CONTRARIAN HARDLY AND THE APPROXIMATIVE ADVERBS

By

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ABSTRACT

This dissertation is about an adverbial which I have named "Contrarian" HARDLY. It is a member of the family of approximative adverbs that includes: *almost, barely, hardly, rarely, scarcely* and *nearly*. "Contrarian" HARDLY is different from the approximative *hardly* in a variety of ways. First, it patterns very much like standard sentential negation and in fact, appears in many contexts to be paraphraseable by "no" or "not". For example, *This banquet space is hardly ideal* seems to mean that *This banquet space is not ideal*. Alternatively, approximative *hardly* often has the interpretation "close to not". For example, *Lauren hardly answered any questions* seems to mean that *Lauren came close to not answering any questions*. Despite their different meanings, I will argue that actually these lexical items are the same and that it is a unique confluence of grammatical properties which conspire such that the "Contrarian" HARDLY meaning arises. The dissertation begins with an extensive exposition of the empirical phenomena surrounding "Contrarian" HARDLY.

Interestingly, "Contrarian" HARDLY has a different syntactic distribution in the clause and interacts with other syntactic items in ways which are different from approximative *hardly*. In order to account for this, I propose a unique Negation syntax based on den Dikken (2019). This syntactic approach treats morphological negation and semantic negation as distinct from each other, and allows Negation Phrases to take a stacked configuration. I show how this syntax can handle not only "Contrarian" HARDLY but the other negative approximatives. I also demonstrate how it can account for the Negative Concord involving negative approximatives which is attested in Appalachian and Southern American English. Ultimately, I defend the position that "Contrarian" HARDLY results when approximative *hardly* is merged into the Specifier position of NegP and is scoped over by an abstract negative operator which is adjoined at TP.

The next part of the dissertation is about the semantics of these items. I first defend an Intensional (modal) approach to the approximative adverbs and argue that they combine with predicates and introduce a world argument *w*. I claim that their semantic specifications are only about the asserted content—traditionally called The Proximal component. This assertion pertains to the existence of a close possible world where the Truth value of the prejacent is the opposite to that in the

evaluation world. I then show that what are often perceived of as modificational restrictions on the interactions of approximatives and predicates are in actuality failures in reasoning related to these modal projections.

Next, I argue that the Polar component, the presuppositional-like content regarding the prejacent's Truth value in the world of evaluation, can be derived via "Presuppositional Exhaustification" (Bassi, Del Pinal, and Sauerland 2021). In order to do this, I utilize the method for Structural Alternative generation outlined in Trinh (2019). Subsequently, I demonstrate the character of approximatives under negation, showing specifically, that the *far from it* inference that characterizes "Contrarian" HARDLY is actually possible when other approximatives are negated. With all of these pieces in place, I demonstrate how "Contrarian" HARDLY is derived semantically. Afterward, I illustrate the true character of the Polarity associated with "Contrarian" HARDLY by exploring its Polarity Item interactions.

Lastly, I address matters related to the Pragmatics of "Contrarian" HARDLY and the approximatives. I argue that much like Conditionals, utterances with approximatives are used by Speakers to draw an Addressee's attention to a Counterfactual proposal. However, in the case of the approximative, it is a Counterfactual proposal which can serve to make the world of the modal projection "close". I then discuss the character that this takes in discourse before turning to "Contrarian" HARDLY. In that case, I show how "Contrarian" HARDLY is used to engage in Disputative discourse with Interlocutors. I demonstrate its features of counter-expectancy and bias, and show how it is used under conditions very similar to Biased Questions. The primary goal of the discussion is to explicate the Discourse conditions (Context) which must exist regarding a Speaker's beliefs, the target proposition and the Common Ground, such that a "Contrarian" HARDLY utterance can be felicitous. The dissertation ends with some thoughts on future avenues of research.

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For “Blueberry”

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At one point in time, long long ago, I thought that I would write a dissertation that made an important intellectual contribution and maybe said something about who I was as a scholar. It would be tremendous if this work does that, but I simply don't find that goal to be the most crucial anymore. The only thing I really care about now is that the work that is contained here is of a quality that makes the people who have supported me, proud. My name is on the front page, but in my mind, this dissertation belongs to many others. Let me set down as best I can, who they are.

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regarding the importance of finding a manner by which to express complicated ideas such that others can learn and build upon them. I hope I have managed to do that in this dissertation. Love you, Dad. I want to thank both of them and also: my mother-in-law Colleen, my step-dad Don, my greatest friend and brother Andrew and his wife Kristen; my sister Lauren and her husband Travis; my sister Christine and her wife Carrie; and all of my nieces and nephews; all my cousins (and especially my golf and fishing partner Patrick); Pam my Godmother and uncle Doug White; all around pal and fellow Irish culture enthusiast—uncle Steve and my aunt Reesa; and all of my other fantastically supportive aunts and uncles; and friend to our family, Judy Justice. They have all made sure at some point or another that I didn't completely lose it. They have: sent me cards, sent me texts, picked me up and driven me across the country, taken me on vacations, made me food, sent me food, sent me money, taken me fishing, answered silly questions about linguistic judgments, called to check on me, taken me fishing *again*, bought me clothes, sat with me in the hospital, taken me out for golf, watched movies with me, taken me out to dinner, taken me sailing, played games, handed me their babies to hold, and made sure that I laughed and had some fun. They always hug me, they always smile, and they always let me know that they are happy that I am around. In short, thank you to all the Pellino's, Everly's, Phillips's, Buchheit's, White's, Hahn's, Curtis's, Reiss's, Bishop's, Huzl's, Feldman's, Preacher's, Doran's, Oakley's, and Treloar's for looking out for me and encouraging me in this work and in life. I love you all very much.

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CHAPTER 1

A FEW REMARKS ON WHAT IS ACCOMPLISHED

This dissertation is about a single adverbial family, the approximatives, and mostly about a single adverbial, Contrarian HARDLY. It tackles its syntax, semantics and pragmatics and along the way addresses issues pertaining to how these modules interact with one another—it's about Interfaces. That being said, this dissertation attempts to advance our understanding of quite a few areas and dives into the syntax of negation, debates regarding Not-at-Issue content and disputes in discourse involving counterfactual claims. I hope scholars find this fun to read and that I have put this together in way that allows new linguists to learn a lot. Let me say a bit about how the research unfolded and what's in the dissertation.

While there has been a large amount of work on *almost*, so much so that some linguists think there's not really much left to pick over, there hasn't been as much work on the negative approximatives; *barely*, *hardly*, *scarcely* and *rarely*. In the course of my research, it became clear that the more interesting case pertaining to this group of lexical items is actually the instances where *hardly* appears to function not as an approximative but as a negator. These are cases where *hardly* means *not*; for example, *Lucy is hardly qualified* $\rightsquigarrow$ *Lucy is not qualified*. The question of course arises: Do we really have a good understanding of the mechanism by which this occurs? The immediate goal in nearly all linguistic research is to strive for more unifying theories about the Grammar and so of course, what one wants to do is find a way to have just a single lexical item which is "transformed" from an approximative to the Contrarian negator. Seeing as though this lexical item had a different distribution than the approximative variant, the investigation couldn't be wholly semantic but would require some syntactic analysis. And because Contrarian HARDLY appeared to have a completely different function in the Discourse, Pragmatic research would be required as well. Let me introduce a small bit of the data.

Below in (1) is a minimal pair which illustrates a few of the issues explored in this dissertation. As we can see in (1a), both *hardly* and *barely* can appear in the embedded clause and are interchangeable. There is no change in the meaning of the clause that results from selecting one over

the other. The interpretation is the *approximative* one such that they mean: *Agnes had "come close to" not working a day in her life*. Speakers generally paraphrase this something like: *Agnes didn't work a lot*.

(1) a. Felice could honestly say that Agnes had $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\end{matrix}\right\}$ worked a day in her life.

b. Felice could $\left\{\begin{matrix}\textsc{hardly}\\ {}^{*}\text{barely}\end{matrix}\right\}$ honestly say that Agnes had worked a day in her life.

c. Felice couldn't honestly say that Agnes had worked a day in her life.

But this isn't what happens in the case of (1b). It seems that when we move these negative approximatives to the matrix clause of a sentence like this: a) they are no longer interchangeable– *barely* is altogether bad, and b) the adverbial *hardly* means something more like *not*. The available interpretation is similar to that of (1c) with standard contracted negation *n't*. The meaning in both cases is that *It is not possible for Felice to honestly report that Anges had worked a day in her life*. Both (1b-c) implicate that *Agnes did not work at all*.

How all this happens is the subject of this work. But in order to explore this, other issues had to be resolved or at the very least, a stance needed to be taken on them. Specifically, if one is to explain how one lexical item comes to have two interpretations, you must have squared away all aspects related to the first interpretation; whichever is taken to be primary. This turned out to be a major challenge and ironically, one of the things required was defending a position on *almost*. Thus, a project whose central goal was to be about something other than *almost* became to a great extent about *almost*. I hope that scholars who have in the past thought about that particular adverbial modifier will find something fun and interesting said here.

Allow me to map out what the reader will find as they navigate through this dissertation.

The first thing that this dissertation offers is a chapter of empirical observations: Chapter 2. Why do this? Well, the first reason is that existing descriptions of Contrarian HARDLY are limited. So, there was a lot to point out about this lexical item and its behavior. Now, I obviously did have the option of peppering in all the details throughout the work but this creates an issue that

I'd like to avoid. By doing things that way, the data would be less accessible to researchers in other frameworks and would also mean that when theoretical ideas are abandoned or frameworks collapse, my data is lost in the rubble. Done in the way that it has been, every kind of researcher can pick this up and get something out of it, indefinitely. Having said that, the Empirical chapter is an overview and there are additional interesting and unique data points contained in the various discussions. Also, for worrisome and weary readers of limited time, there are no places in this dissertation where you are asked to refer back, i.e. there is no flipping back and forth. If you need a piece of data, it's in front of you as you read or quite near.

In Chapter 3 the reader will find my proposal for the syntax of approximatives and Contrarian HARDLY. The syntax that I build is based off of a short paper by den Dikken (2019), "Not not non-projecting". It offers an analysis where morphological negation and semantic negation are seen—to a large extent—as separate phenomena, and where NegPs may be nested. As far as I know, no one has yet attempted to implement it outside of the original work. However, I think that will change; not necessarily because of the analysis that I provide here but once it is recognized how well it can potentially capture other Non-Canonical Negations. Cross-linguistically speaking, Non-canonical negations seem to be characterized by the simultaneous presence of a high peripheral negation and a lower clausal negation. I don't undertake any comparative work here but the syntax that I offer should help in the analysis of these constructions.

In Chapter 4, the reader will learn about the Proximal Component of approximatives and Contrarian HARDLY. Overall, I argue for a version of the Intensional (modal) approach to adverbs of this kind, and engage in a discussion of various issues related to the asserted content of the approximative family (including Contrarian HARDLY). There is an in depth discussion of predicate interactions, however, it has a unique character. It argues that restrictions related to what predicates can and can not be modified felicitously are really the result of complications taking place when Speakers reason about Modal projections. In an Intensional framework, these adverbs modally project about a particular type of possible world. Namely, a "close" possible world where the content associated with the prejacent has the opposite Truth value to that which it has in the

evaluation world. But Speakers need to be able to reason about this modal projection in terms of the evaluation world where they find themselves and this "modal" reasoning is not successful in all cases. Now, because I argue here that the semantic specifications of the approximatives are only about this type of proximity, we are left to explain the manner by which—what has been called their "Polar component"—comes to be. This is done in Chapter 5.

In Chapter 5, I offer a solution to the largest mystery surrounding approximatives, the asymmetric and category defying quality of their Polar component. This is the part of the meaning of these adverbs regarding the Truth value that the prejacent proposition has in the evaluation world: True or False. I argue that this is enriched content that can be derived via "Presuppositional Exhaustification" (Bassi, Del Pinal, and Sauerland 2021). This necessitates arguing for a particular procedure regarding Structural Alternatives (Trinh 2019). Once this is completed, we finally have enough pieces to actually demonstrate how Contrarian HARDLY comes to be and this is done by way of a conversation regarding what happens to approximative adverbs under negation. The remaining part of the chapter explores Contrarian HARDLY's true polarity by way of examining its Polarity Item interactions; both with NPIs and PPIs.

Chapter 6 may appear to be short but it has this character because it is so much an extension of parts of Chapters 4 and 5. Armed with what we know about the syntax and semantics of the approximatives and Contrarian HARDLY, we can finally explore some of the qualities surrounding their Pragmatics. But this chapter aims to do something specific which is to show how the *bias* associated with this item is such that it can be used in many of the contexts that would support *Biased questions*. It is demonstrated that Contrarian HARDLY has a particular kind of negative Speaker bias and Rhetorical quality. To explore all of this, I discuss issues pertaining to its Disputative and Rhetorical uses, as well as the relationship it has with the Common Ground.

CHAPTER 2

AN EMPIRICAL OVERVIEW OF *CONTRARIAN* HARDLY

In this chapter, the reader will learn about what has previously been said in the literature regarding *Contrarian* HARDLY (ConH) and what my novel observations are[1]. The first thing to do is to become familiarized with the *sense* of ConH and how this differs from its approximative variant.

Contrarian HARDLY has a rather strong negative force. It denies the proposition that it modifies and gives rise to the inference that it is the contrary that holds true. Moreover, it expresses that the world associated with the modified proposition is actually quite remote. That is to say, the true state of affairs is *far from* p. Too, an addressee perceives that the speaker has some strong evidence to support their contrary stance. A classic example is given below in (2a-d) which illustrate the above inferences.[2]

(2) Nadezhda could HARDLY beat Tatiana in a blitz chess match-up.

a. Nadezhda could not beat Tatiana.

b. Nadezhda could not "come close" to beating Tatiana.

c. Tatiana is not a likely candidate for Nadezhda to beat.

d. The speaker believes that there is obvious evidence to support this contrary stance.

The meanings triggered by ConH are very unique from those associated with the negative approximatives *hardly* and *barely*. It should be noted that the distributions of *barely* and approximative *hardly* are not identical, although, they share enough of a pattern of interchangeability such that I will frequently use *barely* to illustrate the data throughout instead of using *hardly*. I do this to avoid confusion for the reader who should not consider this an endorsement that the two items can always be substituted for one another. However, these items can share the 3 senses provided in (3a-c).

[1]The reader should be aware that there is more to be investigated about *Contrarian* HARDLY than there is space or time for in this dissertation. Therefore, I will not be providing an in depth explanation or analysis for each phenomena that I lay out in the following sections. However, I will mention as I go along, what issues/puzzles/constructions that I will be returning to in order to discuss in a more dedicated way.

[2]We will worry later about categorizing and/or naming these in our section on ConH semantics.

(3) a. Rebecca $\left\{\begin{matrix}\text{hardly}\\ \text{barely}\end{matrix}\right\}$ completed the assignment. = "came close" to not-p but p

b. Rebecca could $\left\{\begin{matrix}\text{hardly}\\ \text{barely}\end{matrix}\right\}$ smell the bread baking. = a minimal amount of smelling

c. Rebecca would $\left\{\begin{matrix}\text{hardly}\\ \text{barely}\end{matrix}\right\}$ walk by the pond (anymore). = infrequently walked

The meaning most responsible for the misconception that *barely* is just the opposite of *almost* is illustrated in (3a). Here *barely* signals that the modified predicate "came close" to being false but did actually result in being true. In this example, *Rebecca did complete her assignment but she almost didn't do so.* The example in (3b) demonstrates a use where the interpretation is that the predicate holds albeit to a minimal degree; and (3c) yields a reading that the predicate is undertaken with infrequency. Now, it is clear that the sense which arises is a result of the event structure of the modified predicate. I will have a little bit to say about these matters in a later section. Specifically, I will show the pattern that seems to be present with the Negative approximatives as well as how this differs from ConH. However, I will not be fully working out all the details of the event structure and how they relate to this pattern of interpretation. That is left for future work.[3] But while I will be returning to say a few things about predicates, this amount of information should suffice for us to safely introduce and navigate the empirical data for *Contrarian* HARDLY.

2.1 Previous observations in the literature

To the best of my knowledge, the first discussion of *Contrarian* HARDLY[4] can be found in Amaral (2007) and Amaral and Schwenter (2009). In the latter publication, the authors' refer to the adverbial in question as the "inverted" reading of *hardly* and they compare it alongside Portuguese *mal*. At the moment, I won't be discussing the analysis that they provide but I do wish to point out their observations regarding the adverbial's behavior and distribution. In addition, to keep matters clear, I will use my naming convention. The authors' intent is to characterize these adverbials as

[3]Some thoughts on this have been worked out in Amaral (2007) with regard to European Portuguese.

[4]From here on out *Contrarian* HARDLY will be abbreviated as ConH or simply placed in small caps: HARDLY.

belonging to a class of *non-canonically* negative items[5] and they make 3 observations regarding HARDLY's distribution in justification of this claim.

First, the authors' claim that while both canonical *no* and *Contrarian* HARDLY (ConH) may be used in the denial of propositions, only canonical *no* may be used in cases of meta-linguistic denial (Horn 1985, 1989). As we can see in (4), the suggestion is that ConH can deny the proposition that *John is tall* prior to asserting the opposite, *he is short*. However, we are not supposed to be able to use ConH to deny that the word itself *tall* is somehow inappropriate because John's actual height is best characterized as *gargantuan*. Although Amaral and Schwenter (2009) make no comment about it, it seems rather clear to me from casual survey that there is some variation, if not outright disagreement, by native speakers on this data point. My own intuition and that of other informants is that B_3 is perfectly good and rather, there is a heightened sense of "irony" or perhaps, more of a "sarcastic" flavor imparted there, than in the case of B_2. I'll address this aspect of things later in the dissertation when I turn to discussing the semantics in detail.[6]

(4) A: John is pretty tall.

B_1: He is not/HARDLY tall, he is actually very short. (Denial of a proposition)

B_2: He is not tall, he is gargantuan.

B_3: $^\sharp$He is HARDLY tall, he is gargantuan.

The second observation that the authors make is that ConH fails the test of "redundant affirmation". These are cases where information that is previously entailed or presupposed in a discourse can be felicitously uttered, provided that it is rhetorically opposed to the previously uttered material. In (5), Speaker A asks Speaker B whether they have completed writing their paper. Speaker B may answer with a canonical "*no*" and a follow-up statement in the form of a contrastive "but"-clause

[5]Exactly what this term picks out cross-linguistically is very much still up for debate. At the present moment, we don't need to be concerned about it and are interested in examining the character of the adverbial in a theoretically neutral way.

[6]Something that the reader should keep in mind is that over the last 10-15 years, a clarificational debate has unfolded in the field regarding exactly what phenomena constitute "meta-linguistic" negation. I'll discuss this a bit later on when we return to thinking about these kinds of examples but to be fair, my dispute about the data might hinge on a distinction that the authors are not themselves making.

which provides some elaboration on the circumstances. This is redundant insofar as it presupposes what we already know, namely, Speaker B has not yet completed writing the paper.

(5) A: Did you finish writing your paper?

B_1: No, but I'll be done in a few minutes.

B_2: ♯HARDLY, but I'll be done in a few minutes.

Lastly, the authors offer that in the case of a denial of a prior shared belief, it is only canonical negation that is licit and that the non-canonical negator can not participate in such constructions. In (6), Speaker A asserts out-of-the-blue some news that is contradictory to the Common Ground (CG) which contains the presupposition that *John is (potentially) moving to Michigan*.

(6) Context: All interlocutors believe that John is going to move to Michigan.

A_1: Guess What? John isn't moving to Michigan.

A_2: Guess What? John is ♯HARDLY moving to Michigan.

Now, for the authors, what is most crucial here is the out-of-the-blue status. The conclusion that they draw is that "approximative adverbs contribute the denial of a proposition whose salience must be established in the previous linguistic context. The existence of a shared belief which has not been linguistically expressed or cannot be inferred from a previous utterance is not enough for the felicity of the inverted reading." The pragmatic analysis that they subsequently provide is intended to capture this particular insight.

While I believe that Amaral and Schwenter are on the right track, there is quite a bit more data to wrestle with and the situation is much more complex. Therefore, I will turn to providing some further perspective on matters with several of my own observations about ConH.

2.2 New Syntactico-semantic observations

In the following sections, I will share some new observations on the distribution and behavior of ConH. I have divided the collection of examples into two "rough" categories: those which are at the interface of syntax and semantics; and those which are more at the interface of semantics and

pragmatics. I close the section by discussing a series of tests that have been used over the years to evaluate the negative force associated with a given operator.

One of the most important things that the reader should keep in mind as we go through these examples is that they speak to the fact that a fully pragmatic story for ConH is not a possibility. Each data point that we will consider, can only be explained by appeal to a unique set of syntactic and semantic properties that are present in the case of ConH, but not shared by its approximative cousins.

Throughout the following examples, I will again contrast ConH with canonical *no* and *not* but will additionally use *never*, as well as the approximatives *almost* and *barely*. Having an understanding of the distribution of these approximatives will be crucial to demonstrating the ways in which ConH differs from approximative *hardly* and how it fits in with the group.

For example, as we can see in (7), the predicate *got out of bed* may be modified by either approximative, in fact, either can be optionally followed by *even* as well. Native speakers do not have any "intuition" that the choice results in a change in meaning. However, only *barely* can receive modification from *just*. In the case of approximative *hardly*, the sentence is judged (by most) "unacceptable".

(7) a. Ruby $\left\{\begin{matrix}\text{hardly}\\ \text{barely}\end{matrix}\right\}$ (even) got out of bed this morning.

b. Ruby *just* $\left\{\begin{matrix}{}^{*}\text{hardly}\\ \text{barely}\end{matrix}\right\}$ got out of bed this morning.

In addition, it is easy to find cases like that illustrated in (8) where a predicate like *arrive* only allows modification from *barely* and not *hardly*.

(8) Sarah $\left\{\begin{matrix}{}^{*}\text{hardly}\\ \text{barely}\end{matrix}\right\}$ arrived right before the Christmas party began at Midnight.

Discovering what is at the root of these kind of cases where the two approximatives diverge, despite so many instances where they overlap in all three senses, will have to be left for later

investigation. But the reader should know that this is a reality and that I have done my best to construct examples to avoid this type of confound.

To pick up a bit thematically where I left off in the previous section, one quite noticeable difference between ConH and the negative approximative variant is the former's ability to modify altogether different predicates. Below in (9), we can see that ConH and the affirmative approximative *almost* are acceptable with a predicate like *resulted in* while modification by *barely* is disallowed.[7] Moreover, ConH may act as a modifier in positions that are impossible for both *almost* and *barely*; such is the case of the predicate *be finalized*.

(9) **Variant predicate acceptability**

a. Nancy's rude outburst $\left\{\begin{array}{c}\textsc{hardly}\\ \text{almost}\\ {}^{*}\text{barely}\end{array}\right\}$ *resulted in* Kim getting fired.

b. The dispute could $\left\{\begin{array}{c}\textsc{hardly}\\ {}^{*}\text{almost}\\ {}^{*}\text{barely}\end{array}\right\}$ *be finalized* by local custom.

The situation attested in the verbal domain also holds for adjectival predicates. As shown in (10), while a predicate like *adequate* may be modified by either ConH or the negative approximative *barely*, there are predicates like *ideal* that are only acceptable with ConH.

(10) **Negation of predicate adjective**

a. The banquet space is $\left\{\begin{array}{c}\textsc{hardly}\\ \text{barely}\end{array}\right\}$ *adequate*.

b. The banquet space is $\left\{\begin{array}{c}\textsc{hardly}\\ {}^{*}\text{barely}\end{array}\right\}$ *ideal*.

[7] However, the reader should notice that the sentence with *barely*, while unacceptable, has a potentially good meaning: *the outburst came close to not resulting in Kim getting fired but then actually did result in her getting fired.* I'll discuss two possible reasons for examples like this later on.

Another way to see how ConH manifests the negative quality that it intuitively shares with canonical negation is to examine *un*morphological negation. This type of morphological negation has the property of forming "litotic" expressions when it is scoped over by a standard negator like *no* (Horn 2002, 2017). In other words, when we negate a given lexical item which carries some *un*morphology, what results is a somewhat affirmative expression of that item's contrary. Thus, we can see in (11) that when we negate *unhappy with her job*, the sense that arises is that Samantha's true emotional position (in the speaker's opinion) lies somewhere between *happy* and *unhappy*. Samantha isn't really *happy with her job* but she's not *unhappy* either. And the construction carries this sense along with the inference that the Speaker is not willing to commit to any stronger affirmative statement.

What is interesting is that ConH appears to have the same effect as the canonical negator *not*, whereas *barely* is not even acceptable. This is curious because we can easily imagine what modification by *barely* should mean. Perhaps, something like: *Samantha came close to not being unhappy with her job but alas is unhappy* or *Samantha is unhappy with her job to some minimal degree*. However, this meaning is unavailable.

(11) ***Un*morphological negation interaction**

a. Samantha is *not un*happy with her job.

b. Samantha is HARDLY *un*happy with her job.

c. *Samantha is *barely un*happy with her job.

Now, as I mentioned earlier, these kinds of examples are crucial to demonstrating that ConH has come to have some unique properties that are not shared by its approximative cousins. However, this dissertation isn't really about these kinds of examples, therefore, I would like to shift to some data related to matters that I will discuss in a more in-depth way throughout this monograph.

The first example I'd like to look at is that of the *It*-cleft construction and more specifically, one that contains a truth predicate like *true* or *the case*; and I'll just call them "Truth"-clefts.

It is a well documented fact that the left-position of *It*-cleft constructions can only contain prominently focused material which can be, for example, the answer to some question in the discourse.

(12) a. It was a [candlestick$_F$] that was found hidden in Christine's jacket.

b. It was [true$_F$] that a candlestick was found hidden in Christine's jacket.

As can be seen above in (12), "Truth"-clefts have a predicate nominal in that Focus position. Additionally, these constructions allow this predicate nominal to be modified by items that obligatorily Focus associate; the usual culprits in English are *even*, *only* and *not*. What is interesting for our purposes is that this position can host ConH but not any of its approximative cousins.

(13) **Focus position of Truth Clefts**

a. It was $\left\{\begin{matrix}\text{not}\\ \text{only}\\ \text{even}\end{matrix}\right\}\left\{\begin{matrix}\text{true}\\ \text{the case}\end{matrix}\right\}$ that Marjorie believed that she had all the answers.

b. It was HARDLY true that Marjorie believed that she had all the answers.

c. *It was $\left\{\begin{matrix}\text{almost}\\ \text{barely}\end{matrix}\right\}\left\{\begin{matrix}\text{true}\\ \text{the case}\end{matrix}\right\}$ that Marjorie believed that she had all of the answers.

Now, if one were beginning to suspect that ConH simply patterns with *not*, that might be understandable given the data that we've seen. But this is not the case. In fact, ConH seems to anti-license three well-known constructions that canonical negatives participate in. The first of these is the "because"-clause.

(14) **Because-clause anti-licensor**

a. Heloise did*n't* continue to write serious prose (because she was distracted by her job).

b. Heloise *barely* continued to write serious prose (because she was distracted by her job).

c. Heloise HARDLY continued to write serious prose (*because she was distracted by her job).

As we can see here, when the matrix clause contains either canonical negation or a negative approximative like *barely*, the "because"-clause is interpreted as describing the cause/reason or factors which form the conditions for the matrix proposition to be the case, i.e. *why* it happened. But such an interpretation is not possible when we substitute ConH into this position. Rather, the only interpretation possible is a refutation or denial by the Speaker that the "because"-clause is the reason. The interpretation accessible is that: *It is not the case that due to the fact that Heloise was distracted by her job, she continued to write serious prose*. In other words, the Speaker is denying that the distraction was the cause of the writing and presupposes that there was another reason why she continued writing serious prose, rather than stopping. This is definitely not the reading that we want.

Another process associated with negation generally, is Negative Inversion (NI). This is when negative phrasal material is fronted to a left-peripheral position (above TP) and Subject-Auxiliary inversion results (Haegeman 2000). Despite the phenomenon being documented quite early in the literature, the process is not well understood. The data below in (15) show that NI can be triggered by both *never* and the approximative *rarely* but not by ConH.

(15) **Negative Inversion anti-licensor**

a. Candice would *never* object to partying all night. → *Never* would Candice object to partying all night.

b. Candice would *rarely* object to partying all night. → *Rarely* would Candice object to partying all night.

c. Candice would HARDLY object to partying all night. ↛ *HARDLY would Candice object to partying all night.

A similar type of anti-licensing can be seen in the case of Negative Polarity Items (NPIs) which are lexical items that have requirements regarding the monotonicity of the environment in which they occur. The name is related to the initial observation that the items are best in the presence of negation.[8]

[8]The savvy NPI enthusiast will have already said to themselves, "That's not the *only* NPI Theory." That's totally

Shown below in (16), the NPIs *in years* and *half bad* are acceptable when C-commanded by the canonical negative *n't* but are anti-licensed by ConH. Obviously, this is not expected given that we have seen above how often the environment and sense of ConH overlap with that of *no/n't*.

(16) **NPIs** (Negative licensor and NPI are italicized)

a. Ramona has*n't* auditioned for a theatre part *in years*.

b. *Ramona has HARDLY auditioned for a theatre part *in years*.

c. Ramona did*n't* think Betty's Phonological Theory was *half bad*.

d. *Ramona HARDLY thought Betty's Phonological Theory was *half bad*.

Now that we have witnessed a major difference between canonical negators and ConH in terms of their licensing, I'd like to show a few dramatic differences in their ability to be embedded. In fact, there are at least four environments that I have identified where ConH is particularly poor.

First, it seems that ConH can not take a position inside the embedded clause of *It*-clefts. Recall from above that the *Truth*-cleft in (13) showed that it can occur high in the matrix part of the structure. What we learn here is that canonical *not* is free to take two positions while ConH is restricted to the higher Focus position. Additionally, while above we saw that negative approximative *barely* is blocked from occurring in that matrix Focus position, it is perfectly acceptable in the embedded clause.

(17) **It-clefts**

a. It's syntax papers, Djuna reports are*n't* very intuitive (in her opinion).

b. *It's syntax papers, Djuna reports are HARDLY very intuitive (in her opinion).

c. It's syntax papers, Djuna *barely* understands despite continuous re-reading.

A similar pattern can be seen here in the case of the Restrictive Relative Clause (RRC). Both *not* and *barely* may be embedded inside while ConH is ill-formed in this position.

true. This concept, among others, will be discussed in more depth in a dedicated section. For now our concern is just the data points.

(18) **Restrictive Relative Clauses**

a. The guests who did*n't* arrive late enjoyed a variety of snacks.

b. *The guests who HARDLY arrived late enjoyed a variety of snacks.

c. The guests who were *barely* (even) paying attention understood the directions.

Information seeking questions follow the identical pattern as the RRC. Notice, the declarative counterpart of (19) with ConH is perfectly good: *Katerina could HARDLY buy a live Octopus at the Farmer's market*.

(19) **Questions**

a. What could Katerina *not* buy at the Farmer's market?

b. *What could Katerina HARDLY buy at the Farmer's market?

c. What could Katerina *barely* notice her friend stealing from the Farmer's market?

Lastly, ConH does not seem to be able to be hosted in the Antecedent of a Conditional whereas *not* and *barely* are very natural.

(20) **Antecedent of Conditionals**

a. If Simone was *not* blunt about the issues, then the whole project would have suffered.

b. *If Simone was HARDLY blunt about the issues, then the whole project would have suffered.

c. If Simone was *barely* communicative about the issues, it's because she hates the whole project.

An interesting exception to these Embeddability prohibitions is the case of the Appositive Relative Clause such as that shown in (21). In these types of constructions, all three lexical items that we've been tracking are perfectly acceptable.

(21) **Appositive Relative Clauses**

a. Beatrice, who could *not* promise success, just up and quit.

b. Beatrice, who could HARDLY promise success, just up and quit.

c. Beatrice, who could *barely* understand the project, just up and quit.

So, it is clear that there is a complex pattern of behavior that must be accounted for. It can be shown that in the majority of cases, ConH no longer patterns with the negative approximatives. That is, its distribution has quite obviously changed. On the other hand, ConH is not in 1:1 correspondence with canonical *no*/*not*/*n't* either, which is to say, there are a variety of fairly non-exotic constructions[9] in which ConH can not participate.

2.3 New Semantico-pragmatic observations

In this section we turn to thinking a bit about the function of ConH in Discourse and seeing how this patterns in comparison to canonical negation. Also, I will demonstrate an additional semantic property that ConH shares with the Focus particle *even*.

A very common way that native speakers employ ConH is as a Response particle. Below in (22), we have a context where two Speakers are discussing their co-worker, Siobhan. Speaker A states that they have not seen her and suggests that Siobhan might be sick. Speaker B knows better and wishes to emphatically disagree. Speaker B can say, *No, she's NOT!* or simply use ConH. Both of these utterances target the implicit proposition that *Siobhan is sick*.

(22) **Response particle: Disagreement**

A: I haven't seen Siobhan in the office today. I think she might be sick.

B_1: No, She's NOT! (She's playing golf!)

B_2: HARDLY! (She's playing golf!)

But, as we can see in (23), just like canonical *no*, ConH can also be used to concur. Below we have the same conversation between the same co-workers about Siobhan but this time, Speaker A suggests that *Siobhan is not sick*. The identical utterances may be used by Speaker B to signal to Speaker A that they agree.

[9]The reader might be wondering: What is a non-exotic construction? Well, I consider all of the constructions under discussion in this dissertation to be non-exotic insofar as you can find them in mundane pieces of writing or speech produced by native speakers. A more exotic construction in my mind is something that is theoretically interesting but extremely low frequency like a double Parasitic Gap construction.

(23) **Response particle: Agreement**

A: I haven't seen Siobhan in the office today. But I don't think she's sick.

B_1: No, She's NOT! (She's playing golf!)

B_2: HARDLY! (She's playing golf!)

Above we saw that ConH strongly resists embedding in standard information seeking questions. However, ConH is available in a variety of Rhetorical Question environments. In (24), Andrea uses ConH in a Rhetorical construction with an affirmative Question Tag to signal to her friend, Courtney, that she will attend a friend's party with her.

(24) **Basic Rhetorical Question**

Courtney: Hey Andrea, do you wanna come to Diane's party with me?

Andrea: I'm HARDLY gonna sit around here all night, am I?[10]

There are also Rhetorical Question cases where ConH can be used by a Speaker to answer their own question. Two such instances are given in (25) and (26) which involve a Speaker who is communicating some information to an Addressee by providing both the question and (for heightened drama) the answer.

(25) **RhQ: Mad Magazine**

A: Eliza, score well on the MCAT?.....HARDLY/Noooooooo!

(26) **RhQ: Home Alone**

Clerk: Are you here all by yourself?

Kevin: Ma'am, I'm 8 years old, you think I would be here, alone?...I don't think so!/HARDLY!

Related to the use of ConH in Rhetorical Questions is its use in disputative discourse. Speakers can employ ConH to signal to an interlocutor that they disagree with an explicit or implicit proposition in the discourse but additionally, the use of ConH signals that the Speaker has evidence

[10] One thing that the reader may notice is that the question tag is optional in this case. The speaker, Andrea, could simply have used the ConH utterance alone, *I'm HARDLY gonna sit around here all night*, and conveyed the same message. This issue will be discussed in the final chapter.

for their contrary position. In fact, such use of ConH can be a strategy for forcing an interlocutor to admit that they have either misinterpreted the Common Ground or perhaps, drawn too strong a conclusion from the available evidence. The example provided below is of the latter type.

In the example below, Speaker A asks Speaker B if they have read Chomsky's new book. Speaker B states that they have not and furthermore, they make a pretty strong claim that it's not worth the time or effort because *He's always wrong anyway*. Speaker A uses a ConH utterance to signal to Speaker B that: they have exaggerated, that it is unwarranted and that their claim (in the Speaker's opinion) is false. It signals to Speaker B that there is evidence (from the perspective of Speaker A) to support this contrary position and furthermore, implicates that Speaker B should be aware of this evidence. That is, Speaker A's perspective is that the evidence is in the Common Ground. The Rhetorical force of the ConH utterance is such that Speaker B admits that they are wrong, which was of course Speaker A's goal.

(27) **Evidentiality: Disputative Discourse**

A: Hey, Have you had a chance to read through Chomsky's new book?

B: Ugh, why bother? He's always wrong about everything.

A: Chomsky is HARDLY wrong about everything.

B: Uh, yeah, I suppose you're right. He usually does nail the big picture stuff.

Regarding evidence to the contrary, ConH seems to have a Felicity Condition placed upon how grievous a situation must be in order for a Speaker to employ it and not sound as though they are being deliberately sarcastic or ironic. An example of such a contrast is provided in (28).

To properly interpret the example below, we want to imagine a context where Meredith has been volunteered to bring donuts for the lab meeting. In the first case, Meredith walks into the room with 3 boxes of donuts and has purchased 26 more donuts than there are lab members. Speaker A_1 uses a ConH utterance to alert Meredith that this is way beyond what is needed or expected.

This can be contrasted with a case where Meredith arrives with 5 donuts. She has only 1 more than is required and in this instance, Speaker A_2's response would most likely be interpreted as an

attempt at humor. Like many jokes, this is the result of a presupposition violation, in this case, the discrepancy is not large enough for ConH to be used felicitously.

(28) **Felicity Condition: large discrepancy required**

A_1: Meredith, we HARDLY need 30 donuts, we only have 4 lab members!

A_2: ♯Meredith, we HARDLY need 5 donuts, we only have 4 lab members!

A final property that I would like to mention is that ConH often times appears to function in a mirative manner. More specifically, it carries an inference that is close to that of *even* but is reversed in regard to expectations.

Let's look at an example. Below we can imagine a context where Marianne has been selling off her book collection. The Speaker is reporting that Marianne has sold some books to Aubree. In the first case, the Speaker employs the use of *even* which triggers a mirative inference that can be characterized in 2 ways: Likelihood and Expectation. From the Speaker's perspective, Aubree is an unlikely person for Marianne to sell books to (maybe Marianne doesn't care for her) and therefore, the Speaker is surprised that contrary to expectation and what they know, Marianne has sold books to Aubree.

In the second case, the Speaker uses a ConH utterance to generate a very similar inference about the situation except that in this instance, the actions of Marianne are exactly in accordance with expectation. It is well known how unlikely it would be for Marianne to sell books to Aubree and therefore, she does not. We can imagine the Speaker using such an utterance to correct someone's misconception of the situation.

(29) **Mirativity**

a. Marianne *even* sold some books to Aubree.

   i. Likelihood: Aubree is the least likely person that Marianne might sell books to.

   ii. Expectation: Contrary to expectation, Marianne sold books to Aubree.

b. Marianne HARDLY sold some books to Aubree.

   i. Likelihood: Aubree is the least likely person that Marianne might sell books to.

ii. Expectation: In accordance with expectation, Marianne did not sell books to Aubree.

So, what we have seen thus far is that in addition to having a unique syntactic distribution and semantics, there are quite a few discourse properties that must be accounted for. Most notable is the ability for ConH to be used similarly to a Rhetorical Question and to express a negative speaker perspective toward a discourse proposition. Since much of what we've seen demonstrates that ConH functions as some type of negator, it would be prudent to test for the actual negative force associated with this item. I close this chapter with some classic tests for this property.

2.4 Classic tests of Negative Force

Most discussions of negation begin with Klima (1964). This is because this paper is the origin of some very useful tests for sentential negation which are now sometimes referred to as "Klima tests". These are diagnostics that allow one to test the negative scope of a given lexical item. They are quite useful and recently have been upgraded by Collins and Postal (2017), a work which discusses them in the context of research presented in Pullum et al. (2002). Essentially, some additional tests are added from other sources and they refer to this new collection as the "Extended Klima" tests. Collins and Postal (2014) note that it has been cited by multiple authors over the years that the Klima tests actually verify that it is the negative operator that is taking the widest scope in the matrix clause. They cite the following researchers in support of this claim: Stockwell, Schachter, and Partee (1973), J. R. Payne (1985), Horn (1989), and Penka (2015).

The first of these diagnostics, and certainly the most well known, is the Confirmation Tag Question Test. To run this test, one adds a confirmation question tag to the end of a clause. Whatever the rule is operating in the grammar that governs this process, it requires that the tag question be the opposite polarity of the clause that it attaches to. Therefore, we can see in (30) that when the clause is positive (or affirmative), then the question tag must be negative. The examples with HARDLY and *never* reflect the opposite circumstance and both of these negative phrasal elements force the question tag to be the affirmative, *did he?*

(30) **Confirmation Tag Question Test**

a. Emma said Patsy was invited for dinner, *did she, did*n't* she?

b. Emma HARDLY said Patsy was invited for dinner, did she, *did*n't* she?

c. Emma *never* said that Patsy was invited for dinner, did she, *did*n't* she?

A second test makes use of the connective adjuncts *so* and *neither* to attach an elided clause with Subject-auxiliary Inversion (SAI). If the matrix clause is positive, then the connective is required to be *so*. If the matrix clause is negative, then the connective is required to be *neither*. As we can see in (31), both *n't* and HARDLY require *neither* and contrast with the affirmative sentence which can make use of *so*.

(31) ***so/neither* Adjunct Test**

a. Rihanna sold a manuscript to a publisher, *so/*neither* did Dani.

b. Rihanna did*n't* sell a manuscript to a publisher, **so/neither* did Dani.

c. Rihanna HARDLY sold a manuscript to a publisher, **so/neither* did Dani.

A third test is coordination with *neither*. As Zeijlstra (2004) points out, this test additionally appears to be able to distinguish between stronger and weaker negative phrases. The first contrast that we are looking for is presented in (32a-b). Coordination with *neither* is only licit in (b) which contains the negative particle *not*, and the adverbs *never* and HARDLY. The (c) example shows that the frequency adverb *seldom* and the negative approximatives *barely* and *rarely* can not license the necessary *neither*-coordination. Zeijlstra doesn't state explicitly what he believes to be the defining property of a "weak" or "semi-negative" element. For the purposes of this dissertation, I am following Horn (1989), and all of his subsequent work, in assuming that the distinction existing between the negative elements has to do with the manner in which their inferences are foregrounded or backgrounded, and the consequence this has for the entailments that they produce. Where the negation exists in regard to the foregrounded or backgrounded material is the crucial piece of the puzzle and we'll return to that a bit later.

(32) ***neither* Coordination Test**

a. Helen would understand the game show and **neither* would Amma.

b. Helen would $\left\{\begin{array}{c}\text{not}\\ \text{never}\\ \textsc{hardly}\end{array}\right\}$ audition for a game show and *neither* would Amma.

c. Helen would $\left\{\begin{array}{c}\text{seldom}\\ \text{barely}\\ \text{rarely}\end{array}\right\}$ understand game shows and **neither* would Amma.

A very similar coordination test is possible with *nor*. Again, the requirement for licensing *nor* is that the clause that it is coordinating be of a negative polarity. Our results are much like those above, *nor* is licensed in (33b-c) where the predicate is modified with either the negative particle *n't* or ConH.

(33) ***nor* Coordination Test**

a. Miriam expected Vera to run away, **nor* did Edith.

b. Miriam did*n't* expect Vera to run away, *nor* did Edith.

c. Miriam HARDLY expected Vera to run away, *nor* did Edith.

A fourth diagnostic that originates in Ross (1973) and also is made use of in Culicover (2013) is that of the negative parenthetical. This is yet another test that relies on matching the polarity between the matrix clause and some additional material, in this case, a parenthetical. As (34a) demonstrates, an affirmative matrix clause is incompatible with a negative parenthetical. Alternatively, (34b-c) which contain *never* and HARDLY, are acceptable.

(34) **Negative Parenthetical Test**

a. Deborah claimed, *I do*n't* think/I think, to be great at chess.

b. Deborah *never* claimed, I do*n't* think/*I think, to be great at chess.

c. Deborah HARDLY claimed, I do*n't* think/*I think, to be great at chess.

The final diagnostic, shown in (35) is also attributed to Ross (1973) and is a *Yes* or *No* confirmation reply test. This relies on matching the polarity of the matrix clause with the positive or negative reply. Again, HARDLY and the negative particle *n't/not* pattern together.

(35) **Yes/No Confirmation Test**

a. Rosie sold all the old books. Yeah, I guess so/*Nope, I guess *not*.

b. Rosie did*n't* sell all the old books, *Yeah, I guess so/Nope, I guess *not*.

c. Rosie HARDLY sold all the old books, *Yeah, I guess so/Nope, I guess *not*.

Having demonstrated the negative force of ConH and its distributional pattern in the clause, I will turn to providing a syntax for this item.

CHAPTER 3

THE SYNTAX OF *CONTRARIAN* HARDLY

In this chapter I will demonstrate that a significant part of the meaning difference between approximative *hardly* and Contrarian HARDLY is the result of this adverbial having taken an alternate position within the clausal syntax. Specifically, I propose that the Contrarian interpretation arises when *hardly* is merged into SpecNegP rather than being adjoined at *v*P. Moreover, I will show how the Negation system proposed in den Dikken (2019) can handle the phenomenon.

3.1 Overview

Adverbs such as the approximatives *barely* and *hardly* are hypothesized to attach low in the clausal spine. That is to say, they seem to modify aspects of the event structure of the predicate and therefore must be attached to the VP-shell (Ernst 2001). I argue that they are adjoined at *v*P. Below in (36), I have provided both a bracket and a tree structure for the syntax[1] of approximative *hardly* which has the sense that: *Silvia came close to not recognizing Ramona's handwriting but did in fact recognize it*.[2]

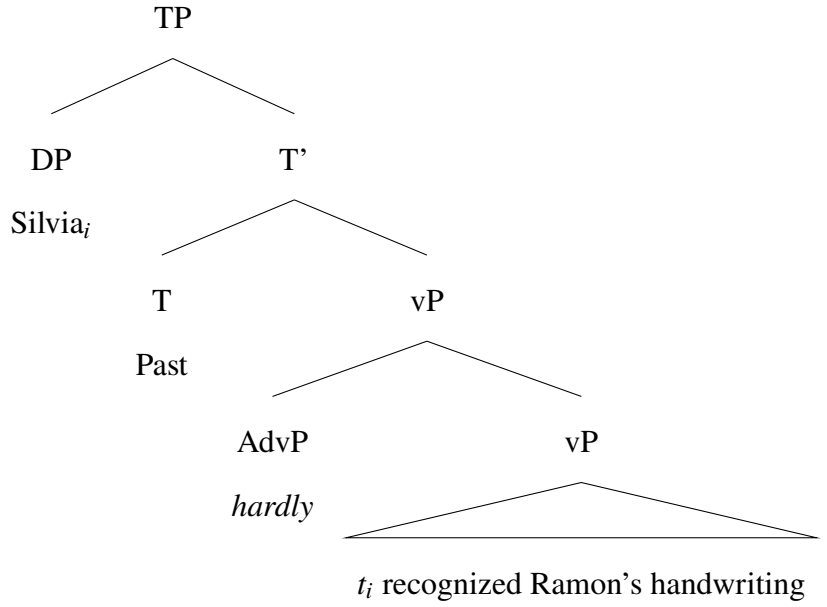
(36) a. Silvia *hardly* recognized Ramona's handwriting. (approx. = close to Not-P)

b. $[_{TP}$ Silvia$_i$ $[_{T'}$ Past $[_{vP}$ *hardly* $[_{vP}$ t_i recognized + v $[_{VP}$ Ramona's handwriting $]]]]]$

[1]The experienced syntactician will immediately notice that I've omitted certain types of movement operations for the sake of clarity. For example, I will not repeatedly be showing standard (mostly) non-controversial derivational procedures like V to little-*v* movement or Subject to SpecTP raising. Hopefully, no one objects.

[2]I will employ both trees and brackets throughout the monograph but for the purposes of first introductions, I provide the reader both.

c.



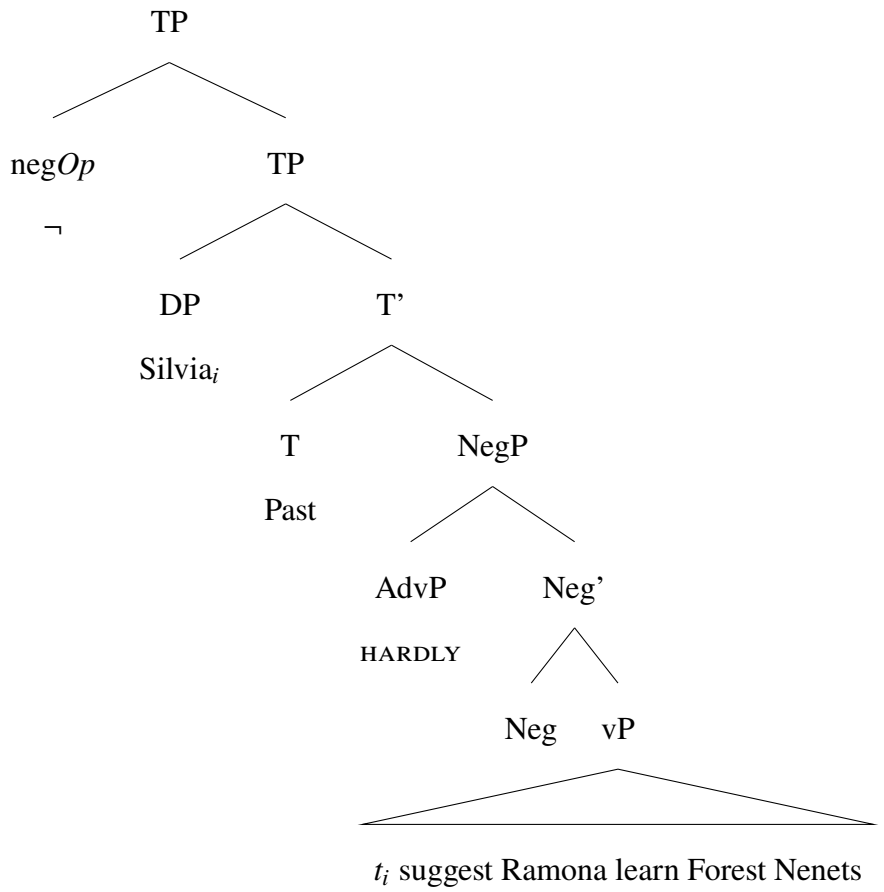
However, in the case of Contrarian HARDLY what has happened is that the approximative has instead been merged into SpecNegP. This is shown in (37) where we have a typical use of the adverbial where ConH negates the entire proposition and implicates that the state of affairs that actually hold are contrary to those expressed by the predicate. (37) has the sense that: *Silvia did not suggest that Ramona learn Forest Nenets* and *never came close to suggesting any such thing*.[3]

(37) a. Silvia HARDLY suggested Ramona learn Forest Nenets. (Contrarian interpretation)

b. $[_{TP}$ ¬ $[_{TP}$ Silvia$_i$ $[_{T'}$ Past $[_{NegP}$ HARDLY $[_{Neg'}$ NEG $[_{vP}$ t_i suggest + v $[_{VP}$ Ramona learn Forest Nenets]]]]]

[3]This structure also shows a Negative Operator adjoined at TP. The reader should not worry; this will be discussed very soon.

c.



The Contrarian HARDLY interpretation is the result of this Spec-Head configuration. From this SpecNegP position, the inherent semantics of the approximative's Polar and Proximal conjuncts interact with those of a phonologically null Neg^0 head. There are three effects: First, the natural negative polarity of the adverb is neutralized; second, the entailment pattern is reversed in the Polar component, and third, the orientation of the Proximal component is reversed. To aid in conceptualizing what occurs, I provide a descriptive semantic schema in (38).

(38) "Close to" Not-p but p + Neg^0 $\mapsto$ ¬ ("Close to") ¬ (Not-p) and ¬ (p) ≡ Not "Close to p" and Not-p

On the left side of the arrow is what I take to (non-controversially) be the "meaning" of modification via approximative *hardly*: for a given proposition *p*, things in the world were such that *Not-p* was very close to holding but despite those conditions, *p* held true (albeit narrowly). The right side of the arrow, and also the equivalency sign, shows what I will argue throughout is the

"meaning" of Contrarian HARDLY: *p* did not hold and things in the world are such that *p* was never even close to being the case.

When examining (38) what the reader needs to understand is that it illustrates the logical consequence of distributing an additional negative element over all 3 internal components of *hardly*. In other words, if one takes each of the 3 identifiable subcomponents of approximative *hardly*'s meaning and individually negates each of them, then the result is Contrarian HARDLY. Through the process, the polar component of *hardly* is negated, accounting for Contrarian HARDLY's anti-veridical inference *Not-p*. Additionally, the lexically internal operator responsible for the proximal meaning is negated as well. This provides the *Not "close-to"* or *far from it*[4] inference that is its major signature. Finally, the negation inherent to the proximal conjunct is canceled. This results in a non-negative polarity that accompanies the foregrounded inference. In this regard, ConH is most similar to *almost* with the exception that the operator responsible for proximity has itself been negated. Otherwise, both ConH and *almost* have a non-veridical Not-At-Issue (NAI) meaning component and a non-negative At-Issue meaning component. Later in this monograph, I will show that this results in a predictable pattern of behavior for ConH which it counter-intuitively shares with *almost* instead of its negative approximative cousins.

For where we are headed, the main take-away is simply that whatever the semantic specifications of approximative *hardly* are, they must be such that when negation is distributed over them, the result is ConH. One of the major purposes of this dissertation is to explicate how this can be achieved. And I will now turn to discussing a Negative Phrasal (NegP) syntax that will assist us in this regard.

3.2 The doubly stacked NegP: den Dikken (2019)

Certainly, one thing that this dissertation is not, is a defense of some particular conception of the Negative Phrase (NegP) as opposed to some other and therefore, I don't engage in any such comparisons. The debate over whether NegP even exists seems to be alive and well (Newmeyer

[4]The *far from it* language that I use here is, I believe, a nice colloquial phrase which captures the spirit of the ConH negation. It should be noted that I am not the first to make this observation. While not stated explicitly, Amaral and Schwenter (2009) use this language, and Pozzan and Schweitzer (2019) recognize that this is also an appropriate way to characterize *almost* under negation.

2006). There are several standout dissertations and full length works devoted to characterizing how the syntax of negation should work overall. Some major works of the last 20 years or so are: Haegeman (1995), Zanuttini (1997, 2001), Zeijlstra (2004), Tubau (2008), De Clercq (2013), and Collins and Postal (2014) inter alia. All of these have subsequently led to more nuanced work in the Principles & Parameters tradition. Of course, there is work on negation that is still highly relevant and often cited going back to the 60's, for example, Klima (1964).

What these works have in common is a belief in, and defense of, the existence of a Neg-head in the syntax that has the ability to project within the clause and host various elements in its Specifier. Within many such models, the Neg-head has a bundle of features and like any other head, must check and value them through the course of the derivation. Many spirited debates revolve around the nature of the feature bundle and how the derivation of the feature check/valuation unfolds. Minor variations in these procedures can then account for linguistic variation regarding "negative elements" and their distribution. The phenomena most frequently discussed are Negative Concord (NC) and Negative Polarity Items (NPIs). In the present work, I will only make a small suggestion about how to handle the issue of NC with approximative items in non-standard English varieties but will have several things to say regarding Contrarian HARDLY and NPI licensing. However, I will first introduce the unique system introduced in den Dikken (2019).

The system outlined in den Dikken (2019) draws its inspiration from research presented in Horn (2009) pertaining to hypo- and hyper-negation. Horn's paper demonstrates that semantic negation and morpho-syntactic negation are separate entities. Oftentimes, morphological negation is paired with (i.e. coincides with) semantic negation but this need not be the case. There are cases where morpho-syntactic material does not give rise to any semantically negative interpretation. Such cases are often referred to as Pleonastic negations (or hyper-negation) and a typical example is provided in (39). Native speakers judge these sentences to mean the same thing.

(39) a. Don't be surprised if it doesn't rain. ≡ It's probably going to rain.

b. Don't be surprised if it rains. ≡ It's probably going to rain.

Expressions of this type contrast with those of hypo-negation. As the name implies, hypo-

negations are instances where sentential semantic negation is not paired with the kind of morphological marking that is usually assumed to be the realization of a Neg^0 head or SpecNegP material. An example of this type of construction is presented in (40). Again, native speakers take these two to be equivalent to one another; each means that "The level of interest (care) that Alice has in regard to the topic of Modern Art could not be any lower (less)".

(40) a. Alice could care less about Modern Art. ≡ She does not care.

b. Alice couldn't care less about Modern Art. ≡ She does not care.

den Dikken (2019) is concerned with creating a syntax that accounts for this type of data. What he postulates is that there exists an operator of semantic negation (σ-neg), which he represents $\neg$, that adjoins to TP as well as morphological negation (μ-neg) that is realized as Neg^0 and SpecNegP material. In the case of (40a), only σ-negation is present but in the case of (40b), both σ-negation and μ-negation are at work.

A crucial piece of evidence for den Dikken is the pattern of negative tags and negative parentheticals that are available with such sentences. This is given in (41a-d).

(41) a. Sheila could care less, couldn't/*could she?

b. Sheila could care less, I (*don't) think.

c. Sheila couldn't care less, *couldn't/could she?

d. Sheila couldn't care less, I *(don't) think.

In English, the "checking" tags are required to be of opposite polarity from that of the matrix clause, while the negative parenthetical must attach to a clause with overt negation. den Dikken argues that what really licenses these polarity sensitive alternations is the projection of a NegP in the clausal spine below TP. In other words, the real sensitivity is to syntactic sentential negation rather than to semantic negation. Another interesting example is provided in (42a-b); attributed to (but adapted from) Zeijlstra (2016). I have provided some syntactic bracketing to assist in the examination.

(42) a. $[_{CP}$ $[_{TP}$ Rachael $[_{NegP}$ seldom $[_{Neg'}$ Neg^0 $[_{vP}$ lends her books out]]]], does she?]

b. $[_{CP}$ $[_{TP}$ ¬ $[_{TP}$ Rachael $[_{NegP}$ *ever* = never $[_{Neg'}$ Neg^0 $[_{vP}$ lends her books out]]]]], does she?]

Under alternative analyses, whereby these alternations are sensitive to some sort of semantic negation, then the data in (42a-b) is difficult to explain. Only (42b) functions as a "denial" of the proposition. Therefore, we would predict a positive tag for (42b) but not (42a), contrary to fact. However, if we adopt the system proposed by den Dikken and imagine that *seldom* and *never* are similar in that they are both merged in SpecNegP then the issue is resolved. Each clause projects a NegP and triggers a positive "checking"-tag. Additionally, (42b) is paired with a σ-neg operator (¬) adjoined at TP which provides the denial.

den Dikken is aware that this presents an immediate question: what is the purpose of μ-negation at all? He suggests that its presence might be related to Focus and Exhaustivity (den Dikken 2016), however, more work is needed to determine the accuracy of this claim. Rather than get into any of that here, I will mention the last two important aspects of his NegP system before moving on to discuss the syntactic distribution of ConH.

den Dikken argues that the difference between morpho-syntactic sentential negation and constituent negation boils down to whether or not the morpho-syntactic negation is paired with the abstract σ-neg operator adjoined at TP. A NegP that is the complement of T may be paired with this negative operator and function as sentential negation. Constituent negation results from a NegP that is (potentially) not a complement of T but definitely not paired with the operator. In other words, a NegP that forms part of a constituent negation may or may not be a complement of T. It has this optionality. However, a NegP that forms a sentential negation is required to be a complement of T in addition to being paired with the σ-neg operator.

(43) a. $[_{TP}$ ¬ $[_{TP}$ Elizabeth $[_{T}$ does $[_{NegP}$ $[_{Neg'}$ not $[_{vP}$ like peaches]]]]]] = Sentential Negation

b. $[_{TP}$ Elizabeth $[_{T}$ could $[_{NegP}$ [Neg^0 = not $[_{vP}$ like peaches]]]]] = Constituent Negation

One argument for also treating constituent negation as being a projection of a NegP rather than

an adjunction strategy is that many languages have the exact same particle for both sentential and constituent negation. In the case of English, this is the particle *not* which den Dikken argues is the result of Neg^0 being spelled out by the Neg-head in both circumstances. This is also a feature of both Dutch *niet* and Hungarian *nem*.

Another interesting aspect of the system is that it allows for two NegP's to be stacked one inside the other. This is at least one method by which double negations may be handled. (44) provides an example of what this looks like. NegP_1 is a complement of T and paired with the abstract operator while NegP_2 is embedded directly inside and forms the negative constituent *not like peaches*.

(44) a. Elizabeth doesn't *not* like peaches ≡ It is not the case that Elizabeth does not like peaches.

b. $[_{TP}$ ¬ $[_{TP}$ Elizabeth $[_{T}$ does $[_{NegP1}$ $[_{Neg}$ Neg = n't $[_{NegP2}$ $[_{Neg}$ not $[_{vP}$ like peaches]]]]]]]]

An advantage of the embedded NegP system is that it can also handle negative Topicalization data like that in (45a-b). What we can see in (45b) is that if we assume a nested NegP_2 then we have exactly the right constituency structure to copy and internally merge in SpecTopP.

(45) a. NOT invite Jackie, Linda can't ≡ Linda is not able to not invite Jackie.

b. $[_{\text{ForceP}}$ $[_{TopP}$ [NOT invite Jackie]$_i$ $[_{Top'}$ Top^0 $[_{TP}$ ¬ $[_{TP}$ Linda $[_{T'}$ can $[_{NegP1}$ $[_{Neg'}$ n't [< $[_{NegP2}$ [...]]$_i$ >]]]]]]]]

den Dikken claims that much of the attested variation among languages in regard to the behavior of their negation system is the result of a choice between whether the negation particle (*not* in English) is a spell-out of Neg^0 or a piece of morphology in SpecNegP. He identifies English as realizing *not* as the Spell-out of the Neg^0 while Dutch and Hungarian take a transparent Neg^0 and have the negation particle in SpecNegP. This parameter then determines the fact that English requires *do*-support while, for example, Dutch and Hungarian don't. *Do*-support is the result of a filled Neg^0 which blocks featural agreement between T and the VP. Dutch and Hungarian have a

Neg^0 that is transparent in regard to these operations and therefore, have nothing that looks like a *do*-support strategy.

In the next section, I will briefly illustrate where Contrarian HARDLY and the negative approximatives fit in with the negation syntax that I have just discussed. I will also show how this system can potentially handle non-standard varieties of English with Negative Concord.

3.3 Contrarian HARDLY and negative Approximative syntax

Having introduced the negation system above, I would like to sketch-out how it can handle some non-Standard varieties of English that demonstrate Negative Concord with their approximative items. To begin, I provide a Standard English example in (46). Constructions with these types of predicates are interesting from a semantic point of view and demonstrate the complexity of the meanings that can arise with the approximatives. In cases like (46a), native speakers will generally create paraphrases like: *Sidney was startled or taken aback* or *Sidney didn't have time to retort or rebuke (to any appreciable amount) what was being said to her*. Whatever the denotation of the predicate *react* looks like, it is such that modification by a negative approximative like *barely* gives rise to ambiguity. That is, the modification allows for more than one of the senses discussed above to be expressed, namely, the "close to not-*p*" and "minimal degree". I set these kinds of predicate specific semantic issues mostly aside in this dissertation but do focus later on some larger generalizations.

(46) a. Sidney could *barely* react to Olga's rapid fire insults.

b. $[_{TP}$ Sidney $[_{T'}$ could $[_{vP}$ *barely* $[_{vP}$ react to Olga's rapid fire insults]]]]

In order to derive a Contrarian HARDLY interpretation, our approximative adverb must instead be merged into the SpecNegP position of a Neg^0 that is paired with the abstract negative operator $\neg$ adjoined to TP. This is shown in (47). A native speaker might paraphrase (47a) as *It was not possible for Mary to react to Olga's insults*.

(47) a. Mary could HARDLY react to Olga's rapid fire insults.

b. $[_{TP}$ ¬ $[_{TP}$ Mary $[_{T'}$ could $[_{NegP}$ HARDLY $[_{Neg'}$ Neg^0 $[_{vP}$ react to Olga's rapid fire insults]]]]]]

As I mentioned previously, from this position, the inherent semantics of the approximative interact with those of the abstract operator and produce the canonical "Contrarian" meaning. To reiterate, this meaning arises when the negation licensed by the Neg^0 and the abstract operator are distributed across the semantic pieces internal to the approximative.[5]

Additionally, using the system introduced in den Dikken (2019), we have a nice way to account for Double Negations, including those involving ConH. An example is provided in (48). Here we can see that HARDLY occupies SpecNegP1 associated with the sentential negation and that *not* is the Spell-out of a Neg^0 head in a lower NegP2 which forms a constituent negation. I have provided two paraphrases in (48b-c) to show that along with *not*, Contrarian HARDLY may also be placed higher under an *It*-cleft. This further demonstrates its association with the higher sentential negation.

(48) a. Talia could HARDLY not invite Esther to dinner.

b. Paraphrase:$_1$ It was not the case that Talia was permitted to not invite Esther.

c. Paraphrase:$_2$ It was HARDLY the case that Talia was permitted to not invite Esther.

d. $[_{TP}$ ¬ $[_{TP}$ Talia $[_{T'}$ could $[_{NegP1}$ HARDLY $[_{Neg'}$ Neg^0 $[_{NegP2}$ $[_{Neg'}$ Neg^0 = not $[_{vP}$ invite Esther to dinner]]]]]]]]

For standard English, this is a significant piece of the syntactic story. However, in Non-standard varieties, there are some other phenomena that need to be accounted for, namely, several distinctive patterns of Negative Concord. While many of the sources that I cited previously do discuss NC, there are a few additional works that focus on Appalachian English as well as some Non-standard varieties of the British Isles: Blanchette (2015) Johnson (2013, 2018), and Robinson and Thoms (2021a, 2021b). I don't have any intention of reviewing these here or offering an alternative critique of the data discussed in those papers. Blanchette (2015) is most concerned with accounting for the interaction of NC and NPI's, especially, in regard to negative subjects (*nobody*, *no one*, etc)

[5]This was shown conceptually above in (38) and will be illustrated in detail in its own section.

and does so in a unique framework laid out in Collins and Postal (2014). Robinson and Thoms (2021b) augment the approach there with some additional machinery. However, to the best of my knowledge, what is not discussed in any of the works are the examples of Negative Concord present in Appalachian and Southern American English (SAE) that involve the negative approximatives.[6] Since approximative syntax is a subpart of what this paper is about, I will demonstrate how such constructions fit into the model that I am proposing.

(49) is a canonical example of negative concord in Southern American English (SAE). It has *n't* contraction occurring on the auxiliary which in this case is *do* and makes use of the negative approximative *barely*. However, the meaning of this sentence, paraphrased in (49c) is the same as a Standard English construction that uses only the approximative and is provided in (49b).

(49) a. Wind turbines don't *barely* get paid for before they need to be replaced. (SAE)

b. Wind turbines *barely* get paid for before they need to be replaced. (Standard Eng.)

c. Paraphrase: A wind turbine is just finally paid off and already a new one is needed.

The construction in (49a) is recognized as an instance of Negative Concord which is a type of negative agreement whereby two pieces of morpho-syntactic negation are present but with only a single negative interpretation. In the case here, the negative interpretation is the one associated with the approximative *barely*: "close-to" not-P but P. The sense is one that is often reinforced by further modification using *just* in constructions such as: *this was just paid off* or *this was just barely paid off*.

The system presented above from den Dikken (2019) can handle this kind of data really well. What I propose is that in SAE, negative approximatives can move into the specifier positions of NegP's projected for the purpose of constituent negation. This is illustrated in (50). Remember, a NegP used for sentential negation is required to be a complement of T and be paired with a negative operator adjoined to TP. The NegP for constituent negation has no such constraint. So, just because

[6] Although, Johnson (2013, 2018) is a source for "Liketa" which is an Approximative-esque item which occurs not only in Appalachian English but varieties of African-American English.

this NegP happens to be a complement of T, does not bar it in any way from serving as a constituent negation.

(50) $[_{TP}$ Wind turbines $[_{T}$ *do* $[_{NegP}$ barely $[_{Neg'}$ Neg^0 = *n't* $[_{vP}$ get paid off...]]]]]

In (50), *barely* has been merged into the SpecNegP and in keeping with constituent negation, there is no pairing of the NegP with the abstract operator (¬). Some readers might be concerned that this example shows that there is contraction of the Neg^0 spell-out of *not*. Remember that in this system, both sentential and constituent negation are assumed to be NegPs that handle their head and specifier material identically. Parameterization determines for the language whether the negation particle is a Spell-out of the head or a lexical piece merged into the specifier. In English, *not* and *n't* are always Spell-outs of Neg^0. den Dikken (2019) states that it is mistakenly believed that *n't* contraction is a hallmark of sentential negation, rather, there is a fair amount of evidence suggesting that the rule governing contraction of the negative particle is really attenuated to verb finiteness. And so, the example in (49) is only one of many that demonstrate constituent negation contracted on an auxiliary. However, I will not get into those matters here.

This construction contrasts with one that on the surface appears to be identical but is not. This is provided in (51).

(51) a. (This is Spartan Hockey, Damnit!) You don't barely beat an unranked team from Ohio!

b. It's not the case that *barely* beating an unranked team from Ohio is acceptable (i.e. You should be winning by a wide margin).

(51) shows that constructions can be formed using the negative particle *n't* and *barely* that serve to negate the VP which is modified by the approximative. This has an identical surface syntax but a different underlying structure. I have provided the syntax in (52). We can see that the approximative *barely* adjoins to its usual position at *v*P. Additionally, sentential negation is achieved by virtue of a NegP in the complement of T being paired with the negative operator adjoined at TP, and Neg^0 is spelled out as *n't*. This gives us the proper meaning: one does not (just) *barely* beat X (and inferentially): one should be capable of an overwhelmingly large victory.

(52) $[_{TP}$ ¬ $[_{TP}$ You $[_{T'}$ *do* $[_{NegP}$ $[_{Neg}$ Neg^0 = *n't* $[_{vP}$ barely $[_{vP}$ beat an unranked team from Ohio]]]]]

Both standard and non-standard dialects allow for constructions like (52) and the type of Contrarian HARDLY constructions that are the focus of this dissertation. The parameterization seems to be whether an English variety will allow its approximatives to be merged in the SpecNegP of Constituent negations and therefore, derive the kind of approximative NC tokens like those provided in (50).

Notice, that what neither dialect seems to allow is for *barely* to be merged into the specifier of a NegP used in sentential negation and subsequently, be paired with the negative operator (¬). If this were the case, then sentences like (53a) would be grammatical and have a meaning identical to (53b). However, no dialect that I know allows for such sentences.

(53) a. *Gertie *barely* killed all of her rose bushes. She has a green thumb and is very attentive.

b. Gertie HARDLY killed all of her rose bushes. She has a green thumb and is very attentive.

The flip side of this circumstance is that it doesn't appear that Contrarian HARDLY can participate in Negative Concord constructions. If this were possible, then a construction like that given in (54) would be licit, but it is not.

(54) a. *Fiona didn't HARDLY care about finishing her research. ≠ Did not care

b. *$[_{TP}$ ¬ $[_{TP}$ Fiona $[_{T'}$ did $[_{NegP}$ HARDLY $[_{Neg'}$ Neg^0 = *n't* $[_{vP}$ care about finishing her research]]]]]]

This data suggests that there is something very important about the syntactic configuration in these cases. One might imagine that the abstract negative operator adjoined to TP and the Neg^0 involved in sentential negation could simultaneously support Contrarian HARDLY and have material spelled-out on the Neg^0 head but this is not possible as (54b) illustrates. Moreover, the SpecNegP position is only open to *hardly* and never to *barely*, thus as (53a) shows, there is no Contrarian *barely*.[7]

[7]So that the reader doesn't find themselves too disappointed later on, I will provide no solution to the mystery of

3.4 The interaction of *Contrarian* HARDLY and other adverbs

There is an additional manner by which we can corroborate the claims that I have made about the unique position of ConH. That is, we can evaluate the interactions that take place when ConH is stacked with other adverbial elements. From what I have suggested above, at the very least, we predict that ConH should behave differently from its approximative counterpart insofar as it takes a higher position in the clause (and has a unique meaning). This is exactly what we see. Essentially, Contrarian HARDLY no longer patterns with the low clausal degree modifiers but rather, shares more properties with the Evidential/Epistemic adverb class that clusters higher in the clause.

There are two primary theories of adverbial modification. The first is set forth in Cinque (1999) and developed by him and others in subsequent work. It is often referred to as a Cartographic model and posits a semantic hierarchy of functional projections in the clausal spine. Each adverb in a given language then has some specifier position of an associated semantic head that hosts them. The theory has the nice property of having a home for everyone and of course the hierarchy itself is empirically grounded. This aspect is generally what critics pick on first. The argument is that it is stipulative and has no explanatory force. Secondarily, it is often claimed that it is redundant insofar as multiple modifier orderings have to be handled by additional projections.

The primary critic of the Cartographic system as well as a proponent of their own alternative program is Ernst (2001, 2003, 2009, 2020). Throughout his work, he has argued for a scope based understanding of modificational orders and interactions. Theoretically, adverbial modifiers are free to adjoin wherever in the clausal spine and relative to one another. Ernst argues that what actually determines their ordering is whether or not the resulting semantics are licit and commensurate. Any potential ordering is technically possible but only some will result in a compatible semantics. This approach has the nice property of not being stipulative and explains a fair amount of orderings based upon inherent semantic properties of the lexical items. If the reader is interested in a recent dissertation regarding what the higher level semantic clusters might be and where they reside in the

the missing Contrarian *barely*. I speculate that part of the solution to the puzzle will undoubtedly be found in a deeper examination of the predicates like (*arrive*) and modifiers like (*just*) which do not allow for interchangeablility between the two adverbs.

spine relative to one another, see A. Payne (2018) who argues for a typology of five groups. For the most part, I will be following Ernst (2009).

The story advanced in this dissertation regarding Contrarian HARDLY is clearly a Scope-based approach. This is largely because I argue that a single lexical item, approximative *hardly*, inherits some additional properties from its interaction with a Neg^0 head and an associated C-commanding abstract negative operator. Contrarian HARDLY emerges from this interaction. As I previously mentioned, I believe that ConH patterns more with the Speaker-oriented adverbs and specifically, the evidential/epistemic adverbs. To demonstrate why I believe this to be the case, I will walk through some exercises in adverb stacking. This amounts to a defense of my syntactic analysis of ConH by virtue of showing that it has its own distinct pattern of modifier interaction and thus, a very different syntactic position from the approximatives. But first, I will provide a bit of background on Speaker-oriented adverbs and the subgroup of Evidential/Epistemics.

As I mentioned previously, Ernst (2001, 2003) proposes that Adverbs form classes based upon their semantics and adjoin at various heights in the clause related to how well they can scope in regard to one another. Part of what determines this is the nature of the arguments that the adverb semantically selects for. For example, the negative approximative class; *barely*, *hardly*, *scarcely*, etc., and other adverbs like them, select for events. These adverbs appear lower in the clause and modify with respect to the verbal action or aspect. Simultaneously, because of this quality, they are Subject-oriented in nature. Let's look at two contrasting examples in (55a-b). (55a) provides an example of modification using *barely*. Intuitively, the adverb provides us additional information about the speaking event undertaken by Abigail who is our subject: She spoke very little to Eva at a party. Notice, we learn nothing about the quality nor the type of the conversation that the participants engaged in. Instead, what we learn is the "degree" to which she spoke to her; it was minimally.

(55) a. Abigail *barely* spoke to Eva at the party. = Subject-oriented degree modifier

b. Abigail *probably* spoke to Eva at the party. = Speaker-oriented epistemic modifier

c. Abigail *probably barely* spoke to Eva at the part. = Speaker > Subject

This contrasts with (55b) which provides information via *probably* about the Speaker's opinion regarding the proposition. The speaker's point of view is that most likely (*probably*) Abigail did in fact speak to Eva. This may be true or it may be false. What we learn is that our speaker believes it to be true. This is the major property of Speaker-oriented adverbs and especially, the epistemics whose defining feature is the level of commitment that the speaker has to the truth. Other adverbs in this class include: *apparently*, *obviously*, and *possibly*. What (55c) shows us, is that this class of adverb sits slightly higher in the clausal spine than the degree modifiers and has the ability to scope over them. And so, (55c) tells us about the speaker's level of commitment to the proposition that Abigail spoke very little to Eva. It is a proposition that they feel (or assess) with a high degree of certitude to be true.

Essentially, my position is that the shift of approximative *hardly* to Contrarian HARDLY in its move from *v*P adjoined adverb to SpecNegP adverb comes along with two major additional properties. Those properties are selection for propositions and Speaker-orientation. Selection for propositional material is a requirement of functioning as a negator in SpecNegP. ConH needs an entire proposition to negate. However, since ConH can no longer select for event related material, it can not function in a subject-oriented way. So, what comes along with the shift is the move to Speaker-orientation and a new modal quality both of which are characteristic of modifying propositions. This is precisely why native speakers sometimes paraphrase the propositional material *p* associated with an utterance of ConH *p* as one which is highly improbable or impossible. An example of a ConH utterance and paraphrase of this type is provided below in (56a-b).

(56) a. Bertie will HARDLY be a candidate for the next space mission.

b. It is *impossible*/*improbable* that Bertie will be a candidate for the next Space mission.

It seems very obvious to native speakers that expressions involving ConH are statements about the speaker's subjective perspective or belief regarding some given proposition. In fact, ConH's ability to implicate that a Speaker has a contrary perspective in regard to a proposition either in the Common Ground, or that someone is attempting to introduce into the Common Ground, is exactly why it can be pragmatically employed to "correct" another interlocutor's point of view or contest

any such introduction. I provide an example of this type of use in (57) which is one we saw in an earlier chapter.

(57) **Context**: Two colleagues are discussing the topic of how much semantico-pragmatic information can be encoded in the syntax. One colleague offers some arguments based on Chomsky's work and says;

A: I think we should really be concerned about what Chomsky has to say about "Inclusiveness".

B: Who cares what Chomsky says about it!? He's always wrong about everything anyway!

A: Chomsky is HARDLY wrong about everything and I think that we both know that.

I will now go through some additional data that demonstrate that Contrarian HARDLY is not only in a higher position but patterns with the Evidential/Epistemics. The first is an observation that goes back to Bellert (1977) and is further discussed by Nilsen (2003) and A. Payne (2018). These are the restrictions on the so-called "High" adverbs. This is the tendency for particular adverbs to experience a significant degree of degradation when embedded in certain environments, for example: questions, imperatives or the antecedent of a conditional.[8]

(58) a. *Did Deborah *evidently* write a book?

b. *Deborah, *paradoxically* write a book!

c. *If Deborah HARDLY wrote a book, then you needn't bother either.

Another patterning to observe is that adverbs of this class don't stack particularly well with one another. Recall, in our scope theory, all of our adverbial modifiers are able to take multiple positions based upon whether or not their semantics are commensurate. As an aside, Ernst (2009) follows Giannakidou (1999) in assuming that each adverbial element is mapped to two separate but partially overlapping scales. Thus, the Speaker-oriented adverbs are mapped to a scale of

[8]Some major adverbs of this group are: *evidently, possibly, probably, fortunately, paradoxically, allegedly, maybe* (A. Payne 2018)

Veridicality and a scale of Subjectivity. These two scales appear to have some correlation and therefore, for any adverb (AdvP), the strength of its non-Veridical force is directly related to the Subjectivity it expresses. I will not provide a defense of their conjecture but I will note that as I've been demonstrating, ConH does in fact conform to this pattern. That being said, these scalar dimensions in meaning have the effect that some adverbs will be able to take higher scope positions than others and certain combinations will more favorably interact with one another as opposed to others. This is also true within a given class. So, obviously, we will be able to find some particular combinations that are fairly acceptable.

The examples in (59a-d) demonstrate that it's not very acceptable to stack multiple evidential/epistemic adverbs. All of the examples become grammatical if one of the epistemics is removed or alternatively, ConH is simply replaced by the negative particle *not*.

(59) a. Bea *paradoxically* (*HARDLY) sold/did*n't* sell Kirstin her book collection.

b. Bea *probably* (*HARDLY) asked/did*n't* ask for Kirstin's help.

c. Bea *evidently* (*HARDLY) claimed/did*n't* claim that Kirstin was a good friend.

d. Bea *paradoxically* (*evidently) claimed that Kirstin was a good friend.

Additionally, it is important to note that while several of these adverbs can attach higher in the clause, the semantics are still not commensurate and therefore, this higher attachment doesn't fix the problem. Two examples are given in (60a-b). For example, if this were possible then (60a) would mean something like: *It is evident that Wanda definitely didn't claim that Sandra was a good friend.*

(60) a. **Evidently*, Wanda HARDLY claimed that Sandra was a good friend.

b. **Probably*, Wanda HARDLY asked for Sandra's help.

This is clearly not an issue for the negative approximatives who attach lower and also contribute information about the Subject and not the Speaker. The data in (61a-c) show that not only can you have, for example, *barely* coincide with these evidentials but Contrarian HARDLY may also scope over it.

(61) a. Judit *probably barely* asked for any help from Pia.

b. Judit *evidently barely* noticed Pia's error.

c. Judit HARDLY *barely* noticed Pia's error. = (She definitely noticed immediately)

We can easily reaffirm the conclusion that *barely* is attached lower by also taking a look at some material that can come between ConH and *barely*. If you'd like to think about it in another way, this is additional material that can be placed above *barely* but not above HARDLY. Such examples are contained in (62a-d) and make use of the modifiers *just* and *often*. Both of these modifiers may be adjoined above *barely* but neither above ConH, although both may be placed below.

(62) a. Yelena *often just barely* completes the projects that she begins.

b. Yelena (**often*) (**just*) HARDLY completes the projects that she begins.

c. Yelena *barely* (**often*) (**just*) completes the projects that she begins.

d. Yelena HARDLY (*often*) (*just*) completes the projects that she begins. (She adds many extra flourishes.)

So, this section has affirmed two main ideas. First, it can be shown that Contrarian HARDLY has certainly acquired a new higher position (I have argued this is in SpecNegP) from the position where it functions as an approximative. Moreover, we can tell from the interactions of multiply stacked adverbs that not only is ConH in a higher position but that it ceases to pattern with the approximatives and instead acts more as though it is a member of the Evidential/Epistemic class of modifiers.

CHAPTER 4

NEW THOUGHTS ON PROXIMITY AND MODALITY

Thus far I have presented a large amount of Contrarian HARDLY data and provided a syntax that accommodates both it and the other approximative adverbs. I have argued that ConH arises as a result of approximative *hardly* being Merged into SpecNegP where it interacts in a unique way with covert Propositional Negation. However, I have not yet elaborated on the semantic intricacies of these interactions. In this chapter, I will dive into the semantics of these lexical items and explicate how their associated meanings are built compositionally, and subsequently strengthened via Exhaustification. Doing this will require a reexamination of the class and so first I will discuss *almost* and *barely*. The primary thing that I will show is that we can think Intensionally about the Proximal component and simplify its truth conditional specifications. Additionally, I handle an old problem related to the approximative class: what to do with the Polar conjunct and its asymmetric characteristics. I will show that the Polar inference is a piece of Not-at-issue content that results from the type of "Presuppositional Exhaustification" that is presented in Bassi, Del Pinal, and Sauerland (2021).

4.1 Some initial remarks on the approximative class

Let's start off by thinking about the example in (63) and refreshing on the basic sense (or contribution) of a ConH utterance.

(63) **Dialogue with Explicit target**

A: Do you think that Francesca will hire Bernice for the new research position?

B: She's HARDLY going to hire Bernice (that's for sure).

In general, the propositional target for a ConH utterance can be implicit or explicit. In the case of (63), the proposition is explicit insofar as the proposition that ConH targets is embedded directly in Speaker A's question. Here, Speaker B uses the ConH utterance to signal to Speaker A that the proposition does not (or will not) hold, is "outlandish" and furthermore, that there is some type of evidence (from the speaker's perspective) which supports this contrary position.

An example of a dialogue with an implicit target is given below in (64).

(64) **Dialogue with Implicit target**

A: Hi Roberta, how's your day going?

B: Fine, just super busy. I gotta grade a stack of quizzes and return a ton of emails. I need to figure out a bunch of logistics for the Colloquium, and I'm supposed to have an abstract done by tomorrow.

A: Well, I'd HARDLY worry about all that junk. Just get the abstract done.

Here Speaker A has asked about her colleague Roberta's day. Roberta (Speaker B) provides a list of all of the things that she needs to accomplish that afternoon. Speaker A advises Roberta, using a ConH utterance, *not* to worry about anything except the completion of her abstract. I call this use "Implicit" because the adverbial is embedded in a proposition that doesn't appear overtly in the dialogue. In other words, the proposition that ConH is modifying is drawn expressly from the Discourse Context. Speaker A has summarized the circumstances for themselves as "worrying about a bunch of junk" and then advised that they themselves would *not* worry about *it*.[1]

Having reminded ourselves of the flavor of a Contrarian HARDLY utterance, we can turn to thinking a little bit more in depth about Approximative *hardly* and the rest of its "kin", to borrow a phrase from Morzycki (2001). However, there are a few things that the reader should keep in mind. In order to understand how we arrive at this Contrarian HARDLY meaning, it will be necessary first to discuss the semantics of the approximatives and show how they interact with both Negation and Focus. From there we can get an understanding of what is and is not unique about Contrarian HARDLY as well as what semantic interactions allow for its emergence. After all, I will demonstrate that the underlying semantic structure inherent to the approximative is what covert Propositional negation as well as Focus act upon in order to give rise to the Contrarian interpretation. Therefore,

[1] I would like to note for the benefit of non-native speakers that the advice provided by Speaker A is interpreted as "do **not** worry about X". This utterance has no ambiguity and native speakers never interpret utterances like this with any of the senses attributable to approximative *hardly*, which is precisely why Speaker A subsequently refers to the task list as "junk". A native speaker might choose to paraphrase the information as, "Speaker A doesn't consider the list of things that Roberta just told her to be even worth worrying about."

familiarity with the approximatives' behavior and use is required, as is taking a stance on what the semantics of the approximative family are.

One of the critical goals of this investigation is to handle the attested "asymmetries" so frequently discussed regarding the behavior of the "Proximal" vs "Polar" conjuncts of these items. The semantics that I build respect the attested asymmetries regarding which pieces of the meaningful content are asserted and which parts are entailed but not asserted—these are the puzzling "Assertorically Inert" (Horn 2002) or "background" entailments (Roberts 2010) of these adverbs. Ultimately, I demonstrate that we are dealing with At-issue vs. Not-at-issue contributions and demonstrate that they arise via Exhaustification. Also in the end, we will have built an analysis that properly treats the subjective Speaker-orientation of ConH (and potentially all elements of the class). Analyzed in this way, we can dispense with proposals which locate this meaning as part of the Truth-conditional specifications of the adverb pace Penka (2019) and Nouwen (2006). Too, we achieve a principled reason for its unusual behavior, it is a species of Not-at-issue content.

4.2 On approximative and predicate interactions

The approximative family of adverbs, which have been referred to and grouped in various ways over the years: "degree modifiers", "slack regulators", "minimizers"; consist of a group of adverbs that have often been analyzed as having the ability to interact with a lexically provided scale and return some measurement in regard to that scale (Amaral 2007; Israel 2011; Kilbourn-Ceron 2016; Penka 2019).[2] These are items like: *almost, nearly, slightly, scarcely, barely, rarely*, and *hardly*. The exact nature of any such scalar interactions remains an ongoing area of research and I will, of course, weigh in on the approach broadly. An especially thorny issue regardless of theoretical commitments and machinery is to account for how these items interact with other quantificational elements and their cross-categoriality (Morzycki 2015). That being said, looking at matters from the perspective of scales is not the only way to go. Additionally, there are both modal (Sadock 1981; Rapp and Stechow 1999; Morzycki 2001; Nouwen 2006) and Set Subtractive approaches

[2] As Morzycki (2015) points out, the largest discussion has been over the English "almost" but analyses in other languages do exist, for example, see Amaral (2007) for European Portuguese; Rapp and Stechow (1999) for German; Schwenter (2002) for Spanish; Kagan and Wolf (2015) for Russian; and Lee (2023) for Cantonese.

(Crnič 2018; Baron 2022). There are also approaches that present somewhat of a mixed system (scalar and modal) which can be found in Lassiter (2017), and McKenzie and Newkirk (2020).

There will not be time to set out the thinking behind each one of these approaches. As is common in Linguistics, much of the research has focused on very similar sets of data, most notably, modification of verb phrases.[3] So, instead of discussing how each researcher's account fails to do this and that, I'd like to discuss the problems a bit more abstractly and try to make a note of each author's key insights where they are applicable to my own position. Afterward, I myself will present a particular conception of the modal approach. However, I will first lay out a bit of what has been said about predicate interactions as well as make some novel observations in that arena.

To reiterate, a major concern to keep in mind is that, eventually, the cross-categorial nature of these items needs an explanation. Everyone who has jumped into looking at these kinds of items has immediately noticed that the types of constituents that they can modify are quite varied. We find very suitable modifications with many types of lexical and phrasal categories (Morzycki 2001, 2015) which means that the compositional semantics can get very tricky depending on other assumptions one makes in that realm.

(65) a. The library was $\left\{\begin{matrix}\text{nearly}\\ \text{almost}\end{matrix}\right\}$ filled to capacity with books of every size. (Verb)

b. $\left\{\begin{matrix}\text{Nearly}\\ \text{Almost}\end{matrix}\right\}$ all of the books were about Medieval logic and Botany. (Quantified NP)

c. There was a single shelf that was $\left\{\begin{matrix}\text{nearly}\\ \text{almost}\end{matrix}\right\}$ empty. (Predicative Adjective)

The examples in (65) show that an approximative like *nearly* or *almost* may modify Verb Phrases, Quantified Noun Phrases, and Adjectives.[4] In this monograph, I'll mostly be concerning myself with the issues of Verb Phrases. The reason for this will become apparent when I turn

[3]Crnič (2018) and Baron (2022) are exceptions and focus primarily on Quantified Noun phrases. For other thoughts in approximation, vagueness and the nominal domain, see: Rotstein and Winter (2004), Sauerland and Stateva (2007), and Anderson (2013, 2014)

[4]Readers interested in an interesting paper about differences between *almost* and *nearly* should look at Pozzan and Schweitzer (2019).

to discussing what is currently being called "Presuppositional Exhaustification" (Bassi, Del Pinal, and Sauerland 2021).

As Morzycki (2015) points out, a long attested property of the approximative *almost* is its interaction with telicity (Hitzeman 1992). In the case of a telic predicate like *finish*, modification by *almost* yields a sense that the event described by the verb was not completed, although the agent was "close" to having done so. In the case of an atelic predicate like *took a stroll*, modification by *almost* results in a sense that the verbal action was never even begun, rather, the agent "came close" to starting it. These examples are given below. The reader is probably familiar with the classic telicity test which is the ability to support either an *in* Prepositional phrase (Telic) or a *for* Prepositional phrase but I've included these in the examples anyhow.

(66) a. Wynonna *almost* finished her homework $\left\{\begin{array}{l}\text{in an hour}\\ {}^{*}\text{for an hour}\end{array}\right\}$ (Telic)

b. Wynonna *almost* took a stroll $\left\{\begin{array}{l}{}^{*}\text{in an hour}\\ \text{for an hour}\end{array}\right\}$ (Atelic)

As (66) shows, with a telic predicate, we understand that there is a "closeness" to event culmination but with an atelic predicate, a "closeness" to event initiation. This latter sense is sometimes referred to as the "Incipient" reading of *almost*.

As mentioned above, the Approximative class is divided between modifiers that are "positive" (or "affirmative") and those that are "negative". The approximatives in (65) and (66) are positive which means that they tell us how "close" something came to being realized. For example, in (65a) we learn that the library was very close to being filled (although not entirely). The opposite type of information is provided by the negative approximatives which tell us how close something came to *not* being realized. The adverbials *barely* and *hardly* are of this type and a few examples are given in (67).

(67) a. The librarian $\left\{\begin{array}{l}\text{barely}\\ \text{hardly}\end{array}\right\}$ accomplished anything during her afternoon. (VP)

b. $\left\{\begin{matrix}\text{Barely}\\ \text{Hardly}\end{matrix}\right\}$ any books in the library were about Medieval Logic or Botany. (Indef. NP)

c. The print in one book was $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\end{matrix}\right\}$ distinguishable any longer. (Pred. Adj)

As previously noted, the negative approximatives reflect an opposite sense of "closeness" and convey how close an event or proposition came to *not* being the case. For example, in (67a), the librarian came very "close to" *not* accomplishing anything (but did accomplish something in the end). However, the examples in (67) demonstrate an additional aspect of complexity. The inherent features of the modified predicate not only cause the negative approximative to have different senses but demonstrate a certain variability in regard to when this can occur. That is, certain predicates allow for the three negative approximatives in question to overlap in meaning while other predicates allow for only two (*barely* and *hardly*) to overlap and yet others may force a unique interpretation. Some of this variation is provided in (68).

(68) a. The librarian $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\end{matrix}\right\}$ completed her tasks. = "came close" to *not* P but P.

b. The librarian $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\\ \text{rarely}\end{matrix}\right\}$ asked for help with her work. = infrequently

c. The librarian $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\end{matrix}\right\}$ read a single chapter of the book. = minimal amount

Thus, the interpretation of (68a) seems deceptively straightforward such that the tasks in question came "very close" to *not* getting done. However, comparison with (68b) demonstrates that the work these adverbs do is a bit more complicated because in order to achieve an "infrequency" interpretation for the predicate in (68a) one must employ *rarely*. This is to say, it doesn't appear that *barely* or *hardly* can yield an infrequency interpretation with a predicate like *completed*. However, in the case of a predicate like *ask for help*, any of these three approximatives will yield

the infrequency reading. Additionally, notice that the infrequency meaning of (68b) can be brought out more clearly with the addition of *ever*, while the "minimal amount" meaning of (68c) will be more prominent if we add *just* or *even*.[5] To be clear, there is an asymmetry which will need to be accounted for in future work: *barely* and *hardly* can sometimes mean *rarely* (i.e. infrequency) but *rarely* can not take any of the other negative approximative senses.

Even though the major goal of this work isn't to sort out the modificational variability, I would be remiss to say nothing. So, taking a lead from the work on *almost*[6] but adding one layer of complexity, I suggest that we examine this paradigm with respect to the Lexical aspect.

4.3 Approximatives and Aktionsart

Lexical Aspect (Aktionsart) is the study of the aspectual qualities that are lexicalized on verbs and how these core properties interact with other processes in both the syntax and compositional semantics. The terminology "Aspect" is meant to reflect the fact that as researchers, we are examining the manner in which the "actions" denoted by predicates relate to an abstract notion of "time" and are intuited as things like *events*, *processes* and *states*. The modern form of this work originates in Vendler (1957) and Dowty (1979), although Rothstein (2004) is the more recent in depth study. As Filip (2020) points out, many of the classificatory properties identified by Vendler are wrongly attributed to Verbs alone when in reality they hold of Verb Phrases. For our purposes, I will use the most common two way classification [+/−Stages] and [+/−Telic] which results in the following 4 Verb Classes: *States, Activities, Achievements* and *Accomplishments*. As I mentioned earlier, the test for Telicity involves the ability to support an *in* (Telic) or *for* (Atelic) Prepositional phrase. The standard test for a predicate having *stages* is whether or not it can be placed in the Progressive. Below I provide an example of each test along with the featural classification that the tests are meant to be indicative of.

[5] A small clarificational note is needed here. It is unclear to me at the moment why *just* does not readily modify *hardly* unless it is being used with *any* or *ever* i.e. *I just hardly ever speak to Stanley anymore.* This is not the case for *barely* and the reader can test this simply using the example in (68c) where *just barely read* is acceptable but *just hardly read* sounds quite odd.

[6] For the reader interested in a discussion of this sort in regard to European Portuguese *quase* ≈ *almost*, see Amaral (2007).

(69) State: *know*

a. *Cindy is knowing her neighbor. −Stages

b. Cindy knew the password *in 5 mins/for 5 mins. −Telic

(70) Activity: *walk*

a. Cindy is walking down the street. +Stages

b. Cindy walked the countryside for an hour/*in an hour. −Telic

(71) Achievement: *recognize*

a. *Cindy is recognizing her dog. −Stages

b. Cindy recognized the problem in 10 mins/*for 10 mins. +Telic

(72) Accomplishment: *finish*

a. Cindy is finishing her homework. +Stages

b. Cindy finished her homework in an hour/*for an hour. +Telic

Let me quickly point out that I have included *rarely* in the examples below for thoroughness. *Rarely* always gives rise to an infrequency interpretation but what is important for us, is to predict when *barely* and *hardly* will give rise to infrequency interpretations. Therefore, in what follows, I won't be discussing *rarely* too much.[7]

The first type of predicate that we will consider is the *State*, given in (73), and exemplified by *know*.

(73) State: −Stages/−Telic e.g. *know*

a. Rihanna $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\end{matrix}\right\}$ knows what the job tasks are. = Minimal amount

b. Rihanna *rarely* knows who is scheduled for the evening shift. = Infrequently *knows*

[7]In future work on *rarely*, it will be necessary to determine what: a) is at the heart of its flexibility and b) still allows it to participate in things like Negative Inversion.

The important thing to observe in (73) is that our negative approximatives give rise to an interpretation which we might call "minimal amount". When one hears (73a), they take the utterance to mean that *Rihanna's knowledge of the job tasks is somewhat limited* or perhaps, *she doesn't have a full appreciation for what the tasks entail*. So, lacking any kind of endpoint and progressive aspectual qualities, the "close to not" of the negative approximatives results in an interpretation like "very little" but actually is an expression of being in a state X although so close to another Y that you run the risk of being in Y and not X. That is, Rihanna is "close to not" even being in the state identified as *knowing*. "Minimal amount" becomes a way that we can conveniently talk about being or not being in states and I do not think it is reflective of the fact that there are literal quantities in play. After all, what constitutes "knowing" someone or something is regularly up for debate within a group of interlocutors, and while conversational participants have trouble quantifying their ideas here, they have a way to discuss that uncertainty, namely, with approximatives.

The next Aspectual grouping is *Activities*, an example of which is given in (74). This group is +Stages and −Telic, and interestingly, has an event structure such that all of the negative approximatives give rise to an Infrequency reading.

(74) Activities: +Stages/−Telic e.g. *walk*

a. Rihanna $\left\{\begin{array}{l}\text{barely}\\ \text{hardly}\\ \text{rarely}\end{array}\right\}$ walked in the evenings. = Infrequency

So, when the negative approximatives modify a predicate with "stages" they return the information that the agent is "close to not" participating in the progression of those stages. This is interpreted as "infrequentness" or "irregularity". What is important to realize is that it is as vague as the predicate itself, in this case, *walk in the evenings* and the negative approximatives do not contribute anything to that vagueness. To say that *Rihanna walked in the evenings* is to convey that she had a habit or disposition to *walk in the evenings*. The negative approximative does not contribute further to the vagueness of the predicate but rather contributes the information that

Rihanna is "close to not" even having such a habit or disposition. The action performed by Rihanna isn't frequent enough to really be habitual. It doesn't happen often enough. Our interpretation of this is *infrequency*.[8]

The next two categories are *Achievements* in (75) and *Accomplishments* in (76). In the (75) example, Rihanna is *close to not recognizing* her old elementary school teacher but does recognize her *eventually* or *after all*. Similarly, in (76), Rihanna is *close to not completing her homework* but does complete it. Both *barely* and *hardly* give rise to this interpretation and no other.

(75) Achievement: −Stages/+Telic e.g. *recognize*

a. Rihanna $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\end{matrix}\right\}$ recognized her elementary school teacher. = Close to Not X but X

b. Rihanna *rarely* recognized people from her old neighborhood. = Infrequency

(76) Accomplishment: +Stages/+Telic e.g. *completed her homework*

a. Rihanna $\left\{\begin{matrix}\text{barely}\\ \text{hardly}\end{matrix}\right\}$ completed her homework. = Close to Not X but X

b. Rihanna *rarely* completed her homework. = Infrequency

Much like in the case of *almost*, here we can see the importance and impact of the +Telic feature. What it does is bring out the reading that the events described by the predicate were "close to not" culminating. These are the Aspectual classes that generally give us the strongest impression that *barely* is simply *almost not*. This makes sense, it's very easy to create paraphrases where we replace our negative approximative with *almost not*, for example, *Rihanna almost didn't complete her homework*. In this example, we have the same two predominate inferences that arise in (76) which are that: 1) Rihanna was close to not completing the homework 2) Rihanna completed it. And while saying that *almost* and *barely* are just opposites isn't quite the right way to think about the relationship, it is true that when we feed Telic predicates to *almost*, we get an interpretation

[8] A savvy semanticist will quickly ask, where does this *habituality* or *disposition* come from? This is an excellent question which I do not explore. However, other researchers have proposed HAB—a habitual operator—that takes care of some of this. For some discussion, see Anand and Hacquard (2008) and Bervoets (2020).

that the verbal action was "close to" initiation or culmination. That is, in both instances, we make inferences about a vague starting or ending point associated with the action of the predicate.

I'm sure that the reader is beginning to get an impression of the simple semantics that I am building here. What I will demonstrate is that the approximatives have a consistent semantics which provide an interpretation that a certain type of proximity exists in regard to the semantics contributed by the predicate. I will dive into the details more below, but would first like to continue thinking about some other kinds of predicates.

While it's possible to see the effects of Lexical aspect on the interpretation of approximative modification, the perception that these adverbials have multiple ambiguous meaning contributions is an illusion. It is actually indicative of our perceptions of "closeness" to aspectual (and other) qualities of the predicate. In order to show some of the the other qualities that have an effect, I'd like to look very briefly at two other proposed sub-classes of predicates; Proffering verbs and Future-directed Opining (FDO) Verbs. The FDO's can themselves be divided into two distinct groups that each have different patterns of interaction with elements like *barely*. I'll explain briefly what these are and then we'll see what happens when we modify them with a negative approximative.[9]

4.3.1 Submission Verbs and approximatives

The two groups of predicates that we will think about in this section have been referred to as Proferring verbs (Anand and Hacquard 2008) and Future Directed Opining (FDO) verbs (Bervoets 2020). These are groups which form two subsets of the category of "Submission" verbs, which is itself a subgroup of Opinion Verbs. A list of Submission verbs, divided into Proffering and FDO exemplars, is given below in (77).[10]

[9]While the discussion of these verbs in regard to approximatives is my own work, I'd like to note that the major source for general comments about these verb classes, especially the Future Directed Opining verbs, is Bervoets (2020) which draws on Anand and Hacquard (2008) for Proffering verb data and discussion.

[10]Opinion verbs are themselves considered to be a subset of Internal attitudes. All of these subdivisions are based upon a variety of semantic considerations that drive overall patterns of behavior. I will be referring to features that make-up the most immediate superset category: Submission verbs. However, the reader should keep in mind that there are other Future Directed Opinion verbs that are NOT Submission verbs and therefore, not "Opining" verbs, under the classifications laid out by Bervoets (2020) and Anand and Hacquard (2008). Also, there are "Submission" verbs that don't fall into either of the categories that I'm focusing on here. A large amount of work remains to be done in this area overall and so, we should expect these groupings to shift a bit as future work unfolds.

(77) Submission Verb Category

a. Proferring Verb = *argue, claim, deny, maintain*

b. Fut Dir Opining = *offer, recommend, demand, promise*

The major attribute of the Submission verb category is that these predicates are used to "submit" a proposition to the Common Ground. However, they do this in different ways. In the case of the Proffering verb, they embed a clause which denotes a proposition which is submitted to the Common Ground for assessment by discourse participants. The expectation for this submission is that the proposition will be non-controversially accepted. In this way, according to Anand and Hacquard (2008), Proffering verbs encode discourse moves rather than describing private cognitive states. This is not the case with FDOs which instead report the submission of a modal proposition (Bervoets 2020). Let's look at an example in (78).

In (78a), what the subject proposes to move to the Common Ground is the proposition denoted by the embedded clause, which is that *Pippa was a scuba diver*. Alternatively, in (78b), the propositional submission is something very different than what is contained in the embedded clause. It is actually a modal proposition along the lines of: *Insofar as Josie is concerned, Pippa may choose to Scuba dive*.

(78) a. Josie argued that Pippa was a scuba diver. (Proffering)

b. Josie permitted Pippa to scuba dive. (FDO)

The second major quality shared by both groups is that some form of "attestation" seems to be required. This means that there must be some outward signalling associated with the propositional attitude. As Bervoets (2020) points out, this does not have to be a vocalization but must take the form of a "public gesture". These items seem infelicitous if the attitude holder does not express the attitude. To see this, we can look at example (79) drawn from Bervoets (2020)[11] regarding a group of friends who annually visit the beach together.

[11]This can be found in (Bervoets 2020) pg 25 ex 69

(79) *Julia demands that everyone bring bicycles to the beach next year. She remembers however that Lupe has been told by her doctor that walking long distances is good for her back, so notes to herself that Lupe walking instead of biking would be acceptable. She forgets, however, to let Lupe or anyone else in the group know about this exception to the biking mandate.*

a. Julia is fine with Lupe walking.

b. #Julia permits Lupe to walk.

As the example in (79) demonstrates, Julia's permission in regard to Lupe walking must be signalled in some way to the group or Lupe. It is not enough for Julia to merely adopt this position or internal attitude, she must convey that stance in order for it to "become" a permission.

Another interesting aspect of the semantics explored for this class in Bervoets (2020) and which she uses to divide the FDOs into two separate classes, is the inferential pattern that presents when the FDOs take a disjunctive complement. In brief, the group can be separated into those predicates which give rise to Free Choice effects which are existential-like in nature and those which are universal-like. Bervoets terms the former group Class I and the latter, Class II. Let's look at a couple of her examples.[12]

The Free Choice effects of existentials are such that it can be inferred what the choices are by simply replacing the whole disjunction in the object position with just one or the other of the disjuncts. This is shown below in (80).

(80) Some students went to the beach or to the cinema. *implies:*

a. Some students went [to the beach].

b. Some students went [to the cinema].

As we can see below in (81), the FDO *permit* follows this exact pattern.

(81) The first steward permitted me to drink coffee or tea. *implies:*

[12]These can be found on pg 43-46 of (Bervoets 2020).

a. The first steward permitted me to drink coffee.

b. The first steward permitted me to drink tea.

However, in the case of universals, a different pattern is demonstrated. The choices are not simply the two sentences yielded by substituting the whole disjunction in the complement position for a single one of the disjuncts. The choices that arise are not those shown in (82a-b): *You must go to beach*, *You must go to the cinema*. Rather, what arises are a pair of inferences that correspond to the possibility for each VP + disjunct. Thus, what (82) does imply is that *You may go to the beach* and *You may go the cinema*.

(82) You must go to the beach or go to the cinema. *does not imply:*

a. You must go to the beach.

b. You must go to the cinema. *But DOES imply:*

c. You may go to the beach.

d. You may go to the cinema.

This Universal-like pattern is what we have in the case of the predicate *promise*.

(83) The airline promised to give me money or a hotel stay. *does not imply:*

a. The airline promised to give me money.

b. The airline promised to give me a hotel stay. *But DOES imply:*

c. Giving me money was a possible way to satisfy the promise.

d. Giving me a hotel stay was a possible way to satisfy the promise.

Now, in order to account for this pattern, Bervoets (2020) proposes a semantics for these predicates that builds in a modal operator.[13] That is, since it seems that these predicates involve quantification over possible worlds, a modal operator can be considered to be part of the verbs

[13]These predicates also pass standard tests for Intensionality and yield FC inferences in "Wide"-disjunction which is an attribute of modals.

denotation which allows the inferential pattern to then be derived via Exhaustification.[14] I will be discussing Exhaustification in a subsequent chapter and we don't need to worry at the moment about how these inferences are derived. Currently, what is of interest are the semantics that are proposed for these items. Below in (84), I have provided the simplified semantics offered in Bervoets (2020). Each verb quantifies over an *attest* operator and a modal operator. In the case of *permit* which patterns with existentials, this is the possibility modal $\Diamond$ and in the case of *promise* which patterns with universals, the necessity modal $\Box$.

(84) Simplified semantic denotations for Class I and II FDO

a. $[\![\text{permit}]\!] = \lambda p.\lambda x.x\ attest(\Diamond_{0_x} p)$

b. $[\![\text{promise}]\!] = \lambda p.\lambda x.x\ attest(\Box_{0_x} p)$

At this juncture, we should look at an example where a negative approximative modifies one of these Class I and Class II FDOs.

As we can see below in (85a), modification by *barely* of Class I *permit* results in an infrequency interpretation which might be paraphrased as: *Sharon does not allow the children to play outside very often*.

(85) a. Sharon *barely* permitted the children to play outside.

b. *Sharon *barely* promised the children could play outside.

This is pretty good result. The negative approximative *barely* behaves as though it were modifying an Activity predicate. This is commensurate with Bervoets treatment of these predicates as Accomplishments that can be turned into Dispositions via an Habitual operator HAB. Additionally, we can see that modification of Class II *promise* is not possible. Hypothetically speaking, since the predicate is underlyingly an Accomplishment, it should mean that *Sharon came close to not promising the children could play outside but then promised them that they could*. As far as I can tell, the sentence is just bad.

[14]The Exhaustification procedure utilized is that developed in Bar-Lev and Fox (2017) which is a procedure for the "Grammatical" calculation of implicatures.

Notice that the Class II FDO differs from an example with a Proffering verb like *argue*, provided below in (86), which when modified by *barely* yields an interpretation that is similar to when the negative approximative modifies a State. That is, the interpretation might be paraphrased as: *Sharon didn't argue very much* or *Sharon didn't provide much of an argument*. Again, this is a pretty good result since it has been shown that *argue*, while passing the tests for Accomplishments, is 1) closely related to Attitudes 2) semantically requires that its complement be an opinion held by the Subject (Anand and Hacquard 2008). Therefore, we might anticipate that when modified by *barely*, it would possibly behave like *know* and in fact, it does.

(86) Sharon *barely* argued that the children needed time outside.

Turning back to the examples given in (84), another thing that makes them very interesting is that they demonstrate a previously attested pattern in which *barely* participates, namely, *barely* has the ability to modify existentials but not universals. This topic has been given some attention recently in Crnič (2018) and Baron (2022) where they both discuss Quantified Noun Phrase modification by *almost* and *barely*. In the example in (87), we can see that *barely* can modify an Indefinite Noun Phrase (existential) but not a Definite NP (universal).

(87) a. *Barely* any student finished their paper on time.

b. **Barely* every student finished their paper on time.

The opposite pattern is seen with *almost* in (88).

(88) a. **Almost* any student finished their paper on time.

b. *Almost* every student finished their paper on time.

4.3.2 Why are these predicate interactions important?

There are a few reasons why its necessary to think about how these predicates interact with the approximative class. The first reason is that I will be introducing (and arguing for) a simple Intensional semantics that does not use any of the machinery that has been fashionable to put to use in scalar approaches. I will argue that the semantics for the Approximative class is highly

uniform and makes the same contribution in regard to the semantics of the predicate. A brief look at predicates like the Proffering verbs and FDOs make it obvious that adverbs like *almost* and *barely* are not simply attenuated to the event structure and lexical aspect. As we saw above, the presence of a HAB operator or modal operator has implications for the felicity and/or acceptability of attempted modifications.

Ultimately, I will show that the latter complication, that the presence of a modal in the lexical specifications can lead to unacceptability with approximative modification, is the result of the Exhaustification procedure. In certain cases, obligatory Exhaustification over Alternative triggering elements simply produces incompatible At-issue and Not-at-issue content. This will be discussed more in depth in a later section. Presently, I will turn to the former issue: what is the primary contribution of an approximative adverb and how does that work anyhow?

4.4 The Proximal Component

Regardless of the angle pursued or the approach offered, everyone who has worked on the issue of approximatives can agree that a primary complication is adequately generalizing and describing whatever it means “to be close”. When an approximative is employed as in (89), the imparted information seems to be that the event structure of the verb was “close to” or “close to not” happening, depending upon use of an affirmative or negative approximative, respectively.

(89) a. Tammy *almost* revised Chp 4 of her book. = affirmative approx "close to VP"

b. Tammy *barely* revised Chp 4 of her book. = negative approx "close to Not VP"

As we saw in the previous section, there are a variety of contributions made by the modified predicate that come to alter the overall interpretation of an approximative utterance. I will argue that we can best capture the overall pattern by appeal to an Intensional approach. Although it’s maybe an unconventional presentation style, rather than beginning with other researchers’ ideas on this matter and then arguing to a final unveiling of my semantics, I’d like to start by providing what I take those to be. This will then allow me to refer the reader back to something if need be when discussing what has been said previously by others. Instead of merely rehearsing the details

and dividing things in terms of the methodologies which individual researchers pursued, I'd like to put something a bit different into the literature by way of presenting the complications that arise in examining the Approximative class and share the insights and observations previous researchers have made.

Having said that, I would like to offer what I take the basic semantics of *almost* and *barely* to be.

(90) a. $[\![\text{almost}]\!] = \lambda P \lambda w . \forall w^1 \in Dox_S(w)[\exists w^2[Prox(w^1)(w^2) \;\&\; P(w^2) = True]]$

b. $[\![\text{barely}]\!] = \lambda P \lambda w . \forall w^1 \in Dox_S(w)[\exists w^2[Prox(w^1)(w^2) \;\&\; P(w^2) = False]]$

As we can see above in (90), an approximative will combine compositionally with a predicate and introduce a modal argument which asserts that there is a close possible world where the truth value of the predication is either True (if you're *almost*) or False (if you're *barely*). The reader should notice that there is nothing in these specifications which asserts anything about the evaluation world. These semantics advance a counterfactual claim about a Speaker's belief in a "close" possible world.[15]

Now that the reader knows where we will end up, I'd like to turn to the complications that have arisen throughout the years.

4.4.1 Everyone's Troubles

Oftentimes in papers about approximatives, one of the first things mentioned is the divide between opposing approaches, Scalar vs Intensional. The choice to pursue one rather than the other may reflect how well a researcher thinks that they can capture certain pieces of data or might simply reflect commitments made in other parts of the grammar. However, one of the largest driving forces is the need to have something substantive to say about intuitions regarding "closeness" or proximity. Naturally, this leads to an impulse to do something quantitative. After all, we want to have some way of describing the origin of the intuition and capture the proper conditions under which it arises. And the one way to do that is to introduce scales. However, a scalar approach introduces extra

[15] As I mentioned earlier, the meaning contribution commonly thought of as the Polar component, regarding whether the prejacent is itself True or False, will be handled somewhere else.

machinery in the system and can end up hindering the analysis when a point is reached where the semantic specifications themselves have become cumbersome. That is, the internal pieces begin the create problems rather than solve them.

The first issue that I'd like to discuss is the cross-categorial nature of these adverbials. As I showed earlier in this dissertation, it seems that the approximatives have the ability to combine with a variety of phrasal categories. Below in (91), I have reproduced some of this type of data. We can see that *almost* appears to be able to directly modify; (91a) Determiner Phrases, (91b) Adverbial Phrases, (91c) Verb Phrases and (91d) Adjective Phrases. The question is, is this modification real or illusory?

(91) The cross-categorial combinatorics of *almost*

a. *Almost* every linguist enjoys ping pong. = DP

b. The syntax reading group met *almost* daily. = AdvP

c. The phonologist *almost* invited a semanticist to dinner.= VP

d. The syntax paper was *almost* unreadable. = AP

The fact that *almost* had a wide variety of positions that it could takes is an old observation. Nevertheless, researchers have debated about what this means in terms of constituency and to what extent these optional positions affected the interpretation. One option available is to (in some sense) deny that a problem exists. For example, We could treat approximative *almost* as being an exclusively propositional operator with a variety of adjunction positions. Under such an analysis, *almost* might take any of its available surface positions, but raise at LF and interact just at the propositional level. This would mean that the sentences in (91c-d) might have an LF as presented in (92) with a meaning like that shown in (92a-b).

(92) LF = [*almost*] (p)(w)

a. [There is a close world where it is true that] The Phonologist invited a semanticist to dinner.

b. [There is a close world where it is true that] The syntax paper was unreadable.

This is essentially the approach of Sadock (1981) where *almost p* is itself true if there is a close world w^2 (a world w^2 not very different from the actual world w^1) and p is true in w^2.[16] Such an analysis seems to work alright for a range of examples but there are sensitivities that can't be ignored for long.

One obvious problem is that if *almost* worked in this fashion, then one wouldn't predict any of the restrictions that are attested. In other words, if *almost* was a propositional operator that we were always raising at LF but had a variety of adjunction sites available (which perhaps coincided with Focus) then why is it ever bad anywhere? We should be able to have sentences like those given in (93a-b) but these are not acceptable.

(93) a. *The Phonologist invited *almost* a/some/the Semanticist to dinner.

b. *The Phonologist invited *almost* some/several/many Semanticists to dinner.

As Morzycki (2001) points out, *almost* seems to require that the Noun Phrase that it is adjacent to be a Universal quantifier (Carlson 1982; Kadmon and Landman 1993) or a numeral (Partee 1986). An example of acceptable modifications is given in (94).[17]

(94) The Phonologist invited *almost* every/all the/twenty Semanticist(s) to dinner.

A second complication is that we can easily generate examples where there is a sharp interpretational difference in regard to the placement of the approximative modifier. So, in the case of (95a) where our approximative is high and adjacent to the universally quantified noun phrase (QNP), we have an inference that *many students are certified*. However, in (95b) where *almost* appears in the clausal spine and adjacent to the Verb Phrase (vP), the inference that we get is that *none of the students are certified*.[18]

(95) a. *Almost* all the students were certified sky divers. $\rightsquigarrow$ many are certified

[16]For the time being, I'll just be worrying about researchers' thoughts on Proximity and so will not be mentioning (unless necessary) what they assumed to be the status of the Polar inference. But for those dying to know, Sadock proposed that it was a Conversational Implicature.

[17]I will make a suggestion later after discussing the Polar inference as to why these are not acceptable.

[18]Remember, the squiggle arrow $\rightsquigarrow$ is a non-committal indicator that there is an inference i.e. it does not indicate what species that inference is.

b. All the students were *almost* certified sky divers. $\rightsquigarrow$ none are certified

Morzycki (2001) is an early attempt to capture cross-categoriality and maintain a semantics based on Intensional similarity that closely parallels Sadock (1981). The primary issue that Morzycki was concerned about were cases where *almost* modified a Determiner Phrase (DP). Below in (96) is his data.

(96) a. *Almost* every plant is dry.

b. Every plant is *almost* dry.

On first take, some would argue that these sentences mean the same thing. However, there is a complication with (96a). If you assume a Sadockian semantics like I showed in (92), then you predict that (96a) will have a meaning like that in (97a).

(97) a. [It is almost the case that] every plant is dry.

b. almost(w)($\forall$x[plant(x)(w) $\rightarrow$ dry(x)(w)])

This is problematic because it predicts that (96a) *and* (96b) can be true under the same conditions. That is, it does not disambiguate between worlds where some of the plants are dry and worlds where all of the plants are still wet albeit minimally. We know that there are two situations, that's not up for debate, but what we want is for (96a-b) to have different truth values in those 2 situations and not overlapping truth values. In one situation, that in (98a), what we are talking about is individuated plants and whether they are either wet or dry. We need to pick out the number corresponding to the count of those wet and dry plants. For example, there are 10 plants and 9 are dry and 1 is wet. In situation (98b), we are talking about the plants collectively and what's at-issue is the amount of wetness or dryness of the group. And so that sentence is true, when all the plants are "moist" and we don't want this in the (98a) situation.

(98) The two situations of Morzycki's plants

a. *Almost* every plant is dry. $\rightsquigarrow$ there are a few remaining wet plants

b. Every plant is *almost* dry. $\rightsquigarrow$ there is a small amount of wetness (collectively) on all plants

If one is not careful, and uses such a semantics, you end up predicting that entities can change core properties between close worlds. So, an entity that is a *plant* in the evaluation world would possibly end up being a *semanticist* in a possible world but a dry semanticist. This is obviously terrible.

Morzycki fixes the situation by building a stipulation into the semantics which then requires that entities in the extension of the Verb Phrase can not vary between worlds. This is the third conjunct of the existential statement in the formula provided below.

(99) a. $[\![\, \textbf{almost}_{DP} \,]\!] = \lambda Q.\lambda P.\lambda w.\neg Q(P)(w) \,\&\, \exists w_2\, [Q(P)(w_2) \,\&\, CLOSE(w)(w_2) \,\&\, \lambda x.[P(x)(w)]$
$= \lambda x.[P(x)(w_2)]$

According to Penka (2011, 2019), there are a few unpleasant side-effects of this treatment. First, the stipulation isn't very elegant and so lacks explanatory value in regard to the selectional restrictions. Furthermore, the approach still does not account for any of the examples where the modified constituent seems to make a contribution to the overall interpretation. But most problematic is Morzycki's use of the stipulation to explain the inability of *almost* to modify Indefinite Noun Phrases, an example of which is shown in (100a). Morzycki explains the problem as arising because this construction would require that something that is not in the NP-extension in the actual world, be so in the *p*-world. What Penka notes is that this reasoning seems to require that *almost* not be able to modify Negative Indefinites. Using the same logic, these constructions require that an entity in the NP-extension in the actual world, no longer be so in the "close"-world. However, contrary to this prediction, (100b) is perfectly well-formed.

(100) a. *Almost* *some plant is dry.

b. *Almost* no plant is dry. $\rightsquigarrow$ very few plants are dry

Despite this particular issue, it is really the second complication which I mentioned that has driven scalar approaches: Amaral (2007), Amaral and Del Prete (2010), Hitzeman (1992), and

Penka (2011, 2019); which is the desire to build into the semantics of *almost* (and the other approximatives) some mechanism for capturing the contribution of the modified constituent. At their core, Scalar approaches are evaluative of the relation that holds between the Predicate and its Argument as opposed to the relation which holds in another similar proposition. Analyses vary in regard to how these alternative propositions are constructed. For example, early proposals by Penka (2011, 2019) propose that the alternative proposition be formed from Horn scales, while others like Amaral (2007) and Amaral and Del Prete (2010) suggest that Focus and Context must play a much larger role. Let's look at a possible denotation for *almost* in a scalar semantics and then a couple of examples.

As we can see in (101), under a scalar analysis for a proposition *p*, *almost* evaluates the predicative relation between the predicate and its argument as holding defectively in world *w* as opposed to how it holds in a "closely" related proposition *q* in world *w*. What Scalar proposals wish to convey is that *almost* assesses that the predicative relation in Alternative proposition *q* in world *w* holds more "appropriately".

(101) Scalar denotation of approximative

a. $[\![\text{almost}_C]\!] = \lambda w.\lambda p.\ \neg p(w)\ \&\ \exists q[\ q \approx p\ \&\ q(w)\ ]$

b. A proposition *p* is False in evaluation world *w* but an Alternative proposition *q* that is very closely related to *p* is True in *w*.

In a situation where a natural scale exists, this may be utilized to create the Alternative proposition. Other cases may require something more like a Horn scale which are scales created by entailment relations between lexical items. That is, they are ranked in regard to one another by "informativeness" which is modeled via entailment (Geurts 2010). However, other kinds of scales may also be in play, for example, those for which the ranking is "conventional" in nature[19] and where no entailment exists between members (Hirschberg 1985). I have provided some examples below in (102). Those in (102a) are quantifier words and form a non-controversial scale between

[19] Another way to think about this is that any entailment that exists is not of the logical sort.

members. Those in (102b) form a more classic Horn scale where again, there is a pretty clear pattern of entailment insofar as something that is "cruel" entails it's "mean". The final scale presented in (102c) demonstrates what is sometimes called a "rank order" or sometimes, "ad hoc" scale. Oftentimes, such scales represent a set of items whose ranking is simply part of a social convention. Importantly, there are no entailments between the members, i.e. if one is a "Full Professor", it does not entail that they are an "Associate Professor".

(102) Logical Hornian, Quasi-Hornian and Ad Hoc (non-logical) scales

a. <all, most, many, some, none>

b. <cruel, mean, rude>

c. <Full Professor, Associate Professor, Assistant Professor>

Let's select the scale in (102b) to see how this works. We can imagine a context where co-workers are discussing the way that their boss interacted with the staff member that needed to be laid off.

(103) A: You will not believe what happened to Bill today.

B: Actually, I heard that he got laid off.

A: Yes, but the way that he was told...it was *almost* cruel.

In this case, the proposition presented by the utterance of Speaker A, *The way Bill was spoken to was cruel*, is evaluated by *almost* to be false and it is asserted that there is a "close" proposition q which is true. The proposition q is created by replacing the "false" scalar item *cruel* in p with the next most "informative" item on the scale, *mean*: *The way Bill was spoken to was mean*.

Problematically, it's easy to create examples in which the proposition in question contains no canonically scalar items. I have provided one below in (104). In such cases, researchers like Amaral and Del Prete (2010) argue that scales need to be coerced from either contextual information or Focus alternatives. For our example, I have given two potential "close" propositions q_1 and q_2 which might serve as our Alternative. These are obviously based simply on world knowledge and

the event structure of the predicate *give away*. That is, natural alternatives to "giving X away" is either "not to give it away" or perhaps, "keep it to oneself".

(104) Tessa *almost* gave her chili recipe away.

a. q_1 = Tessa didn't give her chili recipe away.

b. q_2 = Tessa kept her chili recipe to herself.

Certainly, there are those researchers who might argue that examples like (104) really fall better into the category of examples which seem to obligatorily require a "counterfactual" analysis (Rapp and Stechow 1999; Penka 2011). In German, such examples also supposedly require the Subjunctive (Sub) mood rather than the Indicative (Ind). I have provided an example from Rapp and Stechow (1999) in (105) which they suggest can be paraphrased: "if the actual world had been minimally different, I would have run over a cat."

(105) Ich hätte/ *habe *fast* eine Katze überfahren
I have.Sub/ *have.Ind *almost* a cat over-run
I almost ran over a cat.

This is the type of data that has driven research agendas which seek to argue that supposed "scalar" cases are illusory and can be directly subsumed by a "counterfactual" approach (Eckardt 2007; Nouwen 2006; Sevi 1998). But there are other complications for the "scalar" analysis. For example, prominent scalar approaches such as Amaral and Del Prete (2010) assume that the scalar reading[20] should be available anytime the event structure is individuated into a coherent series of subevents with a coherent endpoint. Again, it is easy to find examples where this is not the case and Xu (2016) provides the following two examples which I have reproduced in (106).

(106) a. John *almost* ate the apple. (✓Incipient)(#Endpoint)

[20]In some of the literature, there is some potentially confusing terminology which is employed such that the "scalar" reading of *almost* is the reading where the action of the event approached the endpoint but did not culminate. This is contrasted with a "counterfactual" reading which is meant to suggest cases where the action of the event never began. Terminologically, these are obviously problematic and so I avoid using them. They also are misleading to researchers new to the literature and not representative of proposals where, for example, all readings are taken to be counterfactual in nature.

b. John *almost* ate the whole apple. (✓Incipient)(✓Endpoint)

c. John *almost* woke up the children. (✓Incipient)(#Endpoint)

d. John *almost* woke up all the children. (✓Incipient)(✓Endpoint)

What's important about these examples is the (un)availability of the two primary readings of *almost*. The first reading is where the information proffered is that the action of the event was close to the beginning (close to the starting point). I prefer to call this the "Incipient" reading. The second is a reading is where the information proffered is that the action of the event was close to ending/culminating (close to the endpoint). I'll just refer to this as the "Endpoint" reading. Now, if an individuated event structure was required to achieve the Endpoint reading as suggested in "scalar" approaches like Amaral and Del Prete (2010), then such an interpretation should be available in all the cases in (106) but this is not so, and that's a problem.[21]

When we analyze the predicate *eat the apple* and *wake up the children*, there are very clearly associated subevents. In the first case, we can understand the apple to be eaten in successive bites. In the second case, we can understand the children to be awoken one at a time or perhaps, via some series of actions by John. This should then provide *almost* with a scale of subevents leading to successful culmination of the action described by the predicate. Under "scalar" proposals *almost* should be able to use this scale and the endpoint to either generate an appropriate alternative proposition (Penka 2019) or say something about a point on the scale in relation to the endpoint (Amaral 2007). What is most crucial to understand is that the ingredients that all "scalar" approaches require are present but the Endpoint reading is unavailable. This leads immediately to a problem directly opposite to that discussed above. Rather than finding extra mechanisms to derive desired readings from certain predicates, now we need to block them.

[21] An additional issue for scalar approaches in general is that there exists a third interpretational possibility in many cases. This is where *almost* actually picks out a place not in the event structure per se but rather in the course of events. McKenzie and Newkirk (2020) have named this *Almost-at-a-distance*. I don't particularly care for this terminology but it is intended to connote situations where *almost* is picking out an instance that is quite removed from the Endpoint in some way. These scenarios generally involve an "endpoint" that is the final event in a succession of discrete events, for example, "I *almost* went fishing but after I got up, drove to the lake, put my boat in the water and went to the marina, they were all out of live bait....and so, I *almost* went fishing." Personally, I'd prefer something more like "narrative *almost*" since all of these cases involve a narrative structure.

What we are seeing in (106a-d) is related to an issue addressed in Nouwen (2006) and which I discussed in an earlier section on Submission verbs. This is that *almost* inherits quite complex semantics from the predicates that it combines with and this *can* include a scale. This is a fine but important point. Under certain conceptions of how approximatives function, it is supposed that the semantics of the approximative (*almost*) is actually responsible for "creating" or "mapping" a scale in some way. However, as the above data shows, this doesn't always seem to be possible. Such a condition is quite different from the Intensional semantics that I am interested in or the type suggested by Nouwen (2006) which takes *almost* to proffer information about a scalar relation only if the scale in question is already intrinsically part of the predicate that *almost* is composing with. Additionally, this means that *almost* will contribute uniformly to whatever event structure that it is provided. As we saw in the earlier sections on Aksionsarten and Submission verbs, this will then also include providing its unique contribution to structures which already may contain Habitual/Generic operators, and operators of Possibility or Necessity.

There are two examples in Nouwen (2006) regarding this issue. The first can be seen if we look at the data in (107). There we can see that *almost* modifies, and makes use of, the scalar direction introduced both by the predicate as well as contextually. In both cases of (107a-b), *almost* tells us that we are approaching 10° Centigrade (Close to 10°). In the case of (107a), we are approaching 10° from lower in the scale as we near *that warm* but in (107b), we approach from higher in the scale as we near *that cold*.

(107) a. Yesterday, it was 10° C. Today it is *almost* that warm.

b. Yesterday, it was 10° C. Today it is *almost* that cold.

However, we can also create examples where the context seems to be wholly responsible for any scale direction. For example, we can imagine a scenario where a group of people are using a Time machine to travel backwards in time. In this situation, one of the group members is free to observe the Time machine's clock and comment on the time as it proceeds to run in reverse. *Almost* has no difficulty being oriented in this way.

(108) Context: A man in a time machine observing a clock that says 3:05 AM.

a. It's now *almost* 3:00 AM.

Nouwen has an additional observation related to the overall problem of scales which is that it's unclear what to do, if scalar formation is not enough to determine truth or falsity. Now, I've already mentioned that researchers like Amaral and Del Prete (2010) have argued that scales may need to be coerced. This is a problem which extends beyond that. What if we need other propositions in addition to any alternative proposition (based on the prejacent) in order to determine the Truth value? Nouwen asks us to think about a context of Track and Field competition trials, specifically, for the Long Jump.

We can imagine two possible scenarios for "qualification".[22] In one scenario, everyone is evaluated at the end and the individuals with the best overall scores qualify. A second scenario could be one where there is a fixed value and those individuals who jump to that fixed value or higher, then qualify. In either case, we will have a set consisting of those in the extension of the VP *qualify for the long jump final*. This is provided in (109b). However, this is not enough (in either scenario) to determine the Truth value. We will need at least one additional proposition (depending on our scoring scenario) related to Travis' "jump distance". This is given in (109c). As Nouwen puts it, "predicates that indirectly influence the proposition are relevant." We will need to know who else qualifies and how Travis himself did.

(109) Travis *almost* qualified for the long jump final.

a. Competitors = Betsy, Iris, Travis, Mark

b. $[\![\text{qualify}]\!]$ = {Betsy, Iris}

c. $[\![\lambda x.\text{jump}(\text{Travis}, x)]\!]$ = {0.00,...2.00,...5.90}

These sorts of complications are readily handled in an Intensional approach which evaluates sets of "worlds" and can account for the needed world intersection presented by this example.

[22] Another problem that Nouwen had at the time was that there are only two alternatives to this proposition and no items which allow for the creation of a helpful Horn scale. Since we have already entertained the possibility of contextually coerced scales, I'll pass over this point and focus on the other challenge: we need more propositions.

Despite these observations, McKenzie and Newkirk (2020) have advanced a complicated proposal designed to provide both scalar (Endpoint) and modal (Incipient) readings of *almost* and particularly, to handle examples of what they term *Almost-at-a-distance* (AAD). These are examples where *almost* is felicitous even though the action described by the predicate is far-removed from having occurred in the world of evaluation. The authors' primary example involves climbing Mt. Everest and so that's what I shall use.

Here, we want to imagine a context where some individual has a plan to climb Mt Everest. The plan piece is crucial because we need to be able to envision the proposition *climbed Mt Everest* as being composed of a set of sub-propositions. Another way to think of this is that the proposition *climbed Mt Everest* is the final proposition in a series of necessary propositions. The idea is that, in order to *climb Mt Everest*, you must first *get off the couch*, *raise some money*, *travel to Nepal*, etc. For McKenzie and Newkirk (2020), AAD involves the use of *almost* to pick out some point in the course of such events and importantly for them, that point needn't actually be *close* to the fulfillment of the prejacent proposition *p* but rather "close" in the series of steps. So, if (110g) is the evaluation world circumstance then the *almost* utterance in (110) is false but if the evaluation world circumstances are such that all things have been completed up until (110c), then the utterance should be felicitous. In other words, I can't have *almost climbed Mt. Everest* if I couldn't *get up off the couch* but it's a perfectly good sentiment under conditions where *bad weather forced me to turn back halfway to the top*. In this latter case, I have fulfilled propositions (110g-d) and made it at least half way. That is the general idea.

(110) *p* = I *almost* climbed Mt Everest but

a. I (fell ill 200m from/advanced toward) the summit

b. I was (forced back/pushed on) from last base camp

c. the weather (turned bad/was ideal) halfway up

d. the base camp was (in)accessible

e. I could (not) get into Nepal

f. I could (not) raise the money

g. I decided (not) to get off the couch

In order to capture this, McKenzie and Newkirk (2020) make the following proposal. They suggest that felicitous use of *almost* requires two conditions to be fulfilled: an Antecedent Condition and a Modal Condition. These are provided below in (111).

(111) $[\![almost]\!](p)(w)$ = True iff

a. **Antecedent condition**: There is a small enough set of propositions required for $p(w)$ that do not hold;

b. **Modal condition**: In all normal worlds where that set holds along with what happened in w and nothing else intervenes, p holds.

Very simply, these enforce felicitous use to circumstances like I outlined above. There must be a "small enough" set of unfulfilled propositional conditions such that a normal course of events would very potentially result in the prejacent proposition being True. So, in the case provided in (110) and the 7 propositions which form (110a-g), 6 unfulfilled propositions is too large a set and leaves us in an evaluation world where all one did was *get off the couch*. There is also no set of associated "normal worlds" where getting off the couch necessarily leads to *climbing Mt Everest*. On the other hand, 2 unfulfilled propositions is a small enough set and puts us in an evaluation world circumstance where we are *halfway up the mountain* and needing to turn back due to dangerous weather.

McKenzie and Newkirk (2020) achieve this via the denotation given below in (112).

(112) $[\![almost]\!](\phi)(\alpha)(w) = \exists \mathrm{Z}\ [(\mathrm{Z} \subseteq NEC\ (\phi(\alpha))(w)\ \&\ w \notin \bigcup \mathrm{Z})\ \&\ (\forall w_2 [\ w_2 \in Best_{NI}(\mathrm{R}(circ(w)), \mathrm{Z})) \rightarrow\ w_2 \in \phi(\alpha)])]$

a. There is a small enough subset Z of $NEC\ (\phi(\alpha))(w)$,

b. such that no proposition of Z holds of w and,

c. in all the best ordered worlds w_2 according to a non-interrupting ordering source

d. such that the selected circumstances of w hold in w_2 along with Z

e. $\phi(\alpha)$ holds of w_2

The semantics are structured so that "proximity" is evaluated first and a "proximity" interpretation may arise if the situation is appropriate. Let's take a second to consider that situation. If we continue thinking about the example introduced above, we may be in a circumstance where all of the propositions leading to p are fulfilled, that is, we are close to the event's culmination in the proper time course. This means that the propositions outlined in (110b-g) have been positively fulfilled: I DID get off the couch (proposition 110g) and accomplished everything else including leaving the last base camp (proposition 110b). Here, modal projection will apply vacuously and the interpretation will be *almost p*, but in the sense that we are *close* to the summit. This is the proximity (Endpoint) interpretation.

However, if this is not the case, and only a subset of the propositions leading to the fulfillment of p have been undertaken, then we may potentially have a felicitous case of AAD. However, we first need to know the ratio of the difference between the accomplished propositions and the set of those deemed Necessary. This measure is known as *Jaccard Dissimilarity* i.e. "proportionally how few members two sets share." I have provided a breakdown of this in (113).

(113) Jaccard Dissimilarity for p: *I climbed Mt Everest*

a. Total Necessary Propositions = 7 = {g, f, e, d, c, b, a}

b. Total unfulfilled Propositions = 2 = {b, a}

c. b = forced back at last base camp; a = fell ill 200m away

d. 1 - {b,a}/{g, f, e, d, c, b, a} = 1 - 2/7 = .714

e. T is defined contextually: $.7 \leq T \leq .8$

To understand the purposefulness of the Jaccard value, one has to understand that AAD is an interpretation that arises when evaluation world circumstances unfold somewhere between two contextually determined Thresholds. The upper threshold is a point at which we are too close for an

AAD interpretation. At this point, either "proximity" is true or the *almost p* utterance is just plain false because the event culminated. The lower threshold marks the point beyond which the set of unfulfilled propositions is too large and AAD is not available. This is the circumstance where we only *got off the couch*, and this doesn't count as *almost climbing Everest*. For appropriate AAD, we need to fall between the Thresholds, and the Jaccard Dissimilarity is intended to capture this requirement for any proposition p and accompanying set of necessary steps to achieve p. McKenzie and Newkirk (2020) conjecture that the Jaccard Dissimilarity value probably needs to be somewhere between 0.7 and 0.8 which is reflected in (113e).

Now that I've discussed in general how the authors intend for their system to work, I'd like to just explicitly walk through what seems a very complicated denotation and describe briefly how each piece is supposed to function. I'll continue to use the same example given in (110).

In an *almost* utterance, *almost* composes with the proposition p, here $(\phi)(\alpha)$, which is the Tense/Aspectual and predicate information (ϕ) and an associated time index (α). The *NEC* operator (114a) takes these arguments and returns to us the set of Necessary propositions such that $(\phi)(\alpha)$ could be achieved. As I discussed earlier, the subset Z which is the set of unfulfilled propositions is evaluated against the $NEC(\phi)(\alpha)$ set. If this evaluation is successful and satisfies the Antecedent condition (111a) and (113e), then modal projection proceeds. However, modal projection requires a proper circumstantial modal base which is provided by $circ(w)$ (114b). The circumstantial modal base takes a world argument (w) and returns the *relevant* circumstances that allow for projection of the modal worlds. Subsequently, the R operator (114c) takes the set of circumstances given by $circ(w)$ and the set of unfulfilled propositions Z and returns the largest "consistent" subset of their intersection. For proper projection, we need the "best" worlds where given our intersection, events would unfold like the set *NEC*. In order to do this, a non-interrupting ordering source $Best_{NI}$ is utilized. The proper satisfaction of these latter steps is the Modal Condition (111b) whereby $almost(\phi)(\alpha)$ is True.

(114) $[\![almost]\!](\phi)(\alpha)(w) = \exists \mathrm{Z}\ [(\mathrm{Z} \subseteq NEC\ (\phi(\alpha))(w)\ \&\ w \notin \bigcup \mathrm{Z})\ \&\ (\forall w_2 [\ w_2 \in Best_{NI}(\mathrm{R}(circ(w)), \mathrm{Z})) \rightarrow\ w_2 \in \phi(\alpha)])]$

a. *NEC* $(\phi(\alpha))(w)$ = takes a Tense/Aspect Predicate information $(\phi(\alpha))$ and a world (w) and returns the set of propositions Necessary for accomplishing $(\phi(\alpha))$

b. circ(w) = takes eval world w and returns the set of relevant circumstances of w

c. $R(\text{circ}(w), \text{Z}) = \{w_2 \mid \forall p\ [p \in \text{the largest consistent subset of circ}(w) \cap \text{Z} \rightarrow w_2 \in p\ ]\}$

d. $Best_{NI}(\text{R}(\text{circ}(w), \text{Z})) = \{w_2 \in \text{R}(\text{circ}(w)), \text{Z} \mid \neg\exists w_3\ [\ w_3 \in \text{R}(\text{circ}((\text{w})), \text{Z})\ \&\ w_3 <_{NI} w_2\ ]\}$

As we've seen with the other previous proposals for handling approximatives like *almost*, there are good insights here, but there are some curious complications. One major thing that seems to me to be problematic is that the denotation doesn't quite capture the force of an *almost* utterance. That is, I don't believe that the asserted content of an *almost* utterance is about a set of "missing" propositions. When one proffers an *almost* utterance, it *is* perceived to be informative regarding how close an argument ("subject") is to the truth of a predicate, but it isn't really about a ratio of absent propositions. Additionally, *almost* is used very frequently in abstract contexts where it's not clear how the above criteria would be fulfilled. For example, imagine a context where a group of people are out on a fishing boat and have caught something and don't know what it is. One person might say; *That looks almost like a shark*. Later on in the afternoon when the boat is headed back to shore and the weather looks threatening, one person might look over at the Southern sky and say: *That's weird. The sky is almost green*. So, in the "shark case", do we want to say that we have propositions regarding biological characteristics such that their necessary ordering in all the best worlds leads to a shark? For the "weather case", do we have a set of propositions related to the color spectrum such that their necessary proper ordering leads to the correct color green? This doesn't seem particularly intuitive to me but there's no reason to be uncharitable. Let me engage in some devil's advocate.

Perhaps it's possible to argue that there are a set of "Necessary" shark qualities and those *can* be propositional. I'll call that set P_{shark}. The denotation provided for *almost* by McKenzie and Newkirk (2020) asserts that there is a small set Z which contains some of the members of P_{shark} and it's of a size that's large enough to yield a "proximity" reading. But how is it that it was

determined to be big enough? Perhaps, I could argue that I did in fact recognize the creature that I pulled out of the water as "shark"-like and that is exactly why I used the word "shark" to describe it. Perhaps, I could also argue that via my utterance, I did in fact, assert "something" about a ratio. Specifically, I made an assertion which could be paraphrased as *the creature at the end of my hook has a proportion of properties that make it look like a shark*! Overall, all of my assessments and communicative utterances were based on the proper ordering of all the best worlds. Under all optimal conditions, world knowledge, etc, a marine biologist is more likely to tell me that my guess is correct and this is a shark, rather than some other kind of fish.

So, the authors may have some counter arguments that they can level against my earlier objection. Regardless, I think that their system has another problem. There are always still an infinite number of possible worlds. In some sense, this means that the authors end up in the kind of position which they sought to avoid which is that the AAD interpretation of *almost p* should always be false. This is because the evaluation world set of fulfilled propositions Z will always be "too small" in regard to the infinite set of possible worlds generated by $NEC\ (\phi(\alpha))(w)$. And while I appreciate that the authors have made attempts to shrink the domain of quantification in some way, it is unclear to me that it can be done properly in the way that they would like. Furthermore, they do so by introducing machinery into the approximative's denotation that should already be at work elsewhere in the discourse and so now we have redundancy. Perhaps, an alternative that might be worth considering is *Situations* (Kratzer 2023). We could simplify the McKenzie and Newkirk (2020) denotation significantly by moving operators that normalize and order things, outside of the denotation itself and instead have specifications pertaining to states-of-affairs.

As I'll soon discuss, one thing that is important about *almost* utterances is that they express Speaker beliefs, perspectives, and viewpoints. All of these things can be inaccurate and the *almost* utterance can still be acceptable. Furthermore, and what I will turn to discussing next is that, most important for these types of utterances is not what the Necessary conditions objectively are but what the Subject, Speaker, and Interlocutors take them to be. That is, what we Believe is necessary and possible is the most crucial component and the McKenzie and Newkirk (2020) formulation

does not reflect that.

4.4.2 Supposed Ambiguity and Some New Thoughts

At this point, I would like to make a comment about what I take to be one of the largest problems for scholars working on approximatives. I believe that assumptions made regarding how these items interact with predicates has led to a great deal of confusion and has had the effect of encouraging a variety of complicated proposals. As I've noted in a few other places, this dissertation isn't really about predicates and providing a calculus for predicate interaction. I also don't weigh in on what I believe to be the best way to classify predicates. However, what I have been laying the groundwork for, is to show that adverbials like *almost* and *barely* do behave in a predictable way with the semantics of a given predicate and that one can assume an Intensional model. As I've discussed above, having semantic machinery that requires particular stipulations regarding what it's given soon leads to trouble. This is what we saw in the case of predicates like *wake up the children* which while providing all the ingredients required by their scalar components, couldn't produce the requisite interpretations. My goal is to convince the reader that we can have a relatively simple semantics for approximatives and that we accomplish this by allowing each item in the semantic derivation to makes its unique contribution with limited entanglements. That is, we want to be as free as possible from additional operations occurring either in the syntax or the semantic composition. Having set down this disclaimer, I will say a few words about what I think is one misconception in the literature that has been driving confusion and then I will briefly introduce my proposal on "proximity".[23]

The core misconception is one that I have been alluding to throughout the chapter. It is the idea that there are different "kinds" of *almost* interpretations. By this I mean that researchers claim that there are "scalar" readings and "counterfactual" readings. What they have in mind is that sometimes *almost* is about "closeness" (proximity) to an event ending (115a) and sometimes it's about "closeness" to something potentially beginning but not (115b). And as we've seen in the case most recently discussed, there is a claim that a third reading exists where *almost* picks out

[23] A full discussion of how everything works will be postponed until after I discuss the issues of the Polar inference.

something in the middle, so to speak (115c).

(115) Scalar and Counterfactual *almost* examples

a. Beatrice *almost* finished eating her apple sauce. (Scalar)

b. Beatrice *almost* bought a comic book. (Counterfactual)

c. Beatrice *almost* climbed Mt Everest. (Almost-at-a-distance)

This is wrapped up in another frequent claim which is that there is an "ambiguity" which exists in regard to the modification imparted by *almost*. What researchers are claiming in this instance is that given an *almost* utterance, one can often not discern between whether the situation is a type like (115a) or like (115b). This is a somewhat confused position and I find it somewhat troubling that it has been expressed in the literature so often that it is the contribution of *almost* which is ambiguous. On the contrary, in my opinion, the contribution of *almost* and the other negative approximatives is always the same.

To be fair, there have been researchers who have advocated for a position that is similar in spirit to mine, I think. For example, Tenny (2000) and Amaral (2007) advance the position that *almost* is "underspecified" and is simply "vague". Amaral (2007) quotes Tenny (2000) and characterizes matters as follows; "The specification of the meaning of approximative adverbs is strongly contextually dependent, and it interacts with the semantic properties of the modified expressions, as well as with contextual information". While I pretty much agree here, it is the other position taken by the two authors that I find problematic. According to Tenny (2000), "*almost* offers many possible readings, limited only by the imagination of the speaker,. . . *Almost*, unlike *partly* or *partway* seems to quantify freely over almost anything, so to speak. This suggests that *almost* is not scopally ambiguous, but is simply vague." But I'm not sure that I can agree with this. Rather, what I have been trying to show is that any sense of "vagueness" is simply that which is already present and introduced by the predicate, context or world-knowledge. In fact, it is inaccurate to consider the approximatives "vague", seeing as they do the same thing in all circumstances (make the same contribution) and are therefore quite predictable. I bring this up for two reasons. The first

is, I said I'd mention everybody's good ideas, and paying close attention to predicate contributions and Context is a good idea. But secondly, and I don't believe that I can be accused of "splitting hairs", I think it's important that we are very specific about what we decide to call *vague*, and a lexical item that continually makes the same contribution is not "vague".

Interestingly, the investigation undertaken in Sauerland and Stateva (2007) which sought to characterize the interaction of *approximation*, and Scalar and Epistemic vagueness has to acknowledge in the end that adverbs like *almost* do not fit into the developed framework. Their observation is that *almost* can "access" or quantify over material[24] that the other adverbs of approximation can not. I won't go through all of their examples, because we're not interested in building a theory of "vagueness" or interactions with it. But the following examples in (116) and (117) are interesting and demonstrate that *almost* does something quite different from *approximately*.[25] Notice that while the *almost* sentence is very natural, the *approximately* sentence is quite poor.

(116) John *almost* killed Harry.

a. Interpretation: *John might have killed Harry*

b. *John *approximately* killed Harry.

Notice also, that the Sauerland and Stateva (2007) paraphrases (or interpretations) provided in (116a) and (117a) actually contain the exact sort of modal elements, whose semantics are characterized by quantification over worlds, which I am suggesting occurs in the *almost* species of adverb.

(117) Charles is *almost* King by now.

a. Interpretation: *Charles will be King soon.*

[24]They actually say "scales" but that's language which is particular to the discussion that they were engaged in. I'm choosing to keep my language consistent with what I've already showed, and I don't think that the authors would object to my more general language.

[25]Sauerland and Stateva (2007) carve up the group of approximators into 2 basics groups with 2 subdivisions: those that make things *more* precise and those which make them *less*. Scalar approximators More precise: *exactly, absolutely, completely, precisely, perfectly* and Scalar approximators Less precise: *approximately, about, partially, sufficiently, roughly*. Epistemic More precise: *definitely, positively, for sure, certainly* and Epistemic Less Precise: *more or less, maybe, -ish.*

b. *Charles is *approximately* King by now.

Additionally, their article contains another data point which illustrates again what we have already seen. *Almost* operates upon the semantics of the predicate which it composes with and therefore has no problem in quantifying over other "approximators". This is not true in the case of *approximately*. Now, whatever your analysis of *approximately* and *completely* ends up being, if we are following Ernst (2001, 2003, 2020) (which I am), this is indicative of a scope problem related to incommensurate semantics. At the very least, it demonstrates that *almost* and *approximately*'s semantics are significantly different enough that the modification of a predicate already modified by *completely/perfectly* is blocked in the latter case.

(118) The shirt was *almost* completely/perfectly dry.

a. Interpretation: *The shirt was "close to" being all dry* $\rightsquigarrow$ *the shirt had a tiny amount of moisture (or dampness) left in it*

b. *The shirt was *approximately* completely/perfectly dry.

Circling back to our discussion about misconceptions regarding items like *almost*, I'd like to say something further about researchers' frustrations with implementing a scalar approach. As we saw already, one large problem with the approach ended up being how to account for all the supposedly different interpretations of *almost*. Researchers have perceived a directionality to exist with the use of these adverbs. A problem has been dealing with how to avoid its stipulation but this isn't really possible in Scalar approaches. Even though I am introducing an Intensional proposal, I still think that we ought to say something about this perceived directionality and I would like to suggest that it arises because of the Truth evaluative component of the modal specifications of each adverb. Because they introduce a counterfactual proposal which is either True or False, what becomes most important is the Conceptual Structure linked to the proposal. The modal claim of *almost* is about proximity to something True and the modal claim of *barely* is about proximity to something False. What is crucial to determine is what it means for a given Conceptual Structure to be True or False. What I would like to suggest is that *almost* evaluates "backward" through Conceptual

Structures while *barely* evaluates "forward". The position that I am taking is that contrary to many researchers' proposals, in actuality *almost* and *barely* have a distinct procedure of evaluation, and it is the Conceptual Structures which have different attributes regarding what makes them True or False.

Before moving ahead, I would like to pause momentarily and say something about Conceptual Structure. For the reader who is familiar with the topic, I think that it will go without saying that this section is going to be more speculative than not. It is not entirely clear how the field would like to treat the very notion of Conceptual Structure and in some cases, it is simply ignored. However, there is a growing body of work which suggests that for a variety of reasons, for example, the proper determination of Inferences, that we need to think more deeply about it (Jackendoff 2004; Culicover and Jackendoff 2005; Glanzberg 2020; Buccola, Križ, and Chemla 2022). For our purposes, we don't need a deeply detailed model of Conceptual Structure. Rather, we can think of it in the very basic terms presented in Culicover and Jackendoff (2005). A Conceptual Structure is a hierarchical and combinatorial collection of attributes associated with some propositional material. Just to give a simple description, it provides us with what we need to know about a Situation to understand whether it is Eventive or Processual; in what Time frame the propositional material unfolds and what sorts of Properties the objects involved have. In this regard, it is tied to world knowledge but also to the Semantics, and undoubtedly other Cognitive Systems. Important for where we are going, it will provide us with everything that we need to know, in order to determine what it would mean for the Situation to be True or False, and ultimately, what being "close to" that Truth or Falsity, entails.

Let's begin with the simple *almost* example provided in (119a).

(119) a. Stephanie has *almost* started her book review.

b. Stephanie has *almost* finished her book review.

I think researchers would uncontroversially paraphrase this sentence as: *Stephanie is close to starting her book review, perhaps she's just gathered all the necessary materials or finally sat down at her desk, but whatever the case, she will begin soon*. However, if you are me or Nouwen (2006),

and are advocating an Intensional approach to items like *almost*, then (119a) means something a bit different or at least, it means something a bit more specific. It means that: *based on what we know in our evaluation world, there is a "close" possible world where Stephanie "started" her book review.*[26] Of course, this example contrasts with the one that I have provided in (119b). I've chosen these predicates because they have a relatively clear Conceptual structure with which they are associated and have obvious initiation and culmination points. This makes it easier for us to think about how *almost* engages with them and we can talk about Events and Time, if we so choose.

Now, when I say that *almost* and *barely* evaluate the Conceptual structure in a "backward" or "forward" manner, what I have in mind is that the modal operator semantics that each of the adverbials possesses and its associated Truth evaluation, conspire to direct the modal projection in a particular manner. I have reproduced the semantics that I will advocate for below in (120). What these show is that *almost* takes a predicate P and a world w. It Intensionalizes the predicate by providing a world argument and allows the Speaker to make a counterfactual proposal in regard to the predicate.

(120) a. $[\![\text{almost}]\!] = \lambda P \lambda w . \forall w^1 \in Dox_S(w)[\exists w^2[Prox(w^1)(w^2) \;\&\; P(w^2) = True]]$

b. $[\![\text{barely}]\!] = \lambda P \lambda w . \forall w^1 \in Dox_S(w)[\exists w^2[Prox(w^1)(w^2) \;\&\; P(w^2) = False]]$

Keep in mind, the predicate that we are talking about in (119a-b) is associated with a simple *event* structure and I believe that when we say (119a), we are not making a qualitative judgment as to whether it's appropriate to call what Stephanie did *start a book review*. Rather any claim about Truth or Falsity is related to whether or not the Situation has occurred or not, conceptually speaking. Simply put, life and discourse unfold in time, so this utterance is about our relationship, at some Time t, to all conceptual attributes of the Situation in (119a). What we need to determine is what it means to be "close to" what counts as Truth or Falsity in regard to the Conceptual structure of *Stephanie starts a book review*.

[26]Some folks do argue that this is enough to Conversationally implicate that *she didn't start*. That turns out for other reasons not to work exactly right. This discussion will form part of the Polar inference section.

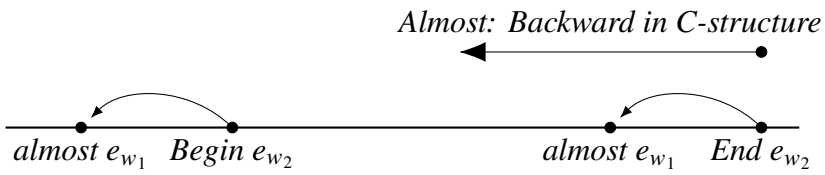
Let me switch over to some "eventive" language. An *almost* utterance locates a position back in an event/conceptual structure precisely because its modal projection is about being "close to" the Truth of an anchoring position in a possible world. The evaluation world "approaches" whatever it would mean Conceptually for a proposition to be True. Proto-typically available markers (or anchors) are event initiations/beginnings and culminations/endings. As we've seen, we can also land in the middle someplace provided that we create a narrative that reconstrues what are canonically individual events into some sub-eventive scheme. This is what was done in the McKenzie and Newkirk (2020) Mt. Everest example where *reaching base camp* played a role as a sub-event of *climbing Mt. Everest*. My point is that because part of the assertion is a "counterfactual" claim about being close to some anchor in Conceptual space, the *almost* utterance itself picks out a place in the evaluation world which is prior to that anchor, in this case, in the event sequence. Part of what a speaker is doing with their *almost* (or approximative) utterance is making a proposal (assertion) about where the interlocutors are located in the evaluation world.

This is shown in the diagram given below in (121). I have drawn it in the way I have so that we can imagine all three basic scenarios. The reader will notice that I have marked worlds w along with the labels. The Beginning and the End are marked w_2 and they correspond to the world associated with the Existential quantifier in our denotation in (120). These are the possible worlds, specifically, where *Stephanie has started/finished her book review*. Our *almost* utterance picks out a place in the evaluation world that is "approaching" the Truth of the anchor. Again, this has to do with the fact that Time is a Conceptual attribute of this predicate. Therefore, that point is evaluated either as prior to the Beginning or the Ending of the event, depending on which one becomes anchored.[27] To reiterate, the diagram is simplified but can potentially involve many more sub-events which may serve as modal anchors in that medial space. Locating matters there is exactly what *Almost-at-a-distance*[28] actually is.

[27] I chose *start* so that it's clear in this example case, the anchor is the beginning.

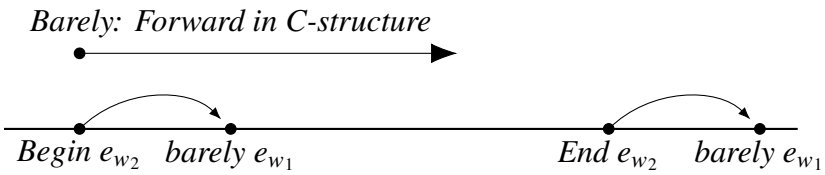
[28] Again, I think "Narrative" *almost* might be a better term.

(121)



In the case of *barely*, we have the opposite situation. A *barely* utterance tends to pick out a place directly after whatever event serves as the modal anchor. Again, because of the unfolding of Time, from a conceptual standpoint, this will be forward. If we have a *barely* sentence that is a counterpart to the example in (119a-b): *Stephanie barely started/finished her book review*, it picks out a place in the evaluation world w_1 that is "close to" the Falsity of the anchor in a possible world (w_2). The modal projection is about what it would mean for the propositional content to be False in w_2, and locates us in some forward position from that in w_1 where things hold True.

(122)



If we look at the diagram in (122), we can see that the only way to do such a thing would be to move forward past the event denoted by the anchor itself. For simplicity, I have labeled the potential Beginning and End events which serve as the modal anchor (w_2). It is easy to imagine what makes an event initiation False: it is never initiated. From wherever this point is, *barely* moves forward into a space after this. *Barely p* will always select our place in the evaluation world (w_1) temporally after this point. This is why I have labeled *barely p* as evaluating Forward in a given event structure. It does this because its modal component is linked to Falsity. Event structures have an associated time course and therefore, Falsity translates into non-occurrence for many predicates, i.e. VP has not happened yet, but can also be simply the instance prior to the beginning or the end. That is what (122) shows.

I've chosen to discuss these eventive predicates in depth because I think that's where the greatest amount of confusion lies. I'd also like to make clear that the adverbials always behave the same,

rather it is the discourse participants who choose one event or another to anchor their modal projection. I hope that I do not give the impression that an *almost p* utterance necessarily picks out a Time *t*. What I am attempting to show is that time can be an important conceptual attribute of a particular predicate and will be necessary to the proposal that the Speaker is making regarding the position in the evaluation world in which the Interlocutors find themselves. We know that this is a part of things because one can say *John almost won the race*, and all Hearers know that what is meant is, *If he hadn't tripped in the last lap.* We partially use such utterances to identify the point at which the proposition became False. That is, where is ceased to possibly be True.

Other kinds of predicates are not so tricky to deal with. Returning to our fishing boat example from earlier, given again in (123a), what we are dealing with here is "closeness" to a possible world where the sky is green. We are all pretty well in touch with our perceptions of things, I believe, even if we're not really adept at describing our impressions to one another. This is always clear when you go to the hardware store and look at paint swatches with a friend. A common bit of this kind of conversation has also been given in (123b). While humorous, it is always clear that we are familiar enough with these kinds of properties like color, taste, etc, to make *almost* utterances about them. That is, speakers seem to be well aware when we are approaching or moving away from a True instantiation of a given property.[29]

(123) a. The sky looks *almost* green.

b. This paint swatch looks *almost* green, sort of a greeny-grey or something.

On the other hand, *barely* utterances can be kind of odd with these sorts of predicates. I consider this to be a good result of my analysis. If *barely* was as good in such cases, it would suggest that we could pick out a shade/color in our evaluation world by referencing the absence of the shade/color denoted by that predicate in a possible world, and that doesn't seem very easy to do. This would be like saying, imagine a greenless space and then ever so slightly add green like properties until your reach something that minimally approximates green. We don't describe properties generally

[29]It goes without saying that this "True" instantiation is based upon the Speaker's perspective, personal taste, etc. All of these things are part of our Believe worlds B_{w_x}.

by starting with the absense of them and that's not particularly simple to do in a phenomenal world. Notice, however, that this problem doesn't arise in the case of *almost* and while we're not dealing in *events* but in *properties*, *almost* always projects a counterfactual (world) proposition that is the Truth of the predicate and works backward to locate the evaluation world position. The examples in (123) are sensical because by default *almost* allows us to begin with the predicate property "green" and then slowly abstract away from it to less and less green qualities/properties.

(124) #The sky looks *barely* green.

(125) #This paint swatch looks *barely* green.

Having said that, I will back-pedal a bit. It seems possible to create a discourse where a *barely* utterance is pretty good. If we imagine the paint department example again, if two speakers look at a swatch and both agree that it's a shade of green, then a dialogue like (126) is fine.

(126) A: I don't know about you but I like this shade of green.

B: I do too. I guess it's green . . . just *barely*.

Notice that in this dialogue, the interlocutors have already established that the shade in question is *green*. Having set this proposition as part of the Common Ground, a *barely* utterance can be used to project a possible world where it ceases to be green w_2 and then locate the evaluation world position w_1 as being located very nearly afterward. So, what we are seeing here, and will continue to see, is that discourse context and dynamics are crucial to understanding the acceptability of these items. My conjecture is that because *almost* utterances introduce a counterfactual about the Truth of the predicate (prejacent), it is much simpler to make certain discourse moves with them, for example, introducing new Topics or making proposals to the Common Ground. This would explain why the *barely* utterance in the paint swatch case, which we saw above, was markedly better if addressing something that was already *in* the Common Ground.[30]

I'd like to think a bit about one more kind of predicate that I haven't really seen discussed much in the approximative adverbial literature which is predicates that have an *instantaneous* quality

[30] I will be discussing this and QUD issues a bit further later on.

about their semantics. I have in mind predicates like *collide* or *blink*. If we can imagine an ice hockey scenario and look at (127a-b), we can see that the *almost* utterance is perfectly natural and the *barely* utterance is not very acceptable.

(127) Context: Ice Hockey; predicate *collide*

a. The two skaters *almost* collided during that last play.

b. *The two skaters *barely* collided during that last play.

Examples like (127) are instructive because they seem to allow us to appeal directly to the obvious and easily paraphraseable semantics in the *almost* case of (127a), but we can not do this for the *barely* case of (127b). When you do, you actually create a relatively unintuitive description of a situation such that *the two skaters came close to not colliding but then did in fact collide.* The question is: What does it mean to be "close to" not colliding? Does this pick out something that we can understand?

Let me set that aside briefly to introduce another idea. My intuition is that we could create some discourse scenarios along with some *barely* utterances where (128b) might be an appropriate interpretation. Such a case would be somewhat related to the color example that we saw above and potentially meta-linguistic. We'd have to imagine a speaker acquiescing to some characterization made by another speaker. Speaker A says that what they just saw was a *collision of two skaters* and Speaker B would much rather describe what they saw as *two skaters bumping into one another*. Speaker B could maybe then use a *barely* utterance intending the meaning presented in (128b). Similarly, the meaning expressed in (128c) might be a potential meaning in some context. It's not easy to think of an appropriate hockey context but there are certainly theoretical scientific discussions in a Physics or Chemistry context where we can discuss particle collisions in a closed system of some sort. There we could use a *barely* utterance to express an infrequency reading: *under these conditions the particles barely collide.* Importantly, it's not an easily recoverable meaning from the particular sentence given in (127b).

(128) a. The skaters came close to not colliding but did then in fact collide.

b. The skaters collided minimally.

c. The skaters collided albeit, infrequently.

So, lets focus on the construction in (127b) and potential meaning in (128a), and figure out why it's not available. As I mentioned above, a predicate like *collide* has an "instantaneous" quality about its semantics. Furthermore, while we may anticipate collisions to occur because of the activity involved, they are also somewhat haphazard or accidental. Even in sports contexts, when one player hits another on purpose, there is a different name for that: e.g. *check* or *tackle*. Generally speaking, collisions are unintentional. *Collisions* don't have beginning or ending points either. A collision becomes a collision when two physical objects strike one another and stops being a collision directly after the strike. This is why an utterance like, "The skaters began colliding" picks out only a scenario where two or more skaters are colliding repeatedly. All of this taken together, I suspect that they don't really serve as very good anchors for a Counterfactual proposition about Falsity. Again, because *barely* locates the evaluation world position by juxtaposing the proximity of a false counterfactual, things become problematic when predicates don't conceptually have a coherent False alternative. Now one might be inclined to object, "Wait! The False counterfactual is very clear to me, it's *the skaters didn't collide*, right?" I totally agree. I think the problem is: where does this claim locate our skaters in the world of evalation?

Let's start over. If a group of people are watching a Hockey game and two skaters collide in front of them and everyone sees it, what is it supposed to mean when someone in the group asserts; "The skaters barely collided"? Well, according to me, they are trying to indicate to the group that *while the skaters collided in the evaluation world, the interlocutors find themselves close to a world where the skaters didn't collide*. What I am suggesting is that there is something about the properties of *collisions* that won't allow us to readily identify this place. While we know what it means to have two objects of any kind pass by one another and *not* collide (a no collision world), we do not understand what it means to be close to a non-collision world. This is partly because we interpret collisions as somewhat unintended or accidental. Perhaps, one would suggest that it would mean that the skaters pass each other without striking. But this seems to be what *almost colliding* means.

If this is a little bit on the right track, then this means that it is not technically the *barely* machinery that fails here. It's actually our ability to intuit the results. On the other hand, *almost* projects about the Truth of the collision (which we have no trouble understanding) and then locates us in the evaluation world, prior to the instantaneous moment which characterizes collisions generally. We can understand circumstances that might potentially lead to a collision having unfolded but a collision being narrowly averted. We can not so easily wrestle with the opposite.[31]

A similar, and I believe related, observation has been made before. Both Atlas (1997) and Horn (2002) note that negative approximatives seem to be Quasi-downward entailing and I think that we will discover that that ends up boiling down to this type of problem which is that the monotonic relationship between the worlds is unclear. I will discuss this more in depth a bit later but at the moment, I would like to share Larry Horn's observation about "near miss."

It's important that I point out first that Horn (2002)'s comments on "near miss" were partially in response to an observation and claim made by Schwenter (2002) that Valencian Spanish approximatives allow for "inverted" readings. These are cases where the negation $\neg$ which is normally associated with the "entailed but not asserted" Polar component, given in (129a), instead comes to be associated with the Proximal component in a circumstance where the negative Polar entailment, by virtue of objective evidence, does not hold. For the data given in (129), we are asked to imagine a scenario where the Speaker is waiting for a friend. Upon the friend's arrival, the Speaker, who can plainly see them and also was beginning to anticipate them being late, says (129b). In this context, rather than the usual meaning "You almost arrive", this is reported to mean "You just barely made it". While unpronounced, in order for this to be the case, the negation is now associated with the "closeness" part. This is given in (129c).

(129) Valencian Spanish inverted *casi* (*almost*)

a. *casi p* = entails $\neg p$ but rhetorically oriented to p

b. ¡Casi llegas! (lit. *You almost arrive*) → You just barely made it!

[31] To describe these similarly you'd have to say something like: *There were circumstances that might potentially not lead to a collision which unfolded but a collision happened regardless.* Again, this just seems like what *collision* means.

c. *Casi p* = canonical *casi* + No *p* → ¡Casi no llegas!

Horn (2002) suggests that this occurs in English in the case of *near miss* but in keeping with the analysis that I am proposing, I'd like to offer an alternative explanation.[32] But first, let me present the data.

According to Horn (2002), a *near miss* has two possible interpretations. It can either be a *miss* in the sense of being a "non-achievement" or it can be something which was "nearly but not quite a miss". While Horn (2002) has some naturally occurring examples, I thought I'd make some of my own but have chosen to keep the sports theme.

In the both cases, Rebecca competes in a golf tournament. In the first case (130), Rebecca unfortunately finishes with 1 additional stroke more than the next best score due to some putting issues and takes second place instead of forcing a playoff by tying the score. The *near miss* is construed as a loss that was close to being a win. The comment presupposes that Rebecca might have won in the playoff if given the opportunity. Regardless, the sentiment is that it was a *miss* at the championship.

(130) **Context**: Rebecca is competing in a golf tournament. She does great but two putts the final hole for par. If she had birdied, a playoff would have ensued, but instead she takes second place.

a. Rebecca has been a powerful tournament contender 3 years in a row and I thought that this might be her year for a win but unfortunately, it is another *near miss*.

b. **Interpretation**: Rebecca has lost the tournament again but came very close to winning.

[32] As I stated at the outset of this monograph, I am uncomfortable with the "inverted" reading analysis which has been offered. As the reader is already aware, I will be presenting in a subsequent chapter an analysis meant to handle what Amaral and Schwenter (2009) supposed as the "inverted" reading of approx *hardly*. Hypothetically, my analysis should cover this Valencian Spanish data and all other data of its kind. That being said, I will not be arguing such a position in this monograph because I have not collected the requisite linguistic data to support such a claim. As Amaral (2007) pointed out quite a while ago now, there does not seem to be a one-to-one correspondence between approximative items cross-linguistically. That means that what is generally used for *barely*-type meanings in European Portuguese, *mal*, doesn't do all of the things that English *barely* can do. Future research will be needed to figure out why this is. The obvious route to pursue is that proximative items can actually have small differences in internal structure, i.e. different configurations or complexities of semantic operators etc. This might cause 2 items to engage similarly in certain environments but not others. As I state in several places, this is the *nearly* vs *almost* problem. I see that as being in no way different from what's at issue between *barely* and *mal*.

In the second case (131), Rebecca ends up winning by virtue of a shot which looked very close to culminating in a different way. It looked like it was going to stop at the edge of the cup and would require an additional stroke to "tap it in". As things occurred, Rebecca finished 1 stroke under all the close competitors and won the championship. Rebecca's win involves the real world circumstance of being *near* to a miss. However, it was her shot that was nearly a miss but was not.

(131) **Context**: Rebecca is competing in a golf tournament. She chips onto the green and the ball carries toward the cup, it looks like it might sit up on the edge but then drops. Her opponents, for various reasons, all finish at least one stroke over Rebecca's final score. If she had needed to putt herself, a playoff would have ensued. Instead, this year she is the champion.

a. It ended up being Rebecca's *near miss* which stopped a playoff and won her the championship.

b. **Interpretation**: Rebecca came very close to missing the shot but miraculously did not.

Interestingly, because of the manner in which golf is scored, (130) is definitely about the final outcome of the whole tournament. At the end of the day, Rebecca was "close" to having won. However, this is not exactly the situation for the second case. In (131), Rebecca wins in the end, but that *near miss* is free to have happened at any point in the 18 holes. We reflectively look back upon the day that Rebecca had on the course and then say to ourselves, "It was that fateful *near miss* at Hole 8 which made the difference today". It's about the shot.

Examples like this remain mysterious under certain proposals but are readily handled by the proper Intensional approach. It seems pretty clear to me that what we have is world quantification over different conceptual structures. In the first case (130), we modally project about winning the championship and in the second case, we modally project about a particular shot. The first case, the championship, represents an amalgam of possible situations and circumstances that might lead to victory or loss. The second case, the shot, is a single event with a binary consideration: in the cup or not in the cup. However, and most importantly, in the first case, we modally project about

the Truth: Rebecca could have won. Alternatively, in the second case, we project about the Falsity: The ball could have *not* gone in.[33]

4.4.3 The Purpose of Assertions of Proximity

So far I have argued that contrary to what has often been claimed, the contribution of approximative adverbs is simple and predictable. I have shown how an Intensional model can handle predicates that are challenging for scalar accounts and additionally, that some purported restrictions on certain predicate modifications are actually the result of interpretational conflicts which arise from modal projection of Falsity over certain types of Conceptual structure. Also, I have suggested that approximative adverbs' behavior can only really be understood if they are evaluated in discourse. Now, while I will wait to discuss this in the most detail in a later chapter, I would like to wrap things up by elaborating a little bit on what I mean.

It is here that we will ask the question: for what reason does one assert an approximative utterance?

So far, I have discussed matters in a way that might lead the reader to believe that I thought that the purpose of approximative utterance[34] is to propose the counterfactual represented by the prejacent. This is a fair assumption but I don't think this is the purpose. Let's stick with our golf context and think about the example in (132).

(132) Rebecca's drive *almost* went in the bunker.[35]

There are a couple of things that I'd like to illustrate with this example. The first is that what counts as felicitous use of an *almost* utterance (or any other approximative utterance) is whatever the other Interlocutors agree is "close". It is not the case, as some authors have suggested, that we want the Felicity conditions built into the semantic denotation. Rather, such utterances are accepted

[33]This provides some clues for resolving the *nearly* problem outlined in Pozzan and Schweitzer (2019). It appears that maybe *near*, unlike *almost*, doesn't force us to project the Truth of some proposition. Barring this restriction, constructions that require modal projection of a True proposition will then be odd with *nearly* which would have the effect of creating incoherence in a way similar to our *barely collide* construction. Obviously, more work is needed to determine this.

[34]For the purpose of this discussion, we can assume that this is any utterance that takes a form like *almost p*, *barely p*, and *ConH p*.

[35]For the non-golf readers, "bunkers" are sometimes also called "sand traps" and are a type of hazard on a golf course.

provided that the Hearers a) understand already the contextual conditions for the proximity or b) the speaker can defend such an assertion.

This leads me to the second most important point which is that approximative utterances are secondarily about the counterfactual based upon the prejacent. Rather, their primary purpose is to alert the Hearers to the fact that a Speaker has a counterfactual proposition in mind such that, *its* realization would have made the prejacent True or False. The approximative utterance signals to Interlocutors that the Speaker has identified for themselves that there is a crucial proposition of some sort which bridges the evaluation world with the True or False possible world of the prejacent.

If a group of Interlocutors are standing around watching as Rebecca takes her shot and everyone clearly watches as it lands toward the edge of the fairway and rolls toward the bunker and Speaker A exclaims (132), everyone might simply nod in exasperation. No defence is required from Speaker A. Everyone has some idea in mind about why this occurred and no one is contesting that it occurred. However, it may so happen that another Interlocutor says, "Yeah, she needs to slow down her back swing." And another says, "What? The back-swing is fine. Her grip is weird and her wrists aren't breaking at the proper time." And Speaker A must now defend the claim and says, "Neither of you know what you're talking about. Everything she does is perfect. There was just a weird breeze."

Here we have a case where everyone agreed that the shot *almost* went into the bunker but it turns out that no one agrees on why. Importantly, what everyone did believe was that some adjustment of technique (or weather in the case of Speaker A) would have resulted in there *not* being this close circumstance. They all believe that under a different condition, Rebecca's shot would have landed with better positioning on the fairway. At the very least, not next to the bunker.

Now imagine that everyone walks to their next shots. There, they may discover that in fact due to the course landscaping and distance, in fact, Rebecca's shot is pretty good and only appears to have nearly gone in the bunker from their sight-line on the tee box. In such a circumstance, they may all now agree that it did not *almost go in the bunker*, while retaining their original positions on the cause of how it got to where it is. They still believe that they correctly identified what Rebecca could have done to have a better shot.

Why do we have this circumstance? Because the most crucial aspect of the *almost* utterance is signaling to the Interlocutors that the Speaker had a counterfactual proposal which they would like to introduce into the Common Ground. Specifically, they have a belief about a counterfactual situation which would have altered the Truth of the prejacent. The nature of that crucial proposition is what is most important. This is why even though the Speakers in our example later discover that they were all wrong about the ball's actual position, they do not feel the need to change their perspective/opinion regarding what Rebecca did wrong. Why? Because regardless, each believes that the counterfactual proposition that they offered is sufficient such that if it were realized, the ball would be someplace else (presumably better).

This brings me to my final point about proximity. Because approximative utterances and the proximity that they express is about a Speaker's belief in a crucial proposition that "bridges" the evaluation world and the possible world under consideration, there is no need to ever "count" propositions or concern ourselves with how many worlds there are between the evaluation world and the prejacent modal world. A world is "close" because a speaker has settled upon a crucial counterfactual proposal that unites them. That counterfactual is "close" enough provided other Interlocutors accept it. Otherwise, the Speaker must defend it and be prepared to entertain or refute other counterfactual proposals from their Interlocutors since they have made the Truth or Falsity of the prejacent, as well as how we arrive there, the relevant QUD.

A more detailed discussion of this will take place in the section on Pragmatics but I would like the reader to be aware of why I've closed this chapter with the discussion that I have.

CHAPTER 5

PRESUPPOSITIONAL EXHAUSTIFICATION AND THE POLAR INFERENCE

In this chapter, we will turn our attention to the thorniest aspect of approximative work, the taxonomic challenge of the Polar component. That is to ask, what kind of inference is the Polar inference, why does it behave in the manner that it does and what is its origin? A variety of proposals have been laid out and all fail for a similar reason: they do not appropriately capture all of the attested behavior of the inference. In what follows, I will offer a new alternative which sees the Polar as a species of Not-at-issue content that results from a particular type of Exhaustification procedure: Presuppositional Exhaustification (Bassi, Del Pinal, and Sauerland 2021). This casts the Polar inference as a type of enriched meaning and additionally, has the ability to provide an explanation for the asymmetries which exist between it and the Proximal component. Since the true point of the work here is to find a solution to the asymmetries, I will not be providing a history of Polar proposals. What I will do is relay a series of observations that are primarily due to Laurence Horn who has in many publications over the years now (Horn 2002, 2009, 2016, 2017) shown what the Polar inference can *not* be. He has also offered a unique characterization of the inference, Assertorically Inert, although not offering a mechanism for how it exactly arises. The best part of the solution that I argue for overall is that we don't have to introduce anything new to the grammar. The Exhaustification operations which I discuss are arguably required for other types of common place inferences, namely, Scalar inferences. As far as I know, no one has observed that the Polar inference of an approximative might be related in any way to the scalar inferences of quantifiers. If this parallel holds up under scrutiny, that will be great news for everyone.

5.1 The mysterious character of the Polar conjunct

The Polar Inference of an approximative is the inferential component which individuals "feel" as the Truth or Falsity for the prejacent holding in the world of evaluation. The examples in (133), demonstrate the Polar inference associated with each of the primary approximative items that we have been discussing. As shown in (133a and 133c), the inference for both *almost* and Contrarian HARDLY is *not p*, while the inference associated with *barely* in (133b) is *p*.

(133) a. Juanita *almost* bought a snow cone. ⇝ Did *not* buy snow cone.

b. Juanita *barely* rode her bicycle. ⇝ She DID ride it.

c. Juanita HARDLY offered a ride to Tammy. ⇝ Did *not* offer a ride.

Over the last 50 years, this inference has been variously classified in all available ways: a Conversational Implicature, Presupposition, ordinary Entailment, "backgrounded" Entailment, and Conventional Implicature.[1] The reason for all the trouble is that the Polar inference doesn't behave like any of these species of inference. It seems to have a unique set of properties which have defied explanation. I would now like to go through these and will again mostly use *almost* in the examples to keep things simple.

The first set of data that we will look at is the dialogue in (134). Here we can imagine two teachers discussing the progress of their student Amanda. Perhaps, Amanda was at one point struggling so badly with some academic material that she was too confused to even begin tackling homework problems on her own. Teacher A is happy with the progress that Amanda has been showing and expresses that she feels that Amanda has probably been able to complete *almost* a whole set of practice test problems by herself. (134) provides two potential ways that Teacher B can respond.

In B_1 the Teacher attempts to deny the Polar contribution of *almost*. According to Teacher B, it is not the case that *Amanda didn't finish the problem set*: she completed *all of it*. This is opposed to the response offered in B_2 where Teacher B denies that Proximal contribution. Here, Teacher B communicates that *Amanda didn't finish most of it*: she only completed half of it. Notice, the target of the denial in B_2 is definitively the Proximal piece as listeners retain the inference that *Amanda did not complete the practice set*.

(134) A: I am happy with Amanda's progress. I bet she was able to *almost* complete the whole practice test this time.

B_1: No. Actually, she got the entire thing done. (Denial of the Polar)

[1] See Horn (2002) for a nice table and discussion, although, as I mentioned in the introduction, this issue is taken up in many subsequent papers of his.

B_2: No. Afraid not. She turned it in half finished. (Denial of the Proximal)

So, it appears that both meaning contributions are available targets for Speaker denial, but what about cancelling or suspending either of these pieces? Data to this effect is given in (135a-b). Whether we try canceling the Polar in (135a) with a follow-up conjunct claiming that *Dolly completed the entire exam* or we try to cancel the Proximal in (135b) with a follow-up conjunct that *Dolly had a lot of the exam yet to finish*, contradiction arises.

(135) a. Dolly *almost* completed the exam #and in fact, completed it. (Contradiction)

b. Dolly *almost* completed the exam #and in fact, had a bunch left. (Contradiction)

This resistance to cancellation is the mark of a true entailment and therefore, is a strike against analyses positing that the Polar inference is a Conversational Implicature.

As discussed in Grice (1989), a defining property of Conversational Implicatures is that they can be cancelled. Below in (136), I have provided one of the most classic styles of example.

(136) Context: Two colleagues talk about a new potential graduate student

A: Could you tell me a bit about Bernice? Is she a pretty good syntactician?

B_1: What I can tell you is that she's always on time. $\rightsquigarrow$ *Bernice is not good at Syntax*

B_2: What I can tell you is that she's always on time; and excellent at syntax and semantics. $\rightsquigarrow$ *B_1 Conversational Implicature cancelled: She's good!*

We can imagine here two colleagues, perhaps on a phone call, discussing a potential graduate student and their application. Professor A would like to know if Bernice, the applicant, is good at syntax. Since Professor B is such a polite person, they provide the answer given in (136B_1), that while complimentary—since punctuality is good—indicates that they have nothing nice to say about Bernice's syntactic abilities. The Conversational Implicature associated with the utterance is that Bernice is a poor syntactician. However, notice that this inference is easily cancellable in a dialogue like that given in (136B_2) where the comment about "punctuality" is immediately followed by a comment about how "good" Bernice is at both Syntax and Semantics. If the Polar inference was a Conversational Implicature, we would see such a pattern, but we do not.

Another related issue is the intuition which Speakers have that the Polar meaning component is "backgrounded" in some way. Having seen that the information that the Polar carries can be denied but resists suspension/cancellation, perhaps, one would think that it could be targeted for affirmation. But this doesn't seem to be the case. Given below in (137) is a dialogue with a context identical to what we saw in (134): two teachers are discussing Amanda's progress. Teacher A expresses the same sentiment, she feels that Amanda has improved tremendously and was (probably) *almost* able to complete the whole practice problem set.

(137) A: I am happy with Amanda's progress. I bet she was able to *almost* complete the whole practice test.

B_1: #Yeah, you're right. She didn't finish all of it. (Affirmation of Polar $\rightsquigarrow$ Odd)

B_2: Yeah, you're right. She only left 1 problem unanswered. (Affirmation of Proximal $\rightsquigarrow$ Natural)

What is surprising is that while Teacher B can agree with Teacher A regarding Amanda having "come close" to completing the practice set, B_2, it is not possible for her to agree that it is in fact "incomplete". Recall, *almost p* expresses "close to *p*" but *not p*. As we can see in B_1, a communicative act by Teacher B which attempts to affirm the informational content of the Polar piece is just plain odd. The inability to comment on both meaning contributions in the same manner is what has led to terminological distinctions like "asymmetric" or "backgrounded" when discussing the Polar. That is, if they had the same status, one would be able to make similar conversational moves in regard to them. Again, that appears not to be possible.

An additional aspect of the asymmetry are the unique sentiments that seem to be associated with the two types of approximatives. This may have already seemed obvious from the way that I have been discussing them throughout this dissertation but it has been puzzling to many why the approximative which expresses *not p*, has an affirmative rhetorical quality. It can be used in positive rhetorical contexts like that provided in (138B_1).

(138) A: Hey Liz, you wanna head down to Sudsy Malone's later and see Mandy's band?

B_1: Sounds good. And I *almost* have enough money for a couple of beers. Let's go.

B_2: Sounds fun. But I *barely* have enough money for a couple of beers. Maybe next time.

There we find Liz expressing to a friend that she is excited to go and see another friend's band and that she *almost* has enough money for a couple of beers. The use of *almost* means that she actually *doesn't* have the money. Nevertheless, the sentiment seems positive in nature. Of course, this all contrasts with *barely* which is what Liz uses in her statement about why she can't attend regardless of it seeming like a fun idea.

This type of data is further evidence for appealing to this idea of a "backgrounded" Polar inference. If you do this, then you can explain the sentiment polarity. It is not associated with the Polar but the Proximal and (138B_1) sounds positive because it is associated with a "close to *p*" rather than a "close to *not p*".

Thus far we have determined that, taxonomically speaking, the Polar inference is not a good candidate for classification as a Conversational Implicature. Additionally, it seems that it is a genuine Entailment but is somehow "backgrounded". And here is where matters become the most interesting. With these two boxes checked, we have to start thinking about presupposition-like material.

I have to interject a small disclaimer at this point. The whole enterprise of approximative adverbial investigations which includes matters pertaining to Contrarian HARDLY and other "exponible" elements[2] like *only* is part of a greater debate regarding content that is non-asserted. I say non-asserted to remain for the moment theory neutral (if that is possible). Broadly, this is a land of a lot of seemingly different types of material: Presuppositions, Implicatures (various types), "backgrounded" entailments etc. But there are other conversations afoot regarding how to collapse all of this material into a single theory. That is, there may be another mechanism in the discourse which is responsible for the character shared by these non-asserted elements.

[2] An "exponible" is a term frequently used by Laurence Horn for lexical items that carry more than one piece of information.

One example of such work is that undertaken in Tonhauser, Beaver, and Degen (2018) which explores the possibility that the "projective" behaviour of these inferences correlates with their degree of "At-issueness". Their paper provides some experimental results to support such an approach. Such a characterization contrasts with a Conventionalist narrative which might suppose that projective quality results purely from semantic specifications inherent to the lexical item.

In this monograph, I will not be entering directly into the debate, however, it will be obvious that I am sympathetic to the research camp constituted by Tonhauser et al. (2013) and Tonhauser, Beaver, and Degen (2018). However, as the reader was made aware earlier, I will be employing a Grammatical Exhaustificational operator to derive our Polar inference which that camp may or may not see as in line with their program. If the reader doesn't mind a bit of speculation, it is my current opinion that the discourse conditions that they are concerned with will become crucial to understanding why the inference associated with any such Exhaustifying operator has variable projective strength.

Importantly, the reader should understand that chosing a terminology to discuss these inferences is not easy. I will most frequently refer to the inferences like the prejacent of *only* and the Polar of *almost* as Not-at-issue (NAI) content. I may be inclined to use other terms in the discussion to appropriately reflect the beliefs and commitments of other researchers. But my own choice is not necessarily an endorsement of any distinction over anyone else's at this time. There is still quite a bit with which the field must grapple.

So, with that small aside in mind, I'd like to dig into the next issue regarding the Polar inference and its entailment status: does this inference behave like a presupposition.

As is well known, tests for presuppositions involve what has come to be known as the Family-of-Sentences diagnostic (Chierchia and McConnell-Ginet 1990). The test goes as follows: one embeds a potentially "presuppositional" piece of material in an entailment cancelling environment and determines whether the inference associated with this material persists. This ability to persist in such an environment is known as "projection" (Tonhauser et al. 2013). And the ability to "project" is the hallmark, traditionally speaking, of the presupposition—informational content that is already

part of the Common Ground. That is, it is propositional material that forms a part of the discourse background already or is assumed by the Interlocutors (Stalnaker 2016).

Below in (139), I have given an example of the Family-of-Sentences diagnostic using a simple sentence which asserts that *Janice has a parole officer*. What we do is embed this proposition into 6 Entailment cancelling environments: Negation, Antecedent of a Conditional, Question, Possibility Adjective, Probability Adverb and a Belief Operator. If a presupposition were involved, it should "project" and if it is a plain entailment, it should be cancelled. As I'm sure it's obvious to the reader, none of these sentences carry an inference that *Janice has a parole officer*.

(139) Janice has a parole officer.

a. Janice does*n't* have a parole officer. (Negation)

b. *If* Janice has a parole officer, I'm not surprised she's on edge. (Ante of Cond)

c. *Does* Janice have a parole officer? (Question)

d. It's *possible* Janice has a parole officer. (Possibility Adjective)

e. *Presumably*, Janice has a parole officer. (Probability Adverb)

f. Greta *believes* that Janice has a parole officer. (Belief Operator)

On the other hand, it is well known that the Saxon Genitive (one type of English Possessive Noun Phrase) carries an Existential presupposition, and is a hard trigger in the sense of Abrusán (2011, 2016).[3] A Family-of-Sentences diagnostic involving such a construction is given in (140). This time the test sentence is about *Janice's parole officer*$_{NP}$. What we notice is that when we embed our new sentence under the Entailment cancelling operators, the inference that *Janice has a parole officer* persists (projects) in all cases.

(140) Janices's parole officer is visiting today. $\rightsquigarrow$ Janice has a parole officer.

a. It's *not* true that Janice's parole officer is visiting today. (Negation)

[3]Diving into the soft-hard distinction is not relevant at the moment. The reader can see Abrusán's work for details. However, the "hard" moniker is intended to connote that the trigger has little variability in its "projection" behavior, i.e. it nearly always projects.

b. *If* Janice's parole officer is visiting today, I'm leaving early. (Ante of Cond)

c. *Is* Janice's parole officer visiting today? (Question)

d. It's *possible* that Janice's parole officer is visiting today. (Possibility Adj)

e. *Pesumably*, Janice's parole officer is visiting today. (Probability Adverb)

f. Greta *believes* that Janice's parole officer is visiting today. (Belief operator)

These tests then show us that we can evaluate the projective quality of a given element or phrase. And so what we want to do is set up a diagnostic situation for our approximative adverb *almost* and see how it fares. In the sentence that I've chosen, *Coretta almost bought a pet turtle*, what we should infer is that *Coretta did NOT buy a turtle*.[4] However, the inference available to us is not as clear as in the previous cases in (140).

(141) Coretta *almost* bought a pet turtle. $\rightsquigarrow$???

a. It's not the case that Coretta *almost* bought a pet turtle.

b. If Coretta *almost* bought a pet turtle, then she's lonely.

c. Did Coretta *almost* buy a pet turtle?

d. It's possible that Coretta *almost* bought a pet turtle.

e. Presumably, Coretta *almost* bought a pet turtle.

f. Susie thinks that Coretta *almost* bought a pet turtle.

One thing that the sentences in (141) seem to demonstrate is that the Polar inference does not "project" as clearly as the presupposition associated with our Saxon Genitive. In fact, it projects variably depending upon the Context that we imagine. To put this somewhat differently, in all of the examples the Polar inference can be "drawn into question" along with the Proximal or can be taken to hold. There seems to be an optionality to whether or not the Polar inference forms part of the "background" of the Discourse or is unknown. Let me walk through what I mean with a few examples. In order to help keep things clear about Coretta and her turtle shopping, in the case of

[4] Also, Coretta "came close to buying a turtle" but we're not worried about that Proximal piece.

the Polar inference, I will talk of Coretta "making a purchase" or not. For the Proximal inference, I will use the predicate "buying", for example, *Coretta was "close to" buying a turtle.*

Examining the case of *almost* in the Antecedent of a Conditional (141b), it seems to be True that regardless of whether or not Coretta did the purchasing, the consequent proposition that *she is lonely* holds as long as she was "close to buying" a turtle at some point. The speaker can "know" that Coretta has no turtle but can be saying that "if she ever was close to buying one, then she *was* lonely". In order to have this interpretation, the Polar component of *almost* must project. Alternatively, the speaker may have no idea how matters turned out in the end and can still felicitously utter (141b). In this case, it can be true that Coretta was lonely even if she purchased the turtle. That is, the speaker does not intend the premise of the conditional to include the content of the Polar such that *If Coretta did not purchase a turtle but came close to buying a turtle then she was lonely*, but *if she was not only close to buying a turtle but did purchase a turtle then she was not*. The latter scenario is surely not what is meant by the conditional.

A similar situation can be seen in the case of the Question in (141c). The question *Did Coretta almost buy a turtle* has more than one appropriate and acceptable answer. However, the answers are dependent upon what a Speaker takes to be part of the question: are they inquiring about just the information provided by the Proximal (close to buying) or the Polar as well (purchase or not)?

If the Interrogator posing this question does not know whether a purchase was made, then the Polar content has also been drawn into question. In this case, the answer given in (142a or b) is appropriate and the other Interlocutor (the addressee), who is aware that the Polar content is also under question, includes the information about the purchase, yea or nay. The other option is that the Interrogator posing the question knows full well that Coretta did not ever purchase a turtle and so this question really means, *Did Coretta who did not purchase a turtle, come close to buying one*? If the addressee interprets the question in this manner, then they may very well offer the answer provided in (142c).

(142) Did Coretta *almost* buy a turtle?

a. Yes, and she did in fact buy one.

b. No, she didn't buy one and she was never thinking about it.

c. Yes, she was thinking about it last year at some point.

A primary take-away is that we can create contexts for all of these that will allow the Polar inference to "project" or not. This is a pretty well established fact (Roberts 2010; Tonhauser et al. 2013; Tonhauser, Beaver, and Degen 2018) and having shown this, I can double back a bit. For the group of researchers which I've just cited above, data like that shown in (141) and (142) is not just evidence that material can optionally project. It is not even just evidence that there is a distinction between "At-issue" vs. "Not-at-issue" (NAI) content. Rather, they believe that there is evidence to support the idea that what these elements are really sensitive to, is the nature of the Question Under Discussion (QUD). When you tackle things in this way and consider not only issues of Context and Relevance but other issues, for example, Super Questions, then there is a principled way of explaining what content comes to *be* "At-issue" vs. NAI; there is a reason for the projection or lack thereof.

As I mentioned earlier, I will not be directing our inquiry toward clarifying matters in this realm but the reader should know that there are quite complicated matters surrounding how the content is made use of in the discourse. I will only be making comments on the generation of that content for now. A large remaining mystery is what happens to it once it is created. Unfortunately, I'll have to leave that alone here.

A very crucial secondary observation that the reader should make here pertains to the previous chapter and the denotation for approximative items. This variable projection will turn out not to be a problem for the way that I will suggest we introduce this content. However, denotations that have the Polar inference as part of their Truth conditional specifications have no real explanation for the asymmetries I've just shown. Their semantics predict that the Polar should always be as prominent as the Proximal; they should both always be Asserted. Incidentally, this is why Horn (2002, 2009, 2016, 2017) has developed his Assertoric Inertia hypothesis. The idea is that the Polar, while having other properties of an Assertion, does not have Assertion status in the discourse. Quite problematically, the mechanism behind *how* an item comes to be Assertorically Inert has

not been developed and therefore, there is no principled reason why it occurs in this case and not some others. In this regard, the system discussed in Beaver et al. (2017) and Tonhauser, Beaver, and Degen (2018), whereby appeal is made to both the QUD and the level of "At-issueness" of the content, is superior.

Having established that the Polar component has a complex character, and that I will be referring to it as NAI as a label of convenience, we can turn attention to my proposal for its source.

5.2 Presuppositional Exhaustification (pex) and the Polar Inference

In this section, I will propose how to derive the Polar inference from an Exhaustification operation Grammatically induced by a syntactic operator at LF: **pex** (Bassi, Del Pinal, and Sauerland 2021). This will allow us to explain how NAI content like the Polar inference comes to be and why it has some of the properties that it does. The application of the **pex** operator to derive inferences for this class of object is theoretically significant because it unites one kind of inferential material, the NAI content of approximatives, with another group of inferences with which it is not normally discussed nor necessarily thought to belong with, Scalar Implicatures.[5] Having said this, there are numerous places in the literature where the Polar inference has been discussed alongside the prejacent of *only*, for example, Horn (2009) and Roberts (2010). Considering that **pex** was purposefully modeled as a mirror to *only* in order to account for the proper character of associated non-assertive content, then exploring whether **pex** can derive the Polar inference of approximatives was just a logical next step.

5.2.1 Introducing pex

Grammatical Exhaustification (Exh)[6] proposals have been steadily developing over the last fifteen or so years since the work of Fox (2007). Presently, the most modern adaptation of that author's line of research can be found in Bar-Lev and Fox (2020). Grammatical Exhaustification is an answer to a basic problem: there exist expressions from which inferences arise that aren't the

[5]For the anxious reader, I do mean specifically "Grammatically" derived Scalar Implicatures and I will use "Implicature" in the way in which it is used in the Exhaustification literature where it is recognized as not necessarily being an Implicature in the Gricean sense.

[6]I will use (Exh) as an abbreviation for the Exhaustification procedure. If I need to discuss the actual operator, it will appear in boldface **exh** as well as its counterpart, the Presuppositional Exh operator **pex**.

"logical" result of the composition of operators that form that expression and additionally, are not easily formulable via a Neo-Gricean approach (Bar-Lev and Fox 2017, 2020). The most frequently discussed example of this occurs in cases where an existential modal quantifies over disjunction. The result is a "Free Choice" (FC) inference. An example is given in (143).

(143) Hayley can eat corned beef or cod.

a. $\rightsquigarrow$ Hayley can eat corned beef.

b. $\rightsquigarrow$ Hayley can eat cod.

For an example like (143), the challenge is to properly derive the inferences that *Hayley may choose to eat the corned beef* and *Hayley may choose to eat the cod* but *Hayley may not choose to eat both*. This is provided in (144). What is required is for the logical relations shown in (144a), to ultimately produce the inferences associated with the logic given in (144b).

(144) Hayley can eat corned beef or cod.

a. $\Diamond$ (beef $\vee$ cod)

b. $\Diamond$ (beef $\vee$ cod) & $\neg\Diamond$ (beef $\wedge$ cod) & $\Diamond$ beef & $\Diamond$ cod

As demonstrated in Bar-Lev and Fox (2017, 2020), there are actually two different ways to achieve the proper inferential set. Under an earlier conception of $\mathbf{Exh}^{IE}$, Exhaustification was conceived of as the negation of all Innocently Exludable alternatives. These were alternatives which could be negated without Contradiction arising when taken together with the content contained in the prejacent. In other words, these were the inferences which could be False *at the same time*. Because $\mathbf{Exh}^{IE}$ was an actual syntactic operator, recursive application was possible and actually required in the case of (144).

However, what Bar-Lev and Fox (2017, 2020) introduce is an enhanced operator $\mathbf{Exh}^{IE+II}$, which in addition to generating Innocently Excludable alternatives, generates another group, the Innocently Includable. These are inferences derived from alternatives which can be True *at the same time*. Let's work an example of $\mathbf{Exh}^{IE+II}$ for our sentence in (144). I will abbreviate *beef*

and *cod* to simply *b* and *c*. The set of alternatives is generated by replacement of the operators with their alternate (∧ for ∨) and (□ for ◊); and also, taking either side of the disjunction independently. This will produce the set of Alternatives given in (145).

(145) *Alt*◊(b ∨ c) = {◊(b ∨ c), ◊(b ∧ c), ◊b, ◊c, □(b ∨ c), □(b ∧ c), □b, □c}

The first thing that we need to do with this set is determine what is Innocently Excludable. As outlined in Bar-Lev and Fox (2017, 2020), in order to make this determination, we first see what maximal sets can be created from the *Alt* set. Those maximal sets are then examined and the items which are contained in each of those sets whose negation does not result in contradiction are the Innocently Excludable items. We can simplify the presentation a bit here because we know that all of the alternatives which contain a Universal (Necessity) operator are Innocently Excludable. Our prejacent proposition is about Possibility, i.e. it is existentially quantified, and we know that we will have to negate (exclude) these alternatives in order for contradiction to *not* arise. Therefore, these Universally quantified alternatives are not what we need to attend to, and we will put them aside. What we do want to consider are the maximal sets given in (146a-b).

(146) Maximal sets for *Alt*◊(b ∨ c)

a. {◊(b ∧ c), ◊ b}

b. {◊(b ∧ c), ◊ c}

There are two observations to make about these sets. The first has to do with the alternatives which differ between the two sets, the dissimilar members; ◊ b & ◊ c. These are the independent disjuncts of the prejacent, and the negation of either one of these will result in contradiction. These are *not* Innocently Excludable. However, there is an alternative which each set contains and whose negation does not result in contradiction. This is the conjunction of the independent disjuncts, ◊(b ∧ c). The negation of this alternative, taken together with the prejacent is consistent and given below in (147).

(147) ◊(b ∨ c) & ¬◊(b ∧ c)

Now we have part of the overall meaning. The remaining step is to determine which alternatives can be counted as Innocently Includable. This will produce the proper Free Choice inferences. Remember, the point of all of this is to maximize the amount of assertable material and derive the strongest propositional interpretation. Innocent Inclusion seeks to assert the remaining alternatives which can be True, alongside the prejacent and the Innocently Excludable. Again, we would hypothetically want to first create all the maximal sets possible from the remaining alternatives and evaluate them as we did before. In this case, there is only the single set of {◊b, ◊c }. The full logical outcome of $\mathbf{Exh}^{IE+II}$ is given in (148) along with inferential paraphrases in (148a-d).

(148) ◊(b ∨ c) & ¬◊(b ∧ c) & ◊b & ◊c

a. ◊(b ∨ c) ⇝ Hayley can eat beef or cod.

b. ¬◊(b ∧ c) ⇝ Hayley can not eat beef and cod.

c. ◊b ⇝ Hayley can eat beef.

d. ◊c ⇝ Hayley can eat cod.

Now while this system seems to work nicely for a variety of cases, which as mentioned earlier were hard to handle under a purely Pragmatic approach, complications result from the fact that $\mathbf{Exh}^{IE+II}$ is designed to "assert" the material that it quantifies over. This means that not only is the prejacent asserted but all of the Innocently Excluded and Included items. As pointed out by Romoli and Santorio (2019), and Marty and Romoli (2021), this makes improper predictions when such disjunctions are embedded in particular environments. Specifically, the content demonstrates "projective and filtering" behavior that is not commensurate with its being assertive content. Let's look at two of these cases; Disjunction under negation; and a Possibility Modal quantifying over Disjunction embedded under a negative factive (Bassi, Del Pinal, and Sauerland 2021; Del Pinal, Bassi, and Sauerland 2023).

One important thing to keep in mind for both of these cases is the complication resulting from the syntactic operator status of $\mathbf{Exh}^{IE+II}$. In principle, this means that for a structure like that in

(149), $\mathbf{Exh}^{IE+II}$ can appear above or below a negative operator. Ultimately, this ends up predicting inferences that are not empirically attested.

In a previous example, (143), we looked at a sentence which contained a modal, but examining the potential effect on Free Choice is an unnecessary complication for what needs to be illustrated. I have simplified the example below in (149) and provided the potential LF's in (149a-b). What we need to be concerned about is the availability of the Scalar implicature associated with the $\vee$-operator.

(149) Hayley didn't eat beef or cod.

a. $[\ \neg\ [\ \mathbf{Exh}^{IE+II}\ [\ \text{beef} \vee \text{cod}\ ]]] \rightsquigarrow \neg((b \vee c)\ \&\ \neg(b \wedge c)) \equiv \neg(b \vee c) \vee (b \wedge c)$ $\vDash$ *It is the case that not either of Beef or Cod; or both of them.*

b. $[\ \mathbf{Exh}^{IE+II}\ [\ \neg\ [\ \text{beef} \vee \text{cod}\ ]]] \rightsquigarrow \neg(b \vee c)\ \&\ \neg(b \wedge c) \vDash$ *It is the case that not either of Beef or Cod; nor both of them.*

If the (149a) LF was available then we would expect that the Scalar Implicature associated with $\vee$ and generated as asserted content by $\mathbf{Exh}^{IE+II}$ could be negated. If this were possible, then we would expect that the follow-up sentence in (150a) would be good.[7] This is because we would have an available interpretation where $\neg(b \wedge c)$ was itself negated. But this isn't what's attested. Rather, we have a situation where the negation interacts only with the disjunctive aspect of the meaning. Our interpretation is $\neg(b \vee c)$ and therefore, the follow-up sentence in (150b) is possible, namely, *Hayley ate neither beef nor cod.*

(150) a. Hayley didn't eat beef or cod. # She ate both.

b. Hayley didn't eat beef or cod. She ate neither. (She's a vegetarian.)

A related problem occurs when such constructions are embedded underneath a negative factive.[8] We'll use the example from (143) again and embed it under the negative factive *unaware*. This is

[7]Remember, we are interested in these examples whereby they are pronounced with a "neutral" declarative intonation. There are other readings possible if emphatic negation is employed.

[8]In addition to the papers mentioned above, the reader might want to consult Gajewski and Sharvit (2011) which advances and explores this particular puzzle.

given in (151). As we saw earlier, Hayley has Free Choice (FC) regarding whether *to eat beef* or *to eat cod*. However, the inference that we have in regard to *The Chef* is that they *don't believe that Hayley can eat beef* and *they don't believe that Hayley can eat cod*. This is given in (151a-b). What we don't intuit is the weaker claim, such that *The Chef doesn't believe that Hayley has FC* (151c). Such a case would be compatible if *The Chef believed that Hayley could eat beef but not cod* or *could eat cod but not beef*. This is not the meaning which we perceive (151) to have.

(151) The Chef is unaware that Hayley can eat beef or cod.

a. $\rightsquigarrow$ ¬The Chef believes Hayley can eat beef.

b. $\rightsquigarrow$ ¬The Chef believes Hayley can eat cod.

c. $\not\rightsquigarrow$ ¬The Chef believes Hayley [FC].

As noted above, the undesired inference in (151c) which we do not want, is exactly what we would get if we embed $\mathbf{Exh}^{IE+II}$ underneath the negative factive and Exh proceeded in the manner outlined above. The incorrect inference results precisely because all of the inferential material is conceived of as asserted content. The negative factive takes scope over all pieces of it. This undesirable result is given in (152a-b) where (152b) puts (152a) into words.

(152) unaware [$\mathbf{Exh}^{IE+II}$ [Hayley can eat beef or cod]]

a. $\neg\forall w \in \mathrm{BEL}_{Chef,\, w_0}$: [◊(b ∨ c) & ¬◊(b ∧ c) & ◊b & ◊c]

b. In no worlds compatible with what *The Chef* believes in evaluation world w_0, are there any of the inferences associated with Exhaustification of ◊(b ∨ c).

What we require is a situation where the utterance content is separated into two distinct groupings in the discourse. We need the *Beliefs of our Addressee* to take the form in (153a) and for the *Beliefs of our Chef* to take the form of (153b). The only way that this can happen is if the inferences associated with part of the content: $\neg\Diamond(b \wedge c)$, ◊b & ◊c, come to have "presuppositional" status (which I have marked below with a subscript p). That is, they form part of the Discourse background and "project" from underneath our negative factive. This is where **pex** will come into play.

(153) a. $\forall w \in \text{BEL}_{Addressee,\, w_0}$: [$\Diamond$(b $\vee$ c) & $\neg\Diamond$(b $\wedge$ c)$_p$ & $\Diamond$b$_p$ & $\Diamond$c$_p$]

b. $\neg\forall w \in \text{BEL}_{Chef,\, w_0}$: [$\Diamond$(b $\vee$ c)]

Since my intent was not to work with **Exh**$^{IE+II}$, and the problems related to implementing it are relatively easy to express informally, I did not provide rigorous specifications for the **Exh**$^{IE+II}$ operator. But I would like to do so for **pex**, especially considering that readers might not be as familiar with it. Below in (154), I have provided what is set out in Bassi, Del Pinal, and Sauerland (2021).

(154) a. $[\![\textbf{pex}(\phi)]\!] = \left\{ \begin{array}{l} \textbf{presupposition:} \bigwedge \neg[\![\psi]\!] : \psi \in Excl(\phi) \wedge [\![\psi]\!] \in R \\ \textbf{assertion} : [\![\phi]\!] \end{array} \right\}$

b. *Excl(*ϕ*)* is a subset of the set of formal alternatives of ϕ, such that for each $\psi \in Excl(\phi)$, $[\![\psi]\!]$ isn't logically entailed by $[\![\phi]\!]$ (or equivalently, such that $[\![\phi]\!]$ is logically consistent with $\neg[\![\psi]\!]$)

c. R = a contextually assigned "relevance" predicate which minimally satisfies the following two conditions: (i) the prejacent, ϕ, is relevant, i.e. $[\![\phi]\!] \in R$ and (ii) any proposition that is contextually equivalent to the prejacent is also in R (i.e if $[\![\phi]\!] \cap c \equiv [\![\psi]\!] \cap c$, then $[\![\psi]\!] \in R$)

The specifications given in (154) are pretty straightforward. The **pex** operator functions like a "mirror" of *only*. This means that it will split the content associated with ϕ into two groupings. As with **Exh**$^{IE+II}$, content of the prejacent will be asserted. What is unique is that the alternatives will be "presupposed" (154a). I have already introduced what considerations are required for the set $Excl(\phi)$. The steps required to identify which alternatives can be commensurately Excluded and Included does not change. However, something extra needs to be said about R.

As authors Bassi, Del Pinal, and Sauerland (2021) mention in a footnote, the specifications that they provide for R are inadequate. This has been shown in a number of places (Chierchia, Fox, and Spector 2012; Fox and Katzir 2011; Roberts 2012; Trinh and Haida 2015). There are a couple of problems related to generating Alternatives when the prejacent material contains no

logical operators nor "scalar"-type items, and the alternatives are propositional in nature. First, we will need to consider matters related to the QUD and conversational goals in order to generate the proper set. However, the "Symmetry Problem" looms. This is the problem of how to properly restrict alternatives which, when Excluded via negation, will give rise to contradiction. This can happen because the negated alternative is contradictory to the given sentence S itself, or because the negation of the alternative A, $\neg(A)$, gives rise to Not-at-issue content which is not commensurate with the NAI content of the sentence S. Breheny et al. (2018) semi-formally state the problem as in (155).

(155) a. *Symmetric Alternatives* = A, and S $\wedge \neg A$

b. Sentence S with a scalar implicature $\neg A$ can't have an alternative which means $S \wedge \neg A$. Exclusion results in $\neg(S \wedge \neg A) \perp (S \wedge \neg A)$.

It will be necessary for me to adopt a particular "symmetry breaking" procedure below to handle the approximatives which are the focus of this dissertation. But for the authors' examples, the definition of (154c) is just fine.

There is an additional matter related to the Truth Conditions which must be mentioned before we look again at our examples. Because **pex** is being designed to be "presuppositional" in nature, we need to have some specifications regarding what counts as True and False, and what content will be "projective". For **pex**, a Strong Kleene computation is adopted for presupposition calculation (George 2008a, 2008b; Fox 2013). Such a system is Trivalent and therefore, an expression ϕ is assigned either 1 (True) or 0 (False) unless the Truth value for any sub-constituents can not be determined. In that case, the expression ϕ would be assigned the third value # (pronounced "hash"). The projective content will be the disjunction of the conditions under which it can be determined to be True or False. That is, all of the conditions under which it is *not* assigned hash #. The Trivalent Truth conditions for **pex** are given below in (156).

$$(156) \quad [\![\textbf{pex}(\phi)]\!] = \begin{cases} 1, \text{ if } [\![\phi]\!] = 1 \wedge \bigwedge([\![\psi]\!] = 0) : \psi \in Excl(\phi) \wedge [\![\psi]\!] \in R \\ 0, \text{ if } [\![\phi]\!] = 0 \\ \#, \text{ otherwise} \end{cases}$$

An important aspect of these Truth Conditions is that **pex** will not contribute in any way to the Falsity of ϕ. An expression **pex**(ϕ) will be false under all the same conditions that ϕ is false. Truth will require that ϕ is True and all of the Relevant Alternatives are False.

With this in place, we can return to the examples which we explored in (150) and (151). Recall, that a large part of our problem arose because we needed to be able to embed our Exh operator but in doing so, we generated NAI content that was different from what is empirically attested. We are still going to need to be able to embed our **pex** operator and in fact, it is going to be obligatory. The notion that Exhaustification *is* obligatory results from the work of Magri (2009) and Meyer (2016) which has shown that Scalar implicatures are often generated despite being "mismatched" with the Common Ground. In such cases, certain expressions may be judged as "odd" and presumably, if Exhaustification wasn't obligatory, such cases would tend not to arise. This is an indication of the "robustness" of the Alternatives generated via Exhaustification: they can not be ignored (Buccola, Križ, and Chemla 2022).

Remember, the problematic case was where our Exh operator was embedded below negation. The major problem was that all of the material generated by $\textbf{Exh}^{IE+II}$ had Asserted status. Thus, the higher positioned negative operator was able to negate both the content of the prejacent and the implicature. This yielded the incorrect meaning and/or predicted an impossible interpretation. However, in the case of **pex**, this problem is avoided due to the manner in which our Truth conditional content is structured and how the Alternatives are generated. Let's return to our earlier example but now place **pex** under negation.

As (157a-b) shows, **pex** generates content which is identical to that of $\textbf{Exh}^{IE+II}$, but has a different Discourse status. Since, **pex** "presupposes" its Exhaustified Alternative set, the Relevant item ¬(b ∧ c) projects from under the propositional negation. As discussed above, **pex** asserts the prejacent material in its scope and therefore, it is only (b ∨ c) which comes to be negated. This is

given in (157b).

(157) Hayley did [¬ [**pex** [eat beef ∨ cod].

a. ¬ [**pex** [(b ∨ c)]]

b. $\left\{\begin{array}{l}\textbf{presupposition} = \neg(b \wedge c) \\ \textbf{assertion} = \neg(b \vee c)\end{array}\right\}$

Our other condition, where **pex** scopes above negation is not of concern in any cases as **pex** will assert the negated propositional material which entails the Relevant Exhaustified Alternatives. Therefore, while Bassi, Del Pinal, and Sauerland (2021) and Del Pinal, Bassi, and Sauerland (2023) assume a matrix level **pex**, it will operate vacuously in these instances.

If we turn our attention to the negative factive example which we saw earlier in (151) and (152), we now have a way to explain why such a sentence doesn't entail that *The Chef* was unaware that Hayley had Free Choice. Our negative factive *unaware* can only scope over the asserted content. Quantification by **pex** ensures that this is just ◊(b ∨ c). The rest of the inferential content projects from the embedded clause and does not interact with the matrix predicate. It is, however, interpreted as part of the "knowledge" of the Speaker. The Addressee's interpretation is that *The Chef* is ignorant to the whole matter.

(158) The Chef is unaware that [**pex** [Hayley can eat beef or cod.]]

a. **pex** = $\left\{\begin{array}{l}\textbf{assertion} = \Diamond(b \vee c) \\ \textbf{presuppose} = \neg\Diamond(b \wedge c)\ \&\ \Diamond\, b_p\ \&\ \Diamond\, c_p\end{array}\right\}$

b. $\forall w \in \mathrm{BEL}_{Addressee,\, w_0}$: [$\Diamond(b \vee c)\ \&\ \neg\Diamond(b \wedge c)\ \&\ \Diamond b_p\ \&\ \Diamond c_p$]

c. $\neg\forall w \in \mathrm{BEL}_{Chef,\, w_0}$: [$\Diamond(b \vee c)$]

Now that we have an understanding of how the **pex** operator works, I'd like to use it to derive the Polar inference of the approximatives. I turn to that in the next section along with another short conversation about generating the proper alternatives for these kinds of cases.

5.2.2 Utilizing pex to generate The Polar Inference

So far we have looked at some cases of Exhaustification where the Alternatives in question have been generated from expressions which contained either natural language equivalents of the logical operators, *or* ($\vee$), *and* ($\wedge$), or quantifiers like *some*. These are often referred to as "Formal" Alternatives. But as previously mentioned, work by Magri (2009) and Meyer (2016) have shown that Exhaustification is obligatory and we know that we have implicature-like NAI content generated in constructions which lack some or all of these types of items. In such cases, we are dealing with Alternatives supplied by Context, and we require a formalized procedure for generating these "Contextual" Alternatives. I argue that we can derive the Polar inference associated with approximative adverbs by Exhaustifying this kind of Alternative Set. Therefore, we need to have a theory of what makes for a good Alternative in these kinds of cases, and how to restrict this species of Alternative. The solution is quite apparent—the structural approach to alternatives introduced in Katzir (2007) and further developed in Fox and Katzir (2011), Trinh and Haida (2015), and Trinh (2018, 2019). I will relay briefly how Structural Alternatives are intended to work and then demonstrate how we can tackle an *almost* and *barely* utterance.

As I discussed earlier, regardless of the method of generating Alternatives, the primary problem is avoiding ending up with "Symmetric" alternatives. These are Alternatives whose Exhaustification produces incoherent Strengthened meaning. That is, if the content is not flat-out incoherent, then it predicts unattested meanings. We've seen cases of both already and I provided a definition in (155). I do not plan to relay the history of *Symmetry breaking* but will dive into the most recent version which has been refined in Trinh and Haida (2015) and Trinh (2018, 2019). What these papers have shown is that the familiar kinds of Formal alternatives which are assumed to be generated: *Relevant*, *Salient* or *Utterance particular*, can not undergo any set operations that will yield the proper non-symmetric subset to Exhaustify. If *Relevant* Alts are defined as the set of Alternatives generated under Boolean Closure of ϕ, *Salient* Alts are those which can potentially resolve the Question under Discussion (QUD) and *Utterance* particular Alts are those which are derived from material spoken in Discourse; what one finds under scrutiny is that there are no systematic relations

which hold between them. Basically, there is no pattern to the membership between these sets in terms of Union, Intersection or Difference. The only way forward is to revise the Function which generates Alternatives from prejacent material and to impose some strict syntactic constraints upon it. We will now explore this solution: *The Condition of Atomicity*.

In order to understand what this condition militates against, we will work through an example found in Trinh (2019) which I have reproduced in (159). Here we have a simple conversational exchange between two Professors about how a group of students did on an exam. Professor A answers her colleagues query very simply regarding how the students did: *not all of them passed* and from this response arises the inference $\rightsquigarrow$ *some of them did pass*.

(159) A: What do you want to know?

B: I want to know how the students did on the exam?

A: $\mathbf{Exh}_C$ [Not all of them passed] $\rightsquigarrow$ some of them did.

In order to get this inference it's crucial that the Alternative set that we ultimately Exhaustify contains (160a) but does *not* contain (160b).

(160) a. [not [some of the students passed the exam]]

b. [some of the students passed the exam]

As can be seen in (161), exclusion of (160a) results in the correct inference *some* ϕ while the exclusion of (160b) results in the inference *no* ϕ. The trouble with this latter inference in (161b) is that when combined with the inference in (161a), contradiction arises.

(161) a. $\neg$ [not [ϕ]] $\rightsquigarrow$ some ϕ

b. $\neg$ [ϕ] $\rightsquigarrow$ No ϕ

The Condition of Atomicity is designed to regulate how an expression/construction derived from Context can be manipulated to provide Exhaustifiable Alternatives. There are two clauses to the Constraint given below in (162). Part I is a substitution rule and can be read: in an expression z, you may substitute x with y, unless x is a subconstitutuent of y, in which case the substitution

is undefined. Part II states that the Substitution Source (SS) has to have a particular character, namely, for any x or y that aren't lexical items, x can not be related to y by virtue of forming some subconstituent of it. Originally, the Substitution Source of Katzir (2007) and Fox and Katzir (2011) was intended to be the Union of the set of lexical items & the set of constituents uttered in the context. This just further refines that notion.

(162) Constraint on Atomicity

a. **Part I**: $[u/v]([x/y](z))$ is undefined if u is a subconstituent of v

b. **Part II**: If $x,y \in$ SS, and neither x nor y is a lexical item, x is not a subconstituent of y.

Let's work through the problem and introduce these ideas as we go along. This will make things more clear.

For our example in (159), the phrase *Not all of them passed* is our "input" z. Our "target" x is *all* and our "substitute" y is *some*. I have provided our "input" in (163a) and the "output" of our substitution procedure in (163b). I have labeled our bracketed constituency structure [ϕ [ψ]] so that they are easier to talk about. Utilizing the constraints in (162), we can replace *all* in ψ with *some*. The operation is defined because *some* is a lexical item and not a subconstituent of the target.

(163) a. [$_\phi$ not [$_\psi$ *all* of the students passed the exam]]

b. [$_\phi$ not [$_\psi$ *some* of the students passed the exam]]

While the example in (163) seems pretty straightforward, the more crucial issue is determining if we can block the Alternatives that we don't want. In (164a), the contextual utterance has been repeated. We can attempt the procedure in two steps. The first step given in (164b) is defined since we can target ϕ and replace it with ψ. However, the second step in (164c) is undefined. We can not subsequently target *all* and replace it with *some* since *all* is a subconstituent of ψ: [all/some]($[\phi/\psi](\phi)$). And so, the constraints have successfully blocked the Alternative that we don't want in our set.

(164) a. [$_\phi$ not [$_\psi$ *all* of the students passed the exam]]

b. Step 1: [$_{\psi}$ *all* of the students passed the exam]]

c. Step 2: *[$_{\psi}$ *some* of the students passed the exam]]

Obviously, the next question to ask is: can we derive the undesired Alternative if we try the steps in the reverse order? The answer turns out to be "no". If we initially target *all* and substitute *some*—which is fine—we can not then replace ϕ with ψ. This is given in (165b-c). This operation violates Part II of the Constraint on Atomicity which characterizes the Substitution Source (SS). The expression yielded by Step 1 in (165b) is not a legitimate member of the SS as it is neither a lexical item, nor a constituent of any expression uttered in the discourse.

(165) a. [$_{\phi}$ not [$_{\psi}$ *all* of the students passed the exam]]

b. Step 1: [$_{\phi}$ not [$_{\psi}$ *some* of the students passed the exam]]

c. Step 2: *[$_{\psi}$ *some* of the students passed the exam]]

Having put all of this into place, we can easily proceed to deriving the Polar inferences that we require for our approximative adverbials. In the examples which follow, I will join other researchers in assuming that linguistic material which counts as "utterance" material, is not necessarily what has been "spoken". That is to say, there are other meaningful units which are part of an utterance that are unpronounced. To quote Trinh (2019), "So much of language is silent that a collection of overt morphemes will rarely yield any interpretation." Trinh's position is that we need to be cognizant of things like: ellipsis, null pronouns, copies, etc. What I would like to suggest is that for elements like *almost* and *barely*, the affirmation and negation that is part of their asserted content is a real part of the "utterance" and therefore, the material from which we build our Alternatives. I have shown above in several places how strong the positive and negative sentiment of *almost* and *barely* are; and speakers do readily employ the paraphrases "close to" (in the case of *almost*) and "close to not" (in the case of *barely*). What I am suggesting is that these expressions of proximity and negation form real parts of the more complex expressions in the Substitution Source and therefore, can play an active role in Alternative generation. Done in this manner, we have a principled way of

distinguishing between *almost* ϕ and *barely* ϕ in a way in which we would not, if we were simply deleting or substituting the adverbial alone.

If we allow for the possibility that the Substitution Source contains utterance material like that of (166b) then we can derive the proper Alternative by having χ substitute for the target ψ. This Alternative is given in (166c) and the Exclusion provided in (166d). This is the correct Polar inference $\rightsquigarrow$ *It is not the case that Maeve passed her exam.*

(166) Maeve *almost* passed her exam.

a. [$_\phi$ Maeve [$_\psi$ *almost* passed her exam]]

b. SS = [$_\phi$ Maeve [$_\psi$ "close to" [$_\chi$ passed her exam]]]

c. Alt = [$_\phi$ Maeve [$_\chi$ passed her exam]]]

d. pex(Alt) = $\neg$ [$_\phi$ Maeve [$_\chi$ passed her exam]] $\rightsquigarrow$ Maeve didn't pass

Similarly, we can assume that the proximity and negation associated with *barely* is part of the utterance material. I have provided in (167b) what I take to be the structure. Keeping things as simple as possible, I am basing my structure off of native speaker paraphrases for these construction types, and also making things parallel to my denotation. Therefore, I have assumed that the internal negation is introduced as part of a structural unit that it forms with the predicate. I have labeled it ζ. Following the same procedure as above, ζ may substitute for the target ψ and yield the required Alternative for Exhaustification by **pex**. This produces the correct Polar inference for *barely* $\rightsquigarrow$ *It is the case that Rita passed her exam.*

(167) Rita *barely* passed her exam.

a. [$_\phi$ Rita [$_\psi$ *barely* passed her exam]]

b. SS = [$_\phi$ Rita [$_\psi$ "close to" [$_\zeta$ not pass her exam]]]

c. Alt = [$_\phi$ Rita [$_\zeta$ not pass her exam]]]

d. pex(Alt) = $\neg$ [$_\phi$ Rita [$_\zeta$ Not pass her exam]]] $\rightsquigarrow$ Rita passed

5.2.3 An additional remark on Substitution Sources for approximatives

The proposal provided above is one option for handling adverbial material like the approximatives. As the reader may have noticed, I am not treating these items, *almost* and *barely*, as though they are simply individual lexical items that appear on opposite ends of a scale of proximity. If this were the treatment, *almost* could be targeted by *barely* much in the way that *some* was an acceptable lexical substitution for *all* in (163). Done in that manner, each would have the same underlying structure, and the Symmetry Problem would immediately arise. This is shown below in (168).

(168) a. $[_{\phi}$ Rita $[_{\psi}$ almost $[_{\zeta}$ pass her exam $]]]$

b. $[_{\phi}$ Rita $[_{\psi}$ barely $[_{\zeta}$ pass her exam $]]]$

c. $[_{\phi}$ Rita $[_{\psi}$ $[_{\zeta}$ pass her exam $]]]$

What I have done in the case of (166) and (167) is to take seriously what Trinh (2019) has said about "utterances". What I have assumed here is that a hearer parses "what is said" into a structure like (167b). It is available insofar as it reflects the "content" of what is said albeit, not all of the pieces are literally spoken. In this way, it is similar to, for example, the content of an extraction gap or ellipsis site. I have taken as evidence for this, the fact that speakers oftentimes paraphrase utterances like (167) as (167b). So, this structure is available on some level. In fact, as we will see below, if things are done in this fashion, it is commensurate with speakers' paraphrase of ConH as "far from" XP.

However, this is not the only way to approach this problem. It may be possible to argue for an alternative syntactic analysis which is more in line with Distributed Morphological approaches (Siddiqi 2018) or Nanosyntactic approaches (Baunaz et al. 2018). Under these kind of analyses, it could be possible to analyze *almost* and *barely* as alternate Spell-outs of a single PROX operator that is merged either into an affirmative (*almost*) or negative (*barely*) Polarity Phrase. Contrarian HARDLY might then be derived either by applying a higher negation to the latter structure (potentially at a different level of computation and not standard sentential negation) or merging PROX into a higher NegP. This is given below in (169).

(169) a. $[_{\phi}$ Rita $[_{PolP}$ PROX [Pol^0 $[_{\zeta}$ pass her exam]]] $\rightsquigarrow$ *almost*

b. $[_{\phi}$ Rita $[_{NegP}$ PROX [NEG^0 $[_{\zeta}$ pass her exam]]]] $\rightsquigarrow$ *barely*

c. **Option 1**: $[\neg$ $[_{\phi}$ Rita $[_{NegP}$ PROX [NEG^0 $[_{\zeta}$ pass her exam]...] $\rightsquigarrow$ *ConH*

d. **Option 2**: $[_{\phi}$ Rita $[_{NegP}$ PROX [NEG^0 $[_{NegP}$ [NEG^0 $[_{\zeta}$ pass her exam]...] $\rightsquigarrow$ *ConH*

Structures like those in (169) have the nice property of lining up more squarely, from a syntactic point of view, with the Katzirian (Katzir 2007, 2013) Structural Alternatives that I have proposed. But there are remaining empirical issues to be sorted out regarding such approaches. For example, how do we handle approximative *hardly* or the fact that there is no Contrarian *barely*? While such decompositional analyses seem ideal (or maybe required) when thinking about the Structural Alternatives that I have introduced, they force us to reconsider the negation syntax itself and all the empirical data discussed thus far. Therefore, I can't tackle the real viability of such an approach here but will leave it for future work. Having said that, the important thing that the reader should be aware of is that there are additional morpho-syntactic considerations to be explored which are not outlined in Chapter 3 and which might turn out to be significant in the final analysis. A more thoroughly decompositional modeling of these adverbials is one of them.

5.3 Approximatives under negation and the Composition of Contrarian HARDLY

At this juncture, we have an understanding of the Proximal component and a mechanism for deriving the Polar inference. But there are still a few details to clear up before we can "build" Contrarian HARDLY (ConH). Of primary importance is an understanding of how these items operate under negation. As usual, the simplest place to start is with *almost* and so, we will begin there. For simplicity's sake, I'll stick with the same example from above.

Below in (170a), I have provided the denotation for *almost* and have given a paraphrase of how to read this in (170b). To review, *almost* composes with the material that it C-commands, and does not operate exclusively at the IP/CP level as Sadockian proposals suggested (Sadock 1981). It introduces modality to the predicate via a world argument *w* and is making an affirmative assertion about the Truth of the prejacent holding in a close world w^2.

(170) Maeve *almost* [$_{VP}$ passed her exam]

a. $\lambda \mathrm{P} \lambda w.\exists w^2[\ \mathrm{Prox}(w)(w^2)\ \&\ \mathrm{P}(w^2)\ ]$

b. *Almost* combines with a predicate and provides a world argument w; it asserts that there exists a close world w^2 and it projects that P holds in w^2.

c. $\exists w^2[\ \mathrm{Prox}(w)(w^2)\ \&\ (\text{passed her exam}(w^2))\ ] \models$ pass her exam in w^2

Remember that, at the same time, *almost* and *barely* utterances are a signal that the Speaker has in mind a counterfactual proposal to add to the Common Ground regarding *how* this close world w^2 is accessed. As I have mentioned to the reader already, these utterances are used by Speakers to locate themselves and their Interlocutors in the evaluation world w with regard to the contrary Truth value of the prejacent in the possible world w^2. I bring this up because when *almost* utterances are negated, it is commonly by an Interlocutor who is rejecting, not just the proximity of the prejacent's contrary but really, the inability for any counterfactual proposal to access that w^2 world. But as I said, these are matters to keep in mind for the moment. There are a couple other things to contend with. Let's look at an example.

(171) **Context**: Two teachers discussing how their students did on a quiz. There is some confusion. One of the Teachers has mixed up in her mind how two different pupils performed. She reports on the matter incorrectly and the second Teacher alerts her to the mistake.

Teacher A: I think that Maeve has improved a lot. Despite bombing all the other quizzes, I'm pretty sure she almost passed this one.

Teacher B: Maeve DID*n't* almost pass her exam. *Far from it!* Its the worst score that she has had all year.

There are a few important aspects to this example. The first thing that I'd like to point out is that while the response of Teacher B is "echoic", it is still a matter of debate whether this counts as meta-linguistic negation. There is a renewed interest in sorting out what kinds of negations are really meta-linguistic and what belong in some other category. Contemporary work on untangling and classifying various negations is requiring more thinking about issues of meta-representation and

how the inferential material accompanying an "utterance" is affected by the negation. The interested reader should dive into Larrivée (2018), Moeschler (2018), and Puskás (2018). Additionally, there are researchers who *may* consider what we are dealing with to be an "irregular" or "non-canonical" negation of some sort (Davis 2016; Johnson and Schwenter 2019). Unfortunately, I will not be joining in the debate here although our analysis will contribute important data for the discussion. Regarding the examples in this dissertation like (171), what we will be focusing on is simply what properties seem present and the mechanics required to derive them.

First off, Teacher B's response clearly has Truth conditional import. Teacher B is denying that *Maeve was close to passing*. Also, we see that the *Far from it* inference that is the hallmark of ConH, is actually possible when negation scopes over *almost*. We will see why this is momentarily. An additional thing to notice about this construction is that there is a very obvious (and I think obligatory) Focus contour placed on *DIDn't*.[9] This seems to be a Polarity/Constrastive Focus associated with the denial. Notice, the placement of this contour is crucial for the interpretation given in (171). If the contour is shifted onto *almost*, then a completely different meaning arises. The difference in the readings is provided in (172a-b). In (172a), as we saw above, the *Far from it* inference is available and the *Teacher* can follow her remark with an additional negative observation: *It is in fact Maeve's worst score all term*. However, when we move the Contrastive Focus to the adverbial itself, what is denied is the adverbial and the Teacher is free to follow-up her observation with an affirmation: *It is in fact Maeve's best score all term.*[10]

(172) a. Maeve DID*n't* almost pass her exam! Far From it! Worst score of the term! ⇝ Maeve didn't pass.

b. Maeve didn't ALMost pass her exam! She passed! Best score of the term! ⇝ Maeve passed.

[9] Again, the reader should see Davis (2016) who claims that the ↘↗ intonation is a trademark of "irregular" negation. I can't weigh in on this particular observation at this time but there is no doubt a prominent contour of some type. See Büring (2016) for an introduction to the issues of Intonational Meaning.

[10] Although I do not explore it here, this phenomenon seems related to *The Implicature Focus Generalization* discussed in Fox and Spector (2018). This generalization states that "Implicatures can be embedded under a Downward entailing operator only if the (relevant) scalar term bears pitch accent". An important aspect of future work will be to compare the phenomenon that I discuss here with the observations made in Fox and Spector (2018).

What we witness in (172) is actually pretty interesting. Here we have the same syntactic ordering of our pieces but opposite inferences regarding how Maeve did. In the case of (172a), she didn't pass but in the case of (172b), she did. The distributions of the negations are given below in (173a-b). In the case of (173a), the negation contributes to the existential statement of *almost* and we end up with an assertion that *there is no close world where Maeve passed her exam*. This is where the *far from it* inference comes from. As we will shortly see, this is true here, and for ConH as well. However, in the case of (173b), the negation serves to deny the entire proposition, *almost* ϕ and implicates that the Speaker denies not just the asserted proximity inference of *almost* ϕ but also the Polar inference $\neg\phi$ which is generated through Exhaustification.

(173) a. $\neg\exists w^2[\text{ Prox }(w)(w^2)\ \&\ P(w^2)\ ] \models$ There is no close world where . . .

b. $\neg(\exists\ \mathrm{w}^2[\text{ Prox }(w)(w^2)\ \&\ P(w^2)\ ]) \rightsquigarrow$ Speaker denies *almost* ϕ

Notice again, that this additional example also has Truth Conditional import: *Maeve didn't come close to passing, in fact, she passed.*[11] Just to be clear, under the analysis that I am providing, there is a very specific thing that is happening, and while it's simpler to talk about "denying" parts or all of the proposition, this can also be somewhat of a misleading way to discuss it. As I mentioned earlier and depict in (173), in the case of (172a) the negation actually contributes to the Existential statement that *almost* introduces which translates into an assertion about the absence of any close possible worlds where Maeve passed. In the case of (172b), the negation doesn't contribute to the propositional content in that way, rather, it aids in an assertion that the proposition *Maeve came close to passing* is itself just False.

The reason that this is important is because I have been advocating an approach to the Polar inference that derives it via Exhaustification and importantly, via Structural Alternatives. The two examples in (172) have different Polar inferences and therefore, will require that the expressions which come to be excluded via Exh are different. We need to make sure that there is a reasonable

[11] Again, there is potentially a Rise-Fall-Rise contour which extends over the entire remainder of the clause. See Constant (2012) for a discussion of this contour.

way to do this. Therefore, I would like to turn our attention back to **pex** for a moment and see how we can derive such Alternatives via our Atomicity constraint.

Since we have looked at several examples already. I am going to trim the visual presentation to bare necessities and focus on the reasoning. To begin, in my previous example deriving the Polar inference of *almost*, I argued that we had to have a nuanced understanding of *what things* counted as "said" in Context and subsequently, could form part of the Substitution Source (SS). We can not alter those assumptions now. And so, I would first like to present in (174a-b) what I take the SS from utterance to be.

(174) Distinct Substitution Sources of (172a-b)

a. $\neg\exists w^2[\text{ Prox }(w)(w^2)\ \&\ P(w^2)\ ] = [_{\phi}\ [_{\zeta}\ \neg\ [_{\psi}\ \text{Prox }]]\ [_{\chi}\ \text{VP }]]$

b. $\neg(\exists\ \text{w}^2[\text{ Prox }(w)(w^2)\ \&\ P(w^2)\ ]) = [_{\phi}\ [_{\zeta}\ \neg\ [_{\psi}\ \text{Prox }[_{\chi}\ \text{VP }]]]]$

As we can see in (174a), in keeping with the intuition that the negation is actually contributing to the Existential statement about a particular possible world (there isn't a close one), I believe that the Substitution Source should be treated such that the negation forms a constituent with the Proximity component, i.e. the "close to". This will reflect a conversational paraphrase like: *Maeve was far from passing*. Therefore, we will treat ψ as being embedded inside ζ, i.e. ζ is the container of ψ. In the case of (174b), there is no such sub-constituency relationship and so, ψ forms an independent phrase which is simply C-commanded by ζ. This has repercussions for the generation of Structural Alternatives.

We will start with the example in (175) where Polarity Focus is placed on the Auxiliary which carries contracted Negation *n't*. As I stated above, the negation contributes to the Existential assertion regarding Proximity to a possible world and the intuition is that the Polar inference is that *Maeve did not pass*, i.e. *She failed*. Since in the SS, ψ, which contains *Prox* ("close to"), is a sub-part of ζ, there is no way for ψ to target ζ for substitution. And also, there is no way for χ to target ψ. Either of these moves would violate the Atomicity constraint, Part I and Part II, respectively. However, χ may target ζ and thus, we can derive the Alt given in (175b). When we

Exhaustify this Alternative via **pex**, we then derive the proper NAI content, namely, that *Maeve failed*.

(175) Maeve DID*n't* almost pass her exam! $\neg\exists w^2[\text{ Prox }(w)(w^2)\ \&\ P(w^2)\ ]$

a. SS = $[_\phi\ [_\zeta\ \neg\ [_\psi$ Prox $]]\ [_\chi$ VP $]]$

b. Alt = $[_\phi\ \ [_\chi$ VP $]]$

c. **pex**(Alt) = $\neg$ [VP] $\rightsquigarrow$ Fail

The situation is different in the case of (176) where Focus is placed on the adverbial itself. Here, there is no evidence to suggest that at the utterance level—informationally speaking—the negation and the approximative are part of the same phrase. Remember, sentences like these are paraphrased best like: *It's not true that Maeve just came close to passing*. Neither the proximity nor the negation is a sub-part of the other. This means that χ which contains VP, may target ψ for substitution. This produces for us, the Alt in (176b) which we can then Exhaustify, giving us (176c). This gives rise to the inference that *Maeve passed*.

(176) Maeve didn't ALMost pass her exam! $\neg(\exists\ \text{w}^2[\text{ Prox }(w)(w^2)\ \&\ P(w^2)\ ])$

a. SS = $[_\phi\ [_\zeta\ \neg\ [_\psi$ Prox $[_\chi$ VP $]]]]$

b. Alt = $[_\phi\ [_\zeta\ \neg\ [_\chi$ VP $]]]$

c. **pex**(Alt) = $\neg[\neg[$ VP $]]$ $\rightsquigarrow$ Pass

Similar procedures are available for cases involving *barely*. It will be necessary to work through one example involving *barely* so that we can see how its internal negation functions. Otherwise, many of the steps involved will be identical to our *almost* example. This will be apparent when we build Contrarian HARDLY below.

In (177), I provide an example with a different predicate. Also, I again provide the semantics which I assume for *barely*. The most important thing for the reader to notice is that there is a piece of negation which is internal to the item itself. This is how it is that *barely* ϕ modally projects about

the Falsity of ϕ or (depending upon ϕ) its contrary.[12] I depict this internal negation with the symbol $\sim$. In the example given below, this internal negation is responsible for the assertion that *there exists a close possible world where Maeve doesn't know what she's doing*, i.e. $\exists w^2[\ \text{Prox}(w)(w^2)\ \&\ \sim(\text{know what she's doing}(w^2))]$.

(177) Maeve *barely* $[_{VP}$ knows what she's doing]

a. $\lambda P \lambda w.\exists w^2[\ \text{Prox}(w)(w^2)\ \&\ \sim(\text{P}(w^2))\ ]$

b. *Barely* combines with a predicate and provides a world argument w; it asserts that there exists a close world w^2 and it projects that $\sim(P)$, the negation (or contrary) of P holds in w^2.

c. $\exists w^2[\ \text{Prox}(w)(w^2)\ \&\ \sim(\text{passed her exam}(w^2))\ ] \models$ doesn't know what she's doing in w^2

Earlier in (167), I showed how we can derive the Polar inference for a *barely* utterance and what my assumptions are about what form the material takes in regard to functioning as a Substitution Source (SS). Now that we have explored two cases where *almost* appears under negation, I would like to look at an example with *barely*. For the moment, I will just be looking at an instance where Polarity Focus falls on an Auxiliary which is supporting some contracted negation *n't* which C-commands *barely*.

The Context in (178) is similar to the one earlier. Two teachers are discussing a student. One of the teachers relays some information that isn't accurate and the other teacher corrects her.

(178) **Context**: Two teachers are discussing how their students were doing while working in a lab. There is some confusion. One of the Teachers reports that she thought a student—Maeve—had not properly prepared for the day's project. The other disagrees with her about this.

A: I'm kind of disappointed with Maeve. I thought she was going to work harder. When I checked on her, she seemed like she barely knew what she was doing.

[12] On this distinction, the reader should remember the earlier discussion of Conceptual Structure. While it is simple to say of event-like things that they are False because they didn't happen or did, but not in the proper way, there are other predicates that *almost* can modify like *green* and for which such a characterization is inappropriate.

B: Maeve DId*n't* barely know what she was doing. She was well prepared, just probably nervous with you staring at her.

Again, we will not alter or deviate from any commitments made in the *almost* cases already. Importantly, I have argued that Focused negation contributes to the existential statement of the approximative and therefore, forms a unit with the Proximity component of the utterance material of the SS.[13] That is reflected below, however, I have made some notational changes to make things simpler to look at. While in the *almost* examples above, I depicted the sub-constituency and labeled those phrases, I am omitting that here. So, the internal negation which applies to the predicate which the adverb composes with, is just presented as χ. Also, the negation which I argued above should be treated as one unit with the Proximity component is simply labeled ζ. This makes it much easier to see that the only option which conforms with the Atomicity Constraint is for χ to target ζ for substitution. The outcome of this substitution is given in (179b). When this Alternative is Exhaustified, the proper inference results when the two negative pieces cancel one another $\rightsquigarrow$ *Maeve knew what she was doing.*

(179) Maeve DId*n't barely* know what she was doing.

a. SS = [$_\phi$ Maeve [$_\zeta$ $\neg$ "close to" [$_\chi$ not know what she's doing]]]

b. Alt = [$_\phi$ Maeve [$_\chi$ not know what she's doing]]]

c. pex(Alt) = $\neg$ [$_\phi$ Maeve [$_\chi$ not know what she's doing]]] $\rightsquigarrow$ Maeve knows what she's doing

Finally, we have enough of an understanding of the interaction of approximatives and negation to successfully solve the puzzle of how the Contrarian HARDLY interpretation arises and I will walk through that piece by piece. We will use the example given in (180) such that *Adelaide HARDLY suggested that Bea was a Syntactician*. This of course can be paraphrased using something like *definitely not*, which is given in (180a). As we saw earlier, it is possible to follow-up a ConH

[13]Technically, it negates the Existential statement but I use the language of "contributes" to reflect the fact that speakers paraphrase as though it were a negative "contribution". This is why speakers say things like, "not close" and "far from".

utterance with a declaration of *Far from it*! This is shown in (180b). The clearest way to describe the Proximal inference in this case is that *Adelaide was not/never close to suggesting Bea was a Syntactician*, and there is a Polar inference that *Adelaide did not suggest Bea was a Syntactician* (180b-c).

(180) Adelaide HARDLY suggested that Bea was a Syntactician.

a. Paraphrase: Adelaide definitely didn't suggest that Bea was a Syntactician.

b. Proximal: Adelaide was Not close to suggesting Bea was a Syntactician. Far from it! She knows Bea only cares about Phonology.

c. Polar: Adelaide did NOT suggest *it*.

We should quickly review the syntax that I have proposed for these items. In an earlier chapter, I defended the position that Contrarian HARDLY (ConH) results when approximative *hardly* is merged into the SpecNegP rather than being adjoined to *v*P. There is additionally a negative operator adjoined at TP. Otherwise, the clausal syntax is of a standard form. The structure for our example is given below in (181).

(181) a. Adelaide HARDLY suggested that Bea was a Syntactician.

b. $[_{TP}$ ¬ $[_{TP}$ Adelaide $[_{T'}$ T $[_{NegP}$ HARDLY $[_{Neg'}$ Neg^0 $[_{vP}$ suggested $[_{CP}$ Bea was a Syntactician]]]]]]]

As we saw earlier, the semantic component of the approximative items, *almost, barely, hardly*, "take-in" the predicational material that they C-command. Because our negative approximative (*hardly*) has been merged into the Specifier of a NegP, its C-command domain includes this negative phrase. This means that there are two negative elements in the second conjunct of our semantic specifications, one which comes from the NegP and one that is always part of the internal mechanics of the adverb. This is shown in (182b).[14] Therefore, we actually end up with an affirmative interpretation for our (Proximal) Modal projection: provided in (182c). At this point in

[14] I have abbreviated the syntax for easier reading. The CP means "Complementizer Phrase" and corresponds to the complement of *suggest* which is *Bea is a Syntactician*.

the derivation, what ConH asserts is that there is a "close" world w^2 and that *Adelaide suggested Bea was a Syntactician* is True in w^2. And this is exactly what we want at this stage.

(182) $\forall(\mathrm{w}) \in B_{w,x} : \lambda P \lambda w . \exists w^2 [\ \mathrm{Prox}(w)(w^2)\ \&\ \sim(\mathrm{P}(w^2))\ ]$

a. $\exists w^2 [\ \mathrm{Prox}(w^1)(w^2)\ \&\ \sim(\neg(\text{suggest CP})(w^2))\ ]$

b. There exists a world w^2, close to the world of evaluation w^1 and *not suggest Bea was a Syntactician* is False in w^2.

c. There exists a world w^2, close to the world of evaluation w^1 and *suggest Bea was a Syntactician* is True in w^2.

Moving on to our second step, we need to determine how the negative operator adjoined at TP is going to affect this compositional structure. Thankfully, we know exactly what is going to happen, because we've already seen it in cases where *almost* and *barely* were negated. In those instances, the higher negation will negate the Existential statement. I have reproduced the syntax and the negative semantic contribution is given in (183a). At this point, we have achieved the complete assertion associated with this adverb, the *Far from it* inference. This is given in (183b-c).

(183) $[_{TP}\ \neg\ [_{TP}$ Adelaide $[_{T'}$ T $[_{NegP}$ HARDLY $[_{Neg'}$ Neg^0 $[_{vP}$ suggested $[_{CP}$ Bea was a Syntactician $]]]]]]]$

a. $\neg\ \exists w^2 [\ \mathrm{Prox}(w^1)(w^2)\ \&\ \sim(\neg(\text{suggest CP})(w^2))\ ]$

b. There exists no world w^2, close to the world of evaluation w^1 and *suggest Bea was a Syntactician* is True in w^2.

c. "Adelaide was not close to suggesting that Bea was a Syntactician. *Far from it*!"

Here I need to pause and point out that we've solved another problem. We have an explanation for the obligatory contour that is placed on ConH. It is the negative Polarity Focus that we saw earlier in our *almost* examples on the Auxiliary carrying the contracted negation *n't*. Remember, ConH is not in the same position as *almost* and *barely*. It is true, with those adverbs, we could actually detect a difference when we shifted stress from Aux*n't* to the adverb itself. In the case of

ConH, the adverb is part of the phrase that contains that negation. This unique interaction is how its special meaning arises. I take it as evidence for the accuracy of my analysis that the Focus contour that we see in cases where approximatives are negated, is exactly where we'd expect it to be when the Specifier of the Negative Phrase is filled. Namely, directly on that element, which in this case, is *hardly* (ConH) in SpecNegP.

Next, we need to ensure that we can derive the Polar inference properly and without making any different assumptions than we have in the previous cases. Not only can this be achieved but it will look just like *almost* under negation. Please refer to (184). As in the earlier examples, I begin by positing what the paraphrase of the utterance in question might be. Similar to the other cases, I think we can safely say that a speaker would be comfortable paraphrasing our example sentence as *Adelaide was not close to suggesting CP* or *Adelaide was far from suggesting CP*. What is important is that we capture the intuition related to the negation taking scope over the adverbial component which supplies the assertion regarding proximity to the possible world w^2. In all other examples, because this negation so obviously contributed to the Existential statement, I treated these pieces as forming a single phrasal item in the "utterance" and as having a relationship of sub-constituency in our SS. And I will do this here, too. This is shown in (184a) where ζ has the phrase ψ as a sub-constituent (ζ is the container of ψ). From the standpoint of generating Alternatives, it is one unit. This means that χ can not target ψ for substitution and form *Alt in (184b). All that the Atomicity Constraint will allow is for χ to target ζ and form the Alt given in (184c). When we Exhaustify this Alternative, we derive the proper NAI inference that *It is not the case that Adelaide suggested that Bea was a Syntactician*.

(184) Adelaide HARDLY suggested [$_{CP}$ that Bea was a Syntactician]

a. SS = [$_{\phi}$ Adelaide [$_{\zeta}$ $\neg$ [$_{\psi}$ close (HARDLY)]] [$_{\chi}$ suggest CP]]

b. *Alt = [$_{\zeta}$ $\neg$ [$_{\chi}$ suggest CP]]

c. Alt = [$_{\phi}$ [$_{\chi}$ suggest CP]]

d. **pex**(Alt) = $\neg$ [suggest CP] $\rightsquigarrow$ Adelaide did *not* suggest it.

To recap, the meaning which is ConH is *not* the result of there being two lexical entries for *hardly*. It is also *not* the result of the entry for *hardly* being any different than *barely*. What has occurred is that several independent processes have converged in just the right kind of way and ConH arises naturally from those interactions. I have not had to make any special adjustments or considerations for the case of approximative *hardly* in order to get things to work out. In fact, I have showed that the *Far from it* inference associated with ConH is actually possible to derive—via the same operations—in an environment where Negation and Polarity Focus operate over *almost*. This is a positive result and suggests that there is nothing special about Contrarian HARDLY.

A reader who is in a speculative mood might ask, why is there no Contrarian *barely*? I think that's a legitimate question and the answer is: it's totally plausible for some dialect. After all, there is nothing different about the semantics that I have given them. What seems to be different is that approximative *hardly* can be merged in SpecNegP and approximative *barely* can't. To me, this says maybe that approximative *hardly* has been lexically encoded as an N-word and *barely* has not. After all, there are a whole lot of things that can't be hosted in SpecNegP. But if this were possible then Contrarian *barely* would arise and, much like it does in other types of constructions, would then overlap in meaning with *hardly* in Contrarian contexts as well.

In the next section, I'd like to address another concern. Is it reasonable to believe that **pex** can be used to generate both Scalar implicatures and the Polar inferences of the approximatives. Aren't these different?

5.3.1 A note on the legitimacy of the pex proposal

As the reader might remember, conceptually speaking, **pex** was envisioned as a mirror to *only*. When **pex** exhaustifies an expression, we get the opposite behavior of *only*. In the case of **pex**, the material associated with the prejacent is asserted and the Alternatives are "presupposed" to be false. I place "presupposed" in quotations because the content does not strictly behave like a "presupposition" should. It is perhaps another kind of Not-at-Issue/projective content. The authors of the original **pex** articles are aware of this and argue that while more work is needed, it might be the case that the content associated with **pex** is such that it is globally accommodated as long

as it is "consistent" with the Common Ground. That is, it does not actually have to be entailed by the Common Ground but can not be at odds with it. The authors suggest that the content generated by **pex** is less "deterministic" because it is subject to Relevance. Basically, interlocutors can "restrict" the relevant set of Alts in such a way that problematic presuppositional material can be treated as "irrelevant". (Bassi, Del Pinal, and Sauerland 2021; Del Pinal 2021; Del Pinal, Bassi, and Sauerland 2023). I will not be weighing in on their idea regarding automatic Global accommodation but instead, would like to make a few other observations.

Considering that **pex** is supposed to be based on *only*, it's obviously better at the end of the day, if the content comes out with the attributes of the behavior of *only*. However, as Horn (2009), and Roberts (2010) have shown in a variety of work, understanding the behavior of *only* is a complicated endeavour and there is still a lot of work to complete in that area (Greenberg 2022). I'm obviously not going to solve the mysteries of that particle—in this dissertation. But one thing that we should check on is whether or not the NAI content of the Scalar implicatures acts like the Polar inference of the approximatives. If it doesn't, then it's suspect whether or not the content is really generated by the same operator. So, in what follows, I will set up a few tests. Much of this is based off of observations in Roberts (2010) but as I mentioned much earlier, there is an entire circle of researchers working on the complications of Projective Content (Beaver et al. 2017). Since it is well documented that the Polar inference of the approximatives patterns with the prejacent of *only*, I won't complicate things by always including *only* in my discussion and examples. But, the reader should keep in mind that whatever I say for the Polar inference of the approximatives, should be applicable to the prejacent of *only*.

The Exh/Focus particle *only* generates two different types of content. In the case of the prejacent, the information associated with the material takes on the status of Not-at-issue content and is allowed to "project". At the same time, a set of Alternatives is created from the prejacent material and "excluded" via Exh. These Alternatives take on the At-issue status which is generally connected with Assertions. It would be nice if this material functioned in a neat and tidy manner but it is well-known that the material associated with the prejacent does*n't* always "project". This

is the case with the Polar inference of the Approximatives and a problem which I have already discussed in depth.

This dissertation argues that the reason why the Polar inference variously projects, while the Proximal prejacent material never does, is connected to the way in which **pex** Exhaustifies expressions. This operator, being the opposite of *only*, asserts its prejacent and generates a set of excluded Alternatives that are NAI. The reader should be familiar with all of this. But the remaining issue that we need to test is whether or not the Scalar implicatures will variously project in the same way. Really, the pattern should be identical to that of the Approximatives seeing as though the same operator purportedly generates them. And although context and environment no doubt play a role in the projective strength, we should be able to create some relatively similar contexts and expressions to control this a bit.

As I mentioned briefly in an earlier section, there are different views regarding how things come to have the status that they do. The path that I'm about to take suggests that I believe that At-issueness is not as malleable as others believe. I don't want to give that impression. At present, what we are interested in seeing is just how well the NAI content in the two cases, Polar inference and Scalar implicature, line up with one another behavior-wise. This is important given that we are supposing the same operator is responsible for generating the content, and therefore, that it at least *enters* the discourse with the same status. So, let's run a few tests.

For the unfamiliar reader, I'd like to first have us look at a presupposition trigger that is usually labeled as "hard": *stop*. This trigger has been labeled as such precisely because the presuppositional content that arises with its use seems so pervasive (Abrusán 2011, 2016). I'm going to use two tests below: Antecedent of a Conditional and an Epistemic Adverb. I have chosen these two environments because they cancel entailments and it is known that they allow the prejacent of *only* and the Polar inference of approximatives to project variously. That is, those pieces of content can be drawn into question much like the asserted content associated with those lexical items. When this occurs, they do not project, although we might expect them to do so. First, we'll look at how *stop* behaves in these environments and then check out the approximative *almost* and quantifier

some. We will have the same Context for each instance. Let's turn our attention to the example in (185).

(185) **Context**: Two friends are discussing their friend Dani who has been writing a novel. One of the friends is making a comment regarding their speculation as to Dani's progress.

a. Dani has probably stopped working on her novel.

b. If Dani has stopped working on her novel, then I'd be surprised.

The hard trigger *stop* carries with it some projective content—a presupposition—-about ϕ. So, in the example, *Dani stopped working on her novel*, it presupposes that *Dani was previously working on a novel* or *Dani used to be working on a novel*. Something of this kind. What is important to notice about (185) is that when we embed *stop* ϕ into the entailment cancelling environments that we have selected, it continues to carry this inference. In the case of (185a), what is surmised is that *It is likely that Dani has stopped working on the novel*. What we don't have, is any inference pertaining to the likelihood that *Dani has been previously working on a novel.* The fact that *Dani has been previously working on a novel* isn't drawn into question. That is what it means for it to project. The semantics associated with the adverb *probably* do not interact with this aspect of the meaning. If it did, the sentence of (185a) could mean something like: *It's probably True that Dani has been working on a novel and she probably has also now stopped working on it*.

Similarly, the sentence in (185b) raises the Question as to whether *Dani has ceased to work on her novel* and, if that is True, then *the speaker will be surprised*. Like in the case of (185a), it is taken for granted that *Dani has previously been working on a novel*. Notice that if this were not the case, this sentence might mean that *If it's true that Dani has been working on a novel in the past and has now ceased to work on it, then I'm surprised*. But this isn't the sense that we have regarding the Speaker's knowledge. Our interpretation is that the Speaker *knows* whether or not *Dani has been previously working on a novel*. We think that the Speaker believes that Dani has, and that they will be surprised only if she has stopped. This is what it means for a proposition to be part of the Common Ground. It is shared by Speaker and Hearer alike, and is part of the "background" of the

Discourse.

Let's move on and examine what happens when we have an example with *almost* and with *some*. The context remains the same but we'll be evaluating these a bit differently.

(186) **Context**: Two friends are discussing their friend Dani who has been writing a novel. One of the friends is making a comment regarding their speculation as to Dani's progress.

a. Dani probably finished *some* of her novel.

b. Dani probably *almost* finished her novel.

In regard to the sentences in (186), what we are going to consider is: under what conditions would such utterances be judged to be True or False? We will start with (186a). Recall, what we want to know is whether or not the Scalar implicature generated by **pex** in regard to *some* is drawn into question, or "projects". The contribution we are curious about is the inference *but not all* which accompanies the Existential statement. What is important is how it interacts with *probably*. My intuition is that if some Speaker A uttered (186a), *Dani probably finished some of her novel*, and then subsequently discovered from their Addressee that, in fact, *Dani had finished her novel*, the sense that the Interlocutors would have about Speaker A's assertion is that it is more False than True. We also can imagine that Speaker A might be surprised. In (186a), what is crucial is the proposition that: it is *probably the case that she finished some of the novel*. However additionally, it is crucial that it is the case that: it is *probably not all of the novel*. That is, both parts of the content form part of the conjecture. The NAI content (scalar implicature) associated with *some* seems not to project but to be scoped over by *probably*. This is why we can imagine that Speaker A might be surprised. They had anticipated that *Dani probably had only finished some*. In this case, this content is behaving more like asserted content.

A similar evaluation can be given to (186b). Again, both meaningful contributions of *almost* are part of the conjecture. If an Addressee informed the Speaker that, in fact, *Dani finished her novel*, the Speaker might again express some surprise. This is because it is crucial to the Speaker's conjecture that *Dani has not finished her novel*. In this case, and in the previous, the NAI content

actually forms an important part of the Speaker's relevant belief worlds. The Speaker has bet that *Dani is "close to" but not finished with, her novel*. Importantly, this is not what we see in the case of *stop*.

Let me pause for a moment and return to *only*. As I mentioned at the outset, the prejacent of *only* also demonstrates this behavior. We can see this if we look at the example in (187). I have provided the prejacent contribution, which is taken to be presupposed, in (187a) and the Excluded Alternative, which is taken as asserted, in (187b).

(187) Probably, [$_\phi$ only Rosalynn came to the party]

a. Prejacent: Rosalynn came to the party.

b. Alt: No one else came to the party.

The feature of note is that when ϕ is embedded under an epistemic adverb like *probably*, the prejacent no longer seems to be "presupposed". The intuition that the Addressee has is that the Speaker does not know whether *Rosalynn came*, let alone, anyone else. The prejacent has been drawn into Question; now along with its Excluded Alternatives, it is also At-issue.

If we turn to examining *some* ϕ and *almost* ϕ in the Antecedent of a Conditional, we again find a different sort of behavior. Let's examine (188a-b) and think about what would make these utterances True or False.

(188) **Context**: Two friends are discussing their friend Dani who has been writing a novel. One of the friends is making a comment regarding their speculation as to Dani's progress.

a. If Dani has finished *some* of her novel, I'd be surprised.

b. If Dani has *almost* finished her novel, I'd be surprised.

c. If Dani has *only* finished one novel, I'd be surprised.

If a Speaker were to utter (188a) and an Addressee responded to them that, in fact, *Dani has finished all of her novel*, it would be very odd for the Speaker to then retort, "*Oh, I'm not surprised*". It would be interpreted as odd because it's not conceivable that the Speaker was only going to be

surprised in the case that *Dani had finished some but not all of her novel*. Likewise, a Speaker who utters (188b) does not mean that their surprisal is conditional upon *Dani having come close to finishing her novel but not finishing her novel.* Rather, if the Speaker were to discover that *Dani finished her novel*, they would be surprised as well. In fact, in the case of (188a), it seems that the Speaker may believe that *Dani has finished none of her novel*. Likewise, in the case of (188b), it seems that the Speaker may believe that *Dani is not close to finishing her novel*.

Looking at the final case in (188c) involving *only* ϕ, it is clear that all three of these sentences have one thing in common: the Speaker can not or does not "presuppose" any of the content. In the case of (188a), the Speaker does not know if Dani has finished *any* or *all* of her novel. In (188b), the Speaker does not know if Dani has finished *a little*, *none* or *all*. And in (188c), the Speaker does not know if Dani has finished the *one* novel. No aspects of the meaning associated with these elements form part of the Common Ground.

Overall, we have a positive outcome. From an empirical perspective, we have two seemingly different kinds of content; the Scalar implicature, the Prejacent of *only*, and the Polar inference of Approximatives, which seem to behave similarly in similar syntactic environments given similar contextual set-ups. I have argued that the Scalar implicatures and Polar inference were generated by the same operator **pex** which incidentally is a mirror of *only*. What would have been rather devastating for this argument would be to find that either a) special considerations or stipulations were needed to generate the content in one case and not the other, or b) the content had different kinds of characteristics in similar environments. However, neither of these things are the case. Unfortunately, I can not explore here what potential circumstances are unfolding between *if* and **pex** in these constructions and I leave that for later work.

5.4 Contrarian HARDLY and Polarity Items

Now that we have squared away the inferential aspects of the approximative family and determined a way to build Contrarian HARDLY, we can revisit the issue of the NPIs. As I discussed in the introduction, ConH tends to Anti-license NPIs which is not exactly what one might expect given its seeming "negativity". In fact, the entire Approximative family has been a bit troublesome when it

comes to explaining their NPI interactions. In my opinion, much of this is related to the inaccurate analyses given to these items. Every researcher knows that no matter the Theory proffered, its weak spots result in predictions that are not borne out. The analysis that I have provided will allow us to better situate the Approximative family in regard to a predominant theory of NPI licensing and along the way, I will provide *a smidge* of new data related to Contrarian HARDLY.

Having said that, let me get started with a disclaimer. I will not be providing the reader with an exhaustive exploration or review of the thinking on NPIs. Rather, this section will be highly specific to the Approximatives and their issues. Furthermore, I will only be discussing the results of my analysis of Approximatives and ConH in terms of one theory of NPI licensing—that they require a Downward Monotone environment (Zwarts 1998; von Fintel 1999; Gajewski 2011; Romoli and Mandelkern 2020) inter alia. However, there are other theories on how Polarity Items (PI) work. Giannakidou (1999, 2001, 2006, 2021) has been developing for two decades a licensing system based on (non)Veridicality. Israel (2011) has explored a theory related to how scales, quantification, and "Rhetorical Informativity" interact to produce inferential possibilities. In Israel's system, the NPIs are variously encoded in regard to these kinds of categories and this governs their behavior in the system. Also, Collins and Postal (2014, 2017) have worked out a unique negation system that is heavily syntactic and where NPIs play a role. There, NPIs have internal negative pieces that are licensed or deleted through an intricate calculus that balances negation at the clausal level. The reader should look to these sources for details.

The discussion I provide here will focus on Semantic ideas but the reader should be aware that there are syntactic considerations to sort out. There has always been an interest in defining the constituency in which the proper Downward monotonicity must hold. If one takes an "environmental" approach, then it allows for the licensing of material to be explained relative to the monotonicity present at the phrasal level rather than clausal level. There may be some aspects of what I say here that are applicable to that debate but I will not be getting into them. For the reader interested in exploring the notion that lexical items evaluate monotonicity in particular constituencies, please see Progovac (1994) and Homer (2020) for discussion and references.

The majority of research that seeks to explain NPI licensing in terms of Downward Entailment is an extension of work that was begun in the early 1980's with Ladusaw (1979, 1983), Linebarger (1980, 1987, 1991), and Zwarts (1998). The contribution made by Zwarts was the creation of a Negation taxonomy based upon the Entailment relationships attributable to De Morgan (Atlas 1997; Burris and Legris 2021). The general idea behind the methodology is that after determining what variety of Negative Environments can be created, you can then go about categorizing and classifying particular Polarity Items (PI) with respect to their acceptability in those environments. There have been two major complications identified with the line of work. First, as some researchers point out, even if one could get all the Polarity Items to line up appropriately with some logical notion of Negation and Downward Monotonicity, you'd still lack an explanation for why this is. This is the position of Giannakidou and researchers engaging in inquiry under her paradigm (Giannakidou 2021). This is also the position of Israel (2011) whose work has placed a great deal of emphasis upon explaining the purpose of the Polarity Item, i.e. why do they even exist, and proposing Discourse functionality for them. Barker (2018) also provides some thoughts on the discourse function of NPIs.

The second complication will be our real jumping off point and the issue that plays most heavily into the work that I have done here. That is, the Downward Monotonicity approach seems (too often) to make false predictions. Items that shouldn't be licensed in certain environments *are*, and certain operators that shouldn't be functioning *as* licensors appear to be doing just that. Let's start by looking at the classic definition of Downward Entailment and then afterward at the "textbook" licensing violator.

Below in (189a-b) is the standard definition of Downward Entailment. What this says is that a *function f* is Downward monotonic if when applied to some set *X*, the conditions of the function (or operator) apply to all the subsets. So, in the case of (189c), with the operator *never* scoping over the predicate *heard a bird sing*, we know that *never* is Downward monotone because the predication also applies to the subset *Loon*. Because this is the case, the interpretation arises that *Chanice never heard a Loon sing*.

(189) Downward Entailment Ladusaw (1979, 1983)

a. f = *never*, set of birds X, subset $Y \subseteq X$ Loons

b. $f(X) \Rightarrow f(Y) = 1$

c. Chanice *never* heard a bird sing ⇒ Chanice *never* heard a Loon sing.

d. Chanice never heard *anything*. (Weak NPI)

e. Chanice never heard a Loon sing *at all*. (Strong NPI)

What else is important about (189) is that it shows that in this Downward monotone environment, we may substitute in either a Weak NPI *anything*, or a Strong NPI *at all*. (I'll discuss the distinction in a moment.) The reader can probably test for themselves that if the operator *never* is removed, then the environment will not support either NPI, for example, **Chanice heard anything* is quite unacceptable.

If all cases worked like the example in (189), then that would be great—albeit shocking. However, it's actually quite easy to find constructions, operators and NPIs, which deviate from the pattern. Below I have provided an example of one of these items, *only*, which will license certain kinds of NPIs. An example construction is presented in (190a) with *any*, however, there are other items that *only* will support: *any*, *ever*, *that much*, *necessarily* (epistemic).[15] The problem is that the inferential pattern that *only* demonstrates is not the correct pattern associated with Downward monotonicity and postulated to license the elements. As we can see in (190b), the super-set to subset relationship does not hold and in this case, the entailment does not go through. Just because *Only Toni*, and no one else, *photographed a bird*, does not entail that *Toni photographed a Loon*. Rather, the pattern that we see with *only* is associated with a different entailment pattern altogether.[16]

(190) a. *Only* Toni photographed *any* Loons.

b. *Only* Toni photographed a bird $^{*}\Rightarrow$ *Only* Toni photographed a Loon

[15] ex. **(Only) Toni necessarily wanted to stay.*

[16] In a particular line of research, the fact that *only* has a distinct entailment pattern means that it is part of a different class of negators: it is "psuedo-anti-additive". I will not be discussing the "ins and outs" of this research but please see (Atlas 1997; Zwarts 1998) for more detail.

c. *Only* Toni photographed a bird & *Only* Toni had beans for lunch $\models$ *Only* Toni (photographed a bird **or** had beans for lunch).

A method by which to keep the analysis and explain the deviant patterning was introduced in von Fintel (1999): Strawson Downward Entailment. The idea behind it is very simple. What if we can assume that in these cases, the monotonicity *does* hold because presuppositions about the sets in question are factored into the calculation. So, returning to our example in (190), if it can be presupposed that all the birds in question were Loons, then the Entailment holds. If all birds were Loons, then if *Only Toni photographed a bird*, it was a Loon.

But another complication crops up. It can't be the case that you can simply take presuppositional material, factor it in and all NPI licensing issues are resolved. In fact, it seems that for certain kinds of NPIs, the presuppositional material appears to actually anti-license the items (Homer 2008a, 2008b, 2011). Let's look at two examples of this in (191). The example in (191a) is similar to our examples above but we can clearly see that the NPI *in years* is anti-licensed. Below it in (191b), I have provided an example construction where this NPI appears under canonical negation *n't*. It is perfectly acceptable in such a position. Similarly, in (191c), we can see that the NPI *until* is anti-licensed when embedded in a complement presupposed to be true. Again, this can be easily ameliorated by altering the embedding verb and supplying some negation to the matrix clause (191d).

(191) a. Only Toni photographed a Loon (**in years*). (Presupposes the prejacent)

b. Toni has*n't* photographed a Loon *in years*.

c. Toni regrets to have left (**until*) the next day. (Presupposes the truth of the complement)

d. Toni did*n't* want to leave *until* the next day.

Since we can not appeal to the licensing environment in this way, the remaining option is to assume an NPI typology. This is the approach introduced in Gajewski (2005), Gajewksi (2007), and Gajewski (2011) and Chierchia (2013); and is the source of the Weak/Strong NPI distinction. What the researchers have argued is that Strawson Downward Entailment can be retained but we

have to recognize that there are two classes of NPI: Weak and Strong. Weak NPIs ignore non-truth conditional content, while Strong NPIs must evaluate both truth conditional and non-truth conditional content (presuppositions and implicatures). And it is this approach that I will assume for the remainder of my discussion.

With this model of NPI-licensing in place, we have a principled way of understanding the licensing pattern demonstrated by our approximative adverbials. In order to assist with thinking through what's going on with them, I've created the table in (192). This table provides a look at the three pieces that we have identified for each adverb and also, the polarity associated with the piece. The distinction made here is the same as that which I argued for earlier when we determined Substitution Sources during the Exhaustification procedure. I have assumed nothing different here about the way that negation is internally packaged in the lexical specifications or how external clausal negation comes to interact upon the adverb. These were especially important considerations when building Contrarian HARDLY and are equally important when assessing its behavior comparatively.

However, now knowing what we do about NPI licensing, we can make some predictions by just examining the table and we can determine how accurate they are. I'll first walk through the table to make sure that reader understands what they are looking at and start by examining *barely*.

The first column tells us the Polarity associated with the Not-at-issue content of the adverb. This is the content that was generated by **pex**. In the case of *barely*, it is marked with a plus sign (+). As we saw in the case of *barely* ϕ, via Exhaustification we get inferential material about something that is True/Affirmative in the evaluation world. When *John barely finished the boring novel*, he did in fact, *finish the novel*. The middle column tells us about the Polarity associated with the Existential statement regarding the Proximity that the adverb expresses. In the case of *barely*, this is also marked with a plus (+) because *barely*'s Existential statement is about "closeness to." The final column gives us the polarity associated with the propositional/predicate content which is modally projected. In the case of *barely*, this is marked minus (-) because *barely* is always telling us about a possible world where something is False/negative. So, just to use the example from

above again, when *John barely finished the boring novel*, he was *close to NOT finishing it*. If we take all this together, we can interpret *barely* as giving rise to affirmative Not-at-issue content p and asserting $\Diamond\neg p$.

(192)

	Not-at-issue	Proximity $\exists$	*Proposition*
barely	+	+	-
almost	-	+	+
HARDLY	-	-	+

This predicts that *barely* should be good with NPI's that do not need to evaluate presuppositional content, for example *anything*, and *un*acceptable with those that do. And this seems to be the case. Looking at the examples provided in (193a-c), we can see that the Weak NPI *anything* is licensed by *barely*. However, the "Strong" NPI *cup of tea* is very degraded with *barely* but perfectly acceptable with canonical negation. The same sort of unacceptability seems to result in the case of *until*.

(193) NPI *cup of tea* and *until*

a. Cheryl *barely* understands *anything* about syntax.

b. Syntactic analysis is not Cheryl's *cup of tea*.

c. Syntactic analysis is *barely* Cheryl's (**cup of tea*).

d. Elaine did*n't* shovel the driveway *until* the morning.

e. Elaine *barely* shoveled the driveway (**until* the morning).

In the case of *almost*, we have a completely different situation. We actually have no reason, based upon our licensing theory to even suspect that *almost* would license an NPI. Just examining the table in (192), it is obvious that only the NAI content is negative. Reflecting on our theory, it has nothing to say about this circumstance. Our concern is the evaluation that NPIs do or do not give to their NAI content after their asserted content is evaluated. The adverb *almost* has no negative asserted content. Too, we don't seem to have any evidence thus far for a class of NPI which only responds to negative NAI content. It's simply not a category in our current theorizing.[17]

[17]This doesn't mean that it can't be a category. Israel (2011) has demonstrated that Polarity Items can be divided into 4 groups in his system. Perhaps, the right kind of work can facilitate a similar division in this theory.

This brings us finally to Contrarian HARDLY and its NPI anti-licensing issue. Remember, what was so disconcerting was that ConH has such a strong negative flavor but does not license NPIs in the way that you would expect. I have been building a position throughout the dissertation that there is a very simple way to understand Contrarian HARDLY: it is an adverb that asserts the "remote" possibility of an affirmative/true proposition or predicate. If we look at the table, we can see that the content fits in just perfectly with the other adverbs. They all form a nice paradigm. And reading across the table we see that Contrarian HARDLY is associated with negative NAI content: the predicate/proposition in question is assumed False in the world of evaluation. The Existential statement of Proximity is unique due to the higher negation which is in play. As we saw in the generation of the NAI content during Exhaustification, we treat this in some ways as a unit. In tandem, this higher negation and the naturally occurring Proximity operator produce the *far from it* inference; we are not close to a possibility. However, if we look to the last column, we discover that this possibility is affirmative. Contrarian HARDLY communicates that the Speaker takes $\neg p$ to be in the Common Ground, and that the possibility of p is remote.

Returning to our theory of NPI's, what our table predicts is that ConH should license maybe *no* NPIs at all. It is associated with affirmative assertive content. However, much like *barely* has some positive interference at work, ConH has some negative interference at work. It has a negative existential statement and negative NAI which I believe must provide enough force for Weak NPI licensing. The data in (194) shows the acceptability of a basic indefinite *any*.

(194) Weak NPI *any*

a. Beatrice never claimed that there were *any* loons spotted that day.

b. Beatrice claimed that there were (**any*) loons spotted that day.

c. Beatrice HARDLY claimed that there were *any* loons spotted that day.

Contrarian HARDLY is also acceptable with *ever* as (195) shows.

(195) Weak NPI *ever*

a. Joan did*n't* think that Betsy had ever seen a loon.

b. Joan thought Betsy had (*ever) seen a loon.

c. Joan HARDLY thought Betsy had ever seen a loon.

But the data is more complicated and interesting than these Weak NPI examples. The previous two NPI examples are well known to be very permissive in terms of the negative strength of the environment that they will tolerate. So, I'd like to move onto some other examples. But I would like to add an additional piece for the reader to think about: how these examples fair when in the scope of *Only NP*.[18] As we saw earlier, it was possible to assume Strawson Downward Entailment in order to capture an explanation for NPIs that found themselves in the scope of *only*. In fact, the work of Atlas (1997) and Zwarts (1998) demonstrate that the entailment pattern of *only NP* and the negative approximatives *barely/hardly* are the same. At this point, I've shown that Contrarian HARDLY and the negative approximatives vary in many ways. What we want to know now is, are the parts that have been altered, the right ones such that *only NP* and Contrarian HARDLY do not license the same items? We will see that the answer is yes.

Let's just look quickly at the example in (196). Remember, it is pretty easy to find Strong NPIs that require a negative strength such that neither *only* nor ConH can support them. Just to reiterate, in the system that we are using, the anti-licensing in the case of elements like *in the slightest*, is really a restriction on the lexical item itself. It's somewhat easier to discuss matters by saying that the environment doesn't have the proper negative strength but actually, what is happening here is that the NPI is sensitive to the presence of affirmative content. In the case of *only NP*, it is positive inferential material, but positive assertive material in the case of ConH. The reader needs to make sure that they keep this difference in mind, because it is what actually predicts that the licensing of *only* and ConH can come apart at some point.

(196) NPI *in the slightest*

a. Katya is*n't* intellectually gifted *in the slightest*.

b. Katya is intellectually gifted (**in the slightest*).

[18]For ease, I write and talk about *only* but the reader will notice that all of the examples are *Only NP* examples. This is on purpose. *only VP* has different properties and I won't be discussing it at this time.

c. Only Katya is intellectually gifted (**in the slightest*).

d. Katya is HARDLY intellectually gifted (**in the slightest*).

Now we need to look at some other examples where the licensing appears to overlap. In the example below in (197), we have the NPI *all that*. Here, we can see that *only NP* and ConH license the NPI equally well and that *all that* is very poor in an affirmative environment.

(197) NPI *all that*

a. Trish thought the movie was done (**all that*) tastefully.

b. Only Trish thought the movie was done *all that* tastefully.

c. Trish did*n't* think the movie was done *all that* tastefully.

d. Trish HARDLY thought the movie was done *all that* tastefully.

If we look at an example of the classic *already* vs *yet* alternation, we can see another similarity. Neither *only* nor ConH will license *yet* which is acceptable with canonical negation *no*. They are both natural with *already*. Additionally, we can demonstrate that *almost* will also license *already*. Now if we examine the chart, we have a clear way of predicting the behavior of *almost* and ConH, they both have affirmative assertive content. But this doesn't help us with *only*. It's been long argued, for good reason, that *only* asserts negated alternatives. This would seem to put it at odds with *almost* and ConH. However, as I have discussed above, and Roberts (2010) and Horn (2009) have shown, *only* has some special properties which it shares with the approximative class, namely, its NAI content is not strictly presuppositional. I bring this up because what these three items do have in common which can be responsible for the licensing is a "mixed" Polarity structure. All three of these operators have both affirmative and negative meaning contributions. This is their overlapping characteristic which apparently, some PIs like *already*, can be licensed by.

(198) PI *already* vs *yet*

a. Tabitha *almost* finished her novel *already*/**yet*.

b. Only Tabitha finished her novel *already*/**yet*.

c. Tabitha HARDLY finished her novel *already*/**yet*.

d. Tabitha *didn't* finish her novel **already*/*yet*.

There are other elements which have been labeled as PPIs because of their interaction with canonical negation that are also pretty good with *only* and ConH. In (199) we have the PPI *rather* which seems to be one of these cases.

(199) PPI *rather*

a. Maryanne would*n't* (**rather*) read a book on Botany.

b. Maryanne would HARDLY rather read a book on Botany.

c. Only Maryanne would rather read a book on Botany.

Since it's pretty clear that *Only NP* and ConH can license similar items, it's time to look at some examples which suggest that they can be pulled apart in an opposite direction. Remember, this is potentially an important distinction if it is the case that it matters that the Polarity of their NAI and AI content is the reverse of one another. This aspect, coupled with the fact that the licensing theory which we are employing, technically, predicts a Weak PPI/Strong PPI distinction, highly suggests that there should be some empirical data to this effect. This seems to be the case.

If we look at (200) which has examples built from the PPI *whole nine yards*, we can start to see just such an effect. What the example in (200) shows is that the PPI is natural in an affirmative context. However, it's not very good under *Only NP* which is why I have marked it with question marks. Interestingly, it is ok in the scope of Contrarian HARDLY. In fact, these seem like the exact cases which inspired the name that I bestowed, "Contrarian", insofar as (200d) seems like a perfectly good rebuttal of (200a).

(200) PPI *whole nine yard*

a. Harriet expected *the whole nine yards* for her birthday.

b. **Harriet does*n't* expect *the whole nine yards* for her birthday.

c. ??Only Harriet expected *the whole nine yards* for her birthday.

d. Harriet HARDLY expected *the whole nine yards* for her birthday.

With the PPI in the previous example, *whole nine yards*, I feel the acceptability is somewhat borderline. In the case of *Only NP*, they are not exactly bad but they feel somewhat stilted. However, there are other PPIs where the unacceptability is more pronounced; and *galore* is of this type. If we look at (201), we can see again that our example with ConH is very natural and again, reads as though it were a rebuttal (Contrarian response) to (201a). The PPI is bad in the other two more negative environments. Remember, from the perspective of our licensing theory, elements are most sensitive to asserted content and subsequently, evaluate NAI. In a certain regard, this makes *only* more negative than ConH, given that *only* has excluded/negated material that is asserted.

(201) PPI *galore*

a. Andrea anticipated dancers *galore*!

b. *Andrea did*n't* anticipate dancers *galore*.

c. *Only Andrea anticipated dancers *galore*.

d. Andrea HARDLY anticipated dancers *galore*!

The identical circumstance holds in the case of (202) for the PPI *highway robbery*.

(202) PPI *highway robbery*

a. The price of the Jeep Wrangler is *highway robbery*.

b. *The price of the Jeep Wrangler is*n't highway robbery*.

c. *Only the price of the Jeep Wrangler is *highway robbery*.

d. The price of the Jeep Wrangler is HARDLY *highway robbery*.

This begs the question, are there any PPI's that Contrarian HARDLY creates an unacceptable environment for? Yes, there are. I provide two such examples below: the PPI *manner of speaking* and the PPI *once or twice* are both anti-licensed by ConH.

(203) PPI *in a manner of speaking*

a. Bianca is, in a manner of speaking, the funniest person alive.

b. Bianca is HARDLY, (* in manner of speaking), the funniest person alive.

(204) PPI *once or twice*[19]

a. Robin has driven up into the mountains once or twice.

b. Robin has HARDLY driven up into the mountains (*once or twice).

What the reader should notice is that (203b) and (204b) are both perfectly good and sensible rebuttals or retorts to the (203a) and (204a) sentences provided that the PPIs are removed from them. Therefore, something about the content of both ConH and the PPIs is incommensurate. The easiest solution to the problem is to posit that these two items are Strong PPIs and that they are anti-licensed because of the negative NAI content triggered by ConH. However, more testing will be required, and other possibilities for carving up the Polarity Item space, so to speak, exist. As Zeijlstra (2013) and Penka (2020) have pointed out, we still have not turned enough attention to Positive Polarity Items. They are not just the lexical items that can go where the NPIs can not.

5.5 Chapter Review

In this chapter, I showed that Contrarian HARDLY has the character one would expect if it were in fact simply an approximative under negation. And to that end, I showed how it was possible to semantically derive it. Also, I argued that the Polar inference for all of the approximative elements can be understood as enriched content that is generated by a "Presuppositional" Exhaustification operator called **pex**. Afterward, I laid out what sort of assumptions need to be made to produce the proper Structural Alternatives for Exhaustification. With a new diagnosis of their NAI and AI content in place, I showed that the approximative adverbs, *almost* and *barely*; the focus particle *only* and Contrarian HARDLY, all fit rather well into our current understanding of Polarity Items. The caveat is that we must respect the division between NAI and AI content that each lexical item

[19]For non-Native English speakers, this phrase does not mean, literally, 1 time or 2 times. It is an expression that is actually meant to connote that the action has been undertaken many times. It is a conventionalized understatement that functions as a rhetorical device. There is a similar expression "been there a few times" that works about the same. For example, *You're confused by Chomsky? Well, I've been there a few times*. Really, the speaker is saying that they have been confused many times which is a commonplace occurrence.

creates, and also we must interpret matters via Strawsonian Downward Entailment. I closed by illustrating how these items can help us to investigate PPIs.

CHAPTER 6

CONTRARIAN HARDLY AND APPROXIMATIVE DISCOURSE

Over the past few chapters, I have built up an understanding of Contrarian HARDLY which explains its meaning as an emergent property of the interaction of commonplace processes in the grammar: Negative Polarity Focus associated with a high peripheral negative operator targets an adverbial which has been merged in the Specifier of a Neg Phrase. This has required a deeper understanding of the behavior of the approximative family of elements that includes; *almost*, *barely*, *nearly*, *scarcely*, and *rarely*. Of these, I have found it necessary to discuss *almost* and *barely* in some detail. Throughout this discussion it has been necessary in places to mention how these elements function in Discourse. However, we were often examining certain other properties and so that discussion was supplemental to those things. Therefore, I would like to devote this chapter to a discussion of the Pragmatic particularities of these items. As usual, the simplest way to begin is with some observations about *almost* and afterward, transition into a larger conversation about Contrarian HARDLY.

6.1 The pragmatics of the *almost* utterance

As we saw in the earlier chapter on issues related to proximity. A great deal of concern has been given to what an "almost" construction expresses from a quantificational standpoint. There have been numerous papers about how to capture that "little bit away from X" or "not quite X" quality which researchers have intuited this adverbial to carry. I have attempted to shift this conversation somewhat by arguing that an Intensional model is the appropriate way to handle approximatives and ConH. I have therefore been building the idea over the course of the dissertation that this requires more thinking about how approximative utterances are employed in discourse. This seems especially relevant for two reasons. First, existing conversations that have assumed an Intensional framework have not deeply discussed Discourse (Sadock 1981; Morzycki 2001; Nouwen 2006; McKenzie and Newkirk 2020). Secondly, where this has been undertaken, it is in another framework (Amaral 2007; Amaral and Del Prete 2010; Amaral and Schwenter 2009; Schwenter 2002; Johnson and Schwenter 2019). The latter issue also holds true for Contrarian HARDLY, which as I mentioned

at the outset of this dissertation, receives a small treatment in Amaral (2007) and Amaral and Schwenter (2009) where it is discussed in terms of the work of Fauconnier (1975a, 1975b). I will not be reviewing this work, so the reader who is interested in these other approaches should begin their own investigations with those works. What I am going to do is introduce some of my own thoughts on the discourse dynamics of Intensional approximative utterances.

The first thing I'd like to do is review and add a few additional details to the position that I have been building regarding *almost*. In order to do that, we are going to look at a fresh example. We are going to imagine watching a PWHL game on television while listening to the usual game banter by two broadcast commentators. In this scenario, a forward takes a shot on the goal. Announcer 1 reports that the shot was wide which means that the goaltender didn't interact with the puck nor did it strike the goal frame. Announcer 2 contradicts that claim with an emphatic "no" and then uses an "almost" utterance to report that: *it did almost go in*.

(205) Two Announcers discuss a play for a (PWHL) game. Announcer 1 has stated that a player who was attempting to score has taken a shot which ended up being wide of the goal frame. Announcer 2 corrects this report with an *almost* utterance.

Announcer 1: (Hilary) Knight takes the shot but it's a little wide.

Announcer 2: No. That was almost in there. Excellent quick moves by Maddie Rooney.

Announcer 1: How's that?

Announcer 2: Well, She (the goalie) deflected that shot there with her right pad.

Announcer 1: Didn't look that way from over here. Couldn't see that. Thanks.

One thing that is important to notice is the second part of this exchange where Announcer 1 asks, "How's that", by which they mean: *how is it the case that the shot almost went into the goal*? Announcer 1 asks this because *almost* utterances do a particular thing. They alert an addressee to the fact that the speaker has a counterfactual proposal in mind regarding how to access the world where the prejacent is True. For any Speaker to believe in a "close" possible world regarding p and make an assertion about it using *almost*, they must "have in mind" what proposition would allow us to access it. An "almost" utterance asserts to an addressee that the speaker has a *crucial*

proposition in mind which locates the counterfactual world where the prejacent is True, close to the evaluation world where it is False. If this is not blatantly obvious, then the speaker must defend their assertion. In the case that we are looking at now, Announcer 1 realizes that we simply have a perspectival problem related to "line of sight" and so does not contest. Announcer 1 has no reason to doubt the assessment of Announcer 2 but notice, they still asked for the specifics of that "crucial" proposition.

Notice also that the announcers were not confused in any way (nor was the reader I bet) by the directionality of the "almost" utterance. When Announcer 2 says, "it was almost in there", Announcer 1 did not retort, "that's what I just said!". Interestingly, they know that the phrase "almost in" uttered here, won't pick out the puck's position in this circumstance where Announcer 1 has labeled it "wide". This is because the two interlocutors are intimately acquainted with not only the Context of the game but also its discussion. Therefore, they are both on the same page that what is being discussed is disagreement about *almost* in and/or *barely* missed (going in). The announcers take into consideration the intentions of the players at that particular moment and a lot of detailed information about the action of the game. If this was not the case, and scalar measurement was highly relevant, "wide" would be (in this case) the same thing as "almost in". But the perspective is crucial and the sensitivity to the discourse is much more complex than the closeness of the puck just physically-speaking. This extends back to the asymmetry which I discussed earlier and Horn's long time observation about the affirmative vs negative sentiment attached to these adverbials. The very fact that Announcer 2 chooses *almost* works as a signal to Announcer 1 that something impeded a positive result to the shot. (As somewhat of an aside, there is a third possible exchange. One where Announcer 2 responds by just saying, "barely", which would then have been perceived as a reluctant agreement on the assessment made by Announcer 1. The interpretation would have been underlyingly, "Yes. I reluctantly agree. My perspective is also that it was wide, but just barely").

The above is one kind of scenario where two interlocutors have a dispassionate disagreement based on literal perspectival differences. However, its easy to imagine other varieties. Let's imagine a situation where a young chess student and a Grandmaster are watching a tournament

match between Nadezhda and Tatiana Kosintseva. Unfortunately for fans, the match ends in a draw and at the end of things, the Grandmaster and the student have the following exchange.

(206) Grandmaster: Ugh. Everyone hates a draw. I thought Nadezhda almost had her.

Student: She did? Where?

Grandmaster: Ok. You have to think about what happened at move 27.

In this example, we can see even more clearly how the *almost* utterance signals to the addressee that the speaker has formulated a counterfactual proposition that will allow them to access a close possible world where Nadezhda wins. Interestingly, the student and the Grandmaster have watched the identical match unfold. Both parties and all spectators have witnessed the same events in the evaluation world. But the Grandmaster can do something that the majority of people, including her student, can not do. She can calculate alternative lines of attack and defense which could have been played but were not. In fact, she is so good at this, and has so much real world experience, that even if she were to ask the two players about what happened in the match at move 27, they might without debate agree with her assessment that it was move 27 that altered the course of the game. The point is, the Grandmaster can see potentialities that the less skilled can not, and the *almost* utterance signals to the student that the Grandmaster has happened on a particular one, namely, one that allows access to a world where Nadezhda wins. Take special notice that the Grandmaster has identified 1 crucial proposition, as the turning point, and as the bridge between p's Falsity in the evaluation world and its Truth in the modal world: a different choice at move 27. This is the crucial proposition which is required to make the modally projected world "close". When the Grandmaster says "almost p", it is like asserting; "I have discovered a manner by which a world where p is True, is a close world".

It is definitely possible to go on creating scenarios and the two that I have given are on opposite ends from one another, so to speak. Very often, the situation unfolding will have a character that is somewhere between these two examples. Interlocutors may see the indentical events but modally project a bit differently about them. Stated in the terminology that I am using: the interlocutors have settled upon different "crucial" propositions. In other words, the whole group of speakers have the

same set of premises but they don't add up to the same conjecture about how the world might have been. This is the motivation behind all of the Premise Semantics work done by Angelika Kratzer (Kratzer 2012) which my observations here somewhat assume without diving into formalism.

What I am not interested in doing at this time is arguing for or against any of the work that has been done recently on Modality, in and around this area (Kratzer 2012; Mandelkern 2019a, 2019b; von Fintel and Gillies 2021). What I am interested in advancing is the idea that approximatives like *almost* and Contrarian HARDLY can and should be handled in such a framework. I would like the reader to entertain the idea that utterances like that given in (207) are really more like the Conditional given in (207a) which is why in discourse, they often take a rhetorical form like (207b).

(207) I thought Nadezhda *almost* won.

a. If the world had been X, Nadezhda would have won.

b. Nadezhda *almost* won, she just needed to have X.

One of the big structural differences in (207) is that the *almost p* in (207b), which forms the Consequent, is pronounced first and the piece that forms the analog to a Conditional's antecedent is pronounced second. As I'm sure the reader is aware, there is an ongoing debate about the nature of Conditionals. This is especially true in regard to determining what the status of the Antecedent is (or has to be) (Arregui 2020; Egré and Rott 2021). This debate isn't relevant here. I am merely interested in pointing out the parallel such that in both cases, there is a conjecture about a possible world, and a single (crucial) premise related to how that world is accessed.

If the reader is comfortable drawing this kind of comparison for approximatives, then it will be easier to understand my thoughts on the functionality of Contrarian HARDLY. Similar to the *almost* cases, ConH *p* asserts that the speaker has a counterfactual proposal in mind that will situate the interlocutors in the world of evaluation, *far from* a possible world related to the prejacent or some relevant proposition in the Discourse. This is how Contrarian HARDLY is used to contest things. When a speaker uses a ConH utterance it is like they are saying: "Actually, we (the Interlocutors) are in a $\neg p$ world, and p, while possible, is far removed from where we are". Moreover, as I've

been arguing, the Speaker will also have *at least* one crucial proposition pertaining to why the p world is not accessible. The nature of the Contrarian HARDLY utterance is such that it makes the Speaker's belief in $\neg p$, extremely clear. However, the Contrarian HARDLY utterance does this in a particular kind of way which allows the speaker to engage in some more sophisticated "Disputative discourses". I turn to this now.

6.2 Contrarian HARDLY and Disputative Discourse

In the discussion that follows, we don't need to do a lot of complex modeling. As I mentioned above, that can be done (and should be done) but not here. For the following remarks, we can adopt a very simple notion of the Discourse space and work with a few ideas of Stalnaker (2011, 2016, 2018). In particular, I will use the notions of a *Common Ground*, *Context Set* and a *defective context*. Let me define how I'll use these terms because there is both confusion and continued debate on how these should best be defined.

I will take the *Common Ground* (CG) to refer to the set of possible worlds that are centered on a set of individuals. These worlds are centered insofar as they represent the shared information and presumed knowledge that the participants have regarding one another in the discourse space. This is sometimes distinguished from the *context set* which is a set of the uncentered worlds. These are "the set of possible states of the world that are compatible with the shared information, the alternative states of the world that the participants mean to distinguish between in their conversation" (Stalnaker 2011). A *defective context* is one where conversational participants discover that what they took to be Common Ground is not Common Ground. Under these conditions, Interlocutors can use utterances to both limit and widen the space of possibilities, that is, they can eliminate them or introduce them.

To reiterate, ConH utterances signal to an Addressee that the Speaker has a counterfactual proposal in mind related to the inaccessibility of a proposition p in the Context (its remoteness). Moreover, the ConH utterance signals that they take the proposition's contrary $\neg p$ to be True in the world of evaluation. It is by virtue of the inherent Negative Focus that the Speaker's belief in $\neg p$ is signalled, but like the other approximatives, ConH simultaneously signals that the Speaker has

a (counterfactual) proposition in mind pertaining to the truth of $\neg p$. The strength of the negative speaker bias and the objection of the foregrounded proposition p leads to an inference by the Addressee that it is them who have "missed", "forgotten", "overlooked" and/or "misapprehended" something. The Addressee's perception is that they have made a mis-step of some kind in the discourse. This can be in regard to making a false assumption about the Common Ground or they may have attempted a Conversational move that the Speaker is not going to allow. Let's look at an example.

(208) **Context**: A group of colleagues gather to look through Fellowship applications together to determine which student should receive a Fellowship that has very specific guidelines regarding eligibility. All colleagues know, or are very familiar with, all the applicants.

A: Who submitted applications?

B: Marjorie, Amelia, Crystal and Morgan.

A: Marjorie is HARDLY who this Fellowship is for.

B: Yeah, you're right. We'll probably have to choose between Amelia and Morgan.

Speaker A can be signaling any number of things in regard to the guidelines of eligibility. What seems clear is that Speaker A believes that all Interlocutors who are present know the rules of eligibility and that it is Common Ground that Marjorie is ineligible. (For whatever reason). Put a bit differently, all the Interlocutors have World Knowledge (know details) about Marjorie and can use this to infer her ineligibility. Speaker B acknowledges this and additionally, as the guidelines have now been brought to the forefront, Speaker B suggests who they take to be the eligible candidates. Notice in (208), no Interlocutor's personal position is challenged, rather Speaker A uses the opportunity to remind the group about what they believe the Common Ground to be, in particular, that there are strict guidelines for eligibility which preclude candidates like Marjorie. Targeting the implicit proposition, *Marjorie is a candidate for this Fellowship*, with a ConH utterance signals its remoteness. In fact, it does this to such a degree that it's not even interpreted as a comment about Marjorie, and that she shouldn't receive the Fellowship. Rather, it serves to place the rules front and center by highlighting that Marjorie can't even be considered.

But this dialogue could have gone differently. Let's look at the exchange given in (209).

(209) A: Who submitted applications?

B: Marjorie, Amelia, Crystal and Morgan.

A: Does anyone have any immediate thoughts?

B: I think that Marjorie is an excellent candidate, and Amelia.

A: Marjorie is HARDLY who this Fellowship is for.

B: Oh, what's wrong with Marjorie?

In the dialogue in (209), Speaker B now overtly *recommends* Marjorie which alerts Speaker A that Speaker B doesn't understand the eligibility guidelines. Speaker A uses the same ConH utterance to reject the proposition *Marjorie is a Fellowship candidate* and to draw attention to the fact that Speaker B does not understand the Fellowship guidelines. It is Speaker A's strongly negative bias which accompanies the rebuke that helps signal to Speaker B that they are not being disagreed with per se but rather, they have presupposed something which is inaccurate, namely, Marjorie could be a Fellowship candidate. Speaker B is aware that they have "missed something" and so inquire, "what's wrong with Marjorie?"

We can imagine both of these dialogues taking place in the presence of three other speakers: a group of five colleague. Via these exchanges, the other Conversational participants may also have done some assessing and updating. All conversational participants have had the opportunity to evaluate the Common Ground by listening to this exchange and are at the very least now keenly aware of what Speaker A takes the Common Ground to be. There have also been some changes to the Context Set, we have narrowed the space of possibility; possible worlds which include Marjorie are out. This whole scenario represents a case where the Common Ground is defective. Not all conversational participants had the same set of presuppositions.

Of course, there are more forceful scenarios where the Common Ground is not defective and, a conversational participant uses a ConH utterance to blatantly disagree and signal their strong disapproval of a proposition which a speaker is attempting to introduce. We could imagine a third conversation in the above Context where everyone knows what the eligibility guidelines are, but

they simply disagree that the guidelines should be what they are. In this context, Speaker A could use their ConH utterance about Marjorie to signal to all Interlocutors that the group needs to change the Fellowship eligibility requirements. This would be a disagreement about the Context Set. In this circumstance, there is no problem with what the group of Interlocutors assumes to be true, or with the knowledge that they share or what they take each other to be aware of. The trouble is with what can be a possibility based upon the shared knowledge. And therefore, the ConH utterance about Marjorie which is literally about her ineligibility is really a signal that she should *not* be *in*eligible. In this way, ConH utterances can be a constructive part of Context set negotiations.

At this point, I'd like to pause and alert the reader as to where I'm heading with my discussion. I want to continue talking about the kinds of inferential material that ConH utterances can introduce. Ultimately, what we want to understand is: What is the nature of the Rhetorical signal associated with Contrarian HARDLY? What does it really signal to Addressees and why can it function in this way? This will require that we look at a couple more types of ConH utterances and examine a few of their properties.

6.3 ConH and its *Meta-conversational* properties

Let me begin by explaining what I have in mind when I use the phrase "Meta-conversational". There are two additional inferences that we can see with ConH utterances that signal to an Addressee that the Speaker is a) "surprised" about something and b) that they feel strongly about a contrary proposition. Essentially, surprisal and bias. For example, in the dialogue discussed in the previous section, the Speaker signalled their "surprise" that it was suggested (in any way) that Marjorie was a Fellowship candidate, and that anyone would find that suggestion acceptable. Part of the Speaker's exclamation conveys the information that they had expected everyone else to know that already. ConH utterances seem to suggest to Addressees that the Speaker has strong evidence for objecting to some proposition and furthermore, are in some sense surprised that they have to object to what they are objecting to. This is a large part of what signals to an Addressee that they need to re-assess what their commitments are or re-evaluate what they take the Common Ground to be. On the whole, I think that we should be careful not to say, for example, that ConH has a "Mirative"

property or "Evidentiary" property. From a Grammatical standpoint, these are very particular kinds of things and are often marked morphologically (Murray 2017, 2021). Therefore, I'm going to talk about things in terms of "counter-expectancy", "surprise" and "bias"; avoiding loaded words in favor of more plain terminology. These are the sorts of things I mean when claiming that ConH has *Meta-conversational* properties. ConH allows the Speaker to communicate information about their perception of the Common Ground and what they take to be the other Interlocutors' perceptions of it. We will first look at "counter-expectancy" and then turn to discussing issues of "bias".

When linguists think about particles that express some sort of information about "expectation", the conversation quickly turns to the Focus associative operator (FAOp) *even*. What appears to happen in constructions involving *even* is that in addition to the informational content of the proposition, there is at least one additional inference about the Focus associated sub-constituent which has been targeted, specifically, that its role in the proposition was "unexpected" or "unanticipated" by the Speaker. For example, upon hearing the utterance provided in (210a), an Addressee learns both that *Nancy eats ribs for breakfast* and intuits that, from the Speaker's perspective, *eating ribs for breakfast* is unexpected.

(210) a. Nancy *even* eats ribs [for breakfast]$_F$.

b. It is counter to expectation that Nancy (or people generally) eat ribs for breakfast.

There are a variety of theories regarding how *even* does this and I won't be going into them in any comparative way. I won't even be choosing one because I don't intend to draw any large theoretical parallel between *even* and ConH. The *even* judgments are enough for our purposes. For the reader who is interested in diving into solving the long standing mystery of *even*, please see (Guerzoni 2003; Beaver and Clark 2008; Crnič 2012; Greenberg 2015, 2016, 2017, 2022). What is important is that we understand the role that Focus indisputably plays in the function of *even*, which is its standard Roothian role (Rooth 1992). Focus creates a set of alternatives related to a Focus associate and the contribution of *even* is provided in regard to these alternatives. So, in the example in (210), the alternative set is made of other Prepositional Phrases, presumably of other times to eat ribs: *for lunch, for dinner, for supper, for a snack, etc*. The information that *even* contributes is that

for all of the members of this Alternative set, each one is more in line with expectations regarding the propositional material, than the Focus associate: *for breakfast*. That is to say, if you choose any other prepositional phrase denoting a time of day from this set, it is "less" surprising if *Nancy eats ribs* at that time and not *for breakfast*.

I believe that what occurs in the case of Contrarian HARDLY is similar. Focus works in the same manner as described above, and the Focus associate is used to generate an Alternative set. However, in the case of ConH, it is the *far from it* inference which gets strongly applied to the Focus associate. Remember, the *far from it* inference is part of the semantics of the asserted content, as is the ordinary value O of the Focus associate in the prejacent. Therefore, we interpret the remoteness of the proposition with special regard to the ordinary value O of the Focus associate. Hence, we interpret all of the other members of the Alternative set (the Focus values) as "closer" or more expected than the constituent under Focus. Technically speaking, all propositions p which we can make by substituting in a Focus value (alternative) in place of the ordinary value O. Let's look at an example with ConH alongside an example with *even*.[1]

(211) **Context**: A person named Jeanie with a huge record collection is moving to the city. She is getting a new apartment which is smaller than her old one and therefore, she has to downsize. She's going to sell chunks of her record collection off and the Speaker is having a conversation about this with a friend. It has been suggested in the Discourse that Denise is a potential buyer.

a. Jeanie is *even* going to sell her records to DenISe.

b. Jeanie is HARDLY going to sell her records to DenISe.

In the case of (211a), the Addressee clearly understands that Jeanie is selling records to Denise. Alternatively, in the (211b) example, it is unambiguous that Jeanie is not selling records to Denise. Interestingly, in both cases the Speaker seems to be surprised that *Jeanie is selling records to Denise*. One big difference is what the Speaker's perspective seems to be on this state-of-affairs. In

[1] I will be marking Focus prominence with capital letters to help the reader place the stress on the proper syllable.

the case of (211a), the Addressee intuits that the Speaker believes that it is somewhat unexpected that *Jeanie would sell records to Denise* and the surprisal is related to the fact that she is violating this expectation. However, in the case of (211b), the Addressee also intuits that the Speaker believes that it is somewhat unexpected that *Jeanie would sell records to Denise*, but the surprisal is related to the fact that anyone else would think otherwise. From the Speaker's perspective, Jeanie is conforming to their expectation by not selling records to Denise. What seems surprising to the Speaker is that the possibility to the contrary could be raised.

It is very easy to set up another minimal pair to demonstrate this difference regarding Speaker expectation. As (212a-b) shows, we can easily create examples with an additional fronted *as*-clause.

(212) a. As you probably could (never) have guessed, Jeanie is *even* selling her records to Denise.

b. As you probably could (*never) have guessed, Jeanie is HARDLY selling her records to Denise.

In the case of *even*, it's actually possible to have a negative or affirmative *as*-clause. This makes sense. The negative expectation attached to *selling records to Denise* does not change but we can invent contexts where we *could* or *could not have guessed* about this surprising circumstance, contingent on some other factors. Perhaps, Jeanie needs money very badly. But this doesn't seem to be true in the case of (212b). The negative expectation on behalf of the Speaker regarding *Denise* as a potential buyer is so strong that if you try to attach a negative *as*-clause, oddity results. The Speaker can not simultaneously express with the *as*-clause that a proposition *p* is not obvious (*one that you could not have guessed*), and then relay that proposition using a ConH utterance: ConH *p*.

An additional thing of note is that the pattern seen in (212) also conforms with what we saw in the previous section, which is that ConH utterances are used by Speakers to comment on their perceptions about the Common Ground. An addressee will definitely get the inference in (212) that the Speaker believes that *Jeanie's not wanting to sell records to Denise* is in the Common Ground. For a Speaker to felicitously utter a ConH utterance, the opinion that they express, must also be presupposed by them to be Common Ground or entailed by it. Under this analysis, the

starred (bad) version of (212b) is bad because the Speaker is attempting to use a ConH utterance to advance a proposal to the Common Ground; to add something wholly new. The very design of ConH precludes such a Discourse move. Basically, a Speaker can not exclaim that they have information that "no one could have guessed at" (new information), something that the Common Ground does not entail, and then deliver the information embedded under ConH.

I'd like to transition now to looking at a few issues related to Speaker bias. As we have just seen, it seems that for a ConH utterance to be felicitous, the Speaker must believe the proposition and strongly believe that it is part of the Common Ground or that the Common Ground entails it. This means that ConH utterances aren't used to express lackadaisical positions. As the example below in (213a) shows, a speaker *can* express a negative opinion and then follow it up with a nonchalant comment of indifference. However, such a follow-up utterance is very odd if it comes after a ConH utterance. Too, a pronounced difference between a Speaker choosing to utter (213b) instead of (213a) is to make it clear to the Addressee that the Addressee should be aware of the Speaker's preference already. The Speaker can't do this and then immediately express nonchalantness unless their goal is to appear petulant.

(213) a. I don't (really) wanna eat at the Marliave. But whatever's cool with me.

b. I HARDLY wanna eat at the Marliave. #But whatever's cool with me.

Oftentimes when we think of *bias*, it is in relation to *Bias Questions*. In this arena, being biased means that the Speaker has a disposition toward a particular answer (Dayal 2016; Farkas 2022). As we have seen, when Speakers use ConH utterances, they also have a strong bias toward a particular proposition. They strongly believe that the proposition targeted by the ConH utterance is False. It is not surprising then, that ConH utterances seem to have a force which is similar to Tag Questions, which can only be used to ask Biased Questions.

In the example below in (214), two Biased questions have been juxtaposed with a Contrarian HARDLY utterance. There are two basic polarities of Biased questions and they have slightly different structures. A Biased question for which the Speaker presupposes a positive answer, has an affirmative matrix clause and a negative question tag. A Biased question for which the Speaker

is anticipating a negative answer, has a negative matrix clause and a positive question tag. What we can see from (214) is that the bias of the ConH utterance matches the Biased question with the positive tag. In both cases, the utterance communicates that the Speaker is biased toward a negative proposition (answer).

(214) a. Annie is interested in Irish literature, isn't she? ⇝ Speaker believes she is.

b. Annie isn't interested in Irish literature, is she? ⇝ Speaker believes she is not.

c. Annie is HARDLY interested in Irish literature. ⇝ Speaker believes she is not.

There are some other tests for bias which we can run on both ConH utterances and Biased Questions. The first is presented in Bill and Koev (2022). What this test seems to indicate is that bias strength in Tag Questions can correlate with a pause and pitch accent placed either directly on the tag or afterward (nuclear or post-nuclear stress). As (215a-c) shows, the bias is much stronger in the case of nuclear stress. This is evidenced by the fact that the nuclear stress example will support a follow-up about Speaker certainty, *I was sure*, as opposed to Speaker suspicion, *I suspected*. The two examples in (215d-e) demonstrate that both a ConH utterance and an assertion where Focus is placed on the canonical negator *not* also support the follow-up statement of certainty.

(215) a. This is your book, isn't it...That is to say: I suspected it was/#I was sure it was.

b. This is your book, ISN'T it...That is to say: #I suspected it was/I was sure it was.

c. This isn't your book, is it...That is to say: I suspected it was not/#I was sure it was not.

d. This is HARDLY your book...That is to say: #I suspected it was not/I was sure it was not.

e. This is NOT your book...That is to say: #I suspected it was not/I was sure it was not.

Another test that we can perform originates in Sadock (1971) and is also discussed in Bill and Koev (2022). For this test, we will create a Tag question example using ConH and test the strength of the bias which it contributes. What we are to observe is that the discourse marker *By any chance* can only combine with a question which is to be interpreted neutrally (216a) or where any bias is optionally conveyed (216b). Unequivocally, the discourse marker is very poor with the ConH Tag

question because the bias which ConH contributes is so extreme. There is no optionality in terms of interpretation. The reader should also test that the tag question alone with ConH: *Heather is hardly stopping by, is she?* is perfectly good.

(216) a. By any chance, Does Heather like gumdrops? (neutral)

b. By any chance, Heather isn't stopping by, is she? (optional bias)

c. (*By any chance), Heather is HARDLY stopping by, is she?

All of these parallels are important because one of the qualities that ConH utterances have is that they can function like Rhetorical Questions. That is, Speakers may use them to "remind" an Addressee of a proposition in the Common Ground or to signal that the Common Ground is defective. Quite possibly, an Addressee may have simply forgotten some shared bit of knowledge or need to be informed that the rest of the Interlocutors have some shared presuppositions that they are either unaware of or flat-out mistaken about. Speakers often employ Rhetorical Questions in these kinds of circumstances too. It has been suggested that one of the hallmarks of Rhetorical Questions is that the Interrogator and the Addressee both already know the answer to the question. As we have seen, this is often true in cases where ConH utterances are used.

Let's imagine a context where a couple needs to get ready to make a dinner reservation out in the city, and one of them hasn't yet stopped gardening in the backyard. One partner may choose either of the utterances in (217) to address the other and both will be equally good for the Speaker to remind their partner that a) the restaurant has a dress code b) we need to leave soon c) you need time to change.

(217) a. We need to leave pretty soon. They're not going to seat us if you're wearing that, will they?

b. We need to leave pretty soon. They'll HARDLY seat us if you're wearing that.

Another important take-away here, other than that ConH utterances can be used like Rhetorical questions, is that they *can* be used out-of-the-blue. What is required is that they target propositions that are in the Common Ground. The propositional target for Contrarian HARDLY need not be in the

discourse per se. In our example in (217), the propositions being targeted are all related to general world knowledge: *things one knows regarding going out to dinner at certain kinds of restaurants*. The implicit proposition in the discourse is: *We are going out to dinner*. This is somewhat signalled by the fact that the Speaker says, "We need to leave pretty soon". But the Speaker is using the utterances to draw their partner's attention to the fact that they need to draw upon this knowledge and apply it while taking action, namely, to get ready and appropriately attired. Notice though, the proposition embedded under ConH is not related to anything that has been said and is about the restaurant and their rules for seating guests. It targets a piece of general world knowledge to highlight something about where the couple finds themselves in the world of evaluation, which is, a world far removed from one where they are going to get seated. The gardening partner infers then all the things that they need to do, to get them closer to that "getting seated" world.

The Discourse level properties associated with Contrarian HARDLY are very interesting and I believe that there is quite a bit more to be discovered. One thing that I hope to have shown here is that ConH utterances carry with them an inference about Speaker expectations regarding the propositional content that they target. In this way, they behave somewhat like *even*. However, I have argued that this is for a reason that is consistent with the semantics that I have argued for. It is the application of the *far from it* inference over Focus Alternatives. Additionally, we have seen that it is a strong negative speaker bias and their overt objection to a given proposition which seems to be responsible for the perception by an Addressee that the Speaker is privy to some information that they themselves do not have. This is the feeling that we often colloquially describe as "having missed something". What we have seen is that due to this bias, the ConH utterance actually may be used in contexts that also permit Biased Questions. Furthermore, ConH utterances and Biased Questions can be utilized to achieve some of the same goals.

CHAPTER 7

CONCLUSION

This dissertation has shown that Contrarian HARDLY, a discourse oriented negative operator, can be built directly from the approximative adverbial, *hardly*. In fact, Contrarian HARDLY is an interpretation of approximative *hardly* which occurs when the Syntax and Semantics, and Pragmatics, are configured in a particular way. This configuration consists of merging Approximative *hardly* into the SpecNegP where its (inherent) approximative semantics evaluates the negative material which it C-commands. From this position, it is simultaneously acted upon by an abstract negative operator adjoined higher in the clause. Via the semantic interactions of these negations, which includes a negative Polarity Focus, the *far from it* inference that is associated with Contrarian HARDLY is produced. It is also demonstrated that this *far from it* inference is the natural result of placing an approximative under negation and can be reproduced in particular cases involving *almost* and *barely*.

In order to derive the proper semantics for the proximity reading of Contrarian HARDLY, that inference which is paraphraseable as *far from it* and signals "remoteness", it was necessary to defend some ideas about the basic approximative semantics. I argued that this class of item should be handled via an Intensional (modal) approach which sees the proximity contribution of the approximative semantics as an assertion about the "closeness" of a possible world where the opposite truth value to that of the evaluation world holds. Additionally, I used a "Presuppositional Exhaustification" operator (Bassi, Del Pinal, and Sauerland 2021) to derive the Polar meaning contribution—the inference regarding the truth value of the prejacent in the evaluation world. Done in this manner, the Polar contribution of an approximative is akin to the Scalar implicatures associated with quantifiers like *some*.

Finally, I used what I uncovered about the syntax and semantics to demonstrate some aspects of the Polarity associated with Contrarian HARDLY and the other approximatives. In particular, I discussed both Positive and Negative Polarity items and the ability for ConH to license or anti-license them. I showed that the notion of Strawson Downward Monotonicity is applicable to capturing

these kinds of cases. I then showed some Pragmatic attributes of Contrarian HARDLY, specifically, what kinds of conditions are required in the Discourse for felicitous use. Additionally, I discussed how the negative Speaker bias of Contrarian HARDLY allows it to make certain Discourse moves, in particular, ones that look surprisingly like those available in the case of Biased Questions. This was related to an overarching theme regarding Discourse that I explored throughout the dissertation which is: how do Speakers use approximative adverbials to make Counterfactual proposals and what is the nature of those proposals? My conclusion was that Speakers use approximative assertions not to "comment" solely about a close possible world but rather to draw attention to the fact that they have a Counterfactual proposal related to the prejacent material which "makes" that world close.

There are quite a few unsolved mysteries surrounding this adverbial. For the reader who dug in cover to cover, you will not need any convincing that Contrarian HARDLY magically touches on a variety of interface issues. There are undoubtedly lexical items like this in every language of the world. And if this dissertation has shown anything, it is that figuring out their true nature will require a more "holistic" approach than not. Although this dissertation engages in no cross-linguistic work, that is definitely an important next step. There are some fairly obvious questions that should be tackled and I'd like to mention a couple.

One problem currently existing in the literature which complicates work in this area is the terminological confusion and inconsistency pertaining to the discussion of negation. I very much appreciate work like Moeschler (2018) and I believe that we need more of it. It's very clear from reading papers like Johnson and Schwenter (2019), Magistro (2022), and Erschler (2023) that others agree that the character of negation in Human language is even more nuanced than previously thought and that it will require a greater deal of thinking about in regard to "Not-at-issue" (or projective) content. (I believe that each one of those paper's authors makes this point somewhere in their own way). In fact, what seems to be grouped (variously) as Non-Canonical negations are actually cross-linguistically abundant phenomena that have complex and productive functions in discourse. They are not quirky oddities with irregular properties. In fact, as this dissertation demonstrates, they can arise from regular processes in the grammar. The previously

cited literature also suggests there are a few cross-linguistic similarities.

One of these similarities is their syntax and more work needs to be done to determine how pervasive the negation structure is that I have presented in this dissertation. It appears to me from just the small sample of data in the previously cited papers that the languages (and particles); Italian (*mica*), Brazilian Portuguese and Argentinian Spanish (*Neg-Nada*) and Russian (*xuj*), demonstrate a particular kind of double negation configuration which is characterized by having one negative element high (peripheral) in the structure and another which is mid-clausal. I have placed a generalized structure of this sort below in (218).

(218) $[_{TP}\ Neg_{op}\ [_{TP}\ \text{Subj}_i\ [_{T'}\ \text{Past}\ [_{NegP}\ Neg_{op}\ [_{Neg'}\ \text{NEG}^0\ [_{vP}\ t_i\ v\ [_{VP}\ \text{V Obj}\ ]]]]]$

As I briefly mentioned above, another property which all of these Non-canonical negations have in common is engagement with Not-at-issue content. However, this does not mean that they don't have Truth Conditional import. In fact, many seem to and furthermore, appear to be sensitive to material in the Common Ground and Context Set. As I tried to demonstrate in the last chapter, more sophisticated discourse contexts will need to be set-up in order to tease out and capture their core Semantico-pragmatic properties.

Another highly relevant issue is to determine what types of lexical items can be harnessed to do more Discourse oriented work. In the case study here, I have shown that an adverb with a modal semantics may be co-opted in such a way that it does some of its core tasks and a few extra things. This is probably not the case with every species of lexical item. However, work by Egg and Zimmermann (2012) and Zimmermann (2012, 2018) has shown that other types of operators, like the German degree modifier *schon*, can also take on Discourse operator roles. In principle, with more cross-linguistic work, we should be able to determine what is and is not required, syntactically and semantically, for an item to have this capability. That being said, the earlier cited papers (Johnson and Schwenter 2019; Magistro 2022; Erschler 2023), suggest that NPIs (*xuj*) and negative indefinites (*nada*) can serve as realizations of alternative underlying negation configurations.[1]

[1]This last point assumes my theoretical interpretation of the empirical data and does not necessarily reflect any of

In total, I hope that this dissertation has demonstrated how much we can learn about the Grammar by undertaking a comprehensive study of just one word (Contrarian HARDLY). It also makes clear that despite a perception that a phenomenon has been extensively worked on—like *almost*—there can be more mysteries lurking than one anticipates. Most importantly, studies like this shed light on the modularity of the Grammar. Interface projects like this one *do* tell us new and interesting things about the independent Grammatical modules, those components dedicated to Syntax versus those dedicated to Semantics and Pragmatics, and what their core roles are. But these sorts of projects also provide us with a better understanding of what sorts of processes that we do *not* want handled by a given module. In that sense, this dissertation has kept with a Minimalist spirit insofar as doing the most parsimonious grammatical theorizing I thought it possible to do.

the cited authors' opinions about these cases.

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