D}_N$-conditional relation as either__is false or__is $\text{SAT}_N$, and denote the act-type of expressing this relation ‘COND$_{\mathcal{D},N}$’. Put aside for the moment whether this relation is coherent, and consider the following case, which is intended to supplement Case 1 and Case 2 from §3.2.2.2. (and which in its present form is a sketch, and will not be complete until values for the variables $x$ and $y$ have been given):

**Case 3.** Suppose that for a given conditional sentence $\gamma$, the antecedent
expresses an assertive proposition and the consequent expresses a normative proposition, say \( \vdash \langle a, F \rangle \) and \( \uparrow \langle \text{you}, \Phi-\text{ING} \rangle \), (respectively), that have truth-conditions and \( \text{SAT}_N \)-conditions (respectively). Then, all of the following hold:

**3.1.** In sincerely uttering \( \gamma \), a speaker \( S \) performs a complex act that contains as sub-acts (i) expressing the \( \mathcal{D},N \)-conditional relation either__is false or__is \( \text{SAT}_N \), and (ii) applying either__is false or__is \( \text{SAT}_N \) to the propositions \( \vdash \langle a, F \rangle \) and \( \uparrow \langle \text{you}, \Phi-\text{ING} \rangle \) in the \( x \)-mood.

**3.2.** \( S \)'s act of applying the \( \mathcal{D},N \)-conditional relation either__is false or__is \( \text{SAT}_N \) to \( \vdash \langle a, F \rangle \) and \( \uparrow \langle \text{you}, \Phi-\text{ING} \rangle \) in the \( x \)-mood is \( \text{SAT}_y \) iff either \( \vdash \langle a, F \rangle \) is false or \( \uparrow \langle \text{you}, \Phi-\text{ING} \rangle \) is \( \text{SAT}_N \).

**3.3.** \( \gamma \) expresses \( x \uparrow \langle \langle \sim \vdash \langle a, F \rangle, \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle \rangle \), \( \text{COND}_{\mathcal{D},N} \)

Here, it is assumed that either \( x = \vdash \) or \( x = \uparrow \), but it is not yet determined which, exactly. Also, it is not yet determined what exactly \( \text{SAT}_y \)-conditions are—whether they are truth-conditions, \( \text{SAT}_N \)-conditions, or something else entirely. Making these determinations is the minimum required for **Case 3** to provide an adequate account of the relation \( \text{COND}_{\mathcal{D},N} \).

There are two things that are determined at this stage, however. The first is that now with \( \text{COND}_{\mathcal{D},N} \) at hand, (14) expresses a proposition of the form

\[
(14a) \quad \uparrow \langle \langle \sim \vdash \langle a, F \rangle, \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle \rangle, \text{COND}_{\mathcal{D},N} \rangle
\]

where only the position for wide scope force indicator is still unoccupied. The second thing that is determined at this stage is that the \( \mathcal{D},N \)-conditional relation is defined to be appropriately applied to pairs of propositions with truth-values and \( \text{SAT}_N \)-
values. So, given this, all that remains is to determine what the wide scope force
indicator in (14a) is and what the satisfaction conditions of the proposition are, given
the specified inputs.

To this end, it may be helpful to recall some basic properties of truth-conditions
and SAT\textsubscript{\textscript{N}}-conditions. In Hanks’ theory, truth-conditions go hand-in-hand with the
claim that assertive propositions are representational and have mind-to-world direc-
tion of fit (see §2.1). Recall from statement s2 in §1.1.2.3 that a speaker’s S’s act
of predicating F of a is true iff a is F, so truth-conditions are grounded in states of
affairs that obtain (or do not), and so in asserting that a is F, a speaker commits
themselves to a being F.

On the other hand, SAT\textsubscript{\textscript{N}}-conditions are fundamentally different in that they are
intended to encode that normative propositions are projective and have world-to-
mind direction of fit. A definition for the SAT\textsubscript{\textscript{N}}-conditions for atomic normative
sentences is not given by Hom and Schwartz, but it seems reasonable to infer that
they are more like fulfillment-conditions for imperatives, and that they might be
characterized as properties of things like plans (Gibbard 2002), intentions (Schroeder
2008) or desire-like pro-attitudes (Blackburn 1984, 1988) that can be actualized or
carried out (in whole or in part). Like truth-conditions, they engender commitments
on behalf of the speaker, but these do not commit the speaker to the view that the
action of φ-ing has the property of being required, since such a property does not
exist, but rather are along the lines of the speaker being committed to a plan to do
φ, or having an intention to do φ whenever possible (and perhaps also encourage
others to do φ).
Comparing these properties of truth-conditions and SAT\textsubscript{\textsc{N}}-conditions illustrates how they are fundamentally different in several important respects. These differences are beneficial in that they help clarify the distinction between normative and descriptive fragments of natural language, and they help explain the apparent action-guiding and motivating properties of normative thought and language. But with this sharp demarcation it also becomes quite challenging to reconcile the semantics for the normative fragment of language with that of the descriptive fragment.

This is illustrated in the particular case of the mixed conditional sentence (14), where the \(D,\textsc{N}\)-conditional relation is applied to different kinds of propositions with different properties, and which maps a pair of propositions with different (and seemingly incompatible) kinds of semantic values (truth-values and SAT\textsubscript{\textsc{N}}-values) to some SAT\textsubscript{\textsc{y}}-value. Informally this can be illustrated as follows:

\[
\begin{array}{ccc}
\text{truth} & \rightarrow & D,\textsc{N}\text{-conditional} \\
\text{SAT}_{\textsc{N}} & \rightarrow & \text{SAT}_{\textsc{y}} \\
\end{array}
\]

If SAT\textsubscript{\textsc{y}}-conditions are just truth-conditions, then there must be some explanation for how a truth-value encoding the representational and world-mind direction of fit of a proposition is a function of the \(D,\textsc{N}\)-conditional relation and a pair of assertive and normative propositions, with a truth-value and a SAT\textsubscript{\textsc{N}}-value encoding the projective and world-to-mind direction of fit, respectively. On the other hand, if SAT\textsubscript{\textsc{y}}-conditions are just SAT\textsubscript{\textsc{N}}-conditions, then a similar explanation must be given for how this value is a function of the \(D,\textsc{N}\)-conditional relation and a pair of assertive and normative
propositions, given their different semantic properties.

This is not to say that such explanations are in principle unobtainable. On the contrary, §5.2 below will be concerned in large part with providing a way of doing this. But it is difficult to see, given the resources that are currently available, how to both (i) give a satisfactory explanation for the case where, say, \( \text{SAT}_y = \text{SAT}_N \), and (ii) then also go on to argue plausibly that the same kind of explanation cannot also be given for the case where \( \text{SAT}_y \)-conditions are just truth-conditions. That is, absent any additional forthcoming information about the semantic properties of normative and assertive propositions, there is no principled reason to think that \( \text{SAT}_y \)-conditions are \( \text{SAT}_N \)-conditions, as opposed to truth-conditions (or \textit{vice versa}). This is a problem, since it precludes an explanation of the satisfaction-conditions of the proposition (14a).

The same general line of reasoning goes for arbitrating between \( \vdash \) and \( \ddagger \) in attempting to determine the \( x \)-mood for Case 3. In short, if \( \vdash \) takes wide scope in (14a), then the \( \mathcal{D}_N \)-conditional relation is applied as an act of predication, and so the proposition is representational and should have truth-conditions. On the other hand, if \( \ddagger \) takes wide scope in (14a), then the \( \mathcal{D}_N \)-conditional relation is applied as an act of normative endorsement, and so the proposition is projective and should have \( \text{SAT}_N \)-conditions. However, there is no apparent principled reason to suppose that one of these two is more (or less) plausible than the other. The same general problem as before arises.

The result of this is that there is no immediately apparent way to determine whether the wide scope force indicator in (14a) is \( \vdash \) or \( \ddagger \), nor whether \( \text{SAT}_y \)-conditions
are SAT\textsubscript{\text{\textsc{N}}}-conditions or truth-conditions. Consequently, Case 3 is lacking the crucial details required to enable it to be used to define \text{COND}_{\text{\textsc{P}},\text{\textsc{N}}}. And since this is not defined, there is still no solution to the original problem of embedding in mixed descriptive-normative propositions.

I take this to be the most pressing, and challenging, problem faced by the \textit{HS}-expressivist, at least with regards to the embedding problem. This is because even if acceptable arguments can be given in defense of the claim that the conditional (7) expresses a normative proposition, and even if the proposition that (7) expresses can be specified, there is still the problem of mixed descriptive-normative conditionals. Because of the importance of this problem, in §5.2 I will outline an alternative extension of Hanks’ theory that is designed specifically to address it. But for now I will consider it unsolved.

\section{Conclusion}

In this chapter Hom and Schwartz’s proposed solution to the embedding problem for normative propositions was considered. §3.1 was concerned primarily with their claim that the conditional (7) expresses a normative proposition. In that section I argued that their use of an argument from Schroeder’s (2009) was unjustified, and hence that their argument does not support the claim that (7) expresses a normative proposition.

In §3.2 I considered other explanations for why (7) might express a normative proposition, and in particular why it might express (7a). This was done by first
considering two explanations for why \( \dagger \) might take wide scope in the proposition (in §3.2.1), in terms of \( \dagger \)-dominance (§3.2.1.1) and necessary and sufficient conditions (§3.2.1.2), neither of which was satisfactory. Second, in §3.2.2, I considered the propositional constituent COND, identified two problems with it (§3.2.2.1), and considered a solution that involved defining a new \( \mathcal{N} \)-conditional relation and corresponding act-type \( \text{COND}_{\mathcal{N}} \). I argued that even if doing this solves the embedding problem for the conditional (7), there are difficult problems with mixed conditionals. Because of this, I conclude that Hom and Schwartz’s extension of Hanks’ theory does not readily solve the embedding problem for normative propositions.

This conclusion also has implications for the inference problem for normative propositions. Recall from §1.1.4.4 that Hom and Schwartz’s (2013:20) solution to the inference problem relies exclusively on their solution to the embedding problem for the conditional sentence (7). As they say, “the speaker is endorsing the entire conditional, and, so, the validity of the inference is preserved” (Hom and Schwartz, 2013:20). It is not entirely clear why the conditional must be normatively endorsed (as opposed to asserted), but what is clear is that giving an account of the proposition expressed by (7) is needed in order to explain the validity of the argument. That is, solving the embedding problem is a prerequisite to solving the inference problem. However, since a fully satisfactory solution to the embedding problem has not been given here, a solution to the inference problem is not immediately available.

In Chapter 5 I will give an alternative extension of Hanks’ theory that is designed to address most of the problems and objections that arose in this chapter and Chapter 2. In §5.1 I will define an extension of Hanks’ theory that gives a semantics for atomic
normative sentences like (6). I will argue that this extension is plausible, using the plausibility criteria from §2.1, and show how it addresses the two objections that were raised against Hom and Schwartz’s original extension. Then in §5.2 I will define an additional extension that is designed to give the semantics for conditionals like (7) (as well as disjunctions, conjunctions and negations). This involves addressing several of the main problems encountered in this chapter, including (i) specifying the wide scope force indicators of the propositions expressed by (7) and (14), (ii) defining the act-type COND_ contained in the propositions expressed by (7) and (14), respectively, (iii) giving an account of how the satisfaction conditions of the proposition expressed by (14) are a function of the satisfaction conditions of its constituents, and (iv) giving a systematic and theoretically sound method for restricting the forces with which given propositional constituents can be combined by a speaker. All of these problems will be addressed in Chapter 5. Before turning to this, however, in the next chapter I will consider the negation problem.
Chapter 4

The Negation Problem

Consider the sentence (6) and the negated form of it given by sentence (15):

(6) \( \phi \)-ing is required
(15) \( \phi \)-ing is not required

Given the assumption that these two sentences are inconsistent, for any version of expressivism to be considered a plausible semantic theory it seems reasonable to demand that it be able to specify semantic objects \( \chi_6 \) and \( \chi_{15} \) expressed by (6) and (15), respectively, such that the following constraints are satisfied:

\textbf{c6. Compositionality.} \( \chi_{15} \) is a function of \( \chi_6 \) and the meaning of ‘not’.

\textbf{c7. Inconsistency.} The set \( \{ \chi_6, \chi_{15} \} \) has some property \( P \) such that \( P \) adequately explains the inconsistency of the sentences (6) and (15).

As it turns out, providing Hanks propositions \( \chi_6, \chi_{15} \), and a property \( P \) that satisfies these two constraints is non-trivial, for reasons that are directly related to the negation problem for pure expressivism (Unwin (1999, 2001)). The primary aim of this
chapter is to specify Hanks propositions $\chi_6$ and $\chi_{15}$ expressed by sentences (6) and (15) such that the analogous negation problem for normative Hanks propositions is avoided, and such that all relevant constraints are satisfied.

The chapter is structured as follows: in §4.1 I will rehearse the negation problem for pure expressivism, and list three relevant observations that can be made about it. This section is primarily expository, and the aim of it is merely to explain the basic problem. In §4.1.1 I will investigate the problem in more detail by focusing on how the relations between $\phi$-ing being required, optional and forbidden contribute to it, and I will give two additional constraints that must be satisfied, the deontic and expressive constraints. Then, in §4.1.2 I will draw on Unwin (1999, 2001), Schroeder (2008a,b), Blackburn (1984, 1988) and Gibbard (1992, 2003) to outline two general pure expressivist strategies for dealing with the negation problem, as well as some objections to them. The aim of these two sections is not primarily expository, but rather to suggest some strategies that the HS-expressivist might adopt, along with problems that they should expect to encounter if they do so.

In §4.2, I will address the analogous negation problem for HS-expressivism. In §4.2.1 I will briefly explain how Hanks (2015) characterizes negated assertive propositions, for the purpose of specifying the tools that the HS-expressivist has at their disposal to address the problem. In §4.2.2 I will give the negation problem for normative propositions. Then in §4.2.2.1 and §4.2.2.2 I will draw on some elements of the two general pure expressivist strategies to give several possible HS-expressivist solutions to the problem. I consider some objections to these, and make the case for a possible solution that draws on elements from both of the general strategies.
4.1 The Negation Problem for Pure Expressivism

In this section I will briefly rehearse Unwin’s (1999, 2001) negation problem for pure expressivism, and I will make three relevant observations about the problem. Here, as in §3.1.2, I will follow Schroeder (2007) and take ‘pure expressivism’ to refer primarily to the semantic theories exemplified by (and in the vicinity of) those given by Blackburn (1984, 1988) and Gibbard (1992). For present purposes, all that needs to be said about pure expressivism is that it takes the normative predicate ‘required’ to express a non-cognitive mental state of endorsement, denoted by ‘END’. So, in this semantics the atomic normative sentence (6) expresses the following non-cognitive state:

\[(6) \phi\text{-ing is required} \quad \Rightarrow \quad \text{END}(\phi\text{-ing})\]

Given this basic semantic mapping, Unwin (1999:341), referring to Blackburn’s (1988), considers the following equivalence:

1. **e.** $S$ accepts that $\phi$-ing is required $\equiv$ $S$ endorses $\phi$-ing

Then, Unwin observes that there are three negated forms of the left-hand side of this equivalence, but only two negated forms of the right-hand side, as follows:

1. **e1.** $S$ does not accept that $\phi$-ing is required $\equiv$ $S$ does not endorse $\phi$-ing

2. **e2.** $S$ accepts that $\phi$-ing is not required $\equiv$ ???

3. **e3.** $S$ accepts that not-$\phi$-ing is required $\equiv$ $S$ endorses not-$\phi$-ing

---

1Unwin’s (1999:339) original equivalence is ‘$A$ accepts $H!p \equiv A$ hoorays that $p$’, since he is concerned with Blackburn’s (1988) version of pure expressivism. Here I follow Schroeder (2008a:45) in using a generalized version of Unwin’s equivalence.
Following Unwin (1999:342) and Schroeder (2008:45), the relevant distinctions between these equivalences are as follows: the left-hand side of \( e_1 \) denies that \( S \) has a positive attitude about \( \phi \)-ing, perhaps either because they are agnostic about the issue, or because they have not even considered whether \( \phi \)-ing is required. With \( e_3 \), \( S \) has a positive attitude towards not-\( \phi \)-ing, which is equivalent to \( S \) accepting that \( \phi \)-ing is forbidden. Finally, \( e_2 \) attributes to \( S \) a negative view about about the requirement of \( \phi \)-ing, and is equivalent to accepting that \( \phi \)-ing is either forbidden or optional.

As I understand it, there are three relevant observations that can be drawn from the equivalences \( e, e_1-e_3 \), which together constitute what I take to be Unwin’s (1999, 2001) negation problem for pure expressivism.

Observation 1. One might be inclined to characterize the meaning of (15) in terms of the absence of an attitude of endorsement applied to \( \phi \)-ing, and that in sincerely uttering the sentence a speaker is agnostic or undecided as to whether they should endorse \( \phi \)-ing. However, comparing \( e_1 \) and \( e_2 \) shows that this cannot be the case, since if it were then the right-hand sides of \( e_1 \) and \( e_2 \) would be identical in meaning, despite the fact that their respective left-hand sides differ in meaning. That is, Unwin’s equivalences \( e_1 \) and \( e_2 \) show that the meaning of (15) cannot be characterized by the mere absence of an attitude of endorsement towards \( \phi \)-ing.

Observation 2. Accepting that \( \phi \)-ing is not required means something different than accepting that not-\( \phi \)-ing is required. The former means that either \( \phi \)-ing is
forbidden or that $\phi$-ing is optional, while the latter means just that $\phi$-ing is forbidden. That is, the respective left-hand sides of equivalences $e2$ and $e3$ have different meanings. But then since the left-hand side of $e3$ is equivalent to $S$ endorsing not-$\phi$-ing, it follows that the right-hand side of $e2$ cannot be ‘$S$ endorses not-$\phi$-ing’. The result of this is that the semantic object expressed by the sentence (15) cannot be identical to (or semantically equivalent to) the semantic object expressed by the sentence ‘not-$\phi$-ing is required’.

**Observation 3.** The previous two observations place limits on what the right-hand side of $e2$ can be. Intuitively speaking, the right-hand side of $e2$ cannot ‘collapse’ into either the right-hand side of $e1$ or the right-hand side of $e3$. The problem is that there are three ways to negate the left-hand side of the original equivalence $e$:

$$S \text{ ___ accepts ___ } \phi\text{-ing is ___ required}$$

But, there are only two ways to negate the right-hand side:

$$S \text{ ___ endorses ___ } \phi\text{-ing}$$

In this latter construction, the left ‘___’ position is occupied by negation in the right-hand side of $e1$. The right ‘___’ position is occupied by negation in the right-hand side of $e3$. This leaves no apparent way to negate the right-hand side of $e2$ without it collapsing into either $e1$ or $e3$, both of which are prohibited. Three spots for negation are apparently required, but only two are available. This structural asymmetry is what leads both Unwin (1999:343) and Schroeder (2008a:45,61) to characterize the problem as primarily having to do with a lack of structure, and suggesting that a solution can be given by adding more structure (of the right kind).
I will take these three observations to in effect give the negation problem for expressivism. The problem, so characterized, essentially amounts to (i) explaining how the meaning of the negated sentence (15) is a function of the meaning of the atomic normative sentence (6) and the meaning of ‘not’ (satisfying the compositionality constraint c6), (ii) explaining why (6) and (15) are inconsistent sentences in terms of some property of their meanings (satisfying the inconsistency constraint c7), and (iii) doing so in a way that fills in the right-hand side of equivalence e2 without it collapsing into either e1 or e3. In the next section I will expand upon this third constraint a bit more, with the intent of providing a more precise account of it in terms of what I will call a deontic constraint.

4.1.1 A Partial Diagnosis of the Problem

In the previous section I briefly rehearsed Unwin’s (1999, 2001) negation problem for pure expressivism, drawing in part on Schroeder’s (2008a,b) explanation of it. Before exploring two general pure expressivist strategies for approaching to the problem, in this section I will look at one aspect of the problem in more detail to draw out some important implications. In particular, I am interested in the question of why (15) is (according to Schroeder (2008a:47)) equivalent in meaning to ‘either φ-ing is forbidden or φ-ing is optional’, as opposed to it simply meaning ‘φ-ing is forbidden’. Then I will explain how this supports Unwin’s claim that e2 cannot collapse into e3. To do that, in §4.1.1.1 I will first consider the case where every action is either required or forbidden, and then in §4.1.1.2 compare that with the case where at least some actions are optional.
4.1.1.1 Case 1: No Action is Optional

In §4.1.1.1 and §4.1.1.2 I will temporarily assume that pure expressivism does not hold, and I will use an informal toy semantics to provide a rough representation of the relations that intuitively obtain between the concepts of an action being required, forbidden, or optional. So, let ‘req’ and ‘forb’ be truth-functional sentential operators corresponding to ‘required’ and ‘forbidden’, respectively, and let ‘φ’ be a truth-apt sentence describing the action of φ-ing. Suppose also that the following discussion is limited to a context where it is physically possible for a given speaker S to perform the action of φ-ing or to perform the action of not-φ-ing (but not both).

Consider a normative theory that designates every action as being either required or forbidden, and that does not designate any action as being optional. Then the following figure illustrates the relationship between ‘required’ and ‘not-required’:

```
not-forbidden

forbidden  required

not-required
```

Figure 4.1.1

---

2The relations described here are assumed by Schroeder (2008a,b), most notably in a ‘proof’ in his (2008a:46). So I will assume that they hold as well, with the goal of making them more explicit and drawing out their implications.
The relationship is simple, in that ‘not-required’ is simply equivalent to ‘forbidden’.

So, the following equivalences hold:

\[
\begin{align*}
\text{req}(\phi) & \equiv \neg\text{forb}(\phi) & \text{req}(\neg \phi) & \equiv \neg\text{forb}(\neg \phi) & \neg\text{forb}(\phi) & \equiv \text{forb}(\neg \phi) \\
\neg\text{req}(\phi) & \equiv \text{forb}(\phi) & \neg\text{req}(\neg \phi) & \equiv \text{forb}(\neg \phi) & \neg\text{req}(\phi) & \equiv \text{req}(\neg \phi)
\end{align*}
\]

Now, given this, consider the following four sentences, where (15) and (17) are the objects of acceptance in the left-hand sides of Unwin’s e2 and e3, respectively:

<table>
<thead>
<tr>
<th>Sentence:</th>
<th>Formalized as:</th>
<th>Equivalent to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) φ-ing is required</td>
<td>req(φ)</td>
<td>forb(¬φ)</td>
</tr>
<tr>
<td>(15) φ-ing is not required</td>
<td>¬req(φ)</td>
<td>forb(φ)</td>
</tr>
<tr>
<td>(17) not-φ-ing is required</td>
<td>req(¬φ)</td>
<td>forb(φ)</td>
</tr>
<tr>
<td>(18) not-φ-ing is not required</td>
<td>¬req(¬φ)</td>
<td>forb(¬φ)</td>
</tr>
</tbody>
</table>

Table 4.1.1

Since forb(φ) and forb(¬φ), are inconsistent (as are req(φ) and req(¬φ)), an observation about the consistency and inconsistency of pairs of sentences can be made:

\[
\begin{align*}
o1. \text{ inconsistent} & \quad \begin{cases} (6), (15) \\ (6), (17) \end{cases} \quad \begin{cases} (6), (18) \\ (17), (18) \end{cases} \quad \begin{cases} (15), (17) \\
(15), (18) \end{cases} \quad \text{consistent}
\end{align*}
\]

Notice in particular that (15) and (18) are inconsistent (this is relevant to the next section). Also, since (15) and (17) are equivalent, and hence consistent, Unwin’s equivalences e2 and e3 are also equivalent. So in the case where every (relevant)
action is either required or forbidden (but not both), there is no problem with specifying the right-hand side of $e_2$—it is just ‘$S$ endorses not-$\phi$-ing’. That is, there is no negation problem here.

### 4.1.1.2 Case 2: Some Actions are Optional

That the negation problem does not arise in the previous case should perhaps not be surprising, given that ‘not-required’ is equivalent to ‘forbidden’. So what leads to Unwin’s problem? It is (in part) the observation that some actions are neither required nor forbidden, but are *optional*.\(^3\) So suppose that some actions are optional. This now forces ‘not required’ to contain two disjoint sub-categories, as below:

\[
\begin{array}{ccc}
\text{not-forbidden (permissible)} & \quad & \\
\hline \\
\text{forbidden} & \text{optional} & \text{required} \\
\hline \\
\text{not-required (omissible)} \\
\end{array}
\]

**Figure 4.1.2**

\(^3\)It seems reasonable to assume that such actions exist. In his (2008a:46), Schroeder uses the example of *murdering*, but perhaps a more illustrative example might involve legal norms: in some countries if a citizen satisfies certain eligibility criteria, then it is optional for them to vote in an election. That is, they are not required to vote, and also they are not required not to vote. (Side note: while some legal norms may be both forbidden and required, in using this example I don’t mean to imply that some actions are both forbidden and required. Here, as elsewhere, it will be assumed that no actions are both forbidden and required.)
Given this, the following equivalences hold (for a new sentential operator ‘opt’): 

\[\text{e4. } \neg \text{req}(\phi) \equiv \text{forb}(\phi) \lor \text{opt}(\phi)\]

\[\text{e5. } \text{req}(\neg \phi) \equiv \text{forb}(\phi)\]

\[\text{e6. } \text{opt}(\phi) \equiv \neg \text{req}(\phi) \land \neg \text{req}(\neg \phi)\]

From these equivalences, the following table can be given:

<table>
<thead>
<tr>
<th>Sentence:</th>
<th>Formalized as:</th>
<th>Equivalent to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) (\phi)-ing is required</td>
<td>req((\phi))</td>
<td>forb((\neg \phi))</td>
</tr>
<tr>
<td>(15) (\phi)-ing is not required</td>
<td>(\neg \text{req}(\phi))</td>
<td>forb((\phi)) \lor \text{opt}((\phi))</td>
</tr>
<tr>
<td>(17) not-(\phi)-ing is required</td>
<td>req((\neg \phi))</td>
<td>forb((\phi))</td>
</tr>
<tr>
<td>(18) not-(\phi)-ing is not required</td>
<td>(\neg \text{req}(\neg \phi))</td>
<td>forb((\neg \phi)) \lor \text{opt}((\neg \phi))</td>
</tr>
</tbody>
</table>

**Table 4.1.2**

There are three observations to draw from this table and equivalences e4-e6. The first is that, from e4, unlike in Case 1 from the previous section, \(\neg \text{req}(\phi) \not\equiv \text{forb}(\phi)\), but still \(\text{forb}(\phi) \supset \neg \text{req}(\phi)\). So, (15) is not logically equivalent to (17), but (17) entails (15). Also, notice, from e5, that \(\text{req}(\neg \phi) \equiv \text{forb}(\phi)\) still holds, just as it did in Case 1—so that equivalence is unaffected.

The second observation is that the primary difference between this table and the previous is that the meanings of (15) and (18) have changed, corresponding to the change in the meaning of \(\neg \text{req}\) (from e4) and the definition of \(\text{opt}(\phi)\) (from e6).

\[\text{I have omitted equivalences for permissibility and omissibility for the sake of simplicity. As a side note it is worth mentioning that omis}(\phi) \equiv \neg \text{req}(\phi) \text{ and perm}(\phi) \equiv \neg \text{req}(\neg \phi), \text{ from which it follows from e6 below that opt}(\phi) \equiv \text{omis}(\phi) \land \text{perm}(\phi), \text{ as Figure 4.1.2 illustrates.}\]
Whereas in Case 1 sentences (15) and (18) were inconsistent, now they are consistent (because opt(\(\phi\)) and opt(\(\neg\phi\)) are identical, and hence consistent). This can be illustrated as below (compare this with o1 above):

\[
\begin{align*}
\text{o2. } \text{inconsistent} & \left\{ 
\begin{array}{c}
(6), (15) \\
(6), (17) \\
(17), (18)
\end{array} \right. \\
\text{consistent} & \left\{ 
\begin{array}{c}
(6), (18) \\
(15), (17) \\
(15), (18)
\end{array} \right.
\end{align*}
\]

That is, allowing for the existence of optional actions by allowing e4–e6 results in both (15) and (17) being inconsistent with (6), with (17) entailing (15), and with (15) not entailing (17). This is the main takeaway from this section: defining the meaning of ‘not required’ to be the disjunction ‘forbidden or optional’ separates (15) from (17) semantically, since the meaning of the former is in a sense ‘broader’ than the latter. Saying that something is not required is not to say that it is (just) forbidden, but rather is to say that to say that either it is forbidden or it is optional.

The third observation to draw from this is that all of this corresponds to the main initial observation made by Unwin (1999) about the relationship between the left-hand sides of the equivalences e2 and e3, namely that the former cannot collapse into the latter. However, whereas Unwin goes on to argue that expressivism (apparently) does not have the resources to prevent this collapse from happening, with the informal toy semantics sketched here, there is no such resulting problem.

My intention with this section, and with these three observations in particular, is not to tediously belabor a point that may be obvious to the reader from the account
of Unwin’s negation problem given in §4.1 (or from their familiarity with the source material). The aim is rather to clearly specify a new constraint that will be helpful in framing the negation problem for HS-expressivism, one which in my view does not quite receive the emphasis that it I think it deserves, at least in Unwin (1999, 2001) or Schroeder (2008a,b). Given this, I will stipulate that for any normative theory that takes at least one action φ-ing to be optional, the following so-called ‘deontic’ constraint must hold for the semantic objects χ₆, χ₁₅, χ₁₇ and χ₁₈ expressed by the sentences (6), (15), (17) and (18), respectively:⁵

**c8. Deontic Constraint.** The objects χ₆, χ₁₅, χ₁₇ and χ₁₈ must be defined in such a way (and have component(s) defined in such a way) that

a. (15) and (17) are not equivalent

b. (17) entails (15)

c. (15) and (18) are consistent

In effect, this constraint demands that expressivism be able to explain the relations that hold between an act being required, forbidden, optional, omissible and permissible. As an example, Unwin’s negation problem shows that pure expressivism (as it is described in §4.1) faces challenges satisfying the deontic constraint. On the other hand, the non-expressivist toy semantics sketched in this section readily satisfies it.

I will also say that expressivist semantics must also satisfy an expressive constraint:

⁵Here, notions of equivalence and entailment are intentionally left somewhat ambiguous due to the expressivist constraint **c2** from §2.1 that normative propositions do not have truth-conditions.
c9. **Expressive Constraint.** The normative predicate ‘required’ must contribute some (sub-)object to the semantic objects $\chi_6$, $\chi_{15}$, $\chi_{17}$ and $\chi_{18}$ that captures or represents the expressive content of the sentence that expresses it, as outlined in the expressivist constraints c1-c4 from §2.1.

This constraint should be unsurprising, since satisfying it is at the core of the expressivist project. For example, in the particular case of the atomic normative sentence (6), pure expressivism designates the non-cognitive state END to have the properties required to satisfy the constraint, and in HS-expressivism the force-indicator † does essentially the same. On the other hand, in the toy semantics in this section there is no such analogous object, so the constraint is not satisfied—as one should expect.

I think it’s helpful to frame the negation problem in terms of these two general constraints, not only for taxonomic reasons, but also because disambiguating these deontic and expressive components can be helpful in specifying the right sort of object to be expressed by (15). In conjunction with the compositionality and inconsistency constraints c6 and c7 from §4.1, I will take the deontic and expressive constraints c8 and c9 to provide four minimal conditions that must be met for any HS-expressivist semantics to avoid Unwin’s basic negation problem.

### 4.1.2 Two Pure Expressivist Strategies

In §§4.1.2.1-4.1.2.2 I will briefly rehearse two general pure expressivist strategies for dealing with the negation problem. The purpose of doing so is not primarily

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6As a taxonomic side note, the two strategies surveyed here roughly correspond to Schroeder’s (2008a,b) distinction between ‘B-type inconsistency’ and ‘A-type inconsistency’, respectively. I will
expository, but is rather to identify features of these strategies that will be helpful starting points for HS-expressivist attempts to solve the analogous negation problem for normative Hanks propositions. To do this, I will draw primarily from Schroeder’s (2008a,b), Unwin (1999, 2001), Blackburn (1984, 1988) and Gibbard (1992).

As setup for this, note that given the basic pure expressivist semantic mapping of sentence (6) (from §4.1), the following expression relations hold.⁷

\[
\begin{align*}
(6) & \quad \text{\textit{\phi-ing} is required} \\
& \quad \text{expresses} \quad \text{\textit{END(\phi)}} \\
(15) & \quad \text{\textit{\phi-ing} is not required} \\
& \quad \text{expresses} \quad \chi_{15} \\
(17) & \quad \text{not \textit{\phi-ing} is required} \\
& \quad \text{expresses} \quad \text{\textit{END(\neg\phi)}} \\
(18) & \quad \text{not \textit{\phi-ing} is not required} \\
& \quad \text{expresses} \quad \chi_{18}
\end{align*}
\]

Here, \(\chi_{15}\) and \(\chi_{18}\) are semantic objects that still need to be specified, and in such a way that the four constraints c6-c9 are satisfied.⁸ For example, in the particular case of \(\chi_{15}\), this object must at a minimum be such that (i) \(\chi_{15}\) is a function of \(\text{\textit{END(\phi)}}\) and the meaning of ‘not’ (the compositionality constraint c6), (ii) \(\text{\textit{END(\phi)}}\) not use this terminology here, however, since I would prefer to frame things in terms of the four constraints c6-c9 and in terms of the particular kinds of semantic objects that satisfy each of them.

⁷Here I have dropped the ‘-ing’ suffix of the gerund ‘\textit{\phi-ing}’ in the right-hand side for notational convenience. Also, I am assuming here that the connective ‘\neg’ is applicable to both predicates and gerunds, despite classical first-order negation not being readily defined for gerundival phrases. This notational imprecision is consistent with Unwin’s (1999) use of ‘\sim’ (following Blackburn (1988)) and Schroeder’s (2008a,b) use of ‘not’. Schroeder in particular makes explicit use of notions of the negation of and entailment between gerunds. I will address these and other oddities with the pure expressivist account of negation briefly in §4.2.2.2, where I provide an alternative mapping of the terms in (6) that avoids having negation be defined such that it operates on both predicates and gerunds (or on gerunds at all).

⁸In Schroeder (2008a,b) the relevant attitude under consideration is disapproval, since the normative predicate ‘\textit{wrong}’ is considered in place of ‘required’, here. In Unwin’s (1999), the relevant attitude is hoorays, following Blackburn’s (1984) \textit{H!} operator. I will follow Schroeder’s argument, but Unwin’s use of an endorsement-like attitude to cohere with Hom and Schwartz’s (2013) use of endorsement. Consequently, below I will use an non-cognitive state of omissibility where Blackburn (1988) might use toleration \textit{T!} to complement \textit{H!}. The explanations are largely symmetric, though, so nothing essential is lost with this change of terms.
and $\chi_{15}$ are inconsistent (the inconsistency constraint $c7$), (iii) $\text{END}(\neg \phi)$ and $\chi_{15}$ are not equivalent, $\text{END}(\neg \phi)$ entails $\chi_{15}$, and $\chi_{15}$ and $\chi_{18}$ are consistent (the deontic constraint $c8$), and (iv) $\chi_{15}$ has some sub-object that captures the expressive content of sentence (15) (the expressive constraint $c9$).

4.1.2.1 Pure Expressivist Strategy 1

This general strategy is attributed by Schroeder (2008a,b) to Blackburn (1984, 1988) and Gibbard (1992). It essentially consists of stipulating the existence of a non-cognitive attitude distinct from endorsement that is expressed by ‘not-required’ and that has all of the properties necessary to satisfy the four constraints. I will denote this attitude by ‘OMIS’, and stipulate that it is a non-cognitive attitude of normative omission that might be characterized as tolerating the omission of.$^9$ The relevant expression relations are as follows:

\begin{align*}
(6) \quad & \phi\text{-ing is required} \quad \longrightarrow \quad \text{END}(\phi) \\
(15) \quad & \phi\text{-ing is not required} \quad \longrightarrow \quad \text{OMIS}(\phi) \\
(17) \quad & \text{not} \phi\text{-ing is required} \quad \longrightarrow \quad \text{END}(\neg \phi) \\
(18) \quad & \text{not} \phi\text{-ing is not required} \quad \longrightarrow \quad \text{OMIS}(\neg \phi)
\end{align*}

Then, the problematic equivalence $e2$ can be written as something like this:

$e2$. $S$ accepts that $\phi$-ing is not required $\equiv S$ tolerates the omission of $\phi$-ing

---

9I am not committed to this particular characterization of the attitude, just that it is a non-cognitive attitude like normative endorsement, disapproval, or toleration. The name is due to the characterization of ‘not-required’ in terms of omissibility given in Figure 4.1.2. In Blackburn (1988) and Schroeder (2008a,b) the relevant attitude under consideration is toleration, since the sentences studied there are of the form ‘$\phi$-ing is wrong’ and ‘$\phi$-ing is not wrong’ (permissible). But since Hom and Schwartz (2013) are concerned with ‘$\phi$-ing is required’, a non-cognitive attitude associated with ‘not-required’ (omissible) must be considered here.
Here, the strategy for addressing the negation problem is to have the states END and OMIS do the bulk of the explanatory work in satisfying all of the expressive, inconsistency and deontic constraints. One way of doing this is to interpret these states in terms of deontic operators from Standard Deontic Logic SDL (see McNamara 2018, Chellas 1995:190-5), and to use basic deontic equivalences as a formal basis for the expressivist semantics (generating a ‘logic of attitudes’).\textsuperscript{10} In SDL the deontic operator of omissibility OM can be defined out of negation and the truth-functional operator OB of obligation with the equivalence \( \text{OM} \equiv \neg \text{OB} \). So, the expressivist can simply define a correspondence between the non-cognitive state END and the deontic operator OB, invoke the cited equivalence to infer that there must exist a non-cognitive state corresponding to the operator OM (call this state ‘OMIS’), and conclude that ‘not required’ expresses this state. Then, in short, the compositionality, inconsistency and deontic constraints c6-c8 are satisfied in virtue of properties of the underlying deontic logic, and the expressivist constraint c9 is satisfied since the non-cognitive attitudes END and OMIS capture the expressive content of the sentences that express them.\textsuperscript{11}

Here is one objection to this strategy, which I will not critique or comment on, and include for the purposes of seeing if an analogous objection can be raised against

\textsuperscript{10}Both Blackburn (1988) and Gibbard (1992) essentially follow this strategy, using a deontic logic (based on Hintikaa model sets) and a factual-practical modal logic (based on S4), respectively, to formalize their expressivist semantics.

\textsuperscript{11}As a side note, both Unwin and Schroeder also consider a variation of this strategy where ‘not required’ is interpreted as a compound word, where OMIS is not a function of END and the meaning of ‘not’, and where the inconsistency and deontic constraints are satisfied purely in terms of “distinct, unanalyzable and non-interdefinable” (Schroeder (2008a:47)) properties of omissibility and endorsement. However, it violates the compositionality constraint c6, and as both Unwin (1999:342) and Schroeder (2008a:48) argue (and I agree), this renders the strategy implausible. Consequently I will not pursue an HS-expressivist strategy in this vein.
the HS-expressivist strategy given in §4.2.2.1 below:

**Objection 4.1.2.1.** (Schroeder (2008a:46-47, 2008b:580).) Negating the deontic operator OB is well-defined, since it just involves the truth-functional negation of a sentential operator. However, negating the non-cognitive attitude END is not similarly well-defined, since it involves the negation of a different kind of entity, a non-cognitive mental state. But explaining this is precisely what needs to be done, and superimposing expressivist semantics on the formal logic does not deliver on this point. As Schroeder (2008b:580) claims, this is a “perfectly good formal move,” but is *explanatorily* deficient.

End Objection 4.1.2.1.

I am somewhat skeptical that this objection is deserving of the weight that Schroeder gives it, but I will not pursue that issue here. Instead, I will merely note what the HS-expressivist should take away from all of this is that one possible strategy for addressing the negation problem for normative propositions is to take ‘not required’ to express a force-indicator † distinct from ‡, and to take the following two expression relations to hold:

(6) $\phi$-ing is required $\longrightarrow$ expresses $\vdash\langle\text{you}, \Phi\text{-ING}\rangle$

(15) $\phi$-ing is not required $\longrightarrow$ expresses $\dashv\langle\text{you}, \Phi\text{-ING}\rangle$

Then, select an appropriate logic, and establish a logic of force-indicators that delivers the target logical relations (taking care to avoid an analogue of the objection raised above). If force-indicators can be defined in such a way that they are primarily responsible for satisfying all four of the constraints (and in particular the deontic
and expressive constraints), then a relatively straightforward solution to the negation problem may be available. In §4.2.2.1, I will consider four variations of this strategy for HS-expressivism, as well as some potential problems with each. The fourth variation in particular will be similar to the pure expressivist strategy described here, in that force-indicators † and ‡ will be interpreted in terms of the deontic operators of obligation and omissibility.

### 4.1.2.2 Pure Expressivist Strategy 2

A distinguishing characteristic of the previous strategy was that it took the non-cognitive states END and OMIS to each perform a dual function of both satisfying the expressivist constraint and of contributing (in large part) to the satisfaction of the deontic and inconsistency constraints. This places a heavy and potentially problematic explanatory burden on the states END and OMIS, since non-cognitive mental states are by their nature not well-suited to model logical concepts like inconsistency or entailment.

The second pure expressivist strategy under consideration, due to Schroeder (2008a,b), diverges from this, in part, by providing two distinct semantic objects that are expressed by the normative predicate ‘required’. As I understand this strategy, one of these objects functions primarily to satisfy the expressive constraint, and the other object can be seen as functioning (along with negation) to satisfy the inconsistency and deontic constraints. With this division of semantic labor also comes an increase in the structure of the state expressed by a normative sentence, which conveniently addresses the structural concerns raised in Observation 3 from §4.1.
Here, I will give a very brief account of this strategy, followed by some results that will be of significance to the HS-expressivist response to the negation problem that I consider in §4.2.2.12. Instead of having ‘required’ map to one object END that performs a dual semantic function of satisfying the expressive and deontic (and inconsistency) constraints, here the normative predicate is interpreted as mapping to two distinct objects: it corresponds to both (i) a general non-cognitive attitude END, and (ii) a relation or property P.13 Similarly, the negated normative predicate ‘not required’ corresponds to the state END and contributes the truth-functional negation of P to the content of this state. This can be illustrated as follows:

\[
\text{required} \quad \text{END} \quad \text{P} \quad \text{not required} \quad \text{END} \quad \neg P
\]

Notice that the non-cognitive state of endorsement is intended to encode the expressive content of the normative predicate ‘required’ and is unaffected by negation, while the relation P is some descriptive content of the predicate that is apt for operation

12In the interest of simplicity I will be omitting significant amounts of information and argumentation, and will be focusing only on that which is necessary for the HS-expressivist version of the negation problem. The interested reader is referred especially to Schroeder (2008a:39-49, 56-64).

13Schroeder (2008a:58) considers the predicate ‘wrong’ and associates with it a general non-cognitive attitude being for and a relation of blaming for. Here, to streamline the application of the strategy to HS-expressivism, I have just focused on the general structure of his strategy, and have replaced notation such that the non-cognitive attitude END plays the role of his FOR (‘being for’), and the relation P plays the role of his relation ‘blaming for’ (but here would be more appropriately interpreted as something like ‘praising for’). Note that the words ‘corresponds’ and ‘contributes’ are used by Schroeder (2008a:56-57) in place of ‘expresses’. Finally, as a side remark, in Schroeder’s account of pure expressivism, descriptive predicates are already taken to both (i) correspond to a mental state (belief) and (ii) express a property. So, Schroeder’s move here can be seen as extending this feature of descriptive predicates to normative predicates.
on by truth-functional negation. Separating the content of ‘required’ into these two components yields the following expression relations, where ‘\( \phi \)’ is a gerund:

\[
\begin{align*}
(6) \quad \text{\( \phi \)-ing is required} & \quad \rightarrow \quad \text{expresses} \quad \text{END}(P(\phi)) \\
(15) \quad \text{\( \phi \)-ing is not required} & \quad \rightarrow \quad \text{expresses} \quad \text{END}(\neg P(\phi)) \\
(17) \quad \text{not \( \phi \)-ing is required} & \quad \rightarrow \quad \text{expresses} \quad \text{END}(P(\neg \phi)) \\
(18) \quad \text{not \( \phi \)-ing is not required} & \quad \rightarrow \quad \text{expresses} \quad \text{END}(\neg P(\neg \phi))
\end{align*}
\]

Then, the problematic equivalence \( e_2 \) can be written as:\(^{14}\)

\( e_2. \) \( S \) accepts that \( \phi \)-ing is not required \( \equiv \) \( S \) endorses that \( \phi \)-ing is not \( P \)

The right-hand side of the equivalence is obtained in virtue of the additional structure that is afforded by the distinct semantic objects END and \( P \). Furthermore, by stipulating that ‘required’ maps to two distinct objects, all three of the target negatable forms of (6) can be given, presenting a solution to the structural (or syntactic) problem that Unwin raises. This is good progress, but whether the negation problem overall is solved with Schroeder’s proposed solution is contingent on the constraints \( c_6-c_9 \) being satisfied. So I will very briefly turn to that now to see if they are, with an eye on the potential implications for \( HS \)-expressivism.

First, the expressive constraint \( c_9 \) is clearly satisfied, since the non-cognitive state \( END \) encodes the expressive content of each of the sentences (6), (15), (17) and (18). Second, the compositionality constraint \( c_6 \) may appear to be satisfied, since \( \text{END}(\neg P(\phi)) \) is a function of \( \text{END}(P(\phi)) \) and truth-functional sentential negation. Third, the inconsistency constraint \( c_7 \) may appear to be satisfied since \( P(\phi) \) and

\(^{14}\)In Schroeder’s (2008a,b) terminology, where ‘being for’ is used in place of ‘endorses’, the right-hand side of \( e_2 \) would be ‘\( S \) is being for not praising for \( \phi \)-ing’.
\(\neg P(\phi)\) are logically inconsistent. Fourth, while satisfaction of the deontic constraint \(c_8\) depends on how the relation \(P\) is interpreted, there is a fair amount of room for interpretation here (for example, in terms of the toy semantics from §4.1.1.2 above, or as something like a deontic operator, as will be considered in §4.2.2.2 below), so it may appear that the constraint is satisfied assuming that an appropriate interpretation of \(P\) is given.\(^{15}\)

However, there is a problem with the apparent satisfaction of the three constraints \(c_7\)-\(c_9\). Here it is, in the form of an objection:

**Objection 4.1.2.2.** (Schroeder 2008a:39-44). While the truth-apt descriptive content of an attitude of endorsement is optimally designed to capture logical relations, it does not necessarily follow that the attitude of endorsement as a whole exhibits those same logical properties. For example, while \(P(\phi)\) and \(\neg P(\phi)\) might be logically inconsistent, and while believing that \(P(\phi)\) and believing that \(\neg P(\phi)\) is in some related sense inconsistent (or irrational), it does not necessarily follow that endorsing \(P(\phi)\) and endorsing \(\neg P(\phi)\) is similarly ‘inconsistent’ (or irrational).

*End Objection 4.1.2.2.*

To address this objection, Schroeder claims (2008a:43) that endorsement is like belief (and unlike, say, desires or wonderings) in that bearing it to inconsistent contents is

\(^{15}\)Schroeder (2008:58), drawing on Gibbard (1992), interprets the relation expressed by the predicate ‘wrong’ as a property of blaming for. He does not give a logic of blaming, so it is not clear if his proposal satisfies \(c_8\). This is not inherently problematic, since he treats this interpretation as a placeholder and is not committed to it (see Schroeder 2008a:73-74).
itself ‘inconsistent’—it has the property of being inconsistency-transmitting.\textsuperscript{16} Since \(P(\phi)\) and \(\neg P(\phi)\) are inconsistent, it follows from this property that \(\text{END}(P(\phi))\) and \(\text{END}(\neg P(\phi))\) are inconsistent.\textsuperscript{17} Finally, since these are the states expressed by (6) and (15), respectively, this explains why these two sentences are inconsistent. So, assuming that Schroeder’s inconsistency-transmission counts as an adequate explanation for the inconsistency of mental states, and assuming that endorsement has this property, the inconsistency constraint \(c7\) appears to be satisfied.

While Schroeder (2008a,b) only considers the case of inconsistency, it is not much of a stretch to suggest that the property of inconsistency-transmission can be generalized to explain why the deontic and compositionality constraints are also satisfied. All that needs to be done is to stipulate that whatever property beliefs have that make them inherit the logical properties of their propositional contents, the attitude of endorsement also has this property. Since the primary concern of this section is what implications this general pure expressivist strategy has for \(HS\)-expressivism, I will not discuss Schroeder’s strategy any more here, and will simply move on to the positive results that \(HS\)-expressivism can take away from this.\textsuperscript{18}

\textsuperscript{16} Schroeder (2008a:43): “An attitude \(A\) is inconsistency-transmitting just in case two instances of \(A\) are inconsistent just in case their contents are.” Note that when talking about ‘inconsistency’ of mental states (with his use of scare quotes), Schroeder means something like Gibbard’s (2003) notion of ‘disagreement’, or Blackburn’s (1988) ‘clash’ of attitudes, and is what he (2008a:40) says involves “a special kind of mistake” in that “[h]aving them makes the believer ‘inconsistent’, in a loaded kind of way.”

\textsuperscript{17} As a side note, Schroeder (2008a,b) does not modify the definition of inconsistency transmission to handle non-propositional contents like gerunds, so he seems to be assuming that any inconsistency in the actions \(\phi\) and \(\neg \phi\) has the same explanatory force (with respect to the definition) that the logical inconsistency of \(F(a)\) and \(\neg F(a)\) do (where \(F(a)\) is the propositional content of the belief state expressed by ‘\(a\) is \(F\)’). This assumption is potentially problematic, but I will not pursue an objection along these lines here, and merely flag that a potential problem exists.

\textsuperscript{18} Two side notes: first, if care is not taken in generalizing inconsistency-transmission, then states of normative endorsement may inherit truth-functional and representational properties of their
The primary positive result that can be drawn from the strategy is that it provides a precedent for interpreting the meaning of the normative predicate ‘required’ in terms of two distinct objects with distinct semantic roles. Here, these objects are the general non-cognitive state \(END\) and the relation \(P\), but for the \(HS\)-expressivist they would be the force-indicator \(\dagger\) (suitably interpreted) and some propositional constituent \(P\). Very roughly, and with some abuse of notation, the propositions expressed by (6) and (15) might look something like the following (where ‘__’ is a placeholder for a force indicator and possibly also a ‘\(~\)’):

\[
\begin{align*}
(6) & \quad \phi\text{-ing is required} \quad \xrightarrow{\text{expresses}} \quad \dagger\langle\text{you, } \Phi\text{-ING}\rangle, P \\
(15) & \quad \phi\text{-ing is not required} \quad \xrightarrow{\text{expresses}} \quad \dagger\langle\text{you, } \Phi\text{-ING}\rangle, \text{NOT-P}
\end{align*}
\]

Notice that here \(\dagger\) takes wide scope in both propositions, and that this force plays no apparent role in determining the logical relations between the propositions. Rather, force only functions to satisfy the expressive constraint \(c9\), and all of the logical work is done by other propositional constituents. This division of semantic labor is beneficial in that it lessens the explanatory burden on the force of normative endorsement, at least compared with the first strategy from §4.2.1.1.

However, an \(HS\)-expressivist strategy in this vein is also subject to an objection similar to the one the pure expressivist encounters. This is because even if the descriptive contents that render them inherently non-normative, thus undercutting one of the main motivations of semantic expressivism. Second, Schroeder’s (2008a:x,179) “Master Argument” is that once the full implications of the basic commitments of expressivism are teased out (including the present solution to the negation problem), it can be shown that expressivism is not only an “extremely unpromising” semantics for natural language, but that there is good reason to believe that it is false. A critical move Schroeder makes that leads to this is to take both descriptive and normative sentences to express non-cognitive \(\text{FOR}\) states (see Schroeder 2008a:92-94). I mention this because in §5.2 I reach a similar fork in the road where I could make a similar move (having \(\dagger\) take wide scope both for all normative and for all assertive sentences), but instead provide an alternative approach that may lead to happier results, assuming things turn out right.
propositional constituents (excluding †) have the properties required to explain logical properties like inconsistency and deontic relations, it does not necessarily follow that combining them in the force of normative endorsement preserves those logical properties and relations. This and other related issues will be discussed in §4.2.2.2 below (see especially Objection 4.2.2.2.a). Prior to doing this, however, I will first briefly examine how Hanks (2015) characterizes negation (§4.2.1), and then will set up the negation problem for normative propositions (§4.2.2).

4.2 An HS-expressivist Response to the Problem

In a footnote, Hom and Schwartz (2013) suggest that their extension to Hanks’ theory may be able to solve the negation problem for normative Hanks propositions:

[O]ur theory predicts that force cancellation could play a role in a solution to the [negation] problem as well. To anticipate, we believe that a proper understanding of [(15)] involves cancellation of a certain type of normative endorsement (Hom and Schwartz, 2013:19, ft.3).

They do not provide any details beyond this, however, so it is unclear what exactly they have in mind in terms of a solution.

In this section I will pursue two general strategies for addressing the negation problem for normative propositions, each of which is based to some extent on the two pure expressivist strategies outlined above in §§4.1.2.1-4.1.2.2. To do this, first in §4.2.1 I will briefly explain how Hanks characterizes negation for assertive propositions, for the purpose of outlining the resources that are available already in Hanks’
theory to the $HS$-expressivist. Then in §4.2.2 I will state the negation problem for normative propositions, and show how resources from §4.2.1 can make some initial headway in addressing the problem. Then in §§4.2.2.1-4.2.2.2 I will give examine two general strategies for addressing the problem, in part using the implications that the two pure expressivist strategies have for $HS$-expressivism, as they were described in the previous sections. In both cases, however, there will be important differences between the pure and $HS$-expressivist strategies.

**4.2.1 Negation in Hanks’ Theory**

In this section I will very briefly describe Hanks’ (2015) account of negation. The purpose of doing so is to outline the resources that are available to the $HS$-expressivist to adopt for use within the normative extension of Hanks’ theory.

Hanks (2015:98-103) describes three general ways of negating an atomic declarative sentence like ‘$a$ is $F$’, yielding a sentence of the form

\[ (16) \quad a \text{ is not } F \]

The three ways are by using *sentential negation*, *predicate negation*, or *denial* (or *anti-predication*). Here I will briefly describe the relevant aspects of each.

First, with the *sentential negation* of (1), a speaker commits themselves to the sentence being false by using the sentential modifier ‘it is not the case that’. In doing so, they express the property of not being true and they predicate this property of the proposition expressed by (1) (in a cancellation context).\(^{19}\)

\[ (19) \quad \text{it is not the case that } a \text{ is } F \quad \overset{\text{expresses}}{\longrightarrow} \quad \vdash \langle \sim \vdash \langle a, F \rangle, \text{NOT-TRUE} \rangle \]

\(^{19}\)This act of predication involves target-shifting, see (Hanks 2015:99-100) or §1.1.2.3.
A token act of this type is true iff it is false that $a$ is F.

Second, with *predicate negation*, ‘not’ is treated as a predicate modifier that is used by a speaker to pick out or make available a negative property for predication of an object. In this case, Hanks (2015:101) characterizes ‘not’ as expressing a function (I will call it $f_-$) from properties to negative properties, and in uttering ‘$a$ is not F’ a speaker performs a complex act of simultaneously (i) referring to $a$, (ii) identifying $f_-$, (iii) applying $f_-$ to the property of being F (yielding the negative property of being non-F), and (iv) predicating the property of being non-F of the object $a$:

$$a \text{ is not } F \quad \xrightarrow{\text{expresses}} \quad \vdash \langle a, \langle \text{NOT}, \text{F} \rangle \rangle$$

As was the case with (19), the proposition expressed here is true iff $a$ is not F. But while this proposition has the same truth-conditions as the proposition expressed by (19), they each characterize different acts—predicate negation involves predicating the property of being non-F of the individual $a$, while sentential negation involves predicating the property of being not-true of the proposition $\vdash \langle a, \text{F} \rangle$.

Compare this with Hanks’ (2015:101-2) third kind of negation, *anti-predication*, or *denial*. With this act, the speaker is not necessarily predicating a negative property of $a$, nor are they necessarily saying that it’s not the case that $a$ is F. Rather, they are *denying* that $a$ is F (represented by the force-indicator $\dashv$).

$$a \text{ isn’t } F \quad \xrightarrow{\text{expresses}} \quad \vdash \langle a, \text{F} \rangle$$

This proposition is the act-type of a token act of (i) referring to $a$, (ii) expressing F, and (iii) anti-predicating F of $a$ (or denying that $a$ is F).

Denial is also characterized by Hanks in terms of answering ‘no’ in response to the question ‘is $a$ F?’ (while answering in the affirmative can be characterized in
terms of asserting that \( a \) is F):

\[
\begin{align*}
(2b) \quad \text{Is } a \text{ F? Yes.} & \quad \therefore \langle a, F \rangle \\
(2c) \quad \text{Is } a \text{ F? No.} & \quad \therefore \neg \langle a, F \rangle
\end{align*}
\]

The act of anti-predicating F of \( a \) is true iff \( a \) is not F, so it has the same truth-
conditions as (19) and (20). However, anti-predication is an act distinct from per-
forming sentential negation or predicate negation, since here the speaker applies the
property F to the object \( a \) in the mood of denial. It is, according to Hanks (2015:102),
more general in that it could be said that a speaker \( S \) denies that \( a \) is F if they utter
any of the following sentences: ‘it is not the case that \( a \) is F’, ‘\( a \) is not F’, ‘\( a \) isn’t F’
or ‘Is \( a \) F? No’. In this respect anti-predication is a super-type of sentential negation
and predicate negation.

With these three kinds of negation at hand, in Hanks’ theory there are ample
resources to characterize the proposition expressed by the negation of an atomic
declarative sentence like (1). It also provides the \( HS \)-expressivist with a relatively
large set of tools to approach the problem of negating the atomic normative sentence
(6). In the remaining sections of this chapter, I will make use of these tools to sketch
several possible solutions to the negation problem for normative propositions. In
each case I will consider potential objections, and will give replies when possible.

4.2.2 The Negation Problem for Normative Propositions

Consider the four sentences (6), (15), (17) and (18) again. In \( HS \)-expressivism, the
following expression relations obtain, where \( \chi_{15}, \chi_{17} \) and \( \chi_{18} \) are presently unspecified
Hanks propositions:
(6) φ-ing is required \[\rightarrow \text{expresses} \] \(\#\langle \text{you, } \Phi-\text{ING} \rangle\)

(15) φ-ing is not required \[\rightarrow \text{expresses} \] \(\chi_{15}\)

(17) not φ-ing is required \[\rightarrow \text{expresses} \] \(\chi_{17}\)

(18) not φ-ing is not required \[\rightarrow \text{expresses} \] \(\chi_{18}\)

Just as was the case with pure expressivism in §4.1, Unwin’s negation problem will arise again here unless the four constraints c6-c9 are satisfied. So, Hanks propositions \(\chi_{15}, \chi_{17}\) and \(\chi_{18}\) must be given such that the compositionality, inconsistency, deontic and expressive constraints are satisfied. To approach this, first I will consider the relatively easy case of sentence (17) and proposition \(\chi_{17}\). Then, in §§4.2.2.1-4.2.2.2 I will go on to consider two general strategies for specifying the propositions \(\chi_{15}\) and \(\chi_{18}\) expressed by the sentences (15) and (18), respectively.

Before doing this, however, I will briefly comment on four things, pertaining to (i) the meaning of ‘declarative sentence’, (ii) the meaning of ‘inconsistency’, and (iii)-(iv) how the propositional constituents you and Φ-ING will be interpreted.

The first is a matter of taxonomy. Expressivists maintain that there is a distinction between descriptive and normative (or normatively endorsed) atomic sentences. Syntactically, the difference is marked by the absence or presence of the normative predicate ‘required’, and semantically this difference is explained in terms of properties of the objects that are expressed (for the HS-expressivist, assertive propositions or normative propositions, respectively). Descriptive and normative sentences fall under exactly the same kinds of logical relations, and are bound by exactly the same linguistic norms of correct use. The only salient semantic difference is at the level of
the propositions that they express. In Hanks’ (2015) theory, there is a three-fold distinction between declarative, interrogative and imperative sentences, corresponding to the distinction between assertive, interrogative and imperative propositions (see §2.1). So to capture the distinction between descriptive and normative sentences in Hom and Schwartz’s extension of Hanks’ theory, for present purposes I will partition the set of atomic declarative sentences into descriptive declarative sentences, like ‘a is F’, and into normative (or ‘normatively endorsed’) declarative sentences, like ‘φ-ing is required’. With this partition, both descriptive and normative sentences are kinds of declarative sentences in the extended theory, but the former are used to express assertive propositions, and the latter are used to express normative propositions.

Second, in the expressivist sources referenced previously in this chapter, the word ‘inconsistent’ is variously used to denote at least three distinct kinds of inconsistency. For the purposes of ensuring that these three meanings are not conflated, I will draw a distinction between them here. The first kind of inconsistency is what will be called sentence inconsistency (‘s-inconsistency’), or the inconsistency of declarative (descriptive or normative) sentences. For example, the descriptive sentences (1) and (16) are s-inconsistent, and the normative sentences (6) and (15) are s-inconsistent. This notion of inconsistency does not apply to non-declarative sentences like interrogatives or imperatives. So, for example, the imperative sentences ‘a, be F!’ and ‘a, be not-F!’ are not s-inconsistent, even if they are in some sense incompatible due

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20See Schroeder (2008a:3) for the pure expressivist case: “the only differences between [normative] language and descriptive language derive from the differences in [normative] thought and descriptive thought.”
to expressing jointly unfulfillable commands. The second kind of inconsistency is a property of sets of Hanks propositions. In the case of assertive propositions, this is logical inconsistency ('l-inconsistency'), or truth-functional inconsistency. In the case of normative propositions, this is an inconsistency in terms of \( N\)-satisfaction conditions, or \( N\)-inconsistency (conforming with the expressivist constraints c1-c4 from §2.1). The important thing to note is that \( s\)-inconsistency is a concept that applies uniformly to descriptive and normative sentences, but that while the \( s\)-inconsistency of descriptive sentences is explained in terms of the \( l\)-inconsistency of assertive propositions, the \( s\)-inconsistency of normative sentences is to be explained in terms of the \( N\)-inconsistency of normative propositions. The same holds for \( s/l/N\)-consistency, \( s/l/N\)-entailment and \( s/l/N\)-equivalence (or \( s/l/N\)-logical properties, more generally). That is, there is a uniformity at the level of declarative (descriptive or normative) sentences that is not easily replicated at the level of the propositions that these two kinds of declarative sentences express—hence the Frege-Geach problems.

Third, recall from §2.2.3 that I interpreted the object you as being a proper name for a set of individuals. This set is the audience of S’s utterance (in a context), which may or may not contain S as a member (see especially ft. 8, §2.2.3). I also interpreted S’s act of applying a property to you as an act of applying that property to each individual in the set. It is not clear if this is exactly the same as Hanks’ (2015) intended interpretation, but it is the interpretation that I will adopt here. According to it, in sincerely uttering ‘\( \phi\)-ing is required’ in a context \( c\), a speaker S performs an action of simultaneously (i) referring to the set you (S’s audience), (ii) expressing the property of \( \phi\)-ing, and (iii) applying the property of \( \phi\)-ing to the
object you in the mood of normative endorsement.\textsuperscript{21}

Fourth, I will assume that the gerund ‘\textipa{\phi-ing}’ expresses the property of \textipa{\phi-ing}, and that this property is most naturally attributable to individuals. This interpretation is consistent with Hom and Schwartz’s extension (as given in the map \texttts{m} from §2.1), but deviates from the pure expressivist interpretations considered above where ‘\textipa{\phi-ing}’ is interpreted as referring to a gerund. This has the happy consequence that, by definition, Hanks’ predicate negation function \textipa{f} can be applied to the property of \textipa{\phi-ing} to yield a negative property of not-\textipa{\phi-ing}.

Now that these four things have been stated, the negation problem can be considered. First, the ‘easy’ case of sentence (17). Using Hanks’ definition of \textit{predicate negation}, I suggest the following as a first pass at giving the (or ‘a’) proposition expressed by the sentence:\textsuperscript{22}

\begin{equation}
(17\text{a}) \quad \dagger\langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle
\end{equation}

This is the type of a speaker’s token act of simultaneously (i) referring to you, (ii) expressing the property of \textipa{\phi-ing}, (iii) identifying the function \textipa{f}, and applying it to the property of \textipa{\phi-ing} (yielding the property of not-\textipa{\phi-ing}) and (iv) applying the property of not-\textipa{\phi-ing} to the object you in the mood of normative endorsement. Since \textipa{\phi-ing} is a property, and since Hanks (2015:101) assumes that negative properties exist, there is nothing overtly controversial about normatively endorsing not-\textipa{\phi-ing} of you. So, I suggest that (17a) provides a reasonable initial account of the proposition

\textsuperscript{21}I will temporarily set aside any further questions that may arise about how exactly to formalize the object you, and assume that at a minimum the present account of it is coherent enough to serve as a placeholder for a formally more complex object to be given in future work.

\textsuperscript{22}I include the parenthetical remark because in Hanks’ theory a given sentence may express more than one proposition, see especially (Hanks 2015:103).
expressed by (17).

Now on to the difficult cases, namely sentences (15) and (18). Since if an account of (15) can be given then a similar account of (18) immediately follows, I will focus first on (15) and leave (18) for later. Here I will branch off into two general strategies for specifying the proposition expressed by (15), drawing in part on aspects of the two pure expressivist strategies described in §§4.1.2.1-4.1.2.2. The first general strategy, followed in §4.2.2.1, is to take force-indicators to be the propositional constituents that are primarily responsible for satisfying all of the expressive, deontic and inconsistency constraints, similar in spirit to the pure expressivist’s Strategy 1 from §4.1.2.1, where the mental states END and OMIS jointly performed this explanatory role. The second general strategy, followed in §4.2.2.2, involves designating two distinct propositional constituents, a force-indicator and a sentential operator, to separately perform the distinct functions of satisfying the expressive and logical (deontic and inconsistency) constraints, similar in spirit to the pure expressivist Strategy 2 from §4.2.1.2, where END and the relation R performed these distinct explanatory roles. Finally, in a reply to an objection in §4.2.2.2, I will sketch an approach that incorporates elements from both of these strategies, and later in Chapter 5 I will implement a version of this as part of giving a new extension to Hanks’ theory.

4.2.2.1 HS-Expressivist Strategy 1

The starting point for this strategy is the pure expressivist’s idea from §4.1.2.1 that a single semantic object (or kind of object), properly defined, can capture both the expressive and deontic content of an atomic normative sentence. In the particular
case of the atomic sentence (6), for the pure expressivist that object was the non-cognitive state END. Here, in the context of HS-expressivism, that object will be the familiar force indicator †. The challenge here will be to determine how to use this force-indicator, in conjunction with other as yet undefined force-indicators, to specify propositions $\chi_{15}$ and $\chi_{18}$ such all four of the constraints $c6$-$c9$ are satisfied.

In this section I will attempt to pursue a relatively conservative strategy, at least initially. The strategy is conservative in that it relies to the greatest extent possible only on resources available already in Hanks’ theory, and introduces the smallest number of new concepts, objects and assumptions as possible. The hope is that doing so will be minimally disruptive to the existing semantic framework, and hence less apt to result in problems.

First, note that the force indicator † does not by itself have the expressive power to capture all of the target relations that hold between the sentences (6), (15), (17) and (18). So it is unavoidable that another force-indicator will have to be introduced, and that this force must semantically correspond to the word ‘not’. Before postulating the existence of such a force-indicator, first it has to be established that Hanks’ theory can coherently accommodate it. To that end, consider the following claim:

Claim 4.2.2.1. In Hanks’ theory, it is in principle possible for ‘not’ to (or be used to) make a semantic contribution to (or determination of) the force-indicator of a proposition (for some kinds of force-indicators).  

End Claim 4.2.2.1.
Support: Here is one example from Hanks (2015) that provides some support for the claim. Recall from §4.2.1 the way that assertion, denial and predicate negation can be used to express different propositions (with identical truth-conditions):

1. \( a \) is F \quad \text{expresses} \quad \vdash \langle a, F \rangle
2. \( a \) is not F \quad \text{expresses} \quad \vdash \langle a, \langle \text{NOT}, F \rangle \rangle
3. \( a \) isn’t F \quad \text{expresses} \quad \dashv \langle a, F \rangle

With (20), the sentential item ‘not’ is a predicate modifier, and indicates a function \( f_\text{¬} \) that takes as input the property expressed by \( F \). It does not contribute to the determination of force. But with (21) the sentential item ‘not’ (abbreviated ‘n’t’) does not function to modify the predicate, and subsequently does not modify the property of being F. Rather, the propositional item that it makes a semantic contribution to determining is the force (here, \( \dashv \) instead of \( \vdash \)). So, in principle, in some cases in Hanks’ theory, ‘not’ can function to semantically contribute force to the proposition expressed.\(^{23}\)  

End Support for Claim.

This claim is relevant for \( HS \)-expressivism in the following way. Recall from the expressivist constraint \( c_1 \) and the basic mapping \( m \) from §2.2 that ‘required’ expresses the force-indicator \( \dagger \), not a property. So in the case of sentence (15), if ‘not’ makes any semantic contribution at all to the proposition expressed by (15), it must make a contribution to the force of that proposition. And, from the claim, it is coherent in Hanks’ theory for ‘not’ to function this way.

\(^{23}\)There are limitations to this result, though. For example, with the sentence ‘\( a \) isn’t F?’ there is no reason to think that ‘not’ functions to modify interrogative force, such that the sentence expresses something like \( \dot{\circ} \langle a, F \rangle \). So the claim should be interpreted as holding that there are at least some cases where ‘not’ contributes to force, but not that it makes this contribution in all cases.
Given this, (15) can be interpreted as ‘φ-ing isn’t required’, and negation can be interpreted as contributing to the force of the proposition expressed. I will call this force *normative anti-endorsement*, and denote it by ‘†’. Then (15) expresses

\[(15c) \downarrow \langle \text{you}, \Phi-\text{ING} \rangle\]

This is the type of a speaker $S$’s token action of simultaneously (i) referring to *you*, (ii) expressing the property of φ-ing and (iii) applying the property of φ-ing to *you* in the mood of normative *anti*-endorsement. A natural way of reading anti-endorsement is as an answer in the negative to a question, as in (22) below:

\[
\begin{align*}
(21) \text{is } \phi-\text{ing required? Yes. } & \quad \downarrow \langle \text{you}, \Phi-\text{ING} \rangle \\
(22) \text{is } \phi-\text{ing required? No. } & \quad \downarrow \langle \text{you}, \Phi-\text{ING} \rangle
\end{align*}
\]

Given this account of (15c), Hom and Schwartz’s extension of Hanks’ theory can be further extended by adding the force of normative anti-endorsement to it, yielding the following set of force-indicators: \{⊢, −, ⊣, †, ‹, ‡, ?, !\}.

Recall that one of the goals of the strategy in this section is to be conservative with respect to adding new concepts, objects and assumptions to the existing semantic framework. The preceding claim and subsequent argument is intended to show that extending by † is conservative in this way. Furthermore, testing this new extension for “plausibility” using the criteria given in §2.2 shows that like Hom and Schwartz’s original it satisfies constraints c1-c3, assuming that †\langle \text{you}, \Phi-\text{ING} \rangle has \text{SAT}_N\text{-conditions and world-to-mind direction of fit. However, just as in Hom and Schwartz’s original extension constraint} c4 \text{ does not hold, so Objection 2.1 from} §2.1 \text{ still stands, and the same problem with interrogation given with Objection 2.2 from} §2.2 \text{ also still stands. But at least this new extension is apparently no less}

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plausible than Hom and Schwartz’s original extension.

I’ll take this to be an argument that there is nothing obviously incoherent or incorrect about stipulating that the force of normative anti-endorsement exists, and that Hom and Schwartz’s extension of Hanks’ theory can be further extended to contain this force. Given this, Hanks propositions can be assigned to the target sentences (6), (15), (17) and (18) as follows:

\[(6) \quad \phi\text{-ing is required} \quad \xrightarrow{\text{expresses}} \quad [\text{\textlangle you, } \Phi\text{-ING\textrangle}]\]

\[(15) \quad \phi\text{-ing is not required} \quad \xrightarrow{\text{expresses}} \quad [\text{\textlangle you, } \Phi\text{-ING\textrangle}]\]

\[(17) \quad \text{not } \phi\text{-ing is required} \quad \xrightarrow{\text{expresses}} \quad [\text{\textlangle you, } \langle\text{NOT, } \Phi\text{-ING\textrangle\textrangle}]\]

\[(18) \quad \text{not } \phi\text{-ing is not required} \quad \xrightarrow{\text{expresses}} \quad [\text{\textlangle you, } \langle\text{NOT, } \Phi\text{-ING\textrangle\textrangle}]\]

Furthermore, another pass at Unwin’s (1999) problematic equivalence \(e_2\) can be given:

\[\textbf{e}_2. \quad S \text{ accepts that } \phi\text{-ing is not required} \quad \equiv \quad S \text{ anti-endorse } \phi\text{-ing}\]

The term ‘anti-endorse’ may not be very illuminating, but what matters at this stage is that there exists a force corresponding to it, that this force is distinct from endorsement, and that this force is in part a function of the meaning of ‘not’.

To pin down how to interpret anti-endorsement, and consequently whether the constraints \(c_6\text{-}c_9\) are satisfied, in the remainder of this section I will consider four different ways of interpreting \(\downarrow\). The first, given in §4.2.2.1.1, interprets endorsement and anti-endorsement as being the normative correlates of assertion and denial (respectively), and so is the most conservative strategy to be considered. In this case, the inconsistency constraint is (nearly) satisfied, but the deontic constraint is not. In an attempt to remedy this shortcoming, in §4.2.2.1.2, a new force-indicator
‡ is introduced to model an action being optional. However, this fails to satisfy the deontic constraint, so in §4.2.2.1.3 a ‘broader’ interpretation of ‡ is invoked, which unfortunately results in an inability to explain inconsistency. Finally, in §4.2.2.1.4, the least conservative strategy is considered, and force-indicators † and ‡ are interpreted in terms of the deontic operators of obligation and omissibility, respectively, similar to the pure expressivist’s Strategy 1 from §4.2.1.1.

In all four of these cases, \( N \)-logical relations are imposed on normative propositions based on already established and well-understood \( l \)-logical relations, with the ultimate goal of explaining \( s \)-logical relations that are directly observable in natural language discourse (for example, the \( s \)-inconsistency of (6) and (15)). In the first three cases (§§4.2.2.2.1-4.2.2.2.3), the relevant \( l \)-logical relations to be imposed are those that hold between asserted and denied Hanks propositions. In the fourth case (§4.2.2.2.4), the \( l \)-logical relations to be imposed are those that hold between deontic operators in \( SDL \). Keeping in mind Objection 4.1.2.1 from §4.1.2.1 against the pure expressivist’s Strategy 1, imposing these \( l \)-logical relations must not only be formally adequate, but should also provide adequate explanation.

4.2.2.1.1. † and ‡ are Normative Correlates of \( \vdash \) and \( \dashv \)

Perhaps the most natural way of interpreting normative anti-endorsement would be to view it as the normative correlate of the act of anti-predication (or denial) from Hanks’ base theory. There is reasonable basis for this interpretation, particularly since the act of answering ‘no’ to the question ‘is \( \phi \)-ing required?’ is, at least at the level of speech, of the same kind as the act of answering ‘no’ to the question ‘is a \( F \)?’.
This is not to say that anti-endorsement and denial are identical acts, but rather that they perform the same general functional role within their respective domains, and that the similarities between them are enough treat the former as the normative correlate of the latter (or so it will be assumed here).

On this interpretation, the act of normatively anti-endorsing $\phi$-ing is $N$-equivalent to normatively endorsing not-$\phi$-ing, in much the same way that the act of denying that $a$ is $F$ is $l$-equivalent in Hanks’ theory to asserting that $a$ is not $F$. That is, both of the following two equivalences hold:

\[ e7. \quad \vdash \langle a, \langle \text{NOT}, F \rangle \rangle \text{ is } l\text{-equivalent to } \dashv \langle a, F \rangle \]

\[ e8. \quad \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle \text{ is } N\text{-equivalent to } \dashv \langle \text{you}, \Phi-\text{ING} \rangle \]

The equivalence $e7$ holds in Hanks’ theory, and the equivalence $e8$ is taken to hold here because (i) anti-endorsement is interpreted as the normative correlate of denial, and (ii) equivalence $e7$ holds.

Interpreting anti-endorsement as the correlate of denial does not imply that anti-endorsed propositions have truth-conditions. However, it does imply (or is intended to imply) that endorsement and anti-endorsement stand in opposition to each other in generally the same way that assertion and denial do. This is reflected in the following two statements:

\[ e9. \quad \vdash \langle a, F \rangle \text{ is } l\text{-inconsistent with } \dashv \langle a, F \rangle \]

\[ e10. \quad \vdash \langle \text{you}, \Phi-\text{ING} \rangle \text{ is } N\text{-inconsistent with } \dashv \langle \text{you}, \Phi-\text{ING} \rangle \]
The first statement, **e9**, holds in Hanks’ theory. The second statement, **e10**, is taken to hold here because (i) anti-endorsement is interpreted as the normative correlate of denial, and (ii) **e9** holds.

Evidently, the correlation between \(\not\) and \(\uparrow\) is doing the bulk of the explanatory work here. If it holds (and that is a big ‘if’), then the \(N\)-logical relations that hold between the relevant propositions can be displayed as follows (compare with **Figure 4.1.1** from §4.1.1.1):

\[
\downarrow\langle\text{you}, \langle\text{NOT, } \Phi\text{-ING}\rangle\rangle \\
\uparrow \text{expresses} \\
\Phi\text{-ing is not forbidden}
\]

\[
\begin{array}{c|c|c}
\text{\(\Phi\text{-ing is forbidden}\)} & \text{\(\Phi\text{-ing is required}\)} \\
\downarrow \text{expresses} & \downarrow \text{expresses} \\
\uparrow\langle\text{you}, \langle\text{NOT, } \Phi\text{-ING}\rangle\rangle & \uparrow\langle\text{you, } \Phi\text{-ING}\rangle
\end{array}
\]

\[
\downarrow\langle\text{you, } \Phi\text{-ING}\rangle \\
\downarrow \text{expresses} \\
\uparrow\langle\text{you, } \Phi\text{-ING}\rangle
\]

**Figure 4.2.2.1.1**

This figure respects the \(s\)-inconsistency of the sentences ‘\(\Phi\text{-ing is required}\)’ and ‘\(\Phi\text{-ing is not required}\)’, and illustrates how this \(s\)-inconsistency is explained by the \(N\)-inconsistency of \(\uparrow\langle\text{you, } \Phi\text{-ING}\rangle\) and \(\downarrow\langle\text{you, } \Phi\text{-ING}\rangle\) (which in turn is explained by statement **e9** and the correlation).

This is one way of explaining why (6) and (15) are \(s\)-inconsistent, given the present interpretation of anti-endorsement. An ideal explanation would appeal directly to...
suitably well-defined \( \text{SAT}_N \)-conditions, just as appealing to truth-conditions explains the \( l \)-inconsistency of assertive propositions, but since such an account of \( \text{SAT}_N \)-conditions is presently unavailable, the explanation of the \( s \)-inconsistency of (6) and (15) sketched above will have to suffice. Fortunately it does provide some explanation for why these sentences are \( s \)-inconsistent—enough that it is fair to conclude that the inconsistency constraint is \( c_7 \) satisfied (modulo potential concerns about the assumed correspondence between \( \vdash \) and \( \downarrow \)).

That the inconsistency constraint is satisfied here is a positive result of interpreting anti-endorsement as the normative correlate of denial (and in particular that equivalence \( e_8 \) and statement \( e_{10} \) hold). However, the deontic constraint \( c_8 \) fails to be satisfied here, since it does not permit for the possibility that some actions are optional (see §4.1.1.1, and in particular Figure 4.1.1, for the case where no actions are optional). As a result, the present account does not resolve the negation problem. In the next two sections, I will consider two ways of approaching this.

4.2.2.1.2. \( \uparrow \) and \( \downarrow \) are Normative Correlates of \( \vdash \) and \( \neg \) (version 2)

Suppose again that anti-endorsement is interpreted as the normative correlate of denial, and that the equivalence \( e_8 \) and statement \( e_{10} \) hold. Then, to model that some actions are optional, Figure 4.2.2.1.1 from the previous section can be modified to account for a new category where \( \phi \)-ing is optional. However, since the equivalence \( e_8 \) holds, a new force distinct from endorsement and from anti-endorsement must be introduced. Denote this force by the symbol ‘\( \dagger \)’. Then the following relations should hold:
This is just Figure 4.2.2.1.1 with a third category added, so that the distinct categories of \( \phi \)-ing being required, forbidden and optional are displayed. These are correspondingly explained in terms of a distinction between the normative propositions \( \updownarrow(you, \langle \text{NOT, } \Phi-\text{ING} \rangle) \), \( \downarrow(you, \langle \text{NOT, } \Phi-\text{ING} \rangle) \) and \( \updownarrow(you, \Phi-\text{ING}) \), respectively.\(^{24}\)

Since the statement e10 holds here, the inconsistency constraint is satisfied (at least to the same extent that it was in the previous section). However, even though there is now a category for \( \phi \)-ing being optional in the figure, and that this sentence corresponds to a Hanks proposition \( \updownarrow(you, \Phi-\text{ING}) \), the resulting relations between these propositions do not map on to the observable s-entailment and s-equivalence.

\(^{24}\)This is similar in some respects to Blackburn’s (1984) and his pro- and con-attitudes \( H! \) and \( B! \) (for hooray and boo). There, no intermediate state was given. Here, the three states can be interpreted intuitively as endorsement, disapproval, and insouciance, the latter of which might be denoted by ‘\( M! \)’ (for meh).
relations of the sentences (6), (15), (17) and (18). This is because here ‘φ-ing is not required’ expresses a proposition that is N-equivalent to the proposition expressed by ‘not-φ-ing is required’ (that is, equivalence e8 holds), and this results in Unwin’s equivalences e2 and e3 (from §4.1) collapsing into each other (equivalently, clause c8.a of the deontic constraint fails to be satisfied). That is, the negation problem is not solved if the relations displayed in Figure 4.2.1.2 hold. So, this account of anti-endorsement, supplemented by ‡, is not satisfactory for present purposes.

4.2.2.1.3. † and ‡ are not Normative Correlates of ⊢ and ⫱

The previous two sections showed how the inconsistency constraint may be at least partially satisfied if the equivalence e8 and statement e10 hold. Initially, this may seem like a positive result. However, as was also shown, if e8 is maintained, then the deontic constraint fails to be satisfied. So, suppose that e8 does not hold, and that †⟨you, ⟨NOT, Φ-ING⟩⟩ is not N-equivalent to ‡⟨you, Φ-ING⟩. Given this, the following figure represents the relations that should hold between the propositions expressed by (6), (15), (17) and (18), if things turn out right.25

---

25 Notice that there are two open placeholder positions in the conjunctive proposition expressed by ‘φ-ing is optional’. As was the case in §3.2 with the conditional (7), in §5.2 the tools will be available to characterize this conjunctive proposition. For now, I will simply bracket this issue.
Here there are three distinct categories, corresponding to \( \phi \)-ing being required, forbidden and optional, similar to Figure 4.1.2 from §4.1.1.2. This figure also tracks what is conventionally meant when a speaker responds with ‘No’ to the question ‘is \( \phi \)-ing required?’, in that they mean that either \( \phi \)-ing is forbidden or that \( \phi \)-ing is optional, but absent additional prompting or clarification their response is ambiguous as to which disjunct exactly they are committed to.\(^{26}\)

This is a positive result, and may initially look promising. But there is a problem. The problem is that since equivalence \( e^8 \) no longer holds, anti-endorsement cannot be interpreted as the normative correlate of denial. This is because it induces an important disanalogy between the two. Recall that in Hanks’ theory, denial and

\[^{26}\text{The example of voting from ft.3 above illustrates this. If } S \text{ asks ‘is voting required?’ and receives just the reply ‘no’, that means that the most they can directly infer is that either it is forbidden or it is optional.}\]
predicate negation are different acts that are truth-functionally equivalent. That is, \( \neg \langle a, F \rangle \) and \( \vdash \langle a, \langle \text{NOT}-F \rangle \rangle \) are different kinds of act-types, but have the same truth-conditions (or are \( l \)-equivalent, according to \( e7 \)). But if \( e8 \) fails to hold, then \( \downarrow \langle \text{you}, \Phi\text{-ING} \rangle \) and \( \uparrow \langle \text{you}, \langle \text{NOT}, \Phi\text{-ING} \rangle \rangle \) are different act-types that do not have the same SAT\( A \)-conditions (they are not \( A \)-equivalent). This marks a critical distinction between denial and anti-endorsement that prevents a correlation from being drawn between the two.

Since anti-endorsement is not the normative correlate of denial anymore, the justification for the \( A \)-inconsistency result \( e10 \) is also lost, along with any other justification for relations holding between normative sentences. That is, endorsement and anti-endorsement are no longer interpreted as the normative correlates of assertion and denial. This can be phrased as an objection.

**Objection 4.2.2.1.3** The argument (from §4.2.2.1.1) used to satisfy the inconsistency constraint \( c7 \) requires that anti-endorsement be interpreted such that the equivalence \( e8 \) holds, that is, anti-endorsement is interpreted as a normative correlate of denial. But in order to satisfy the deontic constraint \( c8 \) here, anti-endorsement must be interpreted in such a way that the equivalence \( e8 \) does not hold—in which case the argument for the satisfaction of the inconsistency constraint is no longer available.

*End Objection 4.2.2.1.3.*

The point is that drawing on the \( l \)-inconsistency between assertion and denial to explain the \( A \)-inconsistency between endorsement and anti-endorsement is potentially
problematic if equivalence \( e8 \) does not hold, and the equivalence does not hold here. This is not to say that it is in principle impossible to explain the \( s \)-inconsistency of (6) and (15), since with a well-defined account of \( \text{SAT}_N \)-conditions that have the same explanatory force as truth-conditions, an explanation would be ready at hand. However, since such an account of \( \text{SAT}_N \)-conditions are presently unavailable, the only viable recourse here is to establish a correlation between anti-endorsement and denial and use that correlation as the basis for an explanation. But since equivalence \( e8 \) fails to hold, such a correlation cannot be established here, and so the interpretation of \( \Downarrow \) explored in this section is problematic.

A consequence of this section and the previous is that the forces of normative endorsement and anti-endorsement do not seem to have sufficient logical power to satisfy both the inconsistency and deontic constraints. Given this, in the next section the pure expressivist’s first strategy (from §4.2.1.1) will be used to interpret \( \uparrow \) and \( \downarrow \) in terms of the deontic operators of obligation and omissibility, respectively.

4.2.2.1.4. A Deontic Interpretation of \( \uparrow \) and \( \downarrow \)

In the first interpretation above (§4.2.2.1.1), anti-endorsement was interpreted as being a normative correlate of the speech act of denial. This allowed for an explanation of why (6) and (15) are \( s \)-inconsistent, but it did not satisfy the deontic constraint. In the second interpretation (§4.2.2.1.2), anti-endorsement was again interpreted as being a normative correlate of denial and a third force-indicator \( \hat{\xi} \) was introduced to model an action being optional, but this account failed to satisfy the deontic constraint. With the third interpretation (§4.2.2.1.3), anti-endorsement was interpreted
in such a way that the deontic constraint might be satisfied, but doing so introduced a disanalogy between anti-endorsement and denial that prohibited the use of the previous explanation for the apparent s-inconsistency of (6) and (15). In this section, I will follow the pure expressivist’s first strategy (from §4.2.1.1) and interpret † and ‣ in terms of the deontic operators of obligation and omissibility, respectively. On the one hand, this strategy is similar to the previous (from §4.2.2.1.3) in that it does not interpret † and ‣ as the normative correlates of ⊢ and ⊣. On the other hand, the present strategy departs from all of the previous three to the extent that it involves an interpretation of force indicators in terms of deontic modalities and SDL. Doing this marks a departure from the more conservative strategies used up until now, since there is no clear analogue in Hanks’ theory where forces are interpreted in terms of an underlying logic independent of the logical properties of the other propositional constituents.

Here are the relevant equivalences from SDL, where PERM, IMPER, OMISS, OPTION and OBLIG are deontic operators of being permissible, impermissible, omissible, optional and obligatory, respectively (see McNamara (2018) or Chellas (1995)):

\[
\begin{align*}
\text{PERM}(\varphi) & \equiv \neg\text{OBLIG}(\neg\varphi) \\
\text{OMISS}(\varphi) & \equiv \neg\text{OBLIG}(\varphi) \\
\text{IMPER}(\varphi) & \equiv \text{OBLIG}(\neg\varphi) \\
\text{OPTION}(\varphi) & \equiv \neg\text{OBLIG}(\varphi) \land \neg\text{OBLIG}(\neg\varphi)
\end{align*}
\]

Following the pure expressivist’s first strategy, the idea here is to first assign † to OBLIG. Then, since OMISS(\varphi) \equiv \neg\text{OBLIG}(\varphi), the next step is to stipulate that there exists a force corresponding to OMISS, and denote this force by ‘¶’. Then, ‘not required’ corresponds to ‣. This, in conjunction with the four equivalences, is intended
to provide the logical structure required to satisfy the deontic and inconsistency
constraints with just † and ‡.

Whereas in previous subsections ‡ was interpreted as the force of normative anti-
endorsement, here it is interpreted as a force along the lines of the normative tol-
eration of omissibility.27 Here is an informal sketch of the correspondences that are
established:

(6) φ-ing is required ⟷ OBLIG(φ) ⟷ †⟨you, Φ-ING⟩
(15) φ-ing is not required ⟷ ¬OBLIG(φ) ⟷ OMIS(φ) ⟷ ‡⟨you, Φ-ING⟩
(17) not φ-ing is required ⟷ OBLIG(¬φ) ⟷ †⟨you, ⟨NOT, Φ-ING⟩⟩
(18) not φ-ing is not required ⟷ ¬OBLIG(¬φ) ⟷ OMIS(¬φ) ⟷ ‡⟨you, ⟨NOT, Φ-ING⟩⟩

Because the propositions expressed by (6), (15), (17) and (18) are grounded in the
truth-functional deontic equivalences via the correspondence sketched here, they
should inherit properties that result in the four constraints c6-c9 being satisfied
(assuming things work out as intended). In particular, the Hanks propositions dis-
played above should stand in N-equivalence, N-entailment N-inconsistency and N-
consistency relations that are non-truth-functional normative correlates of the logical
relations of equivalence, entailment, inconsistency and consistency that the displayed
sentences in SDL stand in.

To see how this general approach fares with respect to the four constraints, first
consider the expressive constraint c9. Here, † and ‡ capture the expressive content

27This interpretation of ‡ follows the characterization of the attitude OMIS from the pure ex-
pressivist’s first strategy in §4.1.2.1 above. See in particular ft. 9.
of ‘required’ and ‘not required’, respectively, so the expressive constraint is satisfied. For the compositionality constraint c6, note that due to the correspondence sketched above, ‘φ-ing’ is not required’ corresponds to the object ¬OBLIG(φ), and this is a function of the meaning of ‘not’ and the object corresponding with ‘φ-ing is required’, namely OBLIG(φ). That is, the compositionality constraint is satisfied in virtue of the correspondence and the fact that SDL is compositional.

For the inconsistency constraint c7, note that OBLIG(φ) and ¬OBLIG(φ) are logically inconsistent. But since the former corresponds to †⟨you, Φ-ING⟩ and the latter corresponds to †⟨you, NOT, Φ-ING⟩, these two propositions are N-inconsistent. So, there is some support for the satisfaction of the inconsistency constraint.

For the deontic constraint, a similar line of argumentation can be applied. First, for c8.a, since ¬OBLIG(φ) ⊨ OBLIG(¬φ), it follows that †⟨you, Φ-ING⟩ is not N-equivalent to †⟨you, NOT, Φ-ING⟩, and hence that (15) is not s-equivalent to (17). For c8.b, note that since OBLIG(¬φ) logically entails ¬OBLIG(φ), it follows from this that †⟨you, NOT, Φ-ING⟩ N-entails †⟨you, Φ-ING⟩, and hence that (17) s-entails (15). Finally, for c8.c, notice that ¬OBLIG(φ) and ¬OBLIG(¬φ) are logically consistent, and so †⟨you, Φ-ING⟩ and †⟨you, NOT, Φ-ING⟩ are N-consistent, and hence also (15) and (18) are s-consistent. Therefore, the deontic constraint is satisfied.

There is more that could be said about the logic of force-indicators sketched here. For now, however, I will simply turn to a possible objection.

**Objection 4.2.2.1.4.** An analogue of the primary objection against the pure expressivist’s strategy 1 from §4.1.2.1 applies here. It is that while interpreting the
force-indicators † and ‡ in terms of the deontic operators OBLIG and OMIS may be formally adequate, it is explanatorily deficient. While negating the truth-functional sentential operator OBLIG is well-defined, negating the force-indicator † is not similarly well-defined, and so there is no explanation of what this is.

End Objection 4.2.2.1.4.

Reply. This objection does not seem to carry quite the same weight here as it does in the pure expressivist case, in part because ‘not’ can make a semantic contribution to the determination of force (see Claim 4.2.2.1 above) in Hanks’ theory, and because there is no need here to explain what kind of object a negated non-cognitive attitude is. That is, due to the properties of normative Hanks propositions, there is less of an explanatory burden to be met. To explain what these propositions are, one can directly observe token actions of anti-endorsement (of which there do seem to be observable cases in speech), and generalize from these discrete acts to understand properties of the related propositions (as act-types). That is, the underlying logic is not the only means by which a satisfactory explanation can be arrived at. If anything, the logic serves an auxiliary function of refining explanations that are already available by observing token acts of anti-predication in natural language discourse.

Having said this, the foregoing is not intended to be a decisive reply to the objection. On the contrary, all it is intended to show is that the objection may not be as forceful in the HS-expressivist case as it is in the pure expressivist case. Because of this, I will take the following position: if the objection is effective in the
case of pure expressivism, then it is effective also in the case of $HS$-expressivism. Given this, I will assume that the objection still stands.

*End Reply.*

In this section (§4.2.2.1) several interpretations of anti-endorsement were considered. If it is interpreted as the normative correlate of denial (as in §4.2.2.1.1), then the inconsistency constraint may be satisfied, but the deontic constraint is not. If it is again viewed as the normative correlate of denial, and a new force-indicator ‡ is introduced (as in §4.2.2.1.2) in an attempt to satisfy the deontic constraint, then the intuitive meaning of ‘not required’ is not captured. In particular, the negation problem still stands. On the other hand, if anti-endorsement is interpreted as being ‘broader’ than denial, as described in §4.2.2.1.3, then the correlation between anti-endorsement and denial is lost, along with the satisfaction of the inconsistency constraint. Finally (from §4.2.2.1.4) if anti-endorsement is interpreted in terms of deontic operators, then it faces two objections. In all of the interpretations considered here, **Objection 2.1** and **Objection 2.2** from Chapter 2 still hold, which suggests that even if one of these interpretations is adopted by the $HS$-expressivist, the extension of Hanks’ theory to include † and ‡ would not meet the standards of plausibility set out in §2.1.
4.2.2.2  **HS-Expressivist Strategy 2**

The second general strategy that I will consider differs notably from the first in that it does not attempt to specify one single propositional constituent expressed by ‘required’ that functions as both the expressive and deontic component of a normative proposition. Rather, like the pure expressivist’s second strategy from §4.1.2.2, two distinct propositional constituents are identified to perform the separate functions of satisfying the expressive and deontic constraints. This strategy will, however, deviate somewhat from the pure expressivist strategy, and the overall view (as described in §4.1), in the way that the atomic sentence ‘ϕ-ing is required’ is interpreted.

An intuitive way of viewing this strategy might be given by comparing it with the interpretation of † and ‡ in terms of deontic operators in SDL, as was done in §4.2.2.1.4. There, the force of normative endorsement was interpreted as having both (i) expressive content that captured the non-representational, action-guiding and projective character of a normative proposition, and (ii) deontic content, to the extent that it stood in a correspondence relation with deontic operators from SDL, imposing relations on normative propositions that mirror the deontic equivalences of SDL. The present strategy, on the other hand, can be viewed as prizing these two components apart, such that normative force retains its expressive content, but such that some other propositional constituent is associated with the deontic operator (or is characterized in some other way that functions to satisfy the deontic constraint).

Given this, a natural question to ask is what kind of object this propositional constituent is. In general, there are three kinds of object that this constituent could be. First, it could be a reference act type of a speaker’s token action of referring
to an object (for example, you or a). Second, it could be a property act type of a speaker’s token act of expressing a property or relation (for example, Φ-ING, F or COND). Third, it could be a proposition, or some constituent of that proposition (for example, when ⊨ ⟨a, F⟩ is embedded in the conditional proposition (7a)). Out of these three options, the first seems the least plausible, since it is not clear how the act of referring to an object can capture the deontic content of a sentence. So I will exclude this possibility and restrict attention to the other two kinds of propositional constituents. This suggests that the proposition expressed by the atomic normative sentence (6), namely ‘φ-ing is required’, could take on one of the three general forms:

- **Form 1.** Suppose that the deontic component is a property act type. Then the proposition expressed by (6) could be of the following form:

  †⟨you, a property act type ⟩

  This is the same general form as Hom and Schwartz’s original proposition (6a). Like that proposition, token acts of this type involve endorsing that the individual you has some property. However, here the property act type would have to be more complex than simply Φ-ING in order to capture the deontic content of the sentence. For example, it could be something like the type MUST-Φ-ING, token acts of which express a property of must-φ-ing. In this case, (6) would express the following proposition:  

  †⟨you, MUST-Φ-ING⟩.

---

28In this case ‘required’ could be seen as having the dual semantic function of (i) expressing † and (ii) indicating a function fmust which when applied to the property of φ-ing returns the property of must-φ-ing.
Here, the ‘must’ part of the property of must-$\phi$-ing is intended to capture the deontic content of the sentence (6).

• **Form 2.** Suppose again that the deontic component is a property act type. Then the proposition expressed by (6) could be of the following form:

$$\uparrow\uparrow\langle\lambda\langle\text{you, } \Phi-\text{ING}\rangle, \text{a property act type} \rangle \quad \lambda \in \{\vdash, \dashv, \uparrow\}$$

This form differs from the form of Hom and Schwartz’s original proposition (6a) to the extent that the target of normative endorsement is a proposition, not an individual. It also differs to the extent that tokens of this type involve endorsing that the proposition $\lambda\langle\text{you, } \Phi-\text{ING}\rangle$ has some property. One way of interpreting a proposition of this form would be as a type, token acts of which involve endorsing that certain states of affairs obtain. For example, such a type could consist of endorsing that the proposition $\vdash\langle\text{you, } \Phi-\text{ING}\rangle$ is always true, or endorsing that the individual you always has the property of $\phi$-ing (and never has the property of not-$\phi$-ing). In this case, sentence (6) might express a proposition like the following:

$$\uparrow\uparrow\langle\sim\vdash\langle\text{you, } \Phi-\text{ING}\rangle, \text{ALWAYS-TRUE} \rangle$$

Alternatively, it could consist of endorsing that the proposition $\uparrow\langle\text{you, } \Phi-\text{ING}\rangle$ is always SAT$_N$, of endorsing that the individual you always endorses $\phi$-ing (and never endorses not-$\phi$-ing). Then (6) might express something like

$$\uparrow\uparrow\langle\sim\uparrow\langle\text{you, } \Phi-\text{ING}\rangle, \text{ALWAYS-SAT}_N \rangle$$

In both of the cases considered here, the word ‘always’ is intended to capture the deontic content of the sentence (6).
• Form 3. Suppose that the deontic component is (or is a part of) a proposition. Then the proposition expressed by (6) could be of the following form:

\[ \dagger\langle\langle \text{you, a proposition} \rangle, \text{ACCEPT} \rangle. \]

This involves an instance of the accepts-that relation (see §2.2). It differs from Hom and Schwartz’s original proposition (6a) to the extent that the targets of normative endorsement are an individual and a proposition. Here, the missing proposition must have as constituents the act type \( \Phi\text{-ING} \) and some object that functions to satisfy the deontic constraint (the latter of which could potentially be a force indicator, in which case it would have to be distinct from \( \dagger \)). An example of a token act of this type might be something like an act of endorsing that the individual you accepts that they must do \( \phi \), or that they accept a plan to always do \( \phi \), or that they accept that \( \phi\text{-ing} \) is a goal to always aim for.

These three general forms are not intended to exhaust all of the possibilities, but I see them as suggestive of at least some of the ways that the \( H.S\)-expressivist can pursue the general strategy of this section. Rather than embarking on a detailed discussion of which of these general forms is the most plausible, for present purposes I will settle on using the second form for the remainder of this section. In doing so I don’t mean to imply that the other two forms should be ruled out, but rather that this form serves as a starting point, and that if (and when) problems with it are encountered, the other two forms can then be considered as alternatives. I will return to them at points in later sections.

So, here, for present purposes, is how I will characterize the proposition expressed by (6). First, an observation and some setup. Following Schroeder (2008a,b), the
sentence ‘φ-ing is required’ is of subject-predicate form, where ‘required’ is a predicate (albeit a normative one, to distinguish it from descriptive predicates), and ‘φ-ing’ is the subject of that sentence.\textsuperscript{29} Also, it has been assumed throughout that (6) has the same subject-predicate form as the sentence (1), namely ‘a is F’, as here:

\[
\begin{array}{c c c c c}
\text{a is F} & \text{φ-ing is required} \\
\uparrow & \uparrow & \uparrow & \uparrow \\
\text{subject} & \text{predicate} & \text{subject} & \text{predicate}
\end{array}
\]

However, I think that it is potentially a mistake to draw this similarity between (1) and (6). One reason is that it results in negation being interpreted in at least three distinct ways: first, as ordinary truth-functional negation as in the case of the sentence ‘a is not F’, second, as the negation of a non-cognitive attitude or of a force-indicator, as in the case of ‘φ-ing is not required’, and third as subject-term negation, as in the case of ‘not-φ-ing is required’. Unwin (1999, 2001) and Schroeder (2008a,b) focus primarily on issues pertaining to the first and second kinds of negation, and seem to simply take it for granted that it is coherent to negate the subject term of a sentence of subject-predicate form, as is done in Unwin’s equivalence e3 or sentences (17) and (18), for example. While it may be linguistically acceptable to prefix a gerund with ‘not’, for example as in the case of ‘not running’ or ‘not murdering’, it is not clear how to formalize this in ‘ordinary’ truth-conditional semantics, let alone in Hanks’ theory of propositions.

Given this, what I suggest is that instead of taking the atomic sentence ‘a is F’ to be the descriptive correlate of (6), take a descriptive (first order) modal sentence

\textsuperscript{29}In Hom and Schwartz (2013:18), ‘required’ is classified as a “normative term,” but they do not specifically say that it is a predicate.
like the following to be a more appropriate correlate:30

\[(23) \ a \text{ is } F \text{ is necessary}\]

Here, ‘\(a\)’ is the subject term, ‘\(F\)’ is a predicate, and ‘necessary’ is what I’ll just call a modal term, for lack of a better description. The only objects that are apt for negation are the predicate ‘\(F\)’, the modal term ‘necessary’ and the sentence as a whole. The subject term \(a\) is not negatable.

Similarly, I suggest that the sentence (6) should be interpreted as a modal sentence, where ‘\([you]_c\)’ is the hidden contextual parameter, now unhidden:31

\[(6_c) \ [you]_c \phi \text{-ing is required}\]

Here, as I stated in the two clarifications in §4.2.2, ‘\(\phi\text{-ing}\)’ is taken to express the property \(\phi\text{-ing}\), and there is a hidden context-sensitive term in (6), the audience \(you\). The way to read (6\(_c\)) is that ‘\(you\)’ is a subject term, ‘\(\phi\text{-ing}\)’ is a predicate, and ‘required’ is a modal (deontic) term (a sentential operator). Here, as with (23), the subject term is not apt for negation. This can be illustrated as follows:

\[
\begin{array}{ccc}
\text{\(a\text{ is } F\)} & \text{\([you]_c \phi \text{-ing}\)} & \\
\uparrow & \uparrow & \uparrow \\
\text{subject} & \text{predicate} & \text{modal} \\
\end{array}
\]

There are three points that should be made about this new interpretation of (6).

**Point 1.** This interpretation establishes a syntactic symmetry between descriptive and normative sentences that was not available when (6) was compared with (1). The sentences (1) and (6\(_c\)) were formerly taken to be syntactically symmetrical (in terms

---

30The phrasing is stilted here, in order to draw syntactic parallels with (6). A more natural reading may be ‘it is necessary that \(a\text{ is } F\)’.

31Syntactically this differs from (6) only in that the hidden indexical component \(you\) is unhidden, hence the subscript ‘\(c\)’ to denote the context of utterance \(c\) that determines the object \(you\).
of designation of subject and predicate terms), but they in fact differed significantly to the extent that the (alleged) subject term ‘φ-ing’ of (6) was negatable, but the subject term ‘a’ of (1) was not. Here, (23) and (6c) are syntactically symmetric, in this respect—in both cases the predicate and the modal term are negatable, but the subject is not. This is good, for reasons given in the next two points.

_Point 2._ Doing this avoids the unconventional subject term negation that is characteristic of the expressivist accounts surveyed here (and especially those in the vein of Schroeder’s (2008a,b) account of pure expressivism). So, there is no need to give an account of gerundival negation here, nor is there a need to re-define ‘ordinary’ negation to extend to subject terms. This is helpful for properly formulating the negation problem.

_Point 3._ While Hanks’ (2015) theory of propositions does not have an account of the assertive proposition that would be expressed by sentence (23), it must eventually have one if it is to be considered a plausible semantic theory. But, since it has been assumed that Hanks’ theory is “correct” (to use Hom and Schwartz’s (2013) words), it is reasonable to also assume that there is in principle some account of the Hanks proposition expressed by (23), and that once it is provided it can be used by the _HS_-expressivist to generate an analogous account of the proposition expressed by (6c).

To flesh this third point out a bit more, I am going to simply stipulate that the assertive Hanks proposition expressed by (23) is the following:32

\[
(23a) \vdash \langle \neg \langle a, F \rangle, \text{NEC} \rangle
\]

---

32 Note that since the target of the predication is a proposition, the ‘↑’ subscript is used. Also, note that token instances of the type _NEC_ do not create cancellation contexts.
Here, NEC is the act type of a token act of expressing the property _is necessary_, which can also be read as ‘_is necessarily true_’, or ‘_is true in every possible world_’, and can formalized by the operator □ of necessity in modal logic (see Chellas (1995)). I am in not committed to this particular account, and am open to plausible alternatives. But to me it seems like a good starting point, and not obviously wrong. So, I will use this, provisionally, as a template for the proposition expressed by (6), which I will give below.

First, though, I will briefly make use of one of the positive results of the pure expressivist’s second strategy (see §4.1.2.2). Recall that there Schroeder’s proposed solution involved having ‘required’ express both the non-cognitive state END and a relation P. Here, I will follow this general idea and have ‘required’ express two objects, the force-indicator †, and an act-type OB, where token acts of the type OB consist of expressing the property of deontic necessity _is obligatory_. Following the reading of necessity above, this can also be understood as _is obligatorily true_, or _is true in every deontic alternative_ (see Chellas 1995:191). This property can be given a formal representation by the deontic operator of obligation OBLIG from SDL, and so is intended to exhibit many of the same features as this operator (see Chellas (1995:190-5), McNamara (2018), §4.1.2.1 or §4.2.2.1.4).

Here is an illustration of the objects that ‘required’ expresses on this account:

\[
\begin{array}{c}
\text{required} \\
\downarrow \\
\text{‡} \\
\downarrow \\
\text{OB}
\end{array}
\]

The semantics associates ‘required’ with two objects, one of which is intended to
encode the expressive content of the term (on which negation does not operate), and
the other is intended to do the bulk of the work in satisfying the inconsistency and
deontic constraints (and which negation operates on). The former object is the
force indicator † of normative endorsement, and the latter object is the act type OB
of expressing the property of deontic necessity __is obligatory.

Given this, a natural way of characterizing the proposition expressed by (6c) is
as follows:34

(6c) ††⟨∼†⟨you, Φ-ING⟩, OB⟩

For speaker S in context of utterance c, this proposition is a type of S’s token act
of simultaneously (i) referring to the audience you determined by context c, (ii)
expressing the property of φ-ing with their utterance of ‘φ-ing’, (iii) predicating the
property of φ-ing of the object you (making ⊢⟨you, Φ-ING⟩ available for reference),
(iv) expressing the property __is obligatory with their utterance of ‘required’ (thus
generating a cancellation context) and (v) applying the the property __is obligatory
to the proposition ⊢ ⟨you, Φ-ING⟩ in the mood of normative endorsement (in a
cancellation context). If a speaker S performs such an act, this can be reported by
saying that S endorses that you ought to be φ-ing.

33One might ask whether ‘required’ can map to just OB, and not to †. There are two reasons
why not. The first is that if it does, then clause c1 from §2.1 would not be satisfied. In effect, it
would mean that ‘required’ is stripped of all of its normative content, an unwelcome result.

The second reason is that if ‘required’ expresses OB but does not express †, then clause c4 from
§2.1 is not satisfied. This is because there would be no semantic restrictions on the force with which
S can utter (1) or (6). In particular, the following would be admissible:

(6) φ-ing is required \( \xrightarrow{expresses} \) ⊢†⟨∼†⟨you, Φ-ING⟩, OB⟩

But this violates constraint c4.b, which would also be an unwelcome result. So, given this, it seems
that ‘required’ must express †. The novelty here, of course, is that it also expresses OB.

34Another interpretation would take OB to be the act type of expressing the property __is SAT_N
in every deontic alternative, and taking (6) to express the proposition ††⟨∼†⟨you, Φ-ING⟩, OB⟩. I
merely note this possible interpretation here, though will not pursue it in what follows.
For the remainder of this section I will assume that (6c) is the Hanks proposition expressed by ‘φ-ing is required’, and will carry on to determine whether it satisfies four constraints. First, here are the relevant expression relations:\(^{35}\)

\[(6) \text{ φ-ing is required} \quad \Rightarrow \quad \uparrow\langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle\]

\[(15) \text{ φ-ing is not required} \quad \Rightarrow \quad \uparrow\langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \langle \text{NOT}, \text{OB} \rangle \rangle\]

\[(17) \text{ not φ-ing is required} \quad \Rightarrow \quad \uparrow\langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle, \text{OB} \rangle\]

\[(18) \text{ not φ-ing is not required} \quad \Rightarrow \quad \uparrow\langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle, \langle \text{NOT}, \text{OB} \rangle \rangle\]

As was the case of the pure expressivist’s second strategy, there is now enough structure to account for all the negatable forms of sentence (6), as follows:

\[e. \ S \text{ accepts (6)} \quad \equiv \quad S \text{ endorses that } [\text{you}]_c \text{ ought to be } \phi-\text{ing}\]

\[e1. \ S \text{ does not accept (6)} \quad \equiv \quad S \text{ does not endorse that } [\text{you}]_c \text{ ought to be } \phi-\text{ing}\]

\[e2. \ S \text{ accepts (15)} \quad \equiv \quad S \text{ endorses that } [\text{you}]_c \text{ ought not to be } \phi-\text{ing}\]

\[e3. \ S \text{ accepts (17)} \quad \equiv \quad S \text{ endorses that } [\text{you}]_c \text{ ought to be not-φ-ing}\]

Furthermore, given the definition of OB, the relations illustrated on the following figure should hold:\(^{36}\)

---

\(^{35}\)Note that ‘c’ subscript has been dropped, with the understanding that the contextual parameter \([\text{you}]_c\) is still there, now just back to being hidden.

\(^{36}\)The proposition \(\chi_{opt}\) is omitted from the figure only due to space constraints, and is the conjunction of \(\uparrow\langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \langle \text{NOT}, \text{OB} \rangle \rangle\) and \(\uparrow\langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle, \langle \text{NOT}, \text{OB} \rangle \rangle\). The resources for formalizing this conjunctive proposition will not be available until §5.2, below.
As this figure illustrates, the propositions expressed are intended to model the deontic relations between \( \phi \)-ing being required, forbidden and optional (see §4.2.2.1.4). Whether they actually succeed in doing so depends on whether the deontic constraint is satisfied. So, now the question is whether the four constraints c6-c9 are satisfied. That is what I will look at now, in ascending order of difficulty.

First, for the expressive constraint c9, notice that each of the propositions in question have \( \dagger \) in wide scope position, and that this propositional component is defined to encode the expressive content of the sentence that expresses that proposition. So this constraint is satisfied.

Second, for the compositionality constraint c6, note that the Hanks proposition expressed by (15) is a function of the proposition expressed by (6) and of the meaning of ‘not’. Here, ‘not’ can be interpreted in terms of predicate negation. Under this
interpretation, ‘not’ expresses (or indicates) a function $g_{\sim}$, which when applied to the property of being obligatory yields the negative property of being non-obligatory (see §4.2.1). This is illustrated with the proposition expressed by (15), above. So this constraint is satisfied.

Third, I will look at the inconsistency and deontic constraints $c7$ and $c8$ at the same time. Consider the propositions expressed by (6), (15), (17) and (18):

$$(6c) \; \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$$

$$(15a) \; \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \langle \text{NOT}, \text{OB} \rangle \rangle$$

$$(17b) \; \uparrow \langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle, \text{OB} \rangle$$

$$(18a) \; \uparrow \langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle, \langle \text{NOT}, \text{OB} \rangle \rangle$$

Ideally, the $\text{SAT}_N$-conditions of these propositions would be used to explain why (6c) and (15a) are $s$-inconsistent, why (17b) $s$-entails (15a) (but not vice versa), and why (15a) and (18a) are $s$-consistent. However, at this point sufficiently well-defined notions of such $\text{SAT}_N$-conditions are not available (see §3.2 for some candidate accounts).

Notice though that with the exception of $\uparrow$, all the propositional constituents $\text{OB}, \langle \text{NOT}, \text{OB} \rangle, \Phi-\text{ING}, \langle \text{NOT}, \Phi-\text{ING} \rangle$, and $\vdash \langle \text{you}, \Phi-\text{ING} \rangle$ in these four propositions are constructed using objects and methods that are defined entirely within the base fragment of Hanks’ theory. That is, most of the important logical work pertaining to the $N$-inconsistency and $N$-entailment relations of normative propositions is being done with the well-defined notions of $l$-inconsistency and $l$-entailment, and the only impediment to concluding that the inconsistency and deontic constraints are satisfied is that it is unclear whether combining these objects in the mood of normative
endorsement results in the construction of normative propositions that stand in the right $\mathcal{N}$-inconsistency and $\mathcal{N}$-entailment properties.

To see this, as a thought experiment consider Hanks’ theory without Hom and Schwartz’s extension, replace ‘†’ with ‘$\vdash$’ in the wide scope position of each of (6c), (15a), (17b) and (18a). Then all of the target consistency, inconsistency and entailment relations hold, in virtue of these assertive propositions having truth-conditions and in virtue of the definition of deontic necessity in $SDL$. On the other hand, if ‘†’ is replaced with ‘?’ in the wide scope position of each of (6c), (15a), (17b) and (18a), then none of the target relations hold, due to the resulting interrogative propositions having answerhood conditions (see Table 2.1 from §2.1). The issue here is whether $SAT_\mathcal{N}$-conditions have some relevant property that make them like truth-conditions, but unlike answerhood conditions, to the extent that the normative propositions (6c), (15a), (17b) and (18a) satisfy the inconsistency and deontic constraints $c_7$ and $c_8$ (but such that they do not have truth-conditions or word-to-world direction of fit, consistent with the basic expressivist clauses $c_2$ and $c_3$ from §2.1).

The problem described here was first raised in §4.1.2.2 when considering the implications of the second pure expressivist strategy for $HS$-expressivism. It is essentially the $HS$-expressivist analogue of Objection 4.1.2.2 that the pure expressivist encountered there. Recall that to address that objection, Schroeder (2008a,b) defined a property of mental states called ‘inconsistency transmission’, and stipulated that the attitude of normative endorsement had this property, like just like belief does. This property does not apply here, however, nor would we want it to (since it transmits the truth-conditions of propositional contents, and so would result in a violation of
the expressivist clauses \textit{c2} and \textit{c3} if an analogue were applied here). Here is the problem in the form of an objection:

**Objection 4.2.2.2.a.** The force of normative endorsement must have some property $P_N$ that explains why the inconsistency and deontic constraints \textit{c7} and \textit{c8} are satisfied (and such that the core expressivist constraints \textit{c2} and \textit{c3} are not violated) for the normative propositions (6c), (15a), (17b) and (18a).

\textit{End Objection 4.2.2.2.a.}

**Reply.** A straightforward way to address this objection would be to simply assume that whatever this property is, the force of normative endorsement has it. However, this doing that would be theoretically unsatisfactory. The optimal way to address this objection would be to clearly specify SAT$_N$-conditions for normative propositions, and in such a way that such propositions stood in $N$-logical relations that explain the target $s$-logical relations. However, since a sufficiently robust account of SAT$_N$-conditions is not available (and is not immediately forthcoming), an alternative method of addressing the objection is necessary. In §5.3.2 I will return to this objection and attempt to show how it can be avoided, but for now it stands.

\textit{End Reply.}

This objection highlights a problem with the present strategy, as well as with several of the other strategies that were considered in previous sections. For example, recall that at the beginning of §4.2.2.2 three different possible forms of the proposition
expressed by the sentence (6) were considered (and the second of these three were settled on). The general objection raised here applies to propositions of all of these general forms as well. In addition, it applies partially to the accounts in §4.2.2.1. There, if normative anti-endorsement is interpreted as the normative correlate of denial the inconsistency constraint is satisfied, but the deontic constraint is not. So, this objection points to a problem with many of the H$S$-expressivist approaches that are under consideration here.

Before going on to compare the two general strategies that were considered in §4.2.2, one more objection to the present strategy will be considered.

**Objection 4.2.2.2.b.** In §4.2, a description of Hanks’ (2015) sentential negation was given. However, an account of the sentential negation of sentence (6) was not given for any of the H$S$-expressivist strategies considered above. This seems to be a potentially problematic omission, since sentential negation is defined in terms of a truth predicate that is not readily applicable with the force of normative endorsement (see §3.2 for an analogous case with the conditional connective). To see this, recall that in Hanks’ theory the following holds:

(19) it is not the case that $a$ is F \[ \xrightarrow{\text{expresses}} \vdash \langle \sim \vdash \langle a, F \rangle, \text{NOT-TRUE} \rangle \]

Given this, the question is what the proposition expressed by the following is:

(24) it is not the case that $\phi$-ing is required

Here are the most plausible candidates, where NOT-$\mathcal{N}$-SAT is the act-type of expressing the property of being not-$\text{SAT}_{\mathcal{N}}$:

(24a) \[ \vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \text{NOT-TRUE} \]
(24b) ⊢ ⟨∼†↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩, NOT-TRUE⟩

(24c) †↑ ⟨∼↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩, NOT-Ν-SAT⟩

(24d) ⊢ ⟨∼↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩, NOT-Ν-SAT⟩

Since ‘φ-ing is required’ does not have truth-conditional content (*per* the expressivist clause c2 from §2.1), ‘it is not the case’ should be interpreted as meaning ‘it is not-SAT_Ν that’. So, (24a) and (24b) can be excluded from consideration.

In the case of (24c), there is an odd structural asymmetry, in that while there is an instance of ‘required’ in the sentence (24) that corresponds to the embedded instance of † in the proposition (24c), there is no instance of ‘required’ in the sentence corresponding to the instance of † in wide scope position, as illustrated here:

(24): it is not the case that φ-ing is **required**

(24c):

Since there is no term in (24) that maps to the wide-scope instance of † in (24c), there is no semantic explanation for why it (as opposed to ⊢) takes wide scope. That is, (24) could just as easily be asserted as it could be normatively endorsed, blurring the critical distinction between descriptive and normative discourse that is so essential to expressivist semantics. So (24c) is problematic.

On the other hand, with (24d) it is asserted that the proposition expressed by (6) is not SAT_Ν. While one could plausibly argue that this accurately captures the meaning of (24), it is problematic in that it results in a negated form of (6) expressing an assertive proposition, and not a normative proposition. That is, while the anti-
endorsement and predicate negation of (6) express normative propositions, the sentential negation does not. This asymmetry is problematic in that anti-endorsement is intended to be a more general kind of negation than predicate and sentential negation (as denial is a more general kind of negation in the case of assertive propositions, see §4.2.1 or Hanks (2015:102)), but it cannot be such a general kind of negation if sentential negation is assertive and predicate negation is normative. So (24c) is also problematic.

The upshot is that the most plausible accounts of the proposition expressed by (24) are (24a)-(24d). The propositions (24a) and (24b) can be excluded at the outset, and both (24c) and (24d) are problematic. So there is at present no account of the sentential negation of the original sentence ‘φ-ing is required’. This is a problem.

End Objection 4.2.2.2.b.

Reply. A solution to this problem is given in §5.2, Example 5.2.d.

End Reply.

4.2.3 Summary

In this section I considered two general HS-expressivist strategies for approaching the negation problem for normative propositions. The first general strategy, from §4.2.2.1, extended Hom and Schwartz’s extension with a force indicator †, and then considered three different interpretations of this force-indicator: (i) as a normative correlate of anti-predication (denial) (§§4.2.2.1.1-4.2.2.1.2), (ii) as a force of normative anti-endorsement that is in a sense broader than denial (§4.2.2.1.3), and (iii) as
corresponding to the deontic operator of omissibility (§4.2.2.1.4). In each of these cases, the force-indicators † and ‡ were interpreted in such a way that they were primarily responsible for both encoding the expressive content, and of capturing the logical (deontic and inconsistency) properties, of the propositions of which they were constituents. The primary takeaway from this section is that interpreting normative endorsement and anti-endorsement as normative correlates of assertion and denial provides a natural way of addressing the inconsistency constraint, but lacks the logical structure to address the deontic constraint. Both constraints can be satisfied if † and ‡ are interpreted as corresponding to deontic operators, but this raises questions about the intelligibility of the resulting forces and logical relations between them (see Objection 4.2.2.1.4.a).

The second general strategy that was considered, in §4.2.2.2, differed in that ‘required’ was taken to semantically correspond to two items, the usual force-indicator † and an act-type OB. This division of semantic labor relieves force-indicators of some of their explanatory burden (as compared to the first general strategy), and delegates responsibility for satisfying the logical (inconsistency and deontic) constraints primarily to other propositional constituents. Doing this avoids the objection that the first strategy encountered, when † and ‡ were interpreted as corresponding to deontic operators. However, it encounters a problem with explaining why the force of normative endorsement has a property that explains why the sentences (6) (15), (17) and (18) stand in particular s-logical relations—a property that assertion has, but that the force of interrogation does not.

This leaves things at a bit of an impasse. In the next chapter, I am going to draw
on elements from both general strategies in an attempt to provide an account of the proposition expressed by ‘φ-ing is required’ that makes progress towards satisfying the compositionality, inconsistency, deontic and expressive constraints. This will be done by interpreting normative endorsement and anti-endorsement as the normative correlates of assertion and denial, respectively, largely as was done in §4.2.2.1.1 and §4.2.2.1.2. But the second strategy will also be used to the extent that the act type OB will also be used to address the deontic constraint. This will be done in §5.1, where a new extension of Hanks’ theory will be sketched. Then in §5.2 a further extension will be given that is intended to provide a neutral logical framework that explains relations that obtain between both assertive and normative propositions.

It is important to note, for dialectical reasons, that the particular way of characterizing the proposition that is expressed by ‘φ-ing is required’ that is given in §5.1, with the first section, is largely independent of the extension that is given in §5.2. That is, another account of the proposition expressed by (6), and correspondingly also an alternative extension of Hanks’ theory, could be given instead of the one I give in §5.1, so long as some basic constraints are met (in particular, so long as the correlation between normative endorsement and assertion, and between normative anti-endorsement and denial is maintained). This means that if the extension given in §5.1 ends up being problematic, another interpretation of the proposition expressed by (6) that is less problematic can in theory be given.
Chapter 5

Two New Extensions and the
Problems Revisited

Hom and Schwartz’s (2013) Main Claim is that if Hanks’ theory of propositions is successful, then there is a plausible extension of it that readily solves the Frege-Geach problem for normative propositions. In Chapters 2-3 I examined Hom and Schwartz’s justification for this claim. In Chapter 2 I considered whether the extension was plausible, and argued that it was not because it does not satisfy the expressivist constraint \( c4 \) and because it encounters a problem with interrogatives. In Chapter 3 I considered Hom and Schwartz’s solution to the embedding problem, and argued that their justification for the claim that the conditional (7) expresses the normative proposition (7a) was problematic, and that even if such a justification could be given it would not solve the more challenging problem of mixed descriptive-normative conditionals. In Chapter 4 I considered the negation problem, along with several
possible solutions to the problem, but was unable to conclude that any of these solutions were successful. In summary, in Chapters 2-4 I argued that (i) it is not clear that Hom and Schwartz’s extension is plausible, and (ii) even if it is plausible, it is not clear that it solves the Frege-Geach problem for normative propositions.

Things are not so bleak as this result might suggest, however. In this chapter I will provide an alternative to Hom and Schwartz’s extension that is in broad strokes similar, but which differs in certain key respects. These differences enable the problems with constraint $c_4$ and interrogatives to be addressed, and they also allow for an account of mixed declarative-normative sentences to be given. Consequently, the new extension to be given here is at least more plausible than Hom and Schwartz’s original, and is better equipped to handle the Frege-Geach problems. So, assuming things work out as intended, it should provide better support for the Main Claim.

The chapter is structured as follows: in §5.1 I will results from Chapter 4 to give a new extension of Hanks’ theory that, if successful, will address the problem with the expressivist constraint $c_4$ (Objection 2.1) and the problem with interrogatives (Objection 2.2). In the course of this, I will argue that this extension is plausible, using the plausibility criteria from Chapter 2. Then in §5.2 I will define another extension to supplement the first, which is designed specifically to explain the meaning of certain logical relations. In the course of this, the main outstanding problems from Chapter 3 will be addressed, particularly with respect to specifying a wide scope force-indicator for the proposition expressed by the conditional (7). Finally in §5.3 this extension will be applied in an attempt to address the Frege-Geach problems for normative propositions, and some outstanding problems with this will be considered.
5.1 A New Extension

In this section an new extension of Hanks’ theory will be given. It is intended to provide the semantics for atomic normative sentences like ‘φ-ing is required’, and in such a way that avoids the two main objections to Hom and Schwartz’s original extension that were given in Chapter 2. It will also serve as the basis for another extension, to be given in §5.2, that is designed to address the Frege-Geach problems.

To start, recall that Hom and Schwartz’s extension was not formally defined, but that it consisted essentially of three things: (i) extending the set of force indicators in Hanks’ theory to include a force for normative endorsement †, (ii) specifying the mapping of terms m (or so I suggested in §2.1), and (iii) correspondingly postulating the existence of normative Hanks propositions within Hanks’ theory.

In this section, a similar extension will be defined, except that (i) Hanks’ base theory will be extended by both † and the force of anti-endorsement ‡ (from §4.2.2.1 and §4.2.2.2), (ii) a new map m’ will be given (consistent with the interpretation of sentence (6) argued for in §4.2.2.2), and (iii) a new account of the structure of atomic normative propositions will be given. Then I will give two examples to illustrate properties of this extension, and I will argue that it avoids the two objections encountered by Hom and Schwartz’s original, and hence that it is an improvement.

Here is how the new extension works: extend the set of force-indicators in Hanks’ base theory to include the sign for normative endorsement † and the sign for normative anti-endorsement ‡ (from §4.2.2.1 and §4.2.2.2), yielding the set of force-indicators \{\vdash, \dashv, †, ‡\}.\footnote{A side note: for the remainder of this chapter I am going to ignore the imperative force purely for the sake of simplicity.}

The act of endorsement will be interpreted as it was in...
§4.2.2.1.1 and in §4.2.2.2. Namely, † and ‡ do not have any deontic content, only expressive content, and they will be interpreted as the normative correlates of assertion and denial, respectively, just as in 4.2.2.1.1. In §4.2.2.1 I argued that extending by ‡ is coherent and conservative. Despite this, I do acknowledge that this interpretation of ‡ is potentially objectionable, but I will bite the bullet and accept it in what follows.

Before proceeding I would like to briefly recall a distinction that Hanks (2015) makes between assertion and predication (and that was mentioned in Chapter 1). These are different (but related) acts, to the extent that a speaker can predicate a property F of an object a without asserting that a is F, for example when ‘a is F’ is uttered in a cancellation context. In such contexts, acts of predication occur, but assertion is canceled. To respect this distinction between predication and assertion, I will draw a corresponding distinction between N-predication and normative endorsement, as well as between N-anti-predication and normative anti-endorsement.

With that out of the way, I will now follow the strategy described in §4.2.2.2 of mapping the term ‘required’ to two objects. In that section, the objects that were mapped to were the force of normative endorsement † and the act-type OB of expressing the property _is obligatory_ (or ‘is obligatorily true’, or ‘is true in every deontic alternative’). Here, the objects to be mapped to will be a set of admissible force-indicators {†, ‡, ?}, and the same act-type OB. I will say that ‘required’ both indicates the set {†, ‡, ?} and that it expresses the act-type OB.\(^2\) The set of for the reason that doing so streamlines the overall argument and reduces the number of cases that have to be considered in some of the examples below.

\(^2\) The use of the term ‘indicates’ here follows Hanks’ use of the same term to pick out a function for predicate negation (see Hanks (2015:101) and §4.2.1). A more thorough account of this might
admissible force indicators contains all and only the force-indicators that a speaker is permitted to use when combining the propositional constituent OB with other objects. Introducing this set into the semantics is intended to address the problems that arose frequently in previous chapters pertaining to having a systematic and theoretically sound method for restricting the applications of force-indicators to various objects (for example see Objection 2.1, the reply to Objection 3.2.1.2.a, and §3.2.1 more generally). So, for example, a speaker is restricted to applying the property is obligatory to propositions in one of the †, ‖ or ?-moods, and is prohibited from applying it in the assertive mood.

The same idea will hold for descriptive predicates and relations. For any descriptive predicate F, the predicate indicates a set of admissible force-indicators {†, ‖, ?} and expresses the act-type F of a speaker’s token action of expressing the property F. Notice in particular that since neither † nor ‖ are in the set of admissible force-indicators, a speaker is restricted to applying the property F to an object in one of the †, ‖ or ?-moods, and is prohibited from applying is in either the † or ‖-mood.

These indication and expression relations for the specific normative term ‘required’ and for descriptive predicates more generally can be illustrated as follows:

\[
\begin{align*}
F & \rightarrow \{†, ‖, ?\} \\
\downarrow \\
\text{F} & \rightarrow \text{required} \\
\downarrow \\
\text{OB} & \rightarrow \{†, ‖, ?\}
\end{align*}
\]

---

take ‘required’ to indicate {†, ‖, ?}, to express OB, and to indicate a function \(f_\lambda\) that formalizes the speaker’s act of selecting a specific \(\lambda \in \{†, ‖, ?\}\) (in a context of utterance \(c\)). An application of the function \(f_\lambda\) in context \(c\) would then be a formal account of ‘required’ expressing a particular force. For the purposes of simplicity I will not consider these details here, however.

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This new interpretation of the meaning of ‘required’ and of ordinary descriptive predicates induces a new mapping of terms \( m' \) for the atomic normative sentence (6) to replace the original mapping \( m \) from §2.1. Recalling from §4.2.2.2 that ‘\([you]_c\)’ denotes the hidden context-sensitive parameter in the sentence (6), this mapping can be given as follows:\(^3\)

\[
m':
\]

\[
\begin{align*}
\phi\text{-ing} & \quad {\{\vdash, \dashv, ?}\} \\
\phi\text{-ING} & \\
\text{required} & \quad {\{\dagger, \downarrow, ?\}} \\
\vdash & \quad \text{OB}
\end{align*}
\]

\[
\begin{align*}
[you]_c & \quad \longrightarrow \text{you} \\
\phi\text{-ing is required} & \quad \longrightarrow \dagger\langle\sim\vdash\langle\text{you, } \Phi\text{-ING}\rangle, \text{OB}\rangle
\end{align*}
\]

Then, due to this mapping, the following expression relations hold:

\[
\begin{align*}
(6) \quad \phi\text{-ing is required} & \quad \longrightarrow \dagger\langle\sim\vdash\langle\text{you, } \Phi\text{-ING}\rangle, \text{OB}\rangle \\
(15) \quad \phi\text{-ing is not required} & \quad \longrightarrow \downarrow\langle\sim\vdash\langle\text{you, } \Phi\text{-ING}\rangle, \text{OB}\rangle \\
(8) \quad \text{is } \phi\text{-ing required?} & \quad \longrightarrow \exists\langle\sim\vdash\langle\text{you, } \Phi\text{-ING}\rangle, \text{OB}\rangle
\end{align*}
\]

\(^3\)Note that this map, as well as the general account of terms given here, is incomplete. This is because additional restrictions need to be placed on the applications of properties to objects such that (for example) the property of \( \phi\text{-ing} \) can only be applied to individuals (or sets of individuals), and the property \_is obligatory\_ can only be correctly applied to assertive (and not interrogative) propositions. Such restrictions can be imposed, but since doing so would result in a more complex and unwieldy formalism I will not do so here, and simply register the deficiency and note that it can be resolved.
With this new mapping available to replace the original mapping from §2.1, the problems with the extension can be more appropriately addressed. Here are some examples to show how this works:

**Example 5.1.a.** Consider the atomic descriptive sentence (1):

(1) \( a \) is F

In sincerely uttering (1), \( S \) performs the complex act of simultaneously (i) referring to \( a \), (ii) expressing the property F, (iii) indicating \{\( \vdash \), \( \dashv \), ?\}, (iv) selecting the force of predication from this set, and (v) predicating F of \( a \). So, the proposition expressed by (1) is \( \vdash \langle a, F \rangle \), just as in Hanks’ base theory.

Note the new steps are (iii) and (iv) here. Uttering ‘F’ has the dual function of both expressing the property F and indicating the set \{\( \vdash \), \( \dashv \), ?\}. The indication of this set places constraints on the forces that \( S \) can use to apply the property F to the object \( a \), in particular excluding the \( \hat{\dag} \) and \( \dag \)-moods. So, \( S \) simply cannot use the sentence (1) to express the normative proposition \( \hat{\dag} \langle a, F \rangle \), and consequently the boundary between atomic descriptive and normative sentences is respected. In particular, it results in the satisfaction of the expressivist constraint c4.a from §2.1.

*End Example 5.1.a.*

**Example 5.1.b.** Consider the atomic normative sentence (6):

(6) \( \phi \)-ing is required

Given the new semantic analysis of this sentence from §4.2.2.2, along with the mapping \( m' \) from above, in sincerely uttering (6), \( S \) performs the complex action of simultaneously
referring to you, the audience of their utterance (a context-sensitive parameter),

with their utterance of ‘φ-ing’ simultaneously

(i.a) expressing the property of φ-ing,

(ii.b) indicating the set \{⊢, ⊳, ?\}, and

(i.c) selecting ⊢ from this set and predicating φ-ing of you, making the assertive proposition ⊢ ⟨you, Φ-ING⟩ available for further reference,

with their utterance of ‘required’, simultaneously

(iii.a) expressing the property __is obligatory, creating a cancellation context

(iii.b) indicating the set \{†, ‡, ?\},

with their utterance of the full sentence ‘φ-ing is required’ simultaneously

(iv.a) selecting † from the set \{†, ‡, ?\}

(iv.b) N-predicating the property __is obligatory of the assertive proposition ⊢ ⟨you, Φ-ING⟩ (in the cancellation context induced by (iii.a)).

This complex action is a token of the type †↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩, as expected. Crucially, due to step (iii.b), the proposition expressed by (6) must be a normative proposition, and cannot be an assertive proposition. This respects the boundary between normative and descriptive sentences. In particular, it results in the satisfaction of clause c4.b from §2.1.

End Example 5.1.b.
These two examples are intended to illustrate how and why, given the present extension, the atomic sentences (1) and (6) stand in the following expression relations:

(1) $a$ is F $\xrightarrow{\text{expresses}} \vdash \langle a, F \rangle$

(6) $\phi$-ing is required $\xrightarrow{\text{expresses}} \uparrow\uparrow \langle \sim \vdash \langle you, \Phi-\text{ING} \rangle, \text{OB} \rangle$

This forms the basis for the new extension of Hanks’ theory. As to whether this extension is plausible, that is the topic of the next section (§5.1.1).

5.1.1 Is the Extension Plausible?

In §2.2 I investigated whether Hom and Schwartz’s original extension was plausible, on a particular interpretation of the word ‘plausible’, and concluded that it was not because of two objections that it encountered. Here, I will ask whether the new extension is plausible, using the same criteria. That is, for it to be considered plausible, it must (i) satisfy the four core expressivist constraints $c_1$-$c_4$ from §2.1 (and in particular constraint $c_4$, which was the case of Objection 2.1 against Hom and Schwartz’s extension), and (ii) it does not cause any significant problems in Hanks’ base theory (and at a minimum it avoids Objection 2.2, pertaining to interrogatives, that was faced by Hom and Schwartz’s extension).

5.1.1.1 Are the Four Constraints Satisfied?

First, consider constraint $c_1$. Strictly speaking it is not satisfied here, because ‘required’ does not express $\uparrow$. Rather, ‘required’ indicates the set $\{\uparrow, \downarrow, \?\}$, which has $\uparrow$ as a member. So I will modify constraint $c_1$ to cohere with this, as follows:

$c_1'$. Normative sentences express normative Hanks propositions, and the term ‘re-
quired’ both (i) expresses the property OB and (ii) indicates the set of admissible force-indicators \{†, ⊥, ?\}.

This is similar in spirit, if not exactly in letter, to the original clause \(c1\). It is similar in spirit to the extent that ‘required’ is semantically associated via the indication relation with the set \{†, ⊥, ?\}, and this set contains ⊥ and † (but crucially does not contain ⊢ or ⊣). So, the term ‘required’ does not have much less, if any, expressive content here than if it directly expressed the single object †.

Now, given the same assumptions as in §2.1, clauses \(c2\) and \(c3\) are satisfied just as was the case in §2.1. The new extension adds nothing new here.

Finally, constraint \(c4\) demands that neither of the two expression relations hold:

\[
\begin{align*}
a \text{ is } F & \quad \xrightarrow{\text{expresses}} \quad †⟨a, F⟩ \\
φ\text{-ing is required} & \quad \xrightarrow{\text{expresses}} \quad ⊢↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩
\end{align*}
\]

But, with the new extension and the restrictions placed on admissible force-indicators, it is impossible for ‘\(a \text{ is } F\)’ to express the normative proposition †⟨\(a, F\)⟩, as is demonstrated in Example 5.1.a. Similarly, due to these restrictions, ‘\(φ\text{-ing is required}’ cannot express ⊢↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩, as is demonstrated in Example 5.1.b.

So, now that restrictions have been placed on the applications of force indicators, constraint \(c4\) is satisfied. In particular, the Objection 2.1 that was raised in §2.1 against Hom and Schwartz’s extension does not apply in the case of this new extension. The result of all of this is that all four constraints are satisfied in the new extension, so long as \(c1\) is modified slightly to be read as \(c1’\).
5.1.1.2 Is the Problem With Interrogatives Solved?

Now, the next question is if the new extension causes any problems to Hanks’ base theory. At a minimum, ideally it should avoid the problem with interrogatives that surfaced in §2.2 (Objection 2.2) with Hom and Schwartz’s original extension. So, I will look at that problem here, and show that it is avoided. As a brief recap, recall that the problem pertained to how to specify the proposition expressed by the interrogative sentence

\[(8) \text{ is } \phi\text{-ing required?}\]

In §§2.2.1-2.2.3 I considered the following three propositions as possible solutions to the problem (for interlocutors \(S_1\) and \(S_2\), where \(S_1\) is the speaker):

\[(8a) \ ?\langle \phi\text{-ing}, \text{REQUIRED} \rangle \]

\[(8b) \ ?\langle \text{you}, \Phi\text{-ING} \rangle \]

\[(8c) \ ?\langle \langle S_2, \sim\text{†}\langle \text{you}, \Phi\text{-ING} \rangle \rangle, \text{ACCEPT} \rangle \]

Ultimately, I argued against all three and in Objection 2.2 claimed that as a consequence of all three failing to be satisfactory, it follows that it cannot be concluded that Hom and Schwartz’s extension is plausible, as they claim it is. If this result holds, it constitutes a potentially serious problem with HS-expressivism.

Fortunately, a reply to this objection is available now. All that needs to be done is to refer back to the multiple-part process outlined in Example 5.1.b, and in step (iv.a) have \(S\) select ‘?’ from the set of available force- indicators instead of ‘†’, and in (iv.b) have \(S\) apply the property \(\_\text{is obligatory}\) to \(\text{⊢}\langle \text{you}, \Phi\text{-ING} \rangle\) in the interrogative mood (in the cancellation context induced by (iii.a)). If this is done, then \(S\) uses (8) to express the following interrogative proposition:

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Then, due to the restrictions on forces imposed by the meaning of ‘required’, the proposition \( \vdash \langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle \) cannot be a possible answer to this question, since it simply does not exist. That is, the set of possible answers to this question are limited to *normative* propositions, and exclude assertive propositions (compare with §2.2.3, where the set of answers to the question (8) included the assertive proposition (8d), which was problematic). So, we get

Is \( \phi \)-ing required? Yes.  \[ \uparrow \rightarrow \vdash \langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle \]

Is \( \phi \)-ing required? No.  \[ \downarrow \rightarrow \vdash \langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle \]

This addresses the problem of interrogatives that was raised with *Objection 2.2*, and is due almost exclusively to the new map \( m' \) that places restrictions on admissible force-indicators and that induces more structural complexity in the proposition expressed by (6) with the inclusion of OB.

### 5.1.2 Summary

This new extension addresses the two problems (*Objection 2.1* and 2.2) that Hom and Schwartz’s extension encounters. Furthermore, it satisfies all four of the expressivist constraints \( c1'\text{-}c4 \). Finally, it does not appear to cause any significant disruptions to Hanks’ base theory. So, it appears to meet the plausibility constraints. Later, in §5.4, I will consider two objections to this extension. But for now, I will carry on to give another extension that is intended to supplement the one given here.
5.2 Logical Relations

In the previous section a new extension to Hanks’ theory was given, and it was argued that it is plausible. That extension effectively characterizes the meaning of atomic normative sentences like (6), but it does not have the resources to be able to solve the embedding, negation or inference problems. In this section, I will give another extension beyond the one in the previous section, with the intent of using it to address the Frege-Geach problems. It uses techniques from the previous extension, in particular the dual function of predicates (relations), and corresponding restrictions on the forces that properties can be applied with. But, it is concerned narrowly with the conditional, conjunction, disjunction and sentential negation relations.

I will use conditionals as examples, but the general framework here also applies to conjunctions and disjunctions. Recall from Chapter 3 that there are problems with characterizing the propositions expressed by conditionals with normative sentences as constituents. Here are the relevant expression relations:

\begin{align*}
(5) & \text{ if } a \text{ is F then } b \text{ is G} \quad \text{expresses} \\
& \vdash \langle \langle \neg \vdash \langle a, F \rangle, \neg \vdash \langle b, G \rangle \rangle, \text{COND} \rangle \\
(7) & \text{ if } \phi-\text{ing is required, then } \psi-\text{ing is required} \quad \text{expresses} \\
& \uparrow \langle \langle \neg \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \neg \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \rangle, \_\_ \rangle \\
(14) & \text{ if } a \text{ is F then } \phi-\text{ing is required} \quad \text{expresses} \\
& \uparrow \langle \langle \neg \vdash \langle a, F \rangle, \neg \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \rangle, \_\_ \rangle
\end{align*}

As was described in §3.2, the challenge is to fill in the blank spots ‘\_’ for force-indicators and conditional act-types in the propositions expressed by (7) and (14), and in such a way that the satisfaction-conditions of these propositions are a function
of the meaning of the satisfaction-conditions of its constituents and the meaning of
‘if_ then _’.

At this point, there are essentially three options available for filling in the blank
positions for the propositions expressed by (7) and (14): (i) suppose that $\uparrow$ takes
wide scope position and $\text{COND}_A$ is the conditional act-type, (ii) suppose that $\vdash$ takes
wide scope position and $\text{COND}$ is the conditional act-type, or (iii) something else.\(^4\)
Here I will choose the third option, and elect to do something else. The reasons
for doing so are explained in §3.2.2.1, where I argued that even if option (i) might
work for the particular case of (7), it will not work for (14), and that option (ii)
will work for neither (7) nor (14). So, option (iii) seems like the only viable path
forward. To follow this path, I will extend Hanks’ theory again by providing two new
force-indicators and four new logical relations. These force-indicators and relations
are designed to be generalizations of already existing force-indicators and logical
relations. In §5.2.1 I will describe this extension, give three examples to show how it
addresses the challenge posed by the conditionals (5), (7) and (14), and then consider
some objections.

5.2.1 A (New) New Extension

The Frege-Geach problems arise in part because there is a uniformity in the s-logical
relations between descriptive and normative declarative sentences that is not repli-
cated at the level of the propositions (assertive or normative) that these sentences

\(^4\)In ft. 18 from 4.1.2.2 I referred to a fork in the road. This is that fork. The interested reader
is referred to Schroeder (2008a:90-93) to see why when he is confronted with an analogous fork for
pure expressivism, he choses the analogue of option (i).
express. This lack of uniformity at the propositional level causes problems in particular with explaining the meaning of mixed descriptive-normative sentences like (14). In this section a new extension will be given that is intended to address this issue.

The general idea to be pursued here is to generalize assertive and normative Hanks propositions, the forces of predication and $\land$-predication, and the material conditional, conjunction and disjunction relations. The intent of doing so is to provide a neutral logical framework for both assertive and normative propositions, such that the logical relations are indifferent to the particular properties of assertive and normative propositions that set them apart (like satisfaction conditions, direction of fit, and representational content), but such that the logical relations that obtain between propositions explains the target s-logical properties, and such that the crucial distinction between atomic assertive and normative propositions (as described in the previous section, and especially the expressivist clause c4 from §2.1) is not violated. In the remainder of this section, I will explore one way of implementing this sort of approach. It consists of constructing a new extension that supplements the extension already given in the previous section. Here is how it goes.

First, take the new extension from §5.1, and further extend it by adding two new force-indicators $\oplus$ and $\otimes$, yielding the set \{\$\$, \$\$, $\$, $\$, $\$, $\$\} of force-indicators. For present purposes, $\oplus$ can be thought of as a neutral generalization of both assertion and normative endorsement, and $\otimes$ can be thought of as a neutral generalization of both denial and normative anti-endorsement. The symbols are chosen to correspond roughly to the written symbols of a check mark ‘✓’ and x mark ‘✗’ (respectively)
or to answering ‘yes’ or ‘no’ (respectively) in speech when replying to a question.\(^5\) Whether extending Hanks’ theory with these force-indicators is coherent will be considered at the end of this section in objections and replies.

Second, generalize truth-conditions and SAT\(_N\)-conditions to SAT\(_\oplus\)-conditions, such that for any *assertive* proposition \(p\) (with truth-conditions) and for any *normative* proposition \(q\) (with SAT\(_N\)-conditions) the following generalization conditions hold:

\[
\text{G} \vdash p \text{ is true iff } p \text{ is SAT}_{\oplus}, \text{ and } p \text{ is false iff } p \text{ is NOT-SAT}_{\oplus}.
\]

\[
\text{G} \dashv q \text{ is SAT}_{\chi} \text{ iff } q \text{ is SAT}_{\oplus}, \text{ and } q \text{ is NOT-SAT}_{\chi} \text{ iff } q \text{ is NOT-SAT}_{\oplus}.
\]

The idea is that SAT\(_\oplus\)-conditions are neither truth-conditions nor are they SAT\(_N\)-conditions, and they are completely neutral with respect to concepts like direction of fit or representational content.

Third, take the material conditional, conjunction and disjunction relations from Hanks’ theory, and take the \(\chi\)-conditional relation from §3.2, and replace them with the following \(\oplus\)-relations:

- \(\oplus\)-conditional relation: \(\text{either } \text{is NOT-SAT}_{\oplus} \text{ or } \text{is SAT}_{\oplus}\)
- \(\oplus\)-conjunction relation: \(\text{is SAT}_{\oplus} \text{ and } \text{is SAT}_{\oplus}\)
- \(\oplus\)-disjunction relation: \(\text{either } \text{is SAT}_{\oplus} \text{ or } \text{is SAT}_{\oplus}\)
- \(\oplus\)-negation relation: \(\text{is NOT-SAT}_{\oplus}\)

\(^5\)In this respect, denial is being interpreted rather narrowly here. Hanks (2019:1399) claims that answering ‘no’ to the question ‘is a F?’ is a token of the type \(\vdash \langle a, F \rangle\) but “arguably” not a token of the type \(\vdash \langle \sim \vdash \langle a, F \rangle, \text{NOT-TRUE} \rangle\) or of the type \(\vdash \langle a, \langle \text{NOT}, F \rangle \rangle\). It is in this narrow sense that denial is being used here. Later in §5.3.2 a broader interpretation of it will be considered.
The first three of these are the relations that are expressed by a speaker’s tokening action of the act-types $\text{COND}_{\oplus}$, $\text{CONJ}_{\oplus}$ and $\text{DISJ}_{\oplus}$, and they replace the act-types COND, CONJ and DISJ in Hanks’ theory, as well as $\text{COND}_\lor$ from §3.2. I will say that the act-type of expressing the $\oplus$-negation relation is denoted by ‘$\text{NOT-}\oplus\text{-SAT}$’. This is the generalization of both NOT-TRUE and NOT-SAT$_\lor$.

Then, using the dual function of predicates defined above in §5.1 (and initially used in §4.2.2.2), the natural language relations ‘if _ then _’, ‘_ and _’, ‘either _ or _’ and ‘it is not the case that _’ are taken to indicate the following sets of admissible force-indicators, and to express the following act-types:

- if _ then _ \quad \rightarrow \quad \{\oplus, \otimes, ?\}
  \quad \rightarrow \quad \text{COND}_{\oplus}

- _ and _ \quad \rightarrow \quad \{\oplus, \otimes, ?\}
  \quad \rightarrow \quad \text{CONJ}_{\oplus}

- either _ or _ \quad \rightarrow \quad \{\oplus, \otimes, ?\}
  \quad \rightarrow \quad \text{DISJ}_{\oplus}

- it is not the case that _ \quad \rightarrow \quad \{\oplus, \otimes, ?\}
  \quad \rightarrow \quad \text{NOT-}\oplus\text{-SAT}

As was the case with the new extension in §5.1, these sentential items are semantically
associated with two objects: a set of admissible force-indicators, and an act-type.\(^6\)

The relations that are expressed can be defined as follows, where \(p\) and \(q\) are either assertive propositions, normative propositions, or are Hanks propositions with \(\oplus\) or \(\otimes\) in wide scope position:\(^7\)

\[
\begin{align*}
\bullet \ & \oplus\uparrow\langle\langle \sim p, \sim q \rangle, \text{COND}_\oplus \rangle \text{ is SAT}_\oplus \iff \ & \otimes\uparrow\langle\langle \sim p, \sim q \rangle, \text{COND}_\oplus \rangle \text{ is NOT-SAT}_\oplus \\
& \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad 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\quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \qua
These are the $\oplus$-satisfaction conditions for $\oplus$-conditionals, $\oplus$-conjunctions, $\oplus$-disjunctions and $\oplus$-negations, as one might expect. Notice that there is no direct appeal to the truth-conditions or SAT $N$-conditions of their propositional constituents, but rather only to SAT $\oplus$-conditions. Also, whether the propositional constituents are assertive or normative propositions does not factor into the construction of these propositions. That is, the $\oplus$-relations do not discriminate on the basis of whether the propositions they are applied to are assertive or normative (but they will not hold if applied to interrogative or imperative propositions). Below are three examples to illustrate how this works in the particular cases of the conditionals (5), (7) and (14).

**Example 5.2.1.a.** Consider the conditional (5) with descriptive antecedent and consequent

\[(5) \text{ if } a \text{ is } F \text{ then } b \text{ is } G\]

In uttering this sentence, a speaker $S$ performs the following complex act:

(i) with their utterance of ‘$a$ is $F$’, they simultaneously refer to the object $a$, express the property $F$, indicate the set $\{\vdash, \dashv, ?\}$, select $\vdash$ from this set and predicate $F$ of $a$ (making the proposition $\vdash \langle a, F \rangle$ available for further reference),

(ii) with their utterance of ‘$b$ is $G$’, they simultaneously refer to the object $b$, express the property $G$, indicate the set $\{\vdash, \dashv, ?\}$, select $\vdash$ from this set and predicate $G$ of $b$ (making the proposition $\vdash \langle b, G \rangle$ available for further reference),
(iii) with their utterance of ‘if then’, they simultaneously express the $\oplus$-conditional relation $\text{either}_\oplus$ is NOT-SAT$_\oplus$ or $\text{is}_\oplus$ SAT$_\oplus$ (generating a cancellation context), and indicate the set \{⊕, ⊗, ?\},

(iv) with their utterance of the full sentence ‘if $a$ is F then $b$ is G’, they simultaneously select $\oplus$ from the set \{⊕, ⊗, ?\} and apply the $\oplus$-conditional relation $\text{either}_\oplus$ is NOT-SAT$_\oplus$ or $\text{is}_\oplus$ SAT$_\oplus$ to the propositions $\vdash\langle a, F \rangle$ and $\vdash\langle b, G \rangle$ in the $\oplus$-mood (in a cancellation context).

This act is a token of the type

$$ (5d) \quad \oplus \uparrow \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND}_\oplus $$

The proposition is SAT$_\oplus$ iff either $\vdash\langle a, F \rangle$ is NOT-SAT$_\oplus$ or $\vdash\langle b, G \rangle$ is SAT$_\oplus$. But now the constraint $G_\sim$ from above that links SAT$_\oplus$-values to truth values can be used to conclude that either $\vdash\langle a, F \rangle$ is false or $\vdash\langle b, G \rangle$ is true. These are exactly the conditions under which we would expect the conditional sentence (5) to be true.

Now, consider the sentence

$$ (26) \quad \text{it isn’t the case that if } a \text{ is F then } b \text{ is G} $$

This is apt for analysis with sentential negation, but $S$ could also utter this sentence in the $\otimes$-mood, in which case it expresses

$$ (26a) \quad \otimes \uparrow \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND}_\otimes $$

In performing a token of this type, steps (i)-(iii) are performed exactly as above, but in step (iv) now $S$ selects $\otimes$ from the set of admissible force-indicators and applies the $\oplus$-conditional to the two assertive propositions in the $\otimes$-mood. The expressed proposition is SAT$_\oplus$ iff both $\vdash\langle a, F \rangle$ is SAT$_\oplus$ and $\vdash\langle b, G \rangle$ is NOT-SAT$_\oplus$, and again
using $G_\perp$ to link $\text{SAT}_\perp$-values to truth values it follows that this implies that (26) is true if both $\models \langle a, F \rangle$ is true and $\models \langle b, G \rangle$ is false, which is exactly what is expected.

Finally, suppose that $S$ utters

(27) is it the case that if $a$ is $F$ then $b$ is $G$?

Here, in step (iv) above $S$ selects $?$ from the set of admissible force-indicators and applies the $\oplus$-conditional relation to the two assertive propositions in the interrogative mood. This act is a token of the type

\[(27a) \ ?_\uparrow \langle \langle \neg \models \langle a, F \rangle, \neg \models \langle b, G \rangle \rangle, \text{COND}_\perp \rangle\]

This has as $\text{SAT}_\perp$-conditions a set of answers, and the following hold:

If $a$ is $F$ then $b$ is $G$? Yes.  $\xrightarrow{\text{expresses}} \oplus_\uparrow \langle \langle \neg \models \langle a, F \rangle, \neg \models \langle b, G \rangle \rangle, \text{COND}_\perp \rangle$

If $a$ is $F$ then $b$ is $G$? No.  $\xrightarrow{\text{expresses}} \otimes_\uparrow \langle \langle \neg \models \langle a, F \rangle, \neg \models \langle b, G \rangle \rangle, \text{COND}_\perp \rangle$

The $\oplus$-satisfaction conditions of (5d) and (26a) are given above, and as can be seen, they correspond exactly with the truth-conditions of the assertion and of the denial (respectively) of sentence (5). In effect, $\oplus$-satisfaction conditions collapse into truth-conditions when both the antecedent and consequent of the conditional are descriptive. This illustrates how the extension of Hanks’ theory proposed here is minimally disruptive to the base theory.  \textit{End Example 5.2.1.a.}

\textbf{Example 5.2.1.b.} Consider the familiar conditional

(7) \quad \text{if } \phi\text{-ing is required then } \psi\text{-ing is required}

In uttering (7) (in context $c$), a speaker $S$ performs the following complex action:

(i) with their utterance of ‘$\phi$-ing is required’, they perform the complex action
described in Example 5.1.b. step (i) above, making \( \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \) available for reference,

(ii) with their utterance of ‘ψ-ing is required’, they perform a variant the action described in Example 5.1.b. step (i) above, making \( \uparrow \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \) available for reference,

(iii) with their utterance of ‘if then’, they simultaneously express the \( \oplus \)-conditional relation \( \textit{either } \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \textit{ or } \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \textit{ } \) (generating a cancellation context), and indicate the set \( \{\oplus, \otimes, ?\} \),

(iv) with their utterance of the full sentence ‘if φ-ing is required then ψ-ing is required’, they simultaneously select \( \oplus \) from the set \( \{\oplus, \otimes, ?\} \) and apply the \( \oplus \)-conditional relation \( \textit{either } \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \textit{ or } \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \textit{ } \) to the propositions \( \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \) and \( \uparrow \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \) in the \( \oplus \)-mood (in a cancellation context).

The act described here is a token of the type

\[
(7d) \quad \oplus \langle \langle \sim \uparrow \langle \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \sim \uparrow \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \rangle, \text{COND}_{\oplus} \rangle
\]

This proposition is \( \oplus \)-satisfied if and only if either \( \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \) is \( \text{SAT}_{\oplus} \) or \( \uparrow \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \) is \( \text{SAT}_{\oplus} \) if either \( \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \) is \( \text{NOT-SAT}_{\oplus} \) or \( \uparrow \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle \) is \( \text{SAT}_{\Lambda} \) (where this last result is obtained with an application of \( G \uparrow \) to link \( \text{SAT}_{\Lambda} \)-values to \( \text{SAT}_{\oplus} \)-values). So the satisfaction conditions of this proposition as a whole are determined by the \( \Lambda \)-satisfaction conditions of the embedded normative propositions, in conjunction with the meaning of
the $\oplus$-conditional relation. This essentially provides the basis for a solution to the embedding problem for the conditional (7) (see §5.3 below).

Similarly, by selecting ‘$\otimes$’ from the set of admissible set-indicators in step (iv) above and applying the $\oplus$-conditional in this mood, $S$ can use the sentence

(28) it isn’t the case that if $\phi$-ing is required, then $\psi$-ing is required
to express the following proposition (alternatively, the speaker could choose to use sentential negation instead of $\otimes$ here):

\[(28a) \otimes \langle \sim \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \rangle, \text{COND}_\oplus \]

This proposition is $\oplus$-satisfied if both $\uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$ is SAT and also $\uparrow \langle \sim \vdash \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle$ is NOT-SAT.

Finally, the speaker can select ‘?’ from the same set and apply the $\oplus$-conditional in the interrogative mood when uttering

(29) is it the case that if $\phi$-ing is required, then $\psi$-ing is required?

Here, the following proposition is expressed:

\[(29a) \langle \sim \uparrow \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle \rangle, \text{COND}_\oplus \]

Then ‘if $\phi$ is required then $\psi$ is required? Yes.’ expresses (7d), and ‘if $\phi$ is required then $\psi$ is required? No.’ expresses (28a).

All of this provides a way of addressing the problem from Chapter 3 of determining what the wide-scope force indicator of the proposition expressed by (7) is, along with how the conditional relation should be characterized. Recall that in the Claim 3.1$_{HS}$, which was a central focus of Chapter 3, Hom and Schwartz maintained that (7) expresses a normative proposition. Here, that claim is rejected, and it is maintained that (7) expresses the $\oplus$-proposition (7d), with $\oplus$ in wide scope position and
with $\text{COND}_\oplus$ as the conditional act-type. This answers one of the main outstanding questions from Chapter 3, namely how to characterize the proposition expressed by the conditional sentence (7).

Example 5.2.1.c. Consider the mixed descriptive-normative conditional

\[
(14) \quad \text{if } a \text{ is } F \text{ then } \phi\text{-ing is required}
\]

Recall from §3.2 it was argued that even if there was a solution to the Frege-Geach problem for the conditional (7), this would not solve the problem for the mixed conditional (14). Here, with the generality afforded by the new force-indicators and conditional relation, there is a way to address the problem for mixed conditionals. Here is how it goes: in sincerely uttering (14) a speaker performs the following complex action:

(i) with their utterance of ‘$a$ is $F$’, they perform the complex action described in

Example 5.1.a step (i) above, making $\vdash \langle a, F \rangle$ available for reference,

(ii) with their utterance of ‘$\phi$-ing is required’, they perform the action described in Example 5.1.b step (i) above, making $\dagger \langle \sim \vdash \langle \text{you, } \Phi\text{-ING} \rangle, \text{OB} \rangle$ available for reference,

(iii) with their utterance of ‘if then’, they simultaneously express the $\oplus$-conditional relation \textit{either} \_ is NOT-SAT$_\oplus$ \textit{or} \_ is SAT$_\oplus$ (generating a cancellation context), and indicate the set \{\$\oplus, \otimes, \?\},

(iv) with their utterance of the full sentence ‘if $a$ is $F$ then $\phi$-ing is required’, they simultaneously select $\oplus$ from the set \{\$\oplus, \otimes, \?\} and apply the $\oplus$-conditional
relation either is NOT-SAT$_\oplus$ or is SAT$_\oplus$ to the propositions $\vdash \langle a, F \rangle$ and $\uparrow \langle \sim \vdash \langle you, \Phi-ING \rangle, OB \rangle$ in the $\oplus$-mood (in a cancellation context).

The action described here is a token of the type

$$(14b) \quad \oplus \uparrow \langle \langle \sim \vdash \langle a, F \rangle, \sim \uparrow \langle \sim \vdash \langle you, \Phi-ING \rangle, OB \rangle \rangle, COND_{\oplus} \rangle$$

This is the proposition expressed by the mixed conditional (14). It is $\oplus$-satisfied if either $\vdash \langle a, F \rangle$ is false or $\uparrow \langle \sim \vdash \langle you, \Phi-ING \rangle, OB \rangle$ is SAT$_\Lambda$.

Just as in the previous two examples, by selecting and applying other available admissible force-indicators in step (iv) to the propositional constituents made available in steps (i)-(iii), the sentence

$$(30) \quad \text{it's not the case that if } a \text{ is } F \text{ then } \phi\text{-ing is required}$$

can be used by $S$ to express

$$(30a) \quad \otimes \uparrow \langle \langle \sim \vdash \langle a, F \rangle, \sim \uparrow \langle \sim \vdash \langle you, \Phi-ING \rangle, OB \rangle \rangle, COND_{\otimes} \rangle$$

and the sentence

$$(31) \quad \text{is it the case that if } a \text{ is } F \text{ then } \phi\text{-ing is required?}$$

can be used to express

$$(31a) \quad ? \uparrow \langle \langle \sim \vdash \langle a, F \rangle, \sim \uparrow \langle \sim \vdash \langle you, \Phi-ING \rangle, OB \rangle \rangle, COND_{\otimes} \rangle$$

Answering in the affirmative to this question posed by (31) is equivalent to expressing (14b), and answering in the negative is equivalent to expressing (30a).

This gives an account of the proposition expressed by the mixed descriptive-normative conditional (14).

End Example 5.2.1.c.

These three examples are intended to demonstrate how, by extending Hanks’ theory to include $\oplus$ and $\otimes$, accounts of the propositions expressed by the condi-
tional sentences (5), (7) and (14) can be given. In particular, they are intended to show how the satisfaction-conditions of the propositions expressed are functions of the satisfaction-conditions of the propositions expressed by their sub-sentences and of the meaning of ‘if_then_.’ A similar account can be given for the sentential negation of atomic normative sentences, as is illustrated in the next example.

Example 5.2.1.d. In Objection 4.2.2.2.b from Chapter 4 it was charged that the HS-expressivist accounts of negation in that chapter did not consider Hanks’ sentential negation for normative propositions. More specifically, it was argued that there is no clear way to specify the proposition expressed by the following sentence:

\( \text{(24) it is not the case that } \phi \text{-ing is required} \)

Now, however, an account can be given that treats sentential negation as a logical relation just like the conditional, conjunction and disjunction relations. On the account of \( \oplus \)-negation here, the proposition expressed by (24) can be given as follows:

\( \text{(24e) } \oplus_{1}\langle \sim \rangle_{1}\langle \sim \rangle_{1}\langle \sim \rangle_{1}\langle \text{you, } \Phi \text{-ING}, \text{ OB}, \text{ NOT-} \oplus \text{-SAT} \rangle \)

Recall that one of the problems with specifying the proposition expressed by (24) that was encountered in the original objection was that there was no obvious way of choosing which of \( \vdash \) and \( \dagger \) took wide scope position. Here, that problem is solved by using the force-indicator \( \oplus \), in conjunction with the act-type NOT-\( \oplus \)-SAT. This gives an account of sentential negation that applies uniformly to assertive and normative propositions, and that avoids the problems identified previously in Objection 4.2.2.2.b.

End Example 5.2.1.d.
Recall that the purpose of constructing this extension is to provide a uniformity at the level of propositions that replicates the uniformity of the $s$-logical relations that hold at the level of declarative (descriptive and normative) sentences. The extension makes some progress in doing so by providing a neutral logical framework that applies uniformly to both assertive and normative propositions, and that allows for these different kinds of objects with different (and incompatible) properties to mingle seamlessly in a way that mirrors the $s$-logical relations that their corresponding sentences (and sub-sentences) stand in. The framework is neutral to the extent that truth-conditions, $\text{SAT}_A$-conditions, representational content, expressive content, assertive force, normative endorsement, and direction-of-fit are not properties that are even registered by $\oplus$-relations or applications of these relations in the $\oplus$-mood. That is, all of the properties of assertive and normative propositions that prevent them from ‘playing nicely’ together are simply ignored by the $\oplus$-relations, and the only properties that matter are those that they have in common, namely that these propositions are expressed by declarative sentences, and that they have $\text{SAT}_{\oplus}$-conditions.

However, this neutrality and generality does not entail that the boundary between assertive and normative propositions ceases to exist. On the contrary, for the propositions expressed by atomic descriptive and normative sentences like (1) and (6), these boundaries remain, just as they were established by the extension given in §5.1. This is due to two things: first, that in Hanks’ theory force is a part of propositional content, and second, that in cancellation contexts this force is canceled, but since the corresponding act of predication still occurs in such contexts the
relevant force-indicator is still a constituent of the proposition expressed. That is, the force-indicator of a proposition is not erased or destroyed when embedded, even though its assertive or normative force is canceled. Upon extracting a proposition from a cancellation context, this canceled force is restored. Here is a visual representation of this, using the informal notion of a decomposition tree from §3.2.1 for the proposition (14b), which displays the propositions expressed by the antecedent and consequent of (14):\(^8\)

\[
\oplus^\dagger \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_B
\]

Notice that upon decomposition of the proposition, the propositions \(\vdash \langle a, F \rangle\) and \(\vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle\) appear just as they are when expressed by (1) and (6) (respectively) in unembedded contexts. This is intended to illustrate how all of the properties of assertive and normative propositions that serve to distinguish them (including satisfaction conditions, direction of fit and wide-scope force-indicator) are preserved under embedding, and available upon extraction (for example, the proposition expressed by the consequent in (14) is extracted with an application of modus ponens). The point is that the neutrality of the framework here retains the crucial distinctions and boundaries between atomic descriptive and normative

\[^8\text{A full decomposition tree would also have a node containing the proposition } \vdash \langle \text{you}, \Phi-\text{ING} \rangle \text{ underneath the node containing } \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_B. \text{ This node has been omitted here to display just the propositions expressed by the antecedent and consequent (and not their sub-propositions).} \]
sentences, and all of the assertive and normative content of embedded sentences is canceled and quarantined under embeddings but is fully recoverable upon extraction.

All of this can be viewed as a positive result. However, without an explanation of what kind of act uttering a sentence in the $\oplus$-mood is, and of what commitments it incurs on a speaker who applies it, there is the risk that the description of the extension given in this section does not amount to much more than empty symbol-shuffling. This and other issues will be considered in the following two objections.

**Objection 5.2.1.a.** The description of the extension gives a formal account of the propositions expressed by the conditional sentences (5), (7) and (14), as well as an account of the proposition expressed by the sentence (6) under sentential negations. But there is an explanatory deficiency with the accounts given here. In particular, there is no explanation for (i) what the direction of fit of $\oplus$-propositions are, (ii) what token speech acts and mental states $\oplus$-propositions are types of, and (iii) what commitments such token acts impose on speakers. In short, it does not explain what $\oplus$-propositions are.

*End Objection 5.2.1.a.*

**Reply to Objection 5.2.1.a.** In the interest of giving an account of the conditional, conjunction, disjunction and sentential negation relations that diverges minimally from their meaning in Hanks’ base theory, but that still accommodates the extension, I will say that $\oplus$-propositions have mind/word-to-world direction of fit, that they have representational content, that they are associated with cognitive mental states, and that they commit the speaker to the world being a certain way. This may seem
like ⊕-propositions are being assimilated to assertive propositions with ⊢ in wide scope position, but as I will explain this is not quite the case.

First, it may be helpful to recall what is going on with the atomic descriptive sentence (1), and the assertive proposition that it expresses:

\[(1) \quad a \text{ is } F \quad \xrightarrow{\text{expresses}} \quad \vdash \langle a, F \rangle\]

In tokening the type \(\vdash \langle a, F \rangle\) a speaker (in short) refers to the object \(a\) and predicates the property \(F\) of this object. In terms of the direction of fit metaphor, \(a\) is an object in the world, and in predicating \(F\) of this object the speaker says something about the object \(a\), they commit themselves to \(a\) having the property \(F\), and in so doing they attempt to fit their mind to the world by forming the belief that \(a\) is \(F\). Here, what objects populate the world are not specified, but it seems reasonable to assume that they include at least physical objects, mathematical objects and fictional objects.

This informs how ⊕-propositions should be thought about. For example, consider the conditional sentence (14) and the ⊕-proposition (14b) that it expresses. In tokening this type a speaker is saying something about pairs of objects, namely that two specific propositions stand in the ⊕-conditional relation. That is, in sincerely uttering (14), a speaker is saying that either the proposition \(\vdash \langle a, F \rangle\) has the property of being NOT-SAT\(_{⊕}\) or the proposition \(\vdash \langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle\) has the property of being SAT\(_{⊕}\). They are saying something about propositions, they are trying to accurately represent states of affairs concerning propositions, they are committed to these propositions having these properties, and trying to make their mind fit to these states of affairs concerning propositions. That they are saying something about properties of propositions is reflected in Hanks’ notation ‘\(\vdash\)’ indicating target-shifting.
On this view, atomic assertive propositions like $\vdash \langle a, F \rangle$ have much in common with $\oplus$-propositions like (14b). The salient difference is that in the latter case the world of objects and facts that the mind is fitting to with token acts of this type is a world that consists only of assertive and normative propositions. This ‘world’ consists of a set of abstract, mind-independent types of physical events or actions. To mark this difference, I will distinguish the world as it is in the original direction of fit metaphor, from the ‘$p$-world’ (or ‘world of propositions’) consisting of the set of all assertive, normative and $\oplus$-propositions.

What is the point of introducing this distinction? In short, it is to introduce what can be described as something like a buffer, or an intermediate logical layer, that stands between mind/word and the world in the direction of fit metaphor. This logical layer is such that $\oplus$-propositions do not directly say anything about how states of affairs in the world are, or how they should be, but their (canceled) assertive and normative sub-propositions do make claims about how the world is or should be.

Here is an example to help illustrate this. In sincerely uttering the mixed declarative-normative conditional (14), a speaker commits themselves to the propositions $\vdash \langle a, F \rangle$ and $\uparrow \langle \neg \vdash \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$ standing in the $\oplus$-conditional relation. That is, they are committed to either the former proposition being NOT-SAT$_{\oplus}$ or the latter proposition being SAT$_{\oplus}$. In this respect, in uttering (14) they directly represent states of affairs in the $p$-world, and have a direct commitment to the way things are in this world of propositions, namely that these two propositions have certain properties. However, in making these commitments, secondary or downstream commitments are also incurred, namely the commitment that either $a$ is not $F$ or that
φ-ing is required—the former of which has mind/word-to-world direction of fit and representational content, and the latter of which has world-to-mind/word direction of fit and normative content. That is, the speaker incurs commitments about the way that the world is and the way it should be, but these commitments are secondary, and merely entailed by the prior commitment to facts in the p-world of which they are directly talking about with their utterance of (14).

It is in this sense that the p-world functions as a buffer between mind/word and the world itself, and in having ⊕-propositions have mind/word-to-p-world direction of fit, it allows for both assertive and normative propositions to stand in logical relations uniformly, as determined by the ⊕-relations. Furthermore, even though ⊕-propositions are representational, this does not in any way assimilate normative propositions to assertive propositions, since at the atomic level they retain all of their normative properties, in accordance with the core constraints c1′-c4.

All of this provides a reply to the original objection. First, ⊕-propositions are taken to have mind/word-to-p-world direction of fit (but contain embedded propositions that can have any of mind/word-to-world, world-to-mind/word or mind/word-to-p-world direction of fit). Second, token speech acts of these types are like a kind of assertion (but more general than usual predication), and the corresponding mental states are more like cognitive states (but specifically and only cognitive states about

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The notion of such a buffer (or separate p-world) is consistent with Hanks' base theory however, since, for example, an assertive proposition like ⊢↑⟨⟨¬⊢⟨a, F⟩, ¬⊢⟨b, G⟩, COND⟩⟩ is a type of a token act of saying something about properties that its embedded propositions have, as is indicated by the ↑ notation of target-shifting (where the target of predication is a pair of propositions, not objects a and b in the world). Here, the same buffer or logical layer can be introduced, but it ends up being largely superfluous since the embedded propositions both have mind/word-to-world direction of fit.
properties of propositions). Third, $\oplus$-propositions impose both direct and derivative commitments on a speaker—the direct commitments are to embedded propositions standing in the relevant $\oplus$-logical relation and either being $\text{SAT}_\oplus$ or $\text{NOT-SAT}_\oplus$, while the derivative commitments are those that would normally be incurred by the respective embedded propositions when they are unembedded. This in part explains what $\oplus$-propositions are, and how they differ from assertive and normative propositions.\footnote{As a side note, given these properties of $\oplus$-propositions it seems natural to further partition the set of declarative sentences into descriptive sentences (like (1)), normative sentences (like (6)) and compound sentences (like (5), (7), (14), or any other declarative sentence of the form ‘if_then_’, ‘_and_’ or ‘either_or_’.)}

\textit{End Reply.}

Objection 5.2.1.b. $\text{SAT}_\mathcal{N}$-conditions are an important part of the analysis. But these have not been defined. So, the account is incomplete without specifying what $\text{SAT}_\mathcal{N}$-conditions are.

\textit{End Objection 5.2.1.b.}

Reply. It is true that a full (or even partial) account of $\text{SAT}_\mathcal{N}$-conditions have not been given. In §3.2 I very briefly considered accounts that might be inspired by Blackburn (1988) and Gibbard (2003), but did not adopt versions of either. Rather, the aim throughout has been to assume that $\text{SAT}_\mathcal{N}$-conditions have a set of general properties that distinguish them from truth-conditions and that are consistent with the core expressivist constraints $c_1'$-$c_4$, and then, given that, grapple with the cluster of Frege-Geach problems that arise from this.

This might seem to be an attempt to dodge the objection, but it’s not clear to me that it is. This is because specifying general properties that normative propositions
have is essentially what is done in Hanks’ (2015) when assertive, interrogative and imperative propositions are introduced. There, satisfaction-conditions for various kinds of propositions are very generally defined as a means of classifying them, but little fine-grained or detailed analysis is given, since little is required to establish the general classification scheme. That is consistent with what I’ve attempted to do with normative propositions and $\text{SAT}_A$-conditions, in particular with respect to distinguishing these objects from assertive propositions and truth-conditions. Furthermore, these items have been defined broadly enough that they can accommodate a range of more detailed expressivist explanations, but still narrowly enough that logical relations can be imposed upon normative propositions and such that the boundary between descriptive and normative discourse is maintained. In my view, this seems like a positive result, and to this extent it addresses the objection.

End Reply.

5.2.2 Summary

In this section a new extension was given that is intended to supplement the extension that was given already in §5.1. There, the semantics for atomic descriptive and normative sentences like (1) and (6) was given. Here, the semantics for conditionals, conjunctions, disjunctions and sentential negations was given. The general idea that was followed was to generalize assertion and normative endorsement, generalize the conditional, disjunction, conjunction and sentential negation relations, generalize truth and $\text{SAT}_A$-satisfaction conditions, and give a new semantic map for the $s$-logical relations. Then, in effect, the already-existing and well-understood logic
for assertive propositions was generalized to a neutral form that could accommodate both assertive and normative propositions. Then, this logical structure was imposed on normative propositions, forcing them into logical relations that apply uniformly to assertive and normative propositions, and that replicate the uniformity of the target s-logical relations that hold between descriptive and normative sentences.

In the next section, the familiar Frege-Geach problems will be considered in the context of this new extension of Hanks’ theory.

5.3 The Frege-Geach Problems Revisited

In the previous two sections two new extensions to Hanks’ theory were given. The first was designed to give the semantics for atomic normative and descriptive sentences. The second was designed to give the semantics for conditionals, conjunctions, disjunctions and sentential negations. In each case, arguments were given in defense of the extensions. So, in what follows, I will assume that the extensions are plausible, for the sake of argument, and go on to consider whether they can be used to address the Frege-Geach problem for normative propositions. In §5.3.1 the embedding problem for conditionals will be considered, in §5.3.2 the negation problem will be discussed, and finally in §5.3.3 the inference problem will be addressed.

5.3.1 The Embedding Problem for Conditionals

In §1.1.4.1 and §3.2.2.3 the embedding problem for conditionals containing normative sentences was considered. It was characterized as the problem of specifying Hanks
propositions expressed by the following two sentences, such that the meanings of
the sentences are a function of the meanings of their respective antecedents and
consequents and of the meaning of ‘if_then_’:

(7) if φ-ing is required, then ψ-ing is required
(14) if a is F then φ-ing is required

The two extensions provided above provide a way of addressing this problem. As
was described in Example 5.2.1.b above, the proposition expressed by (7) is

(7d) ⊕↑⟨⟨∼†↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩⟩, COND⟩⟩.

This proposition is ⊕-satisfied iff either ⊤↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩⟩ is NOT-SAT or
†↑⟨∼⊢⟨you, Ψ-ING⟩, OB⟩⟩ is SAT. Then, applying the generalization principle G†
that links SAT-values to ⊕-values, this implies that (7) is SAT if either ⊤↑⟨∼⊢⟨you, Φ-ING⟩, OB⟩⟩ is NOT-SAT or †↑⟨∼⊢⟨you, Ψ-ING⟩, OB⟩⟩ is SAT. This gives
the satisfaction conditions for the conditional sentence (7), as a function of the
satisfaction conditions of its subsentences and of the meaning of ‘if_then_’.

Also, as was described in Example 5.2.1.c above, the proposition expressed by
the mixed descriptive-normative conditional (14) is

(14b) ⊕↓⟨⟨∼ †↓⟨∼ ⊨ ⟨a, F⟩⟩, ∼ †↓⟨∼ ⊨ ⟨you, Φ-ING⟩, OB⟩⟩, COND⟩⟩.

This proposition is ⊕-satisfied iff either ⊨ ⟨a, F⟩⟩ is NOT-SAT or †⟨you, Φ-ING⟩⟩ is
SAT. But now applying both G↓ and G†, this implies that the proposition (14b)
is SAT if either ⊨ ⟨a, F⟩⟩ is false or †⟨you, Φ-ING⟩⟩ is SAT. This explains how
the satisfaction conditions of the conditional (14) are a function of the satisfaction
conditions of its subsentences and of the meaning of ‘if_then_’.

So, the present extension addresses the embedding problem by taking (7) and

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(14) to express the propositions (7d) and (14b), respectively, along with taking the meaning of ‘if_then_’ to be given by the $\oplus$-conditional relation. This provides a formal reply to the embedding problem, but also given the replies to the objections in the previous section, there is an explanation of the acts (spoken or mental) that are tokens of these types. That is, the solution to the embedding problem proposed here is both formally acceptable, and is taken to provide sufficient explanation of what the meanings of (7) and (14) are.

5.3.2 The Negation Problem

In Chapter 4 the negation problem was characterized as the problem of finding propositions expressed by sentences (6), (15), (17) and (18) such that the compositionality, inconsistency, deontic and expressive constraints c6-c9 are satisfied. Given the new map $m'$ and definition of the meaning of ‘required’ from the new extension in §5.1, the following expression relations hold:

\[
\begin{align*}
(6) \quad \phi\text{-ing is required} & \quad \xrightarrow{\text{expresses}} \tup (\vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB}) \\
(15) \quad \phi\text{-ing is not required} & \quad \xrightarrow{\text{expresses}} \tup (\vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB}) \\
(17) \quad \text{not } \phi\text{-ing is required} & \quad \xrightarrow{\text{expresses}} \tup (\vdash \langle \text{you}, \langle \text{NOT}, \Phi\text{-ING} \rangle \rangle, \text{OB}) \\
(18) \quad \text{not } \phi\text{-ing is not required} & \quad \xrightarrow{\text{expresses}} \tup (\vdash \langle \text{you}, \langle \text{NOT}, \Phi\text{-ING} \rangle \rangle, \text{OB})
\end{align*}
\]

For the inconsistency and deontic constraints to be satisfied, the relations displayed in the following figure must hold, and there must be some explanation for why they hold:\textsuperscript{11}

\textsuperscript{11}Here, $\chi_{opt}$ is an abbreviation for the following conjunctive proposition:

$\oplus \tup (\tup (\vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB}), \tup (\vdash \langle \text{you}, \langle \text{NOT}, \Phi\text{-ING} \rangle \rangle, \text{OB}), \text{CONJ}_c)$

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First, the expressive and compositionality constraints hold for the same reasons that they held in §4.2.2.1.1. The challenge is explaining why the inconsistency and deontic constraints are satisfied. This challenge is compounded by Objection 4.2.2.2.a, which charged that the force of normative endorsement must have some property that explains why the constraints hold.

In the case of the inconsistency constraint, this property is that normative endorsement stands in opposition to normative anti-endorsement in a way that correlates with the opposition between assertion and denial. This was first explored in §4.2.2.1.1 where the initial interpretation of ↑ and ↓ as normative correlates of ⊢ and ⊣ was given. As formal representations of these intuitive notions of standing in opposition, consider the following two equivalences (where e9 was originally from §4.2.2.1.1, and e11 is new):
$e_9$. $\vdash \langle a, F \rangle$ is $l$-inconsistent with $\not\vdash \langle a, F \rangle$

$e_{11}$. $\uparrow\vdash \langle \neg \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle$ is $\mathcal{N}$-inconsistent with $\downarrow\vdash \langle \neg \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle$

The first equivalence holds in Hanks’ base theory. If the second equivalence holds then the inconsistency constraint is satisfied, but it has not been shown to hold yet, because $\mathcal{N}$-logical relations and $\text{SAT}_{\mathcal{N}}$-conditions have not been given precise definitions.

So how might this be done? Here, the neutral logical framework of the extension from §5.2 can be deployed to provide an explanation. The general idea that can be followed here is essentially the same as the one that was followed there: first, generalize $l$-logical relations that obtain between assertive propositions to the neutral framework to give isomorphic $\oplus$-logical relations that hold between $\oplus$-propositions. Then, impose those $\oplus$-relations on normative propositions, forcing $\mathcal{N}$-logical relations to obtain that are structurally isomorphic to the original $l$-logical relations.

In short (and abusing some notation for purposes of illustration), since for every assertive proposition $\vdash p$ there is no assignment of truth-values such that both $\vdash p$ and $\not\vdash p$ can be true, it follows that there is no assignment of $\text{SAT}_{\oplus}$-values such that $\oplus\vdash \langle (\vdash p, \not\vdash p) \rangle$, $\text{CONJ}_{\oplus}$ is $\text{SAT}_{\oplus}$. But since $\uparrow$ and $\downarrow$ are the normative correlates of $\vdash$ and $\not\vdash$, it follows that for every normative proposition $\uparrow q$, there also is no assignment of $\text{SAT}_{\oplus}$-values such that $\oplus\vdash \langle (\uparrow q, \downarrow q) \rangle$, $\text{CONJ}_{\oplus}$ is $\text{SAT}_{\oplus}$. But then this imposes $\mathcal{N}$-logical relations on normative propositions, since it implies that there is no assignment of $\text{SAT}_{\mathcal{N}}$-values such that both $\uparrow q$ and $\downarrow q$ are $\text{SAT}_{\mathcal{N}}$. That is, $\uparrow q$ and $\downarrow q$ are $\mathcal{N}$-inconsistent, equivalence $e_{11}$ holds, and the inconsistency constraint is satisfied.
So, all that remains is to explain why the deontic constraint is satisfied. That is, some explanation must be given for why (15) and (17) are not $s$-equivalent, why (17) $s$-entails (15), and why (15) and (18) are $s$-consistent. Here, the same general idea will be used (but with a wrinkle): first, generalize from the relevant $l$-logical relations to $\oplus$-relations, and then impose these on normative propositions, forcing isomorphic $\mathcal{N}$-logical relations to obtain. The wrinkle here is that there do not exist any assertive propositions of the form $\vdash \downarrow \langle \neg \vdash \langle \textit{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$ that can be abstracted from to obtain generalized $\oplus$-relations. This is due to the semantics for ‘required’ from the new extension in §5.1, which prohibits OB from being applied in the assertive mood, due to the corresponding set of admissible force indicators $\{\dagger, \dagger, ?\}$.

A way of smoothing out this wrinkle is to simply suppose temporarily that the relevant assertive propositions exist, along with the relevant $l$-logical relations that would obtain between them if they were to exist, and generalize those to $\oplus$-relations that can then be used to generate $\mathcal{N}$-logical relations that obtain between the relevant normative propositions that do exist.

For example, suppose that the following two assertive propositions exist:

(15b) $\vdash \downarrow \langle \neg \vdash \langle \textit{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$

(17c) $\vdash \downarrow \langle \neg \vdash \langle \textit{you}, \langle \textit{NOT}, \Phi-\text{ING} \rangle \rangle, \text{OB} \rangle$

Here, since tokens of the act type OB express the property _is obligatory_, and since this has the logical properties of the deontic operator of obligation, it follows that (17c) $l$-entails (15b). That is, there is no assignment of truth-values such that (17c) is true and (15b) is false. Generalizing this to the neutral $\oplus$-logical framework implies

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$\dagger$The line of argumentation here could also use $\vdash \downarrow \langle \neg \vdash \langle \textit{you}, \Phi-\text{ING} \rangle, \langle \textit{NOT}, \text{OB} \rangle \rangle$ instead of (15b) here, since these two propositions are $l$-equivalent. 

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that there is no assignment of \(\text{SAT}_\oplus\)-values such that the following proposition is NOT-SAT\(_\oplus\):

\[
(32) \oplus_\uparrow \langle \sim \uparrow \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle, \text{OB} \rangle, \ \sim \downarrow \langle \sim \downarrow \langle \text{you}, \langle \Phi-\text{ING} \rangle \rangle, \text{OB} \rangle \rangle, \text{COND}_\oplus
\]

But since \(\uparrow\) and \(\downarrow\) are the normative correlates of \(\uparrow\) and \(\downarrow\), it follows that also there
is no assignment of \(\text{SAT}_\oplus\)-values such that the following proposition is NOT-SAT\(_\oplus\):\(^{13}\)

\[
(33) \oplus_\uparrow \langle \sim \uparrow \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle, \text{OB} \rangle, \ \downarrow \uparrow \langle \sim \downarrow \langle \text{you}, \langle \Phi-\text{ING} \rangle \rangle, \text{OB} \rangle \rangle, \text{COND}_\oplus
\]

This in turn has implications for the embedded normative propositions, since it
imposes \(\mathcal{N}\)-logical constraints on them. In particular, it implies that there is no
assignment of \(\text{SAT}_\mathcal{N}\)-values such that (17c) is SAT\(_\mathcal{N}\) and (15b) is NOT-SAT\(_\mathcal{N}\). That is,
(17c) \(\mathcal{N}\)-entails (15b). But this explains why the sentence (17c) s-entails the sentence
(15b), which satisfies part of the deontic constraint.

The same general line of reasoning can be used to explain why (15) and (17)
are not s-equivalent, and why (15) and (18) are s-consistent. Doing this provides a
complete explanation for why all of the relevant deontic relations illustrated in Figure 5.3.2
above obtain, and consequently also explains why the deontic constraint
is satisfied.

As a corollary, this proposed solution also shows how Objection 4.2.2.2.a from
\$4.2.2.2 can be avoided with the present approach. Recall that this objection charged
that many of the \(\text{HS}\)-expressivist strategies for addressing the negation problem that
were considered in Chapter 4 encounter a problem. The problem is that the force of
normative endorsement must have some property \(P_{\mathcal{N}}\) that explains why the inco-

\(^{13}\)One might wonder why the instances of \(\uparrow\) in narrow scope are not also replaced by \(\uparrow\). This is
because \(\phi\)-ing' indicates the set of admissible force indicators \(\{\uparrow, \downarrow, \sim\}\) (from the new extension in
\$5.1), and hence \(\uparrow\) is not permitted to appear in this position.
sistency and deontic constraints are satisfied, but that no such property is readily available. In the reply to this objection (again in §4.2.2.2), a solution to the problem was gestured at that consisted in defining SAT_N-conditions for atomic normative propositions, and then defining \( N \)-logical relations that obtain between these propositions. This involves a ‘bottom-up’ approach that is difficult to implement in practice, given that clearly specifying what the SAT_N-conditions of normative propositions are is challenging (let alone defining \( N \)-logical relations out of these).

The proposed solution here, on the other hand, avoids this problem by implementing a ‘top-down’ approach where \( N \)-logical relations are imposed on normative propositions from the outside with the \( \oplus \)-logical framework. To the extent that there is any property \( P_N \) of normative endorsement that explains why the inconsistency and deontic constraints are satisfied, it is that \( \uparrow \) is the normative correlate of \( \vdash \) (and \( \downarrow \) of \( \neg \)). But this only provides a partial explanation—imposing the \( \oplus \)-logical framework is doing the bulk of the explanatory work here.

At various points in the dissertation I have noted that SAT_N-conditions for atomic normative sentences have not been defined, that defining them is a challenge, and that I am going to avoid defining them. At the time this may have seemed like I was neglecting a critical aspect of the HS-expressivist semantics, but the ‘top-down’ approach used here illustrates why I did this. It was because the desired \( N \)-logical relations on normative propositions can be obtained by imposing the \( \oplus \)-logical framework on them, and all without giving more than a very general account of the properties of atomic normative sentences (namely that they are non-representational, have world-to-mind direction of fit, are action-guiding, and so on, as was described
in §2.1). This seems to me to be a more efficient method for addressing the Frege-Geach problems than the ‘bottom up’ approach described above, and was a primary motivation behind the construction of the neutral ⊕-logical framework in §5.2.

In summary, by interpreting † and ‡ such that they are the normative correlates of ⊩ and ⊳, and by using the neutral ⊕-logical framework to impose N-logical relations on normative propositions, the inconsistency and deontic constraints can be satisfied. This marks an improvement over the proposed HS-expressivist solutions to the negation problem that were considered in Chapter 4.

5.3.3 The Inference Problem

Recall from §1.1.4.4 that the inference problem for normative propositions is to explain why the argument A2 is valid. Here are the relevant sentences:

1. if φ-ing is required, then ψ-ing is required
2. φ-ing is required
3. ψ-ing is required

So, the task is to explain why the argument (as a set of sentences) is s-valid, or equivalently, why the set (7), (6) and the negation of (9) is s-inconsistent. Now that accounts of the propositions expressed by these sentences have been given, due to the proposed resolution to the embedding problem, an account of the validity of the argument can also be given.

To do this, the notion of SAT⊕-conditions can be used to give a definition of validity. An argument A is ⊕-valid if the following holds: if the propositions expressed by the premises of A are SAT⊕, then the proposition expressed by the conclusion of
A must also be SAT$_\oplus$.

This definition can be used to explain why the argument A2 is valid. Here are the propositions expressed by the premises and conclusion, respectively:

(7d) $\oplus_\uparrow \langle \neg \uparrow \neg \leftarrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \sim \uparrow \neg \leftarrow \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle$, COND$_\oplus$.

(6c) $\uparrow \leftarrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$

(9b) $\uparrow \leftarrow \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle$

The explanation for why this argument is valid is relatively straightforward. Unsurprisingly, it makes use of the neutrality afforded by the $\oplus$-logical framework that was defined in §5.2 and that was used to effect in addressing the embedding and negation problems in the previous sections.

To see this, first suppose that the conditional sentence (7d) is $\oplus$-satisfied. Then either $\uparrow \leftarrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$ is NOT-SAT$_\oplus$ or $\uparrow \leftarrow \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle$ is SAT$_\oplus$. Also, suppose that (6c) is $\oplus$-satisfied. Then $\uparrow \neg \leftarrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$ is SAT$_\oplus$. So $\uparrow \leftarrow \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle$ must also be SAT$_\oplus$. That is, the argument is $\oplus$-valid.

This account of validity can also be used to explain the apparent validity of mixed descriptive-normative arguments like the following (call this argument A4):

(14) if $a$ is F then $\phi$-ing is required

(1) $a$ is F

(6) $\phi$-ing is required

The propositions expressed by these sentences are as follows:

(14b) $\oplus_\uparrow \langle \leftarrow \langle a, F \rangle \rangle, \sim \uparrow \leftarrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$, COND$_\oplus$

(1a) $\leftarrow \langle a, F \rangle$

(6c) $\uparrow \leftarrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle$
Just as above, if (14b) and (1b) are $\text{SAT}_\delta$, then (6c) must also be $\text{SAT}_\delta$. That is, the argument is $\oplus$-valid.

This explains why the arguments $\text{A}_2$ and $\text{A}_4$ are valid, and constitutes a possible solution to the inference problem. Again, just as above, this is not just an empty formalism. There is an explanation of the tokens that are types of the propositions that these arguments consist of.

5.3.4 Results

In this section the Frege-Geach problems for normative propositions were revisited. The solutions that were proposed here used the two new extensions that were defined in §5.1 and §5.2. The extension from §5.1 involved, among other things, interpreting $\dagger$ and $\downarrow$ as being the normative correlates of $\vdash$ and $\dashv$, respectively. Most importantly, in §5.2 a neutral $\oplus$-logical framework was constructed, and in it $\oplus$-logical relations that obtain uniformly between assertive and normative propositions were defined. With these resources available, solutions to the embedding, negation and inference problems were given in this section. If these solutions are successful, they provide support for Hom and Schwartz’s original claim that there exists a plausible extension of Hanks’ theory that solves the Frege-Geach problem for normative propositions.

5.4 Two Problems With The Extension

While the previous section may be seen as delivering positive results, there are at least two problems with the first new extension from §5.1. Here they are.
Objection 5.4.a. In Hom and Schwartz’s original extension, the sentence (6) expresses the proposition †⟨you, Φ-ING⟩. This is a type of a token action of applying the property of φ-ing to an individual you, and in uttering (6) a speaker S endorses you to be φ-ing. This is consistent with Hanks’ (2019:1400) account of reports of imperatives, like the following (for object a and property F):

(34) S ordered/commanded/told/requested a to be F
(35) S wants/desires a to be F

This naturally suggests that S’s’ utterance of (6) can be reported along the same lines as

(36) S endorses you to be φ-ing

However, with the proposition (6c), namely †⟨~⊢⟨you, Φ-ING⟩, OB⟩, the target of the speaker’s endorsement is a proposition, not the audience of their utterance. So reports of token acts of (6c) would look more like

(37) S endorses ⊢⟨you, Φ-ING⟩ to be obligatory

or

(38) S endorses ⊢⟨you, Φ-ING⟩ to be true in every deontic alternative

But this seems to mean something different than ‘S endorses you to be φ-ing’, in part because the object of endorsement is a proposition, not the speaker’s audience. This suggests that (6c) does not capture the meaning of the sentence ‘φ-ing is required’.

End Objection 5.4.a.
Objection 5.4.b. In the new extension from §5.1, the following expression relation holds:

\[(39) \quad \phi \text{-ing is required} \xrightarrow{\text{expresses}} \Downarrow \langle \sim \vdash \langle \text{you}, \Phi \text{-ING} \rangle, \text{OB} \rangle\]

But it seems plausible that there is a natural language expression, say ‘\(\phi\text{-ing is obligatory}’\’, token utterances of which involve acts of predication, as follows:

\[(40) \quad \phi \text{-ing is obligatory} \xrightarrow{\text{expresses}} \vdash \langle \sim \vdash \langle \text{you}, \Phi \text{-ING} \rangle, \text{OB} \rangle\]

On the surface this does not seem so problematic, since one might hope that a speaker could report that \(\phi\text{-ing is obligatory} \) (say, according to a set of norms) without also endorsing \(\phi\text{-ing} \). But then the following expression relations also hold:

\[(39a) \quad \text{is } \phi \text{-ing required?} \xrightarrow{\text{expresses}} \Downarrow \langle \sim \vdash \langle \text{you}, \Phi \text{-ING} \rangle, \text{OB} \rangle\]

\[(40a) \quad \text{is } \phi \text{-ing obligatory?} \xrightarrow{\text{expresses}} \vdash \langle \sim \vdash \langle \text{you}, \Phi \text{-ING} \rangle, \text{OB} \rangle\]

These two interrogative sentences express the same proposition, which implies that token utterances of each are the same. But this seems wrong, because answering in the affirmative to ‘is \(\phi\text{-ing required} \)’ should be equivalent to (39), and answering in the affirmative to the latter should be equivalent to (40). But these propositions have different satisfaction conditions. This suggests that there is a problem with the account of sentence (6) in the new extension from §5.1.

End Objection 5.4.b.

Reply. Here, I will respond to both of the objections simultaneously. I will not do this by giving replies to them, but rather by noting that even if they hold, the problems that they cause only pertain to the first extension given in §5.1, and that they do not affect the plausibility of the \(\oplus\)-logical framework constructed in §5.2. As
a result, if these two objections do stand, then any number of alternative extensions
can be substituted in for the one given in §5.1 without affecting the plausibility of the
overall approach of the chapter, and in particular without undermining the ⊕-logical
framework. Given the nature of these two objections and the challenges they pose,
attempting to find an alternative extension may be a more effective strategy than
attempting to directly address them.

I will very briefly consider three general approaches that can be taken to replace
the extension in §5.1. I will not pursue any of them in detail here, but rather will
simply enumerate them.

First, one might consider a different version of the HS-expressivist’s second strat-
egy from §4.2.2.2. Recall that there three general forms that the proposition ex-
pressed by (6) might take on were considered. Here are those three general forms:

- **Form 1.** \(\dagger\langle\text{you, a property act type}\rangle\)

- **Form 2.** \(\dagger\ddagger\langle\lambda\langle\text{you, Φ-ING}, a property act type}\rangle\) \(\lambda \in \{\vdash, \dashv, \dagger\}\)

- **Form 3.** \(\dagger\langle\langle\text{you, a proposition}\rangle, \text{ACCEPT}\rangle\).

In the extension given in §5.1 an instance of the second general form was used with
the proposition (6c). However, an alternative extension could be given either by
considering one of the other two general forms, or by providing a different particular
instance of the second form. There are a multitude of possibilities that might be
explored here, especially with the third form.

Second, one might consider a version of the HS-expressivist’s first strategy from
§4.2.2.1. In particular, one might try to use the SDL-interpretation of \(\dagger\) and \(\ddagger\) that
was explored in §4.2.2.1.4. This would avoid any problems that might arise as a result of having OB as a propositional constituent, since it is not used in this approach.

Third, one might try to use Hom and Schwartz’s original extension, but modify the meaning of (6) in an attempt to make the extension more plausible. In particular, one could introduce restrictions on the applications of force-indicators, but deny that ‘required’ expresses an act-type. So, for the term ‘required’ and for any descriptive predicate F, the following expression and indication relations would hold:

\[
\begin{align*}
F & \quad \{\top, \bot, ?\} \\
\text{required} & \quad \rightarrow \quad \{\dagger, \downarrow, ?\}
\end{align*}
\]

It would still be the case that (6) expresses \(\dagger(\text{you}, \Phi-\text{ING})\), but with the specification of these sets of admissible force-indicators, the boundary between atomic normative and descriptive sentences would be maintained and constraint \(c4\) from §2.1 would be satisfied, answering Objection 2.1 against Hom and Schwartz’s original extension. Then, the \(\oplus\)-logical framework from §5.2 could be deployed in an attempt to establish \(\mathcal{N}\)-logical relations between normative propositions. With \(\oplus\)-sentential negation at hand, the inconsistency constraint might be satisfied. However, it is not clear how the deontic constraint would be satisfied on this account. Despite this, the general approach here may be promising.

These three general approaches have been raised here to illustrate how there are multiple ways in which one might attempt to replace the extension given in §5.1 to avoid the objections raised at the beginning of this section. However, I will leave a thorough investigation of them for future work.
5.5 Conclusion

In this chapter, two extensions of Hanks’ theory were given (§§5.1-5.2). The first extension was designed to address the two objections that Hom and Schwartz’s extension faced (from §2.1). It was argued that this new extension avoids these two problems. However, it does not have the explanatory power to address the Frege-Geach problems, so in §5.2 an additional extension was given for this purpose. With this extension, new force-indicators ⊕ and ⊗ were defined, along with corresponding accounts of the meanings of the conditional, conjunction, disjunction and sentential negation relations. In addition to providing a formal account of the propositions expressed by the conditionals (5), (7) and (14), and of the sentential negation of (6), an informal explanation of what these propositions are was given. Then, in §5.3, these two extensions were used to show how the Frege-Geach problems can be addressed.

Recall that Hom and Schwartz’s Main Claim is that if Hanks’ theory of propositions is correct, then there exists a plausible extension of it that readily solves the Frege-Geach problem for normative propositions. In Chapter 2 I argued that Hom and Schwartz’s extension does not meet the standards of plausibility that were set out there, due to two objections. Then in Chapter 3 I argued that there are problems with their proposed solution to the embedding problem, and even if it were correct there is the further problem of mixed descriptive-normative conditionals. In Chapter 4 I considered the negation problem, but was unable to address it satisfactorily there. In Chapter 5 I gave an alternative extension, and argued that it can be used to address the Frege-Geach problems for normative propositions. So, this new extension provides some support for Hom and Schwartz’s Main Claim.
Appendix A

In Defense of the Narrow Scope Reading of Claim 3.1.1

In §3.1.2 I noted that the universal quantification in Explanation 4 can be given two readings, a wide scope reading and a narrow scope reading. I claimed that it should be given a narrow scope reading, and used this to justify the formulation of Claim 3.1.1_{Sc}. In this appendix I will defend this reading of the explanation, and hence also the formulation of Claim 3.1.1_{Sc}. First, I will give the two readings. Then in §A.1 I will argue that the wide scope reading of the claim results in a problem for Schroeder’s argument Arg 3.1.1_{Sc} (and hence also consequently for Hom and Schwartz’s Arg 3.1.1_{HS}). Finally in §A.2 I will briefly present a defense of the narrow scope reading.

Here are the two readings of the explanation:

- **Wide scope.** For every normative modus ponens argument \( \mathcal{M} \), either the at-
titude expressed by the conclusion of $M$ is identical to the attitude expressed by the major premise of $M$, or the attitude expressed by the conclusion of $M$ is identical to the attitude expressed by the minor premise of $M$. This statement is a universally quantified disjunction. Where quantification ranges over normative modus ponens arguments, the form of this can be written as

$$\forall x (\lambda(x) \supset (\varphi(x) \lor \psi(x)))$$

- **Narrow Scope.** Either for every normative modus ponens argument $M$ the attitude expressed by the conclusion of $M$ is identical to the attitude expressed by the major premise of $M$, or for every normative modus ponens argument $M$ the attitude expressed by the conclusion of $M$ is identical to the attitude expressed by the minor premise of $M$. This statement is a disjunction with universally quantified disjuncts. Where quantification ranges over normative modus ponens arguments, the form of this can be written as

$$\forall x (\lambda(x) \supset \varphi(x)) \lor \forall x (\lambda(x) \supset \psi(x))$$

These two readings are not equivalent.$^1$

$$\forall x (\lambda(x) \supset (\varphi(x) \lor \psi(x))) \nleq \forall x (\lambda(x) \supset \varphi(x)) \lor \forall x (\lambda(x) \supset \psi(x))$$

So, the question is which of these two readings Schroeder (and following him, Hom and Schwartz) are (or should be) using.

One might argue that the natural reading of Claim 3.1.1$_{sc}$ is the wide scope reading. This may be supported by the following statements that Schroeder makes

$^1$Counterexample: let the domain of quantification be \{a, b\}, and let $\lambda(a) = \lambda(b) = \neg \varphi(a) = \psi(a) = \varphi(b) = \neg \psi(b) = 1.$
(in each of these cases Schroeder is talking about the generic *modus ponens* argument Sc1):

...hybrid views must hold that $[\text{ATT}_{\text{C} \text{Sc1}}]$ is identical to either $[\text{ATT}_{\text{P1} \text{Sc1}}]$ or $[\text{ATT}_{\text{P2} \text{Sc1}}]$ (Schroeder 2009:271).

If the desire-like attitude expressed by a *modus ponens* argument is always also expressed by one of its premises... (Schroeder 2009:271).

[i]f there is any general guarantee that the attitude expressed by the conclusion is always expressed by at least one of the premises... (Schroeder 2009:272).

These passages seem consistent with the wide scope reading of the explanation. However, when Schroeder turns to the question of which of the attitudes expressed by the premises is identical to the attitude expressed by the conclusion, he makes the following supposition:\(^2\)

So let’s suppose that for a *modus ponens* argument, $[\text{ATT}_{\text{C} \text{Sc1}}]$ is always identical with $[\text{ATT}_{\text{P1} \text{Sc1}}]$—the attitude expressed by the minor (nonconditional) premise (Schroeder 2009:271).

Here, the inclusion and placement of the word ‘always’ might suggest an interpretation that is consistent with the narrow scope reading.

\(^2\)This is likely the passage from Schroeder (2009) that Hom and Schwartz (2013:20) use as a basis for the antecedent of their conditional claim “But if the minor premise is always normatively endorsed then the very same sentence is both normatively endorsed in one argument and asserted in another.”
So, which of these two readings is Schroeder using? In the next two sections I will argue that if Schroeder’s argument is to work (and consequently also if Hom and Schwartz’s argument is to work), the wide scope reading cannot be used, and that the narrow scope reading must be used.

A.1 Against the Wide Scope Reading

Here I will argue that the wide scope reading of Explanation 4 will not work for Schroeder’s purposes. To see this, first suppose that that the wide scope interpretation of the fourth explanation holds. Then the explanation can be rewritten as follows:

Claim 3.1.1$^\text{wide}_{\text{Sc}}$. For every normative modus ponens argument $\mathcal{M}$, either the attitude expressed by the conclusion of $\mathcal{M}$ is identical to the attitude expressed by the major premise of $\mathcal{M}$, or the attitude expressed by the conclusion of $\mathcal{M}$ is identical to the attitude expressed by the minor premise of $\mathcal{M}$.

Given this, an attempt can be made to construct Schroeder’s argument using Claim 3.1.1$^\text{wide}_{\text{Sc}}$. Recall that his argument is intended to support the claim that “the conditional [major] premise always expressed the same attitude as the conclusion” (Schroeder, 2009:272), and that he does this by arguing that $\text{ATT}_{\text{C}_{\text{A}_2}}$ is identical to $\text{ATT}_{\text{P}_{\text{1A}_2}}$. So this identity must be shown to hold in all cases considered in the argument, which is as follows:
**Argument 3.1.1**

Suppose that **Claim 3.1.1** holds. Then applying this claim to the normative *modus ponens* argument **A2** generates two cases:

**Case 1**: Suppose that the attitude expressed by the conclusion of **A2** is identical to the attitude expressed by the minor premise of **A2**. Since this by itself does not imply anything about the attitude expressed by the major premise of **A2**, **Claim 3.1.1** can be applied to the *modus ponens* argument **A3** to generate cases, with the intent of delivering the desired result. So, applying **Argument 3.1.1** to **A3** gives:

**Case 1.1**: Suppose that the the attitude expressed by the conclusion of **A3** is identical to the attitude expressed by the minor premise of **A3**. That is, suppose that \( \text{ATT}_{[C_{A3}]} \) is identical to \( \text{ATT}_{[P2_{A3}]} \). But since \( P2_{A3} = P1_{A2} \) and since \( \text{ATT}_{[C_{A2}]} \) is identical to \( \text{ATT}_{[C_{A3}]} \), it follows that \( \text{ATT}_{[P2_{A3}]} \) is identical to \( \text{ATT}_{[C_{A2}]} \). That is, \( \text{ATT}_{[P1_{A2}]} \) is identical to \( \text{ATT}_{[C_{A2}]} \), which is the desired result.

**Case 1.2**: Suppose that the the attitude expressed by the conclusion of **A3** is identical to the attitude expressed by the major premise of **A3**. That is, suppose that \( \text{ATT}_{[C_{A3}]} \) is identical to \( \text{ATT}_{[P1_{A3}]} \). But this does not yield any useful information about the attitude expressed by premise **P1_{A2}** of **A2**. In particular it leaves open the possibility that \( \text{ATT}_{[P1_{A2}]} \) is *distinct* from \( \text{ATT}_{[C_{A2}]} \). So there is not sufficient information here to conclude that \( \text{ATT}_{[P1_{A2}]} \) is identical to \( \text{ATT}_{[C_{A2}]} \).³

³One might be tempted to iterate this argument by applying **Claim 3.1.1** to another in-
Case 2: Suppose that the attitude expressed by the conclusion of \( A^2 \) is identical to the attitude expressed by the major premise of \( A^2 \). Then \( ATT_{C^A^2} \) is identical to \( ATT_{P^1A^2} \), which is the desired result.

**Conclusion.** In Case 1.1 and Case 2 it follows that \( ATT_{P^1A^2} \) is identical to \( ATT_{C^A^2} \), but in Case 1.2 it does not follow that \( ATT_{P^1A^2} \) is identical to \( ATT_{C^A^2} \). So this argument does not support Schroeder’s claim.

This argument illustrates how giving a wide scope interpretation of Explanation 4 does not provide the resources required to successfully argue that \( ATT_{P^1A^2} \) is identical to \( ATT_{C^A^2} \). That is, it cannot be used by Schroeder to deliver his desired result, nor can it be used by Hom and Schwartz to argue in defense of the claim that (7) expresses a normative proposition.

### A.2 In Defense of the Narrow Scope Reading

Here I will briefly show how the narrow scope reading of Explanation 4 can be used to show that \( ATT_{P^1A^2} \) is identical to \( ATT_{C^A^2} \). All that needs to be done is to take the argument Argument 3.1.1\(_{Sc}^w\) and fill in the missing Case 2\(_{Sc}^w\) using Claim 3.1.1\(_{Sc}^w\), which is just the narrow scope reading of the fourth explanation. Here is:

\[ 1. ((P \supset Q) \supset Q) \supset Q \\
2. (P \supset Q) \supset Q \\
3. Q \]

However, this does not yield any useful information about the attitude \( ATT_{P^1A^2} \), and so is not a viable strategy.
Case $2_{Sc}$: Suppose that for every normative *modus ponens* argument $\mathcal{M}$ the attitude expressed by the conclusion of $\mathcal{M}$ is identical to the attitude expressed by the major premise of $\mathcal{M}$. So in the particular case of argument $\mathbf{A2}$, $\text{ATT}_{\mathbf{C}_{\mathbf{A2}}}$ is identical to $\text{ATT}_{\mathbf{P1}_{\mathbf{A2}}}$.

Then from this and Case $2_{Sc}$ (and the fact that $\text{ATT}_{\mathbf{C}_{\mathbf{A2}}} = \text{ATT}_{\mathbf{C}_{\mathbf{A3}}}$), Schroeder’s conclusion follows. This completes his argument.

The conclusion to be drawn here is that the wide scope reading does not work for Schroeder’s purposes (nor for Hom and Schwartz’s), but the narrow scope reading does. Hence Claim $3.1.1_{Sc}$ is the correct interpretation of Explanation 4.
Appendix B

Numbered Sentences,
Propositions, Arguments, Claims,
Constraints and Equivalences

This appendix contains many of the numbered sentences, propositions, arguments, claims, constraints and equivalences that are frequently referenced throughout the dissertation. It is intended primarily to serve as an index or reference sheet for the reader who would like to be able to quickly look up a particular sentence, constraint, claim or equivalence.

B.1 Numbered Sentences and Propositions

(1) $a$ is $F$ \hfill p.4

(1a) $\vdash \langle a, F \rangle$ \hfill p.5
(1b) $\sim \vdash \langle a, F \rangle$

(2) is $a$ F?  

(2a) $?\langle a, F \rangle$

(2b) is $a$ F? Yes. $\vdash \langle a, F \rangle$

(2c) is $a$ F? No. $\vdash \langle a, F \rangle$

(3) $a$, be F!

(3a) $!\langle a, F \rangle$

(4) $b$ is G

(5) if $a$ is F then $b$ is G

(5a) $\vdash \langle \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND} \rangle$

(5b) $\vdash \langle \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND} \rangle$

(5c) $\vdash \langle \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND} \rangle$

(5d) $\vdash \langle \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle b, G \rangle \rangle, \text{COND} \rangle$

(6) $\phi$-ing is required

(6a) $\vdash \langle \text{you}, \Phi$-ING $\rangle$

(6b) $\vdash \langle \Phi$-ING, REQUIRED $\rangle$

(6c) $\vdash \langle \text{you}, \Phi$-ING $\rangle, \text{OB}$

(6c) $[\text{you}]_c$ $\phi$-ing is required

(7) if $\phi$-ing is required, then $\psi$-ing is required

(7a) $\vdash \langle \langle \sim \vdash \langle \text{you}, \Phi$-ING $\rangle, \sim \vdash \langle \text{you}, \Psi$-ING $\rangle \rangle, \text{COND} \rangle$

(7b) $\vdash \langle \langle \sim \vdash \langle \text{you}, \Phi$-ING $\rangle, \sim \vdash \langle \text{you}, \Psi$-ING $\rangle \rangle, \text{COND} \rangle$

(7c) $\vdash \langle \langle \sim \vdash \langle \text{you}, \Phi$-ING $\rangle, \sim \vdash \langle \text{you}, \Psi$-ING $\rangle \rangle, \text{COND} \rangle$

(7d) $\vdash \langle \langle \sim \vdash \langle \text{you}, \Phi$-ING $\rangle, \text{OB} \rangle, \sim \vdash \langle \sim \vdash \langle \text{you}, \Psi$-ING $\rangle, \text{OB} \rangle, \text{COND} \rangle$
(8) is φ-ing required?  

(8a) ?⟨φ-ing, REQUIRED⟩  

(8b) ?⟨you, Φ-ING⟩  

(8c) ?⟨⟨S₂, ∼†⟨you, Φ-ING⟩⟩, ACCEPT⟩  

(8d) ⊢⟨⟨S₂, ∼†⟨you, Φ-ING⟩⟩, ACCEPT⟩  

(8e) ↑⟨∼†⟨you, Φ-ING⟩⟩, OB⟩  

(9) ψ-ing is required  

(9a) ↑⟨⟨you, Ψ-ING⟩⟩  

(9b) ↑⟨⟨you, Ψ-ING⟩⟩, OB⟩  

(10) if it is the case that if a is F then φ-ing is required, then b is G  

(10a) ↑⟨⟨∼†⟨a, F⟩, ∼†⟨you, Φ-ING⟩⟩, COND⟩, ∼†⟨b, G⟩⟩, COND⟩  

(10b) ⊢⟨⟨∼†⟨a, F⟩, ∼†⟨you, Φ-ING⟩⟩, COND⟩, ∼†⟨b, G⟩⟩, COND⟩  

(11) is it the case that if φ-ing is required then ψ is required?  

(11a) ↑⟨⟨∼†⟨you, Φ-ING⟩⟩, ∼†⟨you, Ψ-ING⟩⟩, COND⟩  

(11b) ?⟨⟨∼†⟨you, Φ-ING⟩⟩, ∼†⟨you, Ψ-ING⟩⟩, COND⟩  

(12) S accepts that φ-ing is required  

(12a) ↑⟨⟨S, ∼†⟨you, Φ-ING⟩⟩⟩, ACCEPT⟩  

(12b) ⊢⟨⟨S, ∼†⟨you, Φ-ING⟩⟩⟩, ACCEPT⟩  

(13) does S accept that φ-ing is required?  

(13a) ↑⟨⟨S, ∼†⟨you, Φ-ING⟩⟩⟩, ACCEPT⟩  

(13b) ?⟨⟨S, ∼†⟨you, Φ-ING⟩⟩⟩, ACCEPT⟩  

(14) if a is F then φ-ing is required  

p.217  

p.42  

p.42  

p.44  

p.46  

p.48  

p.48  

p.60  

p.60  

p.239  

p.98  

p.98  

p.105  

p.100  

p.101  

p.102  

p.100  

p.101  

p.102  

p.100  

p.101  

p.102  

p.118

255
(14a) \[ \top \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle \rangle \text{, COND}_{D,N} \] p.118

(14b) \[ \oplus \vdash \langle \sim \vdash \langle a, F \rangle, \sim \vdash \langle \text{you}, \Phi-\text{ING}, \text{OB} \rangle \rangle \text{, COND}_{\oplus} \] p.220

(15) \( \phi \)-ing is not required p.127

(15a) \[ \vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle \rangle \text{, NOT-OB} \] p.188

(15b) \[ \vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING} \rangle \rangle \text{, OB} \] p.235

(16) \( a \) is not F p.151

(17) not \( \phi \)-ing is required p.134

(17a) \[ \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle \] p.157

(17b) \[ \vdash \langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle \rangle \text{, OB} \] p.188

(17c) \[ \vdash \langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle \rangle \text{, OB} \] p.235

(18) not \( \phi \)-ing is not required p.134

(18a) \[ \vdash \langle \sim \vdash \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle \rangle \rangle \langle \text{NOT}, \text{OB} \rangle \] p.188

(19) it is not the case that \( a \) is F \[ \vdash \langle \sim \vdash \langle a, F \rangle \rangle \text{, NOT-TRUE} \] express \[ \vdash \langle \sim \vdash \langle a, F \rangle \rangle \text{, NOT-TRUE} \] p.151

(20) \( a \) is not F \[ \vdash \langle a, \langle \text{NOT}, F \rangle \rangle \] express \[ \vdash \langle a, \langle \text{NOT}, F \rangle \rangle \] p.152

(21) is \( \phi \)-ing required? Yes. \[ \vdash \langle \text{you}, \Phi-\text{ING} \rangle \] express \[ \vdash \langle \text{you}, \Phi-\text{ING} \rangle \] p.152

(22) is \( \phi \)-ing required? No. \[ \vdash \langle \text{you}, \Phi-\text{ING} \rangle \] express \[ \vdash \langle \text{you}, \Phi-\text{ING} \rangle \] p.161

(23) \( a \) is F is necessary p.182

(23a) \[ \vdash \langle \sim \vdash \langle a, F \rangle \rangle \text{, NEC} \] p.183

(24) it is not the case that \( \phi \)-ing is required p.191

(24a) \[ \vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING}, \text{OB} \rangle \rangle \text{, NOT-TRUE} \] p.191

(24b) \[ \vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING}, \text{OB} \rangle \rangle \text{, NOT-TRUE} \] p.192

(24c) \[ \vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING}, \text{OB} \rangle \rangle \text{, NOT-\lambda-\text{SAT}} \] p.192

(24d) \[ \vdash \langle \sim \vdash \langle \text{you}, \Phi-\text{ING}, \text{OB} \rangle \rangle \text{, NOT-\lambda-\text{SAT}} \] p.192
(24e) $\oplus \langle \sim \uparrow (\sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB}), \text{NOT-} \oplus \text{-SAT} \rangle$

(26) it isn’t the case that if $a$ is F then $b$ is G

(26a) $\otimes \langle \langle \sim \uparrow \langle a, F \rangle, \sim \uparrow \langle b, G \rangle \rangle, \text{COND}_\oplus \rangle$

(27) is it the case that if $a$ is F then $b$ is G?

(27a) $? \langle \langle \sim \uparrow \langle a, F \rangle, \sim \uparrow \langle b, G \rangle \rangle, \text{COND}_\oplus \rangle$

(28) it isn’t the case that if $\phi$-ing is required, then $\psi$-ing is required

(28a) $\otimes \langle \langle \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \sim \uparrow \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_\oplus \rangle$

(29) is it the case that if $\phi$-ing is required, then $\psi$-ing is required?

(29a) $? \langle \langle \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \sim \uparrow \langle \text{you}, \Psi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_\oplus \rangle$

(30) it’s not the case that if $a$ is F then $\phi$-ing is required

(30a) $\otimes \langle \langle \sim \uparrow \langle a, F \rangle, \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_\oplus \rangle$

(31) is it the case that if $a$ is F then $\phi$-ing is required?

(31a) $? \langle \langle \sim \uparrow \langle a, F \rangle, \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_\oplus \rangle$

(32) $\oplus \langle \langle \sim \uparrow \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_\oplus \rangle$

(33) $\oplus \langle \langle \sim \uparrow \langle \text{you}, \langle \text{NOT}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \sim \uparrow \langle \text{you}, \Phi-\text{ING} \rangle, \text{OB} \rangle, \text{COND}_\oplus \rangle$

(34) $S$ ordered/commanded/told/requested you to be F

(35) $S$ wants/desires $a$ to be F

(36) $S$ endorses you to be $\phi$-ing

(37) $S$ endorses $\vdash \langle \text{you}, \Phi-\text{ING} \rangle$ to be obligatory

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(38) $S$ endorses $\vdash \langle \text{you}, \Phi\text{-ING} \rangle$ to be true in every deontic alternative \hspace{1cm} p.241

(39) $\phi$-ing is required \hspace{1cm} \vdash \langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle \hspace{1cm} p.242

(39a) is $\phi$-ing required? \hspace{1cm} ?\langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle \hspace{1cm} p.242

(40) $\phi$-ing is obligatory \hspace{1cm} \vdash \langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle \hspace{1cm} p.242

(40a) is $\phi$-ing obligatory? \hspace{1cm} ?\langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{OB} \rangle \hspace{1cm} p.242

B.2 Selected Arguments

A1:

P1$_{\text{A1}}$. if $a$ is $F$ then $b$ is $G$

P1$_{\text{A1}}$. $a$ is $F$

C$_{\text{A2}}$. $b$ is $G$

A2:

P1$_{\text{A2}}$. if $\phi$-ing is required, then $\psi$-ing is required

P2$_{\text{A2}}$. $\phi$-ing is required

C$_{\text{A2}}$. $\psi$-ing is required

A2:\'

P1'$_{\text{A2}}$. \langle \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \sim \vdash \langle \text{you}, \Phi\text{-ING} \rangle, \text{COND} \rangle$

P2'$_{\text{A2}}$. \langle $\text{you}, \Phi\text{-ING} \rangle$

C'$_{\text{A2}}$. \langle $\text{you}, \Psi\text{-ING} \rangle$

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A3:  
P1\textit{A3}. If it is the case that if φ-ing is required then ψ-ing is required, then ψ-ing is required.

P2\textit{A3}. If φ-ing is required then ψ-ing is required.

C\textit{A3}. ψ-ing is required

A4:  
(14) if \(a\) is \(F\) then φ-ing is required

(1) \(a\) is \(F\)

(6) φ-ing is required

B.3 Selected Claims

Main Claim. If Hanks’ theory of propositions is successful, then there is a plausible extension of it that readily solves the Frege-Geach problem for normative propositions.

Claim 3.1\textit{HS}. Sentence (7) expresses a normative proposition.

Claim 3.1.1\textit{HS}. If the conclusion of argument \textit{A3} expresses a normative proposition, then either premise \(P1_{\textit{A3}}\) of \textit{A3} expresses a normative proposition, or premise \(P2_{\textit{A3}}\) of \textit{A3} expresses a normative proposition.
Claim 3.1.1. Either for every normative *modus ponens* argument $M$ the attitude expressed by the conclusion of $M$ is identical to the attitude expressed by the major premise of $M$, or for every normative *modus ponens* argument $M$ the attitude expressed by the conclusion of $M$ is identical to the attitude expressed by the minor premise of $M$.

Claim 3.1.1* gen. Either for every *modus ponens* argument $M$, if the conclusion of $M$ expresses a normative proposition, then the major premise of $M$ expresses a normative proposition, or for every *modus ponens* argument $M$, if the conclusion of $M$ expresses a normative proposition, then the minor premise of $M$ expresses a normative proposition.

Claim 3.1.1*$ gen$. Either for every *modus ponens* argument $M$, if the conclusion of $M$ expresses a normative proposition $p_1$, then the minor premise of $M$ expresses a proposition $p_2$ that is identical to $p_1$, or for every *modus ponens* argument $M$, if the conclusion of $M$ expresses a normative proposition $q_1$, then the major premise of $M$ expresses a proposition $q_2$ that is identical to $q_1$.

### B.4 Statements and Constraints

s1. $\lambda (a, F) \quad \lambda \in \{\vdash, ?, !\}$

s2. A speaker’s act of predicating $F$ of $a$ is true iff $a$ is $F$
s3. A speaker’s act of predicking *either__is false or__is true* of $p$ and $q$ is true iff 
either $p$ is false or $q$ is true

s4. A speaker $S$ accepts that $\phi$-ing is required iff

- $S$ normatively endorses $\phi$-ing, iff
- $S$ performs the act of simultaneously (i) referring to *you*, (ii) expressing the property of $\phi$-ing and (iii) applying the property of $\phi$-ing to *you* in the mood of normative endorsement.

p.45

c1. Normatively endorsed sentences express normative Hanks propositions, and the normative predicate ‘required’ expresses (or semantically contributes) a force of normative endorsement to the proposition expressed by the sentence. p.33

c2. Normatively endorsed sentences do not express representational propositions with truth-conditions. p.33

c3. Normatively endorsed sentences and normative propositions have a world-to-word (or world-to-mind) direction of fit. p.33

c4. The following conditions must hold for the atomic sentences (1) and (6):

a. sentence (1) must not express a normative proposition.
b. sentence (6) must not express an assertive proposition.

p.33

c5. The propositions expressed by the major premise $P_{1A2}$, by the minor premise $P_{2A2}$ and by the conclusion $C_{A2}$ of the modus ponens argument $A2$ are distinct from one another. p.88

c6. Compositionality. $\chi_{15}$ is a function of $\chi_{6}$ and the meaning of ‘not’. p.127

c7. Inconsistency. The set \{ $\chi_{6}$, $\chi_{15}$ \} has some property $P$ such that $P$ adequately explains the inconsistency of the sentences (6) and (15). p.127

c8. Deontic Constraint. The objects $\chi_{6}$, $\chi_{15}$, $\chi_{17}$ and $\chi_{18}$ must be defined in such a way (and have component(s) defined in such a way) that
a. (15) and (17) are not equivalent
b. (17) entails (15)
c. (15) and (18) are consistent

c9. **Expressive Constraint.** The normative predicate ‘required’ must contribute some (sub-)object to the semantic objects $\chi_6$, $\chi_{15}$, $\chi_{17}$ and $\chi_{18}$ that captures or represents the expressive content of the sentence that expresses it, as outlined in the expressivist constraints c1-c4 from §2.2.

B.5 **Equivalences**

e. $S$ accepts that $\phi$-ing is required $\equiv S$ endorses $\phi$-ing

e1. $S$ does not accept that $\phi$-ing is required $\equiv S$ does not endorse $\phi$-ing

e2. $S$ accepts that it is not required to $\phi$-ing $\equiv$ ???

e3. $S$ accepts that not-$\phi$-ing is required $\equiv S$ endorses not-$\phi$-ing

e4. $\neg \text{req}(\phi) \equiv \text{forb}(\phi) \lor \text{opt}(\phi)$

e5. $\text{req}(\neg \phi) \equiv \text{forb}(\phi)$

e6. $\text{opt}(\phi) \equiv \neg \text{req}(\phi) \land \neg \text{req}(\neg \phi)$

e7. $\vdash \langle a, \langle \text{NOT}, F \rangle \rangle$ is $l$-equivalent to $\neg \langle a, F \rangle$

e8. $\vdash \langle \text{you}, \langle \text{NOT}, \Phi\text{-ING} \rangle \rangle$ is $N$-equivalent to $\nabla \langle \text{you}, \Phi\text{-ING} \rangle$
e9. ⊢⟨a, F⟩ is l-inconsistent with ⊥⟨a, F⟩

p.164

e10. ⊤⟨you, Φ-ING⟩ is N-inconsistent with ⊥⟨you, Φ-ING⟩

p.164

e11. ⊤⟨∼⊢⟨you, Φ-ING⟩, OB⟩ is N-inconsistent with ⊥⟨∼⊢⟨you, Φ-ING⟩, OB⟩

p.234

Gp. p is true iff p is SAT, and p is false iff p is NOT-SAT.

p.211

Gq. q is SATN iff q is SAT, and q is NOT-SATN iff q is NOT-SAT.

p.211
Bibliography


