Pseudo-Imperatives

MSc Thesis (*Afstudeerscriptie*)

written by

Michael Franke
(born 06.12.1978 in Badenberg)

under the supervision of **Dr Robert van Rooij**, and submitted to the Board of Examiners in partial fulfillment of the requirements for the degree of

MSc in Logic

at the *Universiteit van Amsterdam*.

Date of the public defense:	**Members of the Thesis Committee:**
21.06.2005	Dr. Robert van Rooij
	Dr. Maria Aloni
	Prof. Dr. Frank Veltman

INSTITUTE FOR LOGIC, LANGUAGE AND COMPUTATION

菜々美へ

CONTENTS

1. Introducing the Problem of Pseudo-Imperatives

Pseudo-imperatives are compound sentences where an imperative sentence is followed by 'and' or 'or' and a declarative sentence. Schematically, pseudo-imperatives are of the form:

an imperative *I* + 'and' | 'or' + a declarative sentence *D*

Following Schwager's (2004) terminology, I will refer to pseudo-imperatives with a conjunction as IaDs and to pseudo-imperatives with a disjunction as IoDs. It is already a matter of interest that imperative sentences and declarative sentences can be grammatically combined in this way. The case becomes even more interesting if we look at the meaning of pseudo-imperatives. My basic concern will therefore be the particular meaning asymmetries of the following paradigm where it is assumed that being killed is unconditionally undesirable and being kissed is unconditionally desirable for the addressee and that this is common knowledge among the interlocutors:

(1) a. Close the window and I will kill you.
    b. Close the window and I will kiss you.
    c. Close the window or I will kill you.
    d. ? Close the window or I will kiss you.

What meanings are associated with these sentences? – All of the examples in (1) are surely associated with some kind of conditional assertive force. For instance, (1a) and (1c) do not announce an unavoidable murder, and (1b) commits the speaker to a kiss conditional only upon the addressee's closing the window. In particular, the declarative sentence of an IaD makes an assertion only about those situations in which the content referred to by the imperative sentence holds. In contrast to that, the declarative sentence of an IoD makes an assertion only about those situations in which the content referred to by the imperative sentence does not hold. Under the assumption that the addressee does not want to be killed, sentences (1a) and (1c) are, or contain, conditional threats. Under the assumption that the addressee wants to be kissed, sentences (1b) and (1d) are, or contain, conditional promises.

Not only do all the sentences in (1) have a particular assertive force, they also have a particular directive force associated with them. This directive force coincides with or differs from the directive force associated with the plain imperative 'Close the window'. In (1b) and (1c) we interpret *positively*, i.e. the pseudo-imperative as a whole has the same directive impact as the plain imperative form which it contains. Borrowing terminology from Clark (1993), I will speak of positive IaDs or POS-ANDs to refer to examples like (1b) and of positive IoDs or POS-ORs to refer to examples like (1c). In contrast to positive interpretations, (1a)

is interpreted *negatively*, since an utterance of (1a) directs the opposite of the plain imperative form which it contains. I will speak of negative IaDs or NEG-ANDs to refer to examples like (1a). It is important to see that the directive force associated with the utterance of a pseudo-imperative depends on the desirability of the declarative sentence which it contains.

Finally, we note that (1d) is pragmatically odd, if being kissed is desirable for the addressee. (1a) conjoins an undesirable proposition to yield a negative interpretation, (1b) conjoins a desirable proposition to yield a positive interpretation and (1c) disjoins an undesirable proposition to yield a positive interpretation. So, from symmetry one might expect that in (1d) where a desirable proposition is disjoined we would obtain a negative interpretation. But this is clearly not the case. Also a positive interpretation is odd. In fact, it is not possible to maintain that being kissed is desirable for the hearer and to make sense of an utterance of (1d) in either way. This observation can safely be generalized. Examples which should be NEG-ORs for reasons of symmetry are pragmatically infelicitous. In particular, there are no negatively interpreted IoDs. Although there are NEG-ANDs, there are no NEG-ORs. This is the main problem which is going to be addressed in this thesis.

I will refer to the basic explanandum of this thesis as *NEG-OR Problem*. Upon closer look, the NEG-OR Problem comprises two aspects which are to be distinguished. For one, we ask why there are no negatively interpreted IoDs. I will speak loosely here and say that the impossibility or non-existence of NEG-ORs has to be accounted for. For another, we ask why IoDs with a positively connoted second disjunct are pragmatically odd. I will say that the pragmatic infelicity of NEG-ORs has to be accounted for, and what is meant here is that forms which should for reasons of symmetry be negatively interpreted IoDs are pragmatically infelicitous. In a nutshell the problem to be dealt with in the following is this:

> **NEG-OR Problem:** The basic task in connection with pseudo-imperatives is to explain (i) why there are no negatively interpreted IoDs and (ii) why IoDs with a positively connoted second disjunct are pragmatically infelicitous.

Unfortunately, the literature is not unanimous about what the best description of our intuitions about the meanings of pseudo-imperatives should be. In section 2 I therefore argue extensively for such a description. In particular, I argue that we should acknowledge the full asymmetry in the pattern (1) and distinguish IaDs and IoDs more than we should subsume them under the label pseudo-imperatives. I argue in section 2 that IaDs are assertions of conditionals and that IoDs are speech act conjunctions.

It will transpire that if this description of the meanings of pseudo-imperatives is correct we have thereby solved the NEG-OR Problem in both its aspects already at the end of section 2. The critical challenge will be to find further justification for

the suggested view on pseudo-imperatives. That means that especially an adequate explanation for the meaning contribution of natural language conjunction 'and' and natural language disjunction 'or' has to be provided. This I try to give in section 3. The basic question to be addressed in section 3 is how it is possible for 'and' and 'or' in pseudo-imperatives to yield the intuitive meanings for which I have argued in section 2.

A word on method. I do not intend to present or add to a theory of natural language sentence connectives. I will rather identify occurrences of 'and' and 'or' in other linguistic contexts which behave just as I claimed that they would in pseudo-imperatives. Thus, I do not tackle the grand issue to give a formal explanation how the particular meanings associated with 'and' and 'or' in pseudo-imperatives derive from or relate to a fixed and established theory of natural language sentence connectives, say, at best, truth-functional operators, but I mean to solve the NEG-OR Problem, by pointing out how to look at the sentences in (1) such that they have become entirely unproblematic *in themselves* and that moreover this way of looking at things is entirely natural. Of course, I cannot hope to have solved every other riddle in the vicinity, and I will in fact work out some interesting puzzles on the way, but I contend that revealing that a problem, like the NEG-OR Problem, is ill-conceived as such and can be shown not to exist, if one takes a step back and looks at it in the light of a wider context, *is* solving the problem.

2. A Medley of Attempted Solutions

This section looks at various proposals which were made in the literature in order to clarify or account for the meaning associated with pseudo-imperatives. To begin with, I naively assume that pseudo-imperatives are just conditional statements in section 2.1. Seeing that this is insufficient to explain the infelicity of NEG-ORs, I turn to review accounts of Clark (1993) and van der Auwera (1986) in section 2.2 which take the meaning contribution of the imperative forms into account. Section 2.3 discusses Han's (1998) arguments for treating IaDs and IoDs separately and, finally, section 2.4 focuses on Krifka (2004) and Schwager (2004) who deal extensively with disjunction in pseudo-imperatives.

2.1. **Pseudo-Imperatives as Conditionals.**

Despite their surface form, pseudo-imperatives are clearly associated with assertions of conditionals. As a naive start, let's simply assume that pseudo-imperatives *are* the conditional statements we intuitively associate with them:

(2) a. Close the window and I will kill you.
If you close the window, I will kill you.

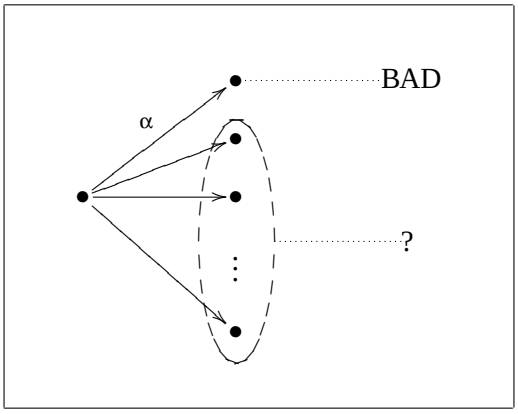

FIGURE 1. Schema for NEG-ANDs

b. Close the window and I will kiss you.
   If you close the window, I will kiss you.
c. Close the window or I will kill you.
   If you do not close the window, I will kill you.
d. ? Close the window or I will kiss you.
   If you do not close the window, I will kiss you.

No matter how unfaithful a paraphrase these conditional sentences are felt to be, it is surely illuminating to analyze these briefly. Clearly, the conditional sentences in (2) describe the *results* of the performance or the abstinence of the action of closing the window. The consequent of the conditional, just as the declarative sentence of a pseudo-imperative, need not be an action of the speaker, as it is in all the examples in (1), but it might as well be another state or event (3a,b), or even an action, of the hearer (3c,d) which is then usually perceived as involuntary.

(3) a. Close the window and we will surely suffocate.
    b. Close the window or we will freeze to death.
    c. Close the window and you will smash your finger again.
    d. Close the window or you will jump out again.

What really matters, also for the felicity judgements of IoDs is whether the result is positive or negative for the hearer. We will then schematically distinguish four cases in the following.

In negative interpretations of IaDs (2a) a negative consequence of the performance of some action is stated. In a simple graph notation where nodes are states, to be evaluated good or bad, and edges are actions we can represent NEG-ANDs as in figure 1. We can think of this as a description of the future state of affairs. The speaker informs the hearer about the negative outcome of his action α. Thereby he clearly influences the hearer in his choice of action, in that he discredits the named

action. Note that to be effective the speaker does not need to commit himself to what will happen when the hearer does not perform the action named.

The picture which we will get for positively interpreted IaDs is similar (figure 2). With the conditional sentence in (2b) the speaker describes the future state of affairs as such: The performance of some action α by the hearer has a positive consequence. Nothing is said about the outcome of other possible, alternative actions of the hearer. Nevertheless, this is clearly an incentive for the hearer to perform the action named, because in case of abstinence the positive result, though not said not to hold, is also not said to hold. Thus, to the extent that the hearer finds the stated result desirable, he will, in the mere description of states of affairs, find a reason to perform the action named.

The conditional paraphrases of POS-ORs give a reason to perform the action named. As represented in figure 3, here we find a negative result of abstinence from performance of the action α. Nothing is said about the outcome of performing α, but clearly if every other possibility results in chaos anyway, then the best choice will surely be to try the only option left the outcome of which is still unclear.

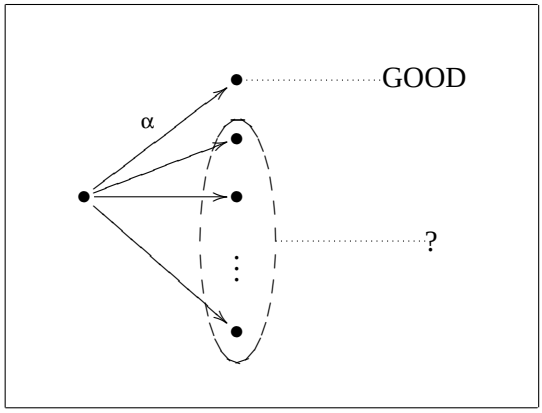

FIGURE 2. Schema for POS-ANDs

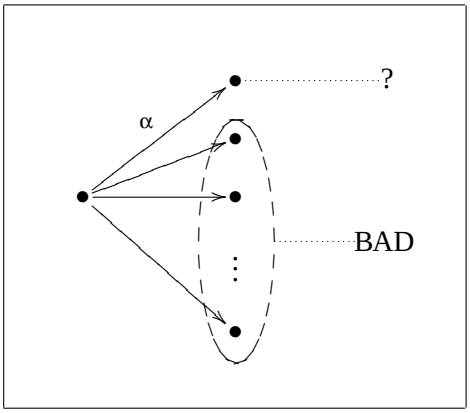

FIGURE 3. Schema for POS-ORs

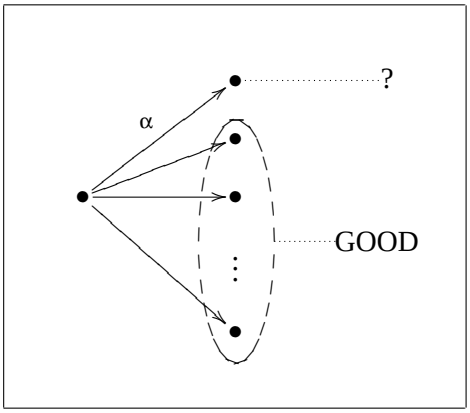

FIGURE 4. Schema for NEG-ORs

Finally, the conditional statement that corresponds to NEG-ORs describes a positive outcome of not performing the action named and remains silent about the outcome of performing this action (figure 4). But just as we argued in the case of POS-ANDs we should consider the mere description an incentive for the hearer not to perform the action under consideration, because if abstinence is so clearly associated with a positive outcome and the outcome of performance is left unrevealed, then this in itself constitutes a reason to abstain and not to perform.

But that means that the conditional statements associated with NEG-ORs can be used to influence the addressee not to perform the action named. It therefore seems that we can neither, at least not straight-forwardly, explain the impossibility of NEG-ORs or the infelicity of NEG-ORs by (i) considering pseudo-imperatives conditional statements of a particular kind, namely where the antecedent names an action for which the consequent describes a result of performance or abstinence, and (ii) feeding the desirability of the respective outcomes into an argument towards the desirability of performance or abstinence of the action named.

2.1.1. *The Logical Weakness of NEG-ORs.* Still, there is an interesting observation to be made. The state of affairs described by all the conditional paraphrases in (2) actually singles out the case of NEG-ORs in a certain respect. Clearly, the statement expressed by the conditional in (2d) and represented in figure 4 is in a sense the *strongest* of its kind. From the set of examples in (2), (2d) is the most committing and the most costly statement *for the speaker*. At the same time, and without contradiction, the assertive force associated with NEG-ORs can also be said to be the *weakest*. It is the least convincing and least compelling statement *for the hearer*. To see why that is so, consider the scenarios in figures 1-4 once more. If the outcome of α is said to be bad, this is a strong incentive not to perform α. If the outcome of α is is said to be good, this is a strong incentive to perform α. If the outcome of every action which is not α is is said to be bad, then this is a

strong incentive to perform α. Yet, if the outcome of every action which is not α is is said to be good, then this is *not* a *strong* incentive to perform α. This is not in contradiction with what we said above. The NEG-OR case *is* an incentive not to perform α, but it is the weakest of its kind. For future reference, I would like to call the observation just made the *logical weakness of NEG-ORs*.

Surely there must arise a certain impatience in the reader to try and build an argument from this much alone. Indeed, the logical weakness of NEG-ORs could easily be channelled into an account of the pragmatic infelicity of NEG-ORs, if we assumed that hearer and speaker are playing a linguistic bargaining game as envisaged, for instance, as a general explanatory strategy for pragmatic phenomena by Merin (1994,1999). Here is such an argument:

Let it be at stake whether Eve closes the window or not. Were Adam to utter (2d), then he would thereby have committed himself to kissing Eve in all circumstances where Eve has abstained from closing the window. We assume that, quite naturally, kissing is highly desirable for *her*, but costly for *him*. Since we are not expecting players to cooperate in such a bargaining situation, what Eve will do is, she will abstain from opening the window, and thereby have Adam be committed to kiss her. But, since reference has been made to Eve's closing the window, nothing has been said about Eve's persuading Cain to close the window. In other words, since we have not identified the referent of the action 'to close the window' as the state of affairs where the window is closed, but as the action of closing the window performed by Eve, we have left room for this kind of uncooperative defect. The bargaining situation and the reference to actions therefore predicts that, since for any action there will be an alternative action to the same effect, to use a NEG-OR is a self-defeating move in the language game at hand.

Interesting as it is, this argument has to be rejected as a serious explanation of the infelicity of NEG-ORs. In fact, any argument based just on the logical weakness of NEG-ORs is discredited by the following counterargument. If the logical weakness of NEG-ORs were the true and only reason behind the oddity of the pseudo-imperative in (2d), then so should the associated conditional be odd. But clearly it is not. This strongly suggests that in order to successfully explain the infelicity of NEG-ORs we have to take more into account than the conditional paraphrases in (2).

Another argument in favor of this view is the following. The conditional sentences in (2) are all readily interpreted to state sufficient and necessary conditions for being kissed or killed (Geis & Zwicky 1971). But if an outcome is either good or bad, i.e. either kiss or kill, but nothing in-between, and if we read the conditional sentences in (2) as biconditionals, then we find that (2a) and (2d) actually express the very same thing. Yet the pseudo-imperative in (2a) is felicitous, while

the pseudo-imperative in (2d) is not. This too suggests that there is more to pseudo-imperatives than the conditional statements which we associate with them.

So, it makes sense to take into consideration more than just the conditional paraphrases for an account of the NEG-OR Problem. A splendid candidate for more persuasive approaches is surely the fact that we have an imperative form. This probably makes for a difference between pseudo-imperatives and conditional statements. In the following I will then investigate two proposals which treat the imperative part of pseudo-imperatives equal to imperative sentences in isolation.

2.2. **Pseudo-Imperatives as Imperatives Plus Declaratives.** This section examines two accounts of pseudo-imperatives both of which assume that the imperative form in pseudo-imperatives has the same pragmatic effect as an imperative sentence in isolation. The accounts differ in what the respective authors take the meaning of imperatives to be. Clark (1993) assumes that imperatives describe potential and desirable states. For van der Auwera (1986), imperatives are associated with a particular speech act.

2.2.1. *Imperatives as Representations of Possible and Desirable States of Affairs.* Clark (1993) treats pseudo-imperatives in the tradition of relevance-theory (Sperber & Wilson 1986). Relevance theory is a pragmatic theory based on the work of Grice (1989) which aims to explain both linguistic and non-linguistic cognitive processes by reference to the notion of relevance. Relevance is a general property of stimuli. The relevance of a stimulus is proportional to the cognitive effects it has on the receiver and anti-proportional to its processing effort. Interpretation aims at a maximization of relevance, which is to say, a maximization of effect and a minimization of effort.

According to relevance theory (Wilson & Sperber 1988) the utterance of a plain imperative with propositional content *p* such as (4) conveys that the speaker finds it possible and desirable that *p*.

(4) Close the window!

Clark (1993) applies this concept of the meaning of imperative sentences to pseudo-imperatives and maintains that the sentence connectives in pseudo-imperatives are just truth-functional conjunction and disjunction. This leads him to predict that a POS-AND like (5a) means (5b).

(5) a. Come closer and I'll give you five pounds.
    b. It is potential and desirable for the speaker that you come closer and (if you do) I will give you give pounds.

The bracketed context-restriction in (5b) is said to be the result of a pragmatic enrichment process which is an integral part of the interpretation of any utterance.

The treatment of POS-ORs requires additional care. Since Clark wants to stick to a truth-functional concept of disjunction, his analysis of (6a) is (6b).

(6) a. Be off or I'll push you downstairs.
    b. It is potential and desirable for the speaker that you leave. (You will leave) or I will push you downstairs.

Again, the bracketed addition is the resolution of underspecification by a natural process of pragmatic enrichment. Interestingly, Clark claims that the appropriate analysis of *some* disjunctive sentences '*P* or *Q*' is '*P*. (...) or *Q*', but he does not elaborate this point any further. He furthermore seems to believe that this analysis is consistent with the classical truth-conditional concept of disjunction, because, after all, the disjunction in the second sentence in (6b) is truth-functional.

Negative interpretations of pseudo-imperatives are accounted for as follows. There are two possible uses of representations in relevance theory, descriptive and echoic use. *Descriptively used*, an imperative is taken to express that the propositional content is potential and desirable to the speaker. *Echoically used*, the imperative conveys that the propositional content is potential and desirable to somebody else. Clark then argues that the assumption that the imperative form in NEG-ANDs is echoic use is the only interpretation consistent with the undesirability of the second conjunct. The overall interpretation of a NEG-AND like (7a) therefore is (7b).

(7) a. Come one step closer and I'll shoot.
    b. It is potential and desirable for you that you come closer and (if you come closer) I will shoot.

Our prime matter of concern however is the treatment of NEG-ORs. According to Clark NEG-ORs are infelicitous, because they require, or would require, unjustifiable processing effort for the cognitive effect that they achieve. The processing effort is high, because in order to interpret the disjunction appropriately, as we have seen, a sentence of the form '*P* or *Q*' has to be reinterpreted as '*P*. (...) or *Q*'. In order to be interpreted negatively, the imperative form has to be interpreted as echoic use. But since the same meaning can be expressed more economically by the POS-AND '*P* and $\neg Q$", relevance theory predicts that NEG-ORs are infelicitous forms.

General disapproval of the tenets of relevance theory notwithstanding, it is highly implausible to me that the infelicity of a given linguistic form can be explained with reference to an excess of processing effort alone. This is not meant to repeat the ubiquitous criticism that the very notions of processing effort and cognitive effect are too vague to be unable to explain come what may. This is rather subject to the conviction that the availability of more economical ways of expressing the same potential meaning might not cause the infelicity of the less economical form, but could rather call for Horn's division of pragmatic labor (Horn 1984) according to

which non-standard forms pair with non-standard meanings while standard forms pair with standard meanings. Thus, if the only peculiarity of NEG-ORs was high processing effort, as Clark suggests, then this need not necessarily mean that NEG-ORs are infelicitous. NEG-ORs could be viable forms, but associated with some kind of non-standard meaning. Therefore, and due to vehement unease about the quality of relevance theoretic explanations in general, I reject Clark's solution of NEG-OR Problem.

2.2.2. *Imperatives as Directives.* Relevance theory purported that by an utterance of an imperative sentence with propositional content p the speaker expresses that p is potential and desirable for him or somebody else. In contrast to that, van der Auwera (1986) prefers a speech act analysis of imperatives. Before turning to review his treatment of pseudo-imperatives, I shall briefly remark on the use of imperatives.

A natural answer to the question what a plain imperative like (4) means, would be to say that it is an *order* to close the window.

(4) Close the window!

But neither is every order given by using an imperative sentence, nor are all utterances of imperative sentences, on their own or compound, orders. Indeed, imperatives are used in a variety of ways, so various in fact that it seems, or perhaps is, impossible to find a single natural term that covers all the conceivable uses. Imperative sentences can certainly be used as orders or commands, but also as recommendations, suggestions, prohibitions or permissions (comp. Broadie 1972). One is therefore well advised to introduce a technical term with which to refer to the possibly vague if not ill-defined class of pragmatic uses of imperative sentences. I will, in this spirit, speak of *directives* in what follows. To represent the speech act associated with an imperative sentence with propositional content p, I will write $Dir(p)$, just as I will write $Ass(p)$ for the assertion that the proposition p holds.

With this in place we can have a look at van der Auwera's (1986) account of pseudo-imperatives. Pseudo-imperatives are treated as a combination of speech acts. The imperative form contributes a directive and the declarative is interpreted as a conditional statement. Simplifying and improving on van der Auwera's proposal for the sake of perspicuity, IaDs are associated with the form in (8a) while IoDs are associated with the form in (8b).

(8) a. $Dir(p)\ \&\ Ass(p \rightarrow q)$
b. $Dir(p)\ \&\ Ass(p \vee q)$

In words, an IaD is both a directive with the propositional content p as well as an assertion with propositional content $p \rightarrow q$. An IoD is both a directive with propositional content p and an assertion with propositional content $p \vee q$.

Since the proposed speech act analysis predicts that the hearer is always directed to bring about p, the interesting cases to investigate are the negative interpretations. In particular, we want to explain why (i) IaDs, despite being of the form (8a), are interpreted to mean that the hearer should *not* bring about p, in case q is undesirable for the hearer and why (ii) IoDs, due to being of the form (8b), *cannot* be interpreted to mean that the hearer should *not* perform p in case q is desirable for the hearer.

Ad (i). To see how a negative interpretation of IaDs comes about, van der Auwera consults the following reasoning pattern:

(i) It holds that $p \rightarrow q$.
(ii) The hearer does not want that q.
(iii) $\Rightarrow$ Hence the hearer should not bring about p.

According to van der Auwera, this inference scheme based on q's desirability is so obvious that the speaker *must intend* the hearer to think that the speaker does *not want* the hearer to perform p so that the whole directive is turned from $Dir(p)$ to $Dir(\neg p)$. Hence the negative interpretation of IaDs.

Ad (ii). The reason why IoDs cannot be interpreted negatively is because there is no adequate argument in sight which is based on the propositional content $p \vee q$ and the desirability of q and which moreover would be strong enough to overrule the directive $Dir(p)$ to mean $Dir(\neg p)$. In particular an argument parallel to the previous does not seem to hold:

(i) It holds that $p \vee q$.
(ii) The hearer wants that q.
(iii) $\not\Rightarrow$ Hence the hearer should not bring about p.

Hence the impossibility of NEG-ORs.

Taken together, van der Auwera proposes that the directive given by the imperative form in pseudo-imperatives can be reinterpreted in case of IaDs, because we have a strong argument towards the undesirability of performing the action in question. For IoDs we do not have such a strong argument which would have us reinterpret the directive given. Of course, we recognize here the logical weakness of NEG-ORs in operation: To reinterpret $Dir(p)$ to mean $Dir(\neg p)$, NEG-ANDs are strong enough, but NEG-ORs are not.

My criticism of van der Auwera's account focuses on his speech act analysis of IaDs (8a). Since the whole account rests on the assumption that this is the correct speech act analysis, rejecting the assumption as incorrect, is to reject the whole account. In particular, there are two reasons why I disapprove the suggested speech act analysis of IaDs, one conceptual and one empirical. As to the first, it

is nebulous what status the firstly ascribed speech act $Dir(p)$ is supposed to have, if with a sufficiently strong *hint* to the contrary it can be reinterpreted to mean $Dir(\neg p)$, whereas explicit redirection is impossible (9).

(9) a. ? Close the window. If you close the window, I will kill you.
b. ? Close the window. And if you close the window, I will kill you.
c. ? Close the window and if you close the window, I will kill you.

I will argue at length in section 2.3.2 that to assume this kind of reinterpretation of directive speech acts is fundamentally mistaken.

As to the second, there are examples of IaDs with which we would clearly not associate any directive at all. The following are such neutral IaDs, or NEU-ANDs for short, whose intuitive impact is the assertion of a conditional statement only:

(10) a. Open the Guardian and you will find three misprints on every page.
b. Life was hard in those days. Say one word out of turn and they'd dock you a week's wages.
c. Scratch a Russian and you will find a Tartar.

For instance, the speaker is not felt to direct the hearer to open the Guardian in (10a). But van der Auwera actually claims that his analysis (8) is compatible with neutral readings and he gives the example (10c) himself. He argues that "some [IaDs] seem to be primarily imperative, while others seem primarily conditional." (p. 209). But for reasons of scientific rigor, we should not content ourselves with reference to a relative degree of performance of a speech act. Either there is a directive associated with examples (10) or there is not. To say that there is, is clearly counterintuitive. To say there is not, is fine, but raises questions, most prominently why some IaDs are associated with directives and some others are not and for what reason then IoDs should not also get a purely conditional reading, too. Therefore, I argue next that IaDs are conditional statements which do not contain a directive.

2.2.3. *Conditional Assertion Hypothesis.* I will say that IaDs are *conditional assertions* to mean that they are assertions of conditionals in the following sense. If '*P* and *Q*' is an IaD with propositional contents p and q, then the correct speech act analysis is $Ass(p \rightarrow q)$. With the term conditional assertion I then mean, contrary to common usage, the assertion of a proposition $p \rightarrow q$ and not the assertion of q conditional on the truth of the proposition p.

I will furthermore refer to the idea that IaDs are conditional assertions as the *Conditional Assertion Hypothesis* in the following. Others have opted for a treatment of pseudo-imperatives with 'and' as conditional assertions as well (Lawler 1975, Krifka 2004, Schwager 2004) without providing a concise presentation of arguments in favor of this analysis. I try to cover this omission in the following.

To begin with, we observe that IaDs get positive (11a), neutral (11b) and negative interpretations (11c).

(11) a. Mow the lawn and I will give you 100¥.
b. Smoke ten cigarettes a day and you will die of lung cancer.
c. Try to date my girl again and I will break your nose.

A further observation can be made if we compare POS-ANDs, POS-NEGs and plain imperatives.

(12) a. Mow the lawn and I will give you 100¥.
b. Mow the lawn or I will burn your house.
c. Mow the lawn!

These examples differ with respect to the degree that the addressee fails to comply with the order given, in case he decides not to mow the lawn. In fact, only in cases (12b) and (12c) would we want to speak of failing to comply with the order. In (12a) there was enough room for rejection, so that 'non-compliance' is already a misleading description. This is meant to show that IaDs and IoDs differ with respect to the degree that an imperative speech act is given. Crucially, I want to say that IoDs have the same impact as a plain imperative. Opposed to that, IaDs are conceivably weaker. Treating IaDs as conditionals can account for all that.

Unfortunately, the picture is slightly more complicated. It is not true that all IaDs are just conditionals. As Bolinger (1979) notes correctly, we can force the directive reading of the imperative form, by insertion of 'please' or 'will you'.

(13) a. Mow the lawn, please, and I will give you 100¥.
Mow the lawn, will you, and I will give you 100¥.
b. Mow the lawn, please, and I will repair your bicycle.
Mow the lawn, will you, and I will repair your bicycle.
c. Mow the lawn, please, and I will go grocery shopping.
Mow the lawn, will you, and I will go grocery shopping.

Let's therefore call pseudo-imperatives with 'please' and 'will you' *enforced pseudo-imperatives*. The enforced pseudo-imperatives in (13) can all be said to contain a directive. Bolinger, and also Schwager (2004) referring to Bolinger, both agree that in enforced IaDs, the pure conditional reading is lost. I would like to refine this and say that the interpretation towards conditionality in these forced directive sentences is a matter of degree. For example, (13a) is more readily taken to imply that the speaker will not give 100¥ to the hearer in case the hearer does not mow the lawn, whereas in (13b) a similar inference is less readily made. In fact, if it were already established that the speaker is going to repair the hearer's bike, or for that matter, give him 100¥, then the conditional reading would not be obtained at

all. The clearest case is sentence (13c) which can be read as to issue a directive and further announce that a particular event will take place independently of whether the directive is followed or not.

I hypothesize that enforced IaDs are speech act conjunctions of a directive and an assertion. Support for this claim also comes from the observation that NEG-ANDs become infelicitous when 'please' or 'will you' are inserted, as is shown by sentences in (14) .

(14) a. Come closer and I will shoot you.
b. ? Come closer, please, and I will shoot you.

I will adopt the following version of the Conditional Assertion Hypothesis then:

Conditional Assertion Hypothesis: Let '*P* and *Q*' be an IaD. Identifying the propositions involved as p and q, the preferred speech act reading for these sentences is $Ass(p \rightarrow q)$. If an IaD is enforced by 'please' and 'will you', then we get $Dir(p)$ & $Ass(q)$. Optionally, the context-of-interpretation for this last assertion is restricted to situations where p is true, but this is subject to additional pragmatic enrichment.

2.3. **The Diversification Strategy.** It is relatively easy to conceive an argument that explains the impossibility of negative interpretations of IoDs on the basis of the Conditional Assertion Hypothesis. Let me give an outline of how such an argument would look like:

IaDs, unless enforced, are conditional assertions. What is grammatically an imperative form is not associated with a directive pragmatically. Thus we get readings which look like negative interpretations of the involved imperative sentences. In IoDs, on the other hand, we assume that the imperative forms are always associated with a fixed directive force. Hence we will not get negative interpretations for IoDs and thus the impossibility of NEG-ORs is accounted for. Depending on the concrete treatment of IoDs, it is hoped that the infelicity of NEG-ORs can be explained easily as well.

I would like to say that explanations of this form follow a *diversification strategy*, because the general idea is to treat IaDs and IoDs separately. Eventually, I will follow a diversification strategy as well. But first it is due to look at previous attempts to follow this general strategy. It is then at stake to make intelligible how it is possible that IoDs are associated with a directive force, while IaDs are not. Han (1998) argues precisely for this point.

2.3.1. *Defective Directives.* Han (1998) offers a semantics of imperatives and discusses the interpretation of pseudo-imperatives on the basis of it. A morpho-syntactic imperative feature is said to contribute to logical form with two meaning features, an irrealis feature and a directive feature. The irrealis features encodes

the sentence's modality, i.e. the description of a yet unrealized possibility. The directive feature encodes the sentence's illocutionary force. It is a direct result of the directive feature that imperatives are standardly interpreted as commands, orders or request. This directive feature plays the central role in her account which comprises two theses:

(i) The imperative forms in IaDs have a *defective* directive feature.
(ii) The imperative forms in IoDs have a *non-defective* directive feature, just as plain imperative forms.

The defect in morpho-syntax, though not visible in surface form, informs the pragma-semantic interpretation process: "The defective directive feature encodes the information that the subject is the addressee, but it does not encode illocutionary force." (Han 1998, p.182). Hence we justify neutral and negative interpretations of IaDs. On the other hand, we do not find negative or neutral interpretations for IoDs, because the non-defective imperative feature secures that the imperative form of IoDs is interpreted as a pragmatic directive. This is, in brief outline, Han's account which follows the diversification strategy.

Unfortunately, the arguments put forward in favor of this account are not at all compelling, but rather disappointingly illogical. Han argues empirically that IaDs have certain characteristics which clearly set them apart from plain imperatives. For instance, Han claims that IaDs do not feature indefinite quantifiers such as 'everybody' (15a), 'nobody' (15b) or 'someone' (15c), while plain imperatives do (Han 1998, p.181).

(15) a. Nobody help her.
* Nobody help her and she will fail.
b. Everybody come to the party.
* Everybody come to the party and she will be happy.
c. Someone open the window.
* Someone open the window and we'll get some fresh air.

This might or might not be an empirically correct observation. But even if correct, the observation does not corroborate the point which Han is trying to make. As long as it is as questionable as it is that the observed difference can be explained by the assumption that the imperative forms in IaDs have a defective directive feature nothing is won. And indeed, Han offers no explanation how the defective directive feature could be made responsible for the noted differences in (15).

Yet there is another crucial oversights in Han's argumentation which is even more vital. In order to find support for the diversification strategy in the assumption that IaDs have defective directive features while IoDs have not, it is not sufficient to only establish a difference between IaDs and plain imperatives, as Han does, but also between IaDs and IoDs. That means that only those phenomena which

support a delineation of IaDs on the one side from IoDs and plain imperatives on the other side will count as evidence in favor of Han's position. What separates pseudo-imperatives from plain imperatives is of little value for the issue at stake. Unfortunately, a delineation of IaDs from plain imperatives is all Han offers. For instance, Han claims that although plain imperative forms allow do-emphasis (16a), IaDs do not (16b).

(16) a. Do put the light on.
b. ? Do put the light on and you'll see better.
c. ? Do put the light on or you cannot see what you are doing.

But this does not help, as long as it cannot be made sure that IoDs behave like plain imperatives, and not like IaDs. But for the case at hand, it seems as if IoDs also do not allow do-emphasis (16c).

Similarly, although IaDs feature verb forms which are infelicitous in plain imperatives, these verbs also make for reasonable IoDs (17).

(17) a. ? Know the answer.
b. Know the answer and you win.
c. Know the answer or you loose.

And just as IaDs do, so may IoDs have a generic second person as covert subject (18).

(18) a. The system is horrible. ? Obey to everything they say.
b. The system is horrible. Mess with the authorities and they lock you up immediately.
c. The system is horrible. Obey to everything they say or they lock you up immediately.

It transpires that Han's observations do not support the point she is trying to make. Indeed, I find it unclear to what extent reasonable arguments for a defective directive feature *can* be found, because the very idea of pragmatic force invisibly engraved in morpho-syntax is alien to me. Han's contribution is thus not satisfactory as justification for adoption of the diversification strategy. But we should not dismiss her too soon, since there is more to be learned from a considerations of Han's ideas.

2.3.2. *Against the Notion of Negative Interpretation.* Han not only discusses English data, but also investigates cross-linguistic data. She examines languages with morphologically marked imperative forms, such as Modern Greek and German. There are pseudo-imperatives in both of these languages, but Han notes that both allow IaDs only if the imperative form involved is acceptable as a plain imperative as well. Although there is room for reasonable doubt that the observation itself is

correct, this is taken as evidence for the claim that the imperative forms in German and Greek IaDs are genuine imperatives, i.e. that they do not have a defective directive feature (Han 1998, p.177,179). According to Han, that German and Greek IaDs nevertheless can have a negative interpretation is due to the fact that in general utterances can have ironic or sarcastic uses (Han 1998, p.179). It is the idea of ironic and sarcastic use of imperatives that I would like to attend to briefly.

If Han is right and the negative interpretation of IaDs in German and Modern Greek is achieved by ironical or sarcastic use, then it appears mysterious again why English IoDs, for instance, cannot be negatively interpreted, since they are, or should be, equal candidates for irony and sarcasm as well. The problem is that irony and sarcasm have nothing to do with the notion of 'negative interpretation' that is at stake here. If it had, then (19a) would be a NEG-OR:

(19) a. Don't talk to me, please, or I might end up feeling like a human being.
b. Close the window and I will kill you.

But sentence (19a) is sarcastic due to the fact that the speaker is actually *saying* 'Don't talk to me', although he might thereby be conveying that he surely wants to be talked to. It is part of a sarcastic or ironic utterance of an imperative sentence which is associated with the directive $Dir(p)$ to perform, or do as if to perform, the directive speech act $Dir(p)$. That the speaker does not actually want p to be realized is additional pragmatic inference. In contrast to that, in negatively interpreted IaDs like (19b) the speaker is at no stage of the pragmatic interpretation process saying that he wants the window to be closed. The directive associated with the imperative in the first conjunct of (19b) is not performed, also not performed-as-if.

This issue is of major importance for the diversification strategy to work. Saying that in IoDs a pragmatic directive is issued, while at the same time making room for reinterpretation of directives $Dir(p)$ to mean $Dir(\neg p)$ undermines all argumentative power of the envisaged account. This is the motivation, but not the reason, why I claim that the idea of negative interpretation which was a worthwhile companion to us until now finally has to be dismissed. I hold that plain imperative sentences are intuitively associated with a given directive which is never interpreted negatively in any interesting sense of the phrase. That is to say, if $Dir(p)$ is the directive which is intuitively associated with a given imperative sentence A, then there are no contexts in which A is associated with the directive $Dir(\neg p)$. I argue consequently against a view which was implicit or explicit in the contributions of van der Auwera (1986), Clark (1993) and Han (1998).

Clark and Han explicitly name three alleged cases of negative interpretation of plain imperatives: (i) sarcastic or ironic use, (ii) threats and (iii) dares. I have already argued why sarcasm and irony should be kept out of the picture. I will turn

to threats and dares in succession only to conclude that these too have nothing to do with negative interpretation of directives.

Ad (ii). I will argue that plain imperatives are never threats, but at best elliptical threats and that these in turn are not cases of negative interpretation of plain imperatives, but instances of elliptical NEG-ANDs for which no negative interpretation of directives has to be assumed, since these are considered conditional statements.

Let's ponder briefly on the concept 'threat' (comp. Klein & O'Flaherty 1993). To threaten somebody is to state that negative consequences will arise out of some situation or event which to prevent from occurring is within the capabilities of the addressee. Interestingly, although there might be unconditional promises, to threaten unconditionally makes little sense. To say that an undesirable state of affairs will obtain come what may, is not to threaten, but to warn or simply to announce. Threats aim to influence behavior by leaving room for the prevention of the negative consequences. Hence, threats are conditional in nature and thus it is conceptually already highly implausible how plain imperatives could be threats. The analytic plausibility argument is easily empirically supported.

I suggest to consult intuition first. To this end, suppose you are addressed by a speaker who is pointing a gun at you and whom you know to be very evil minded. Suppose the gun-wielder utters (20).

(20) Come closer!

Feel free to decorate your imagination of the scene with any variety of intonation, any facial feature and any accompanying gesture you like. As far as I am concerned, I would by all means always come closer. I would also always feel that an order was uttered.

But now consider instead that the wicket holder of arms had said (21).

(21) Come an inch closer!

Now it *does* influence my decision to advance, stay or retreat with what intonation (21) has been uttered. In case of emphatic stress on the word 'inch', I would stay where I am, if not back off a little. And only in this case would I say that some kind of threat was uttered. The gunman made clear to me that in case I came *the least bit* closer I would suffer the consequences. What consequences are at stake is left unsaid and we should therefore speak of an *elliptical threat*.

Since threats are conditional in nature and plain imperatives are intuitively at best elliptical threats which leave the undesirable consequences of some action of the addressee implicit, we should not think of plain imperatives like (21) as negatively interpreted directives, but rather consider them elliptical NEG-ANDs. Here is further evidence for this position.

Contra Han (1998) who claims that although IaDs may feature negative polarity items, plain imperatives may not, I argue that plain imperatives may very well contain negative polarity items and that it is exactly when they do that they are understood as elliptical threats. We noted in connection with (21) that emphatic stress on the word 'inch' is needed to read (21) as an elliptical threat. Likewise (22a) allows for both free choice 'any' (comp. Aloni 2003), as well as negative polarity 'any' in which case we get a threat reading.

(22) a. Take any card.
b. Lift a finger to help her.

Example (22b) can only be interpreted as an elliptical threat, because 'lift a finger' is unambiguously a negative polarity item.

When it comes to pseudo-imperatives, we then note negative polarity items are only felicitous in NEG-ANDs, but not in POS-ANDs or POS-ORs (23).

(23) a. Lift a finger to help her and I will kill you.
b. ? Lift a finger to help her and she will survive.
c. ? Lift a finger to help her or I she will die.

This intuition squares with Lakoff's observation (Lakoff 1970) that the licensing conditions for negative polarity items in the antecedents of conditionals bear close connection to the speech act performed.

(24) a. If you eat any LOXO, I'll {batter you/?give you 100 ¥.}
b. If you eat some LOXO, I'll {?batter you/give you 100 ¥.}

I conjecture that there is a particular discourse function associated with negative polarity items which is operative here. I find it plausible to assume that negative polarity items are used as if to refer to minimal elements on a scale (Israel 2001) in order to achieve a certain argumentative effect. To make a threat conditional on a minimal amount is reasonable rhetoric. To make a promise conditional on a minimal amount is not (comp. Merin 1994).

The parallel licensing conditions of negative polarity items in antecedents of conditionals and the imperative parts of IaDs could surely be coined into a plausibility argument for the conditional interpretation of IaDs as done, for instance, by Lawler (1975). But it is certainly also a very strong point in case for the plausibility of the assumption that plain imperatives are understood as elliptical threats when and only when they are elliptical NEG-ANDs when and only when they contain a negative polarity item. Crucially, I think I have made clear that threats like (21) are not negative interpretations of directives.

Ad (iii). A further and last alleged candidate for negative interpretation of plain imperatives are dares. Clark (1993), for instance, purports that dares like (25) are

instances of negative interpretations, i.e. that they direct the opposite of what they refer to.

(25) Go on! Try it!

I cannot help but think that Clark's position is all too obviously false. To think that dares are instances of negative interpretation in the sense that we are after is a delusion. Daring is to encourage someone to do something with possibly bad or dangerous consequences. To dare with (25) is to say 'Try! It's your own fault.' and not 'Don't try, because you would not like the consequences.' Dares are thus also surely not cases of negative interpretation in the intended sense.

Taken together, I reject all three possible candidates for negative interpretation of directives which were brought forward in the literature (Clark 1993, Han 1998). I claim that there are no negative interpretations of plain imperatives. Let's fix this result and baptize it *No Negative Interpretation Hypothesis*.

> **No Negative Interpretation Hypothesis:** If an imperative sentence A is associated with a directive speech act $Dir(\chi)$ out of context, then there are no contexts in which A is associated with $Dir(\neg\chi)$.

Looking back, in this section, I meant to show that Han's proposal to assume a defective directive feature for imperatives in IaDs is a non-starter. Moreover, I took the opportunity to argue that the notion of negative interpretation of imperatives has to be taken with due care. I aimed to make clear that there are only conditional occurrences of imperatives. Negative interpretation does not exist.

This leaves us with a dilemma. The diversification strategy seemed a promising approach, but we clearly lack justification here. The basic problem is that we need a convincing story about natural language disjunction 'and' which gives rise to conditional readings, on the one hand. On the other hand, we need a story about natural language disjunction 'or'. The following section reviews contributions of authors who have all more or less explicitly subscribed to the Conditional Assertion Hypothesis. Discussing these accounts will shed light on disjunction in IoDs.

2.4. **Disjunction in Pseudo-Imperatives.** Krifka (2004) proposes to treat disjunction as a choice offering operator. Schwager (2004) treats disjunction in the vein of Zimmermann (2000) and Geurts (ms) as a conjunction of modals.

2.4.1. *Disjunction as Choice.* Fillenbaum (1986) and Krifka (2004) both suggest to treat disjunction as a choice between alternatives. The idea is more clearly spelled out in Krifka (2004), so I will focus on his version. For fairness, it needs to be borne in mind that Krifka's is not a fully fleshed out account, but rather a tentative exploration of ideas.

Krifka investigates a treatment of IoDs as disjunctions of speech acts. The basic function of a speech act is to change someone's commitment state, be that the speaker, hearer or society in general. Krifka therefore analyzes speech acts dynamically and associates with each speech act a *commitment change potential*. A disjunction of speech acts presents alternative commitment states. The impossibility of NEG-ORs is addressed as the question why it makes good sense to disjoin a command with a threat (26a), while it makes no sense to disjoin a command with a promise (26b).

(26) a. Go away or I will call the police.
b. ? Go away or I will give you hundred dollar.

Krifka suggests that in (26a) the commitment state which results after the command "Go away!" has been executed in context is relatively preferred by the addressee. The commitment state which results after the threat "I will call the police." has been executed in context is relatively dispreferred by the addressee. The disjunction in (26a) therefore boils down to the command given. In contrast to that, in (26b) the commitment state which results after the promise is executed is absolutely preferred by the addressee. Hence, "there is no need to state a strongly dispreferred option here." (Krifka 2004, p. 6).

I find several aspects of this proposal quite objectionable. To begin with and just to make clear what is at stake, the idea that the hearer is to choose between commitment states makes little sense. If this were so, the addressee in (26a) would choose to be told to go away and stay. What is at stake for choice, if choice is involved, is not being told to perform, but to perform. But if the hearer has the choice between performance of an action *A* and some state *S*, then this offer is only effective to the extent that the alternatives are disjoint. The undesirability of *S* is an incentive to perform *A* only to the extent that *S* will not occur when *A* is performed. Similarly, the desirability of *S* is an incentive not to perform *A* to the extent that *S* will not occur in case *A* is performed. But if the alternatives to choose from are thus understood as disjoint in case *S* is undesirable, then, without argument to the contrary, we would expect the alternatives to be disjoint in case *S* is desirable as well. But if this is the case, choosing *S* would contain choosing not to perform *A* which is exactly what a NEG-OR would amount to. In other words, considering 'or' as presenting a pair of alternatives, renders NEG-ORs possible unless we have an additional argument why the alternatives are not interpreted as disjoint in case *S* is desirable.

Furthermore, recourse to 'or' as a presentation of choice is inappropriate to explain the impossibility of NEG-ORs, because explicit choice offers *are* felicitous after all.

(27) a. It's your choice. You either go away now or I will give you hundred dollar.
b. ? It's your choice. Go away or I will give you hundred dollar.

While (27a) is felicitous and might actually influence the hearer to stay, (27b) remains to be odd.

Finally, although (26a) intuitively is a command backed up by a threat, this does not mean that there are different components, command and threat, which distribute over the surface disjunction. In other words, I fail to see the plausibility of the general assumption that we are faced with a speech act disjunction, because, intuitively, I would rather interpret (26a) as a *conjunction* of a command and a threat. What this objection comes down to is that I, unlike Krifka, would not interpret (28) as a threat in its own right.

(28) I will call the police.

It is apt that the sentence (28) is not readily interpreted as a threat without specification of the circumstances of its use. In (26a), on the other hand, no doubt remains that we are faced with a threat. But then I lack motivation for calling the second disjunct alone a threat while still treating it as a disjunct. Rather, the whole sentence is, or better contains, a threat. The combined effect of (26a) is that a command is given *and* the speaker is threatened with negative consequences in case of disobedience.

It has already become sufficiently clear that there are good reasons for rejecting the present proposal, but I would like to take the opportunity to enlarge on the idea of speech act disjunction.

2.4.2. *Speech Act Conjunction Hypothesis.* Force multiplicity is the phenomenon that one sentence is associated with more than one illocutionary force at the same time. Although conjunctions of performative sentences naturally make for force multiplicity (29a), Groenendijk & Stokhof (1976, p. 73), for instance, argue that "sentences with the syntactic structure of a disjunction in general do not allow for force multiplicity"(29b).

(29) a. I admit that I was late and I promise to be on time from now on.
b. * I hereby ask you to come in person or I hereby ask you to send one of your friends.

But consider another, admittedly far-fetched example of attempted speech act disjunction. Suppose you are to baptize Jane. In front of you stand Jane and Janet, but the two will not, for humorous reasons maybe, reveal their identities. Since time is precious, you get the job done by uttering (30) with the pronouns referentially used.

(30) I hereby baptize you$_i$ or I hereby baptize you$_j$.

I claim that examples like this are the closest we get to speech act disjunction. Nevertheless, the disjunction here pertains crucially to the ignorance of the speaker. The speaker is performing *this* act of baptism or *that*, conditional on the true state of affairs about which his knowledge is imperfect. The disjunction in (30) boils down to the conjunction of conditional speech acts: "If you$_i$ are Jane, then I hereby baptize you$_i$, and, if you$_j$ are Jane, then I hereby baptize you$_j$."

In effect, I agree with Groenendijk & Stokhof's scepticism about possibilities of disjoining speech acts. Speech act disjunction does not make intuitive sense. Interestingly, Krifka opines similarly at another location:

> [W]hile coordination is a well-defined operation for speech acts, disjunction is not. Syntactic forms that look like disjunction of two speech acts typically are interpreted in special ways, e.g. by lowering the disjunction to the propositional level, or by interpreting it as a replacement of the first speech act. (Krifka 2001, p. 22)

When arguing against speech act disjunction, we end up finding IoDs more complicated than ever before. Intuitively, IoDs should be classified as an instance of force multiplicity.

(1) c. Close the window or I will kill you.

Example (1c) is a command *and* a threat. It contains a directive to close the window and an assertion that non-compliance will be accordingly punished. I claim that this is generally so. Pseudo-imperatives '*P* or *Q*' are understood as a speech act conjunction (31).

(31) $Dir(p)$ & $Ass(\neg p \rightarrow q)$

Let's call the assumption that (31) is the correct analysis of IoDs the *speech act conjunction hypothesis*.

Speech Act Conjunction Hypothesis: The speech act analysis of an IoD '*P* or *Q*' is a speech act conjunction of the form $Dir(p)$ & $Ass(\neg p \rightarrow q)$.

But if the speech act conjunction hypothesis is the correct rendering of our intuitions about IoDs, clearly the question has to be answered how 'or' is to be interpreted here. A puzzle of particular peculiarity is how 'or' ends up as a conjunction. The following proposal contains a possible answer to this question.

2.4.3. *Non-classical Disjunction: Disjunction as Conjunction of Modals.* Schwager (2004) tries to cope with IoDs by treating disjunction in the vein of Zimmermann (2000) and Geurts (ms) as conjunction of modals. Geurts suggests to analyze a disjunction of the form '*A* or *B*' as (32).

(32) $C_1Q_1A \wedge C_2Q_2B$

Here C_1 and C_2 are sets of possible worlds which act as a context-restriction for the evaluation of the modal quantifiers Q_1 and Q_2 respectively. Nothing is said about which modality is at stake, but the default is epistemic. Neither is any commitment made about the kind of quantification, universal or existential, but the default is universal. Context-restriction through sets C is subject to two pragmatic constraints. Given CG as the set of worlds that constitutes the common ground of the conversation at the time of utterance of a disjunction, preferably C_1 and C_2 are instantiated such that exhaustivity and disjointness are fulfilled:

Exhaustivity: $CG \subseteq (C_1 \cap A) \cup (C_2 \cap B)$
Disjointness: $C_1 \cap A \cap C_2 \cap B = \emptyset$

Building on Geurts' general framework, Schwager first notes that the case of IoDs is particularly challenging, because, unlike in the examples discussed by Geurts, we have here a case of multiple modality types. The first disjunct of an IoD requires deontic modality, while the second requires epistemic modality. It is therefore perhaps unsurprising that the naive application of Geurts' principles can*not* single out the intuitive reading according to which the context of interpretation for the epistemic modality should be the set of non-compliance worlds, i.e. the set of worlds from CG where A does not hold. To see this, set $C_1 = DG \subseteq CG$. Then there are contexts DG, CG such that there is no set X such that if disjointness holds with respect to X, i.e. $DG \cap A \cap X \cap B = \emptyset$, also exhaustivity holds of X, i.e. $CG \subseteq (DG \cap A) \cup (X \cap B)$.

This is actually a substantial problem for Schwager's approach. The fact that we can amend the exhaustivity rule relatively simply to account for our intuition should not blur the theoretical insufficiency here. The amendment has to be justified, of course. It needs to be said why in some cases we need one version of exhaustivity and in others we need another.

The biggest omission of Schwager's account is however that, although she is able to account for the impossibility of NEG-ORs, it is unclear how she wants to account for the infelicity of NEG-ORs. Thus conceived, Schwager only addresses half the problem.

Moreover, I would wish to see a treatment which pertains more directly to speech acts. This might seem a preference of design, not functionality, but I hope to make clear next why this preference might be legitimate. There are two points which I will raise. For one, there are cases like (33) which seem to conjoin epistemic possibilities and thus appear easy prey for the kind of non-classical disjunctive treatment at hand.

(33) I will call Jane tomorrow or she will be disappointed.

On closer look, however, sentence (33) discredits Schwager's approach to IoDs via non-classical disjunction slightly. With an utterance of (33) the speaker actually commits himself to calling Jane. So, I would like to say that the speech act associated with the first disjunct is actually performed. On top of that, an assertion is made which pertains to epistemic matters, namely that if the speaker does not call, Jane will be disappointed. It is by no means impossible to deal with this case in terms of non-classical disjunction. One could treat the first disjunct as a modal statement in full parallel to IoDs so as to model the speaker's commitment to call by an appropriate modality type to model self-commitment to future action. Yet, a speech act related treatment seems much more parsimonious to me. We could then restrict ourselves to epistemic modality only.

For another, there are special cases of IoDs which do not relate to deontic modality at all.

(34) Speak at least six different languages or you are not a cosmopolitan.

I will classify examples like (34) as neutral IoDs. Neutral IoDs not only fall outside the scope of Schwager's treatment of IoDs, but they also pose a threat in general to the diversification strategy and seem not the square with the Speech Act Conjunction Hypothesis. To see that this is so, recall that I argued that IoDs are always associated with a fixed and not reinterpretable directive, thus being able to explain why NEG-ORs are impossible. But for NEU-ORs, like (34), it is all but clear that the imperative sentence in the first disjunct is associated with a directive speech act. Let's fix this problem and speak of the *NEU-OR Problem*.

> **NEU-OR Problem:** How can we maintain, in the light of neutral IoDs, that the imperative sentences in IoDs are always associated with a directive speech act?

To give a brief forecast, although it would be tempting to assume that NEU-ORs are also just conditional statements like non-enforced IaDs, I will not argue this way. Instead, I try to offer a sufficiently wide concept of a directive, so that the imperative sentences in NEU-ORs can nevertheless be associated with a directive speech act.

For the time being, I reject Schwager's proposal as it stands. I will argue at length in section 3.2.2 that we need a different view on the meaning contribution of the word 'or' in pseudo-imperatives. But let's first briefly collect the insights gathered so far before coming to that.

2.5. **Picking up the Pieces.** By means of reviewing existing accounts of pseudo-imperatives I meant to sharpen our understanding of the issue at stake. More obviously here than elsewhere, the description of the data is already part of the theorizing. I have already committed myself to the view that the most natural way to

NEG-OR Problem: The basic task in connection with pseudo-imperatives is to explain (i) why there are no negatively interpreted IoDs and (ii) why IoDs with a positively connoted second disjunct are pragmatically infelicitous.

Conditional Assertion Hypothesis: Let 'P and Q' be an IaD. Identifying the propositions involved as p and q, the preferred speech act reading for these sentences is $Ass(p \rightarrow q)$. If an IaD is enforced by 'please' and 'will you', then we get $Dir(p)$ & $Ass(q)$. Optionally, the context-of-interpretation for this last assertion is restricted to situations where p is true, but this is subject to additional pragmatic enrichment.

Speech Act Conjunction Hypothesis: The speech act analysis of an IoD 'P or Q' is a speech act conjunction of the form $Dir(p)$ & $Ass(\neg p \rightarrow q)$.

No Negative Interpretation Hypothesis: If an imperative sentence A is associated with a directive speech act $Dir(\chi)$ out of context, then there are no contexts in which A is associated with $Dir(\neg\chi)$.

NEU-OR Problem: How can we maintain that the imperative sentences in IoDs are associated with a directive speech act, in the light of neutral IoDs?

FIGURE 5. Recapitulating Prior Commitments

account for our intuitions in connection with IaDs is to adopt the Conditional Assertion Hypothesis and that the meanings of IoDs are best captured by the Speech Act Conjunction Hypothesis. It was also worked out that it is crucial for the diversification strategy that the No Negative Interpretation Hypothesis is adopted. Prior formulations are reproduced in figure 5. This much is then description of the data and theoretical commitment at the same time.

If this description of the data is correct, we can easily account for the NEG-OR Problem. The impossibility of negatively interpreted IoDs is a direct consequence of the Speech Act Conjunction Hypothesis and the No Negative Interpretation Hypothesis. If all IoDs are associated with the directive which is also associated with the imperative sentence which they contain, and moreover such directives can never be reinterpreted negatively, this establishes the impossibility of negatively interpreted IoDs which was the first aspect of the NEG-OR Problem. Also the infelicity of NEG-ORs, the second aspect of the NEG-OR Problem, can be accounted for on the basis of the Speech Act Conjunction Hypothesis. To this end, recall that the speech act analysis of an IoD of the form 'P or Q' was said to be

$Dir(p)$ & $Ass(\neg p \rightarrow q)$. But if q is a positively connoted proposition this combination of speech acts must appear pragmatically odd, because the speaker does not seem consistent in his intentions. With the directive $Dir(p)$ the speaker wants the addressee to bring about p. But with the assertion $Ass(\neg p \rightarrow q)$ the speaker informs the addressee about positive consequences of p. It could be argued that this is not only mean, but violates principles of conversation. In fact, I will eventually give this argument a slightly different twist in section 3.2.2 where I will argue that especially the meaning of 'or' as it occurs in pseudo-imperatives is responsible for the infelicity of NEG-ORs. Still, already now, it transpires that the commitment to the hypotheses in figure 5 helps account for the NEG-OR Problem.

But subscribing to the hypotheses involved is not for free. Essentially, it needs to be explained how the description of the data is consistent with our understanding of natural language sentence connectives 'and' and 'or'. The problem is two-fold. For one, we have to ask and answer how it is possible for natural language conjunction 'and' to link an imperative sentence and a declarative sentence to yield a conditional assertion. For another, we have to ask and answer how it is possible for natural language disjunction 'or' to link an imperative sentence and a declarative sentence to yield a speech act conjunction reading such that the directive speech act associated with the imperative part is always performed. It then also needs to be said what it means to perform a directive speech act. This is essential in order to deal with the NEU-OR Problem. These are the challenges that go with my preferred account of the NEG-OR Problem and they are tackled in the following section.

3. Putting Everything in its Place

I first remark on a treatment of imperatives in section 3.1. I then enlarge on the rôle which is played by natural language conjunction and disjunction in pseudo-imperatives in section 3.2.

3.1. **Remarks on Meaning and Use of Imperatives.**

When I spell out here how I wish to treat imperatives, it needs to be borne in mind that the aim of this thesis is *not* to give an account of imperatives, but to give an account of pseudo-imperatives. Since the former topic nevertheless figures in a treatment of the latter, it is necessary to refer to the meaning and use of imperatives at least in passing. Talking in passing about a topic as delicate as the one at hand is predestined to disappoint if understood as a theory in its own right. So it needs to be stressed that this is not what I intend to do here. I will confine myself here to very general remarks about the meaning and use of imperative sentences. I comment briefly on a semantics and a pragmatics for imperatives. I subscribe to two rudimentary hypotheses:

(i) The semantic denotatum of imperatives is non-propositional.
(ii) The class of possible speech acts associated with imperatives can be modelled by necessity statements.

3.1.1. *Semantics for Imperatives.* Here is a by now classical account of the difference between sentences (4) and (35) (Stenius 1967).

(4) Close the window!
(35) You will close the window.

The classical view maintains that these sentences share the descriptive content, in this case the proposition that you will close the window, but they differ with respect to their mood. (35) is in the indicative mood. It presents its descriptive content as a description of the ways the world is. (4) is in the imperative mood. It presents its descriptive content as a description of the ways the world is to be made.

I do not mean either to defend or attack this view. I only wish to make a rather simple-minded and perhaps even uncontroversial claim about the meaning and use of imperative sentences on the basis of it. I claim that it is a mistake to think that while the difference in mood between (35) and (4) is a pragmatic difference, the shared descriptive content is a semantic commonality. Although the descriptive content of (35) makes for a reasonable semantic meaning, in case of imperative sentences the semantic meaning should not be identified with their descriptive content, nor with any other proposition.

The reason why I plead for non-propositional semantic denotations of imperative sentences is this. I tend to think of semantic meaning of a linguistic expression as an abstraction over the meanings which are associated with all the possible occurrences of that expression. For an imperative sentence like (4) it is clear that it will never be used to describe the world. This then should be reflected in a semantic denotatum. In other words, the difference in mood between (35) and (4) should not be lost to a semantic theory and that means that in particular imperative sentences should be assigned non-propositional semantic denotations.

More strongly even, I want to say that the meaning of a plain imperative sentence like (4) is not assessable in terms of truth and falsity. This might or might not be the case for all occurrences of imperative sentences. In fact, I tend to believe that it actually is *not*. Be that as it may, this is surely not to say that utterances of imperative sentences do not extend also into the epistemic. On the contrary, a bit carelessly put perhaps, an utterance of (4) *presupposes* that the speaker believes that the window is open, can be closed by the addressee and will not be closed by the addressee or any other agent come what may.

In what follows I will assume that imperative sentences denote *actions* semantically. It is not crucial what kind of entity an action is, as long as we acknowledge a certain difference with propositions. While propositions are reasonably judged

true or false, it makes no sense to ask whether an action is true or false. Since imperatives are not descriptions of states of affairs and do not relate to intuitions about truth, I conjecture that their semantic type equally does not pertain to matters of truth.

A word of caution. In the light of certain occurrences of imperatives (36) one might find the term 'action' misleading.

(36) (a) Come one step closer and suffer the consequences!
(b) Be blond and nobody likes you.

(34) Speak at least six different languages or you are not a cosmopolitan.

Suffering the consequences (36a) is not an action in the intuitive sense of the word. Neither is being blond (36b) or speaking a particular number of languages (34). Portner (2004), for instance, assigns properties to imperatives as their semantic denotation. This in turn may or may not square with our intuitive understanding of the term 'property'. Mastop (2005), on the other hand, commits himself to actions as the semantic denotation of imperatives on empirical grounds. When I speak of actions as the semantic denotation of imperatives, then this is not meant to exclude cases which would not fall under the term 'action' intuitively. In fact, a suggestive nomenclature which would correspond to my later pragmatic commitments would have been *requirement*. Terminological issues aside, the important part is that the semantic denotation of imperative sentences is non-propositional and does not penetrate matters of truth.

To say that the semantics of imperatives are not related to questions of truth is also to say that any connection with sentence connectives, if truth-conditionally conceived, appears mysterious at first sight. Bluntly put, if sentential operators are thought of as functions from truth-value tuples to truth-values, then something needs to be said how to combine logical operators with actions. It is then due to think what could, would or should be reasonable combinations of actions, propositions and logical operators. Let α be an action and φ a proposition. Then we could ask ourselves which of the following can be given a sensible interpretation in our semantics:

(i) $\varphi \rightarrow \alpha$
(ii) $\alpha \rightarrow \varphi$
(iii) $\varphi \vee \alpha$
(iv) $\alpha \vee \varphi$
(v) $\varphi \wedge \alpha$
(vi) $\alpha \wedge \varphi$

As long as we stick to truth-functionality, the strict and perhaps disappointing answer can only be that none of these can. Of course, it is possible to make recourse

to a different concept of logical operators, but this is not what I intend to do. Instead I will leave the classical notions of logical operators untouched. Even in case of implication, although a reinterpretation of the formula $\alpha \rightarrow \varphi$ to mean that φ is the result of the performance of the action α heavily suggests itself, I will refrain from deviation from truth-functional sentence connectives. To fully acknowledge the difference in semantic type, I will write $[\alpha]\varphi$ and call this a *result statement*. Similarly, $[\neg\alpha]\varphi$ is an *anti-result statement*. Here φ is the result of abstinence from performance of α. I will call results of abstinence from performance of α *anti-results* of α. Thus I maintain that actions and propositions cannot be combined by logical operators on a semantic level. This is simply a question of choice of semantic categories.

A related, but distinct issue is whether there are combinations of imperatives, declarative sentences and natural language sententence connectives. Let *A* be an imperative sentence and *P* be a declarative sentence. Then look at the following combinations:

(i) If *P*, then *A*.
(ii) If *A*, then *P*.
(iii) *P* and *A*.
(iv) *A* and *P*.
(v) *P* or *A*.
(vi) *A* or *P*.

Now we are faced, not with a question of reasonable choice in semantic theory, but with an empirical question. We find that only (i), (iv) and (vi) are templates for grammatical sentences, although (vi) is pragmatically felicitous only in case *P* is negatively connoted. The questions to be asked and answered are then:

(a) Why are instances of pattern (iv) meaningful, while instances of pattern (iii) are ungrammatical?
(b) What does it mean to connect an imperative sentences and a declarative sentence with the natural languages connective ‘and’?
(c) Why are instances of pattern (vi) meaningful, while instances of pattern (v) are ungrammatical?
(d) Why are instances of pattern (vi) pragmatically infelicitous if *P* has a positive connotation?
(e) What does it mean to connect an imperative sentences and a declarative sentence with the natural languages connective ‘or’?

It transpires once more that to understand the rôle of natural language conjunction ‘and’ and natural language disjunction ‘or’ in pseudo-imperatives is the essential element. To this relates the claim made in this section that imperatives have non-propositional semantic denotation. For this rules out that we identify ‘and’ and ‘or’ in pseudo-imperatives with truth-functional operators $\wedge$ and $\vee$ respectively. The

subsequent section 3.2 will be entirely dedicated to the above questions, but before reasonable answers can be given something has to be said about the pragmatics of imperatives as well.

3.1.2. *Pragmatics for Imperatives.* I will continue to use the artificial label *directive* for any member of the possibly ill-defined class of uses of imperative sentences. If A is an imperative form which denotes action α semantically, then I wish to represent the directive given by an utterance of A as $\nabla_G\alpha$. This notation goes hand in hand with a particular conviction about how we can reasonably generalize the use that is made of imperative sentences. I hypothesize that the impact of utterances of imperative sentences can be modelled by *necessity statements*.

We say that action α is necessary for the achievement of goal G if all ways that the actual world can turn out to be where G is true are such that α has been performed. Let $Ex(\alpha)$ be a proposition that is true in all worlds where α has been performed, then $\nabla_G\alpha$ is true iff $G \rightarrow Ex(\alpha)$ is true in all ways the actual world turns out to be in a fixed and finite amount of time. A simpler, but perhaps misleading way of representing the same idea is to say that $\nabla_G\alpha$ is true iff $[\neg\alpha]\neg G$ is true. This might be misleading, because the expression $[\alpha]\varphi$ is felicitous for arbitrary φ, but the expression $\nabla_G\alpha$ is only felicitous for reasonable goal propositions G. In other words, whereas $[\alpha]\varphi$ is a simple result statement, $\nabla_G\alpha$ is a special result statement, viz. a necessity statement, equivalent to $[\neg\alpha]\neg G$.

Note that my rendering of necessity of an action is just what it normally means to be a necessary condition. P is a necessary condition for Q if $Q \rightarrow P$ is true, equivalently $\neg P \rightarrow \neg Q$. The same notion of necessity informed the rendering of deontic necessity in terms of Kripke structures, of course.

$\nabla_G\alpha$ is meant to express that the action α is necessary for the achievement of goal G. What this goal is is subject to pragmatic inference. I contend that this generalization over pragmatic use lets us approximate, to the extent that this is possible at all, the impact of speech acts that are performed by utterances of imperative sentences in a variety of different contexts. In order to see how this idea is meant to work, consider a number of different occurrences of imperative sentences all of whose pragmatic impact, different as it may appear, can be more or less faithfully modelled by a necessity statement $\nabla_G\alpha$ with an appropriately instantiated goal proposition G.

Imperative sentences may appear as answers to certain questions (37a) or in anankastic conditionals (37b).

(37) a. How do I get to Haarlem? – Take the A-train!
b. If you want to go to Haarlem, take the A-train!

The speech act which is associated with both occurrences of the imperatives sentence “Take the A-train!" in (37) is most likely a *recommendation* or a *suggestion*. Certainly, we would not want to say that an order is given. On the contrary, whether the speaker has any preference as to what the addressee should do seems to be a totally unrelated issue. I suggest to look at things this way. In a first approximation, the speaker might be felt to say that in order to achieve the end of getting to Haarlem it is necessary to take the A-train. Thus the goal parameter *G* of the directive would be instantiated with the proposition that the addressee got to Haarlem. It has been objected correctly (Darrin Hindsill, p.c.) that a necessity statement of this form is actually too strong to accord with intuition. The speaker is *not* felt to say that the only way to get to Haarlem is to take the A-train, but that *the optimal way* to achieve this end is to do as told. Hence the intuition that we have here a recommendation. Nevertheless, we can deal with recommendations easily by adding the presumption of optimality to the goal proposition. This is certainly a much more natural instantiation of *G* to begin with, because the addressee probably does not just want to get to Haarlem at any cost, but to get there healthy, relaxed, in due time and with a minimum of financial effort. We can thus model the recommendations which are associated with the imperative sentences in (37) by necessity statements where the goal proposition is that the addressee got to Haarlem in the most optimal way.

The impact of plain imperative sentences like (4) can also be captured by an appropriate instantiation of the goal proposition of a necessity statement.

(4) Close the window!

By giving an order like (4), the speaker expresses his wish that the window be closed by the addressee. By utterance, the speaker puts himself, be that legitimate or not, in a position where the mere expression of such wishes is compelling. Now this latter component cannot be included in necessity statements of any form. But it also need not. For, taking the appropriate social circumstances for granted, an order can nevertheless be rendered as a necessity statement where the goal proposition is that the addressee’s actions comply with the speakers wish. Let’s call this goal proposition Γ to acknowledge its special, context-independent status. I will make frequent use of Γ in the following as a fixed constant for the goal proposition just introduced, in order to treat genuine orders or commands as necessity statements.

Treating directives as necessity statements might seem a bit artificial at times and way too complicated at others. All that is meant to be captured by $\nabla_\Gamma\alpha$, for instance, is that the speaker wants the hearer to perform action α. But the idea to try to model directives by necessity statements is directed entirely towards the NEU-OR Problem. It will become clear in section 3.2.2 that thus we can stick to the Speech Act Conjunction Hypothesis, even in the light of NEU-OR, because it

is intuitively easily verified that NEU-ORs express necessity statements. Claiming that this stems from the speech act associated with the imperative form, we then get a parsimonious account of these too.

3.1.3. *The Pairing Hypothesis.* To identify directives with necessity statements for some underspecified goal, informal and vague as it may be, will shed light on the interaction between imperative sentences and sentence connectives 'and' and 'or'. From logic alone we expect that a statement of sufficiency of α pairs naturally with a result of α and that a statement of necessity of α pairs naturally with an anti-result of α. This pertains to natural language conjunction and disjunction, because 'and' may be used to state results while 'or' may be used to state anti-results. And indeed, we observe exactly the kind of interaction that we expected here.

(38) a. You only have to be blond and nobody likes you.
b. You have to be blond or nobody likes you.
c. ? You have to be blond and nobody likes you.
d. ? You only have to be blond or nobody likes you.

Sentence (38a) states a sufficient condition for general dislike. This is naturally expressed by a result interpretation. Dislike is the result of being blond. Sentence (38b) states a necessary condition for being liked. This is naturally expressed by an anti-result interpretation. Dislike is the anti-result of being blond. On the other hand, in (38c) a result reading seems less coherent in the light of the fact that a necessary condition is expressed. Similarly, in (38d) an anti-result reading seems less coherent in the light of the fact that a sufficient condition is expressed. In lack of a better term, I would like to say that (38a) and (38b) form or express one coherent unit of thought, whereas (38c) and (38d) do not. Let me briefly elaborate.

The first conjunct of (38a) says that it is sufficient to be blond. Sufficient for what? – The answer follows in the second conjunct. In contrast to that, the first disjunct in (38d) also says that it is sufficient to be blond, but the second disjunct now does not give an answer to the question: "Sufficient for what?". The second conjunct is a seemingly unrelated proposition, as if two ideas were put forward. In effect, let Φ be a sentence that expresses that ϕ is sufficient for some unspecified result *R*. Let Ψ be a sentence with propositional content ψ. Then it is a natural way of expressing that φ is sufficient for the result ψ to use the sentence 'Φ and Ψ'. The result *R* does not get instantiated as ψ in case of a sentence 'Φ or Ψ'.

Similarly, the first disjunct of (38b) says that it is necessary to be blond. Again we ask: "Necessary for what?" and find an answer in the second disjunct. In (38c), on the other hand, although the first conjunct also says that it is necessary to be blond, the second conjunct again does not answer the question: "Necessary for what?", but states a seemingly unrelated proposition. Let Φ be a sentence that

expresses that ϕ is necessary for some unspecified goal *G*. Let Ψ be a sentence with propositional content ψ which can be conceived of as a reasonable goal in the given context. Then it is a natural way of expressing that φ is necessary for the goal ψ to use the sentence 'Φ or Ψ'. The goal *G* does not get instantiated as ψ in case of a sentence 'Φ and Ψ'.

I propose to subsume these observations under the heading *Pairing Hypothesis*:

> **Pairing Hypothesis:** Natural language conjunction 'and' pairs naturally with expressions of sufficiency, but not with expressions of necessity. In contrast to that, natural language disjunction 'or' pairs naturally with expressions of necessity, but not with expressions of sufficiency.

Here is a further intriguing observation. Sufficiency statements are unbiased, but statements of necessity are biased. Sufficiency statements pair with arbitrary *results*, be they positively or negatively connoted. Necessity statements only pair with reasonable goals, i.e. positively connoted results. To say that α is sufficient for φ, i.e. to assert the result statement $[\alpha]\varphi$, makes sense for all propositions φ. But to say that α is necessary for φ, i.e. to assert the anti-result statement $[\neg\alpha]\neg\varphi$, is also to say that φ is an end for which α is a means. One is tempted to say that necessity statements drag intentionality into the picture, while sufficiency statements stick to pure mechanical consequence.

Unfortunately, I have nothing to say why that is. Fortunately, as long as we accept that necessity statements require goals, to leave this puzzle unsolved does not affect the present account of the meaning and use of pseudo-imperatives despite superficial appearance. Let's however coin a term to capture the open end which was just worked out and call it *Bias Puzzle*.

> **Bias Puzzle:** Sufficiency statements are unbiased and only require results, but necessity statements are intentionally biased and require anti-results which are construable as anti-goals in the given context of use.

3.2. **The Rôle of Sentence Connectives in Pseudo-Imperatives.** Since I have committed myself to the assumption that imperatives do not have a semantic denotation which relates to truth functional connectives, a general problem is made of the case how to interpret the occurrences of 'and' and 'or' in the context of pseudo-imperatives. I will argue that there are other occurrences of the words 'and' and 'or' which do not translate straight-forwardly into logical form as truth-conditional disjunction and conjunction respectively, at least not without further restrictions or caveats. These I will call *uses of sentence connectives* for lack of a better term. I will be only concerned with two particular examples of this mismatch, namely where conjunction is read as conditional, as in (39a), and where disjunction conjoins an explanation (39b).

(39) a. Jason only *looks* at other girls and Jane goes berserk.
b. It is probably a good idea to invite Jason as well or Jane will be sad all night.

I will then show that the assumption that the occurrences of 'and' and 'or' in pseudo-imperatives are of the kind thus distilled, can account for all our intuitions about the meaning of pseudo-imperatives. I turn to conjunction and disjunction separately.

3.2.1. *Conjunction.* For pseudo-imperatives with conjunction, recall that it was argued that IaDs are conditional assertions, unless the directive reading is forced by 'please' or 'will you' in which case we obtain a speech act conjunction of a directive and an assertion. To account for this, I will proceed in three steps. I will first deal with speech act conjunction. Then I will identify a particular use of 'and', which captures the conditional readings of IaDs. Finally, I will reason why the preferred reading of non-enforced IaDs, is a conditional assertion and not a speech act conjunction.

Let's turn to speech act conjunction first. There are occurrences of 'and' which may be conceived as the conjunction of speech acts.

(40) a. I hereby promise not to be late and I hereby allow you to hit me, in case I am.
b. I promise to give you another extension on your homework and now get the hell out of my office.
c. I understand the situation with Jason, but what's the problem with Jane?

I consider cases of IaDs with 'please' and 'will you' cases of speech act conjunction. The reading associated with an enforced IaD like (13a) is (41).

(13) a. Mow the lawn, please, and I will give you 100 ¥.

(41) ∇_{Γ} [[mow the lawn]] & *Ass*([[I give you 100 ¥]])

I claim that in enforced IaDs the underspecified goal proposition *G* associated with the use of an imperative sentence is not instantiated with the proposition expressed in the second conjunct in accord with the Pairing Hypothesis. Out of context we might preferably identify the goal with the special goal proposition Γ which said that the addressee complies with the wishes of the speaker.

I have argued before under the heading of the Conditional Assertion Hypothesis that in general IaDs should not be interpreted as speech act conjunction. To account for the conditional readings I claim that other occurrences of 'and' similarly yield conditional assertions.

The use of conjunction which I wish to blame for our conditional understanding of IaDs is what Culicover and Jackendoff (1997) discuss in detail and describe as *left-subordinating and*. I will refer to $_{LS}$*and* for brevity. Culicover and Jackendoff argue at length that there are examples of syntactic coordination, with conjunction or other, which are semantically subordinate. Simplified, we find cases where surface conjunction '*P* and *Q*' is understood as a conditional statement 'If *P*, then *Q*'.

Unfortunately, Culicover and Jackendoff do not make any attempt to classify the examples of conjunction which are read as conditional statements. There seem to be at least two different cases.

(42) Jason only *looks* at other girls and Jane goes berserk.

(43) (a) Jason goes home now and Janet is happy.
(b) Jason goes home now and Jane is sad.

Generics, as in (42), are perhaps the most common example of $_{LS}$*and*. Although we have a conjunction on the surface, neither the first conjunct, nor the second conjunct are asserted. What is asserted is a general conditional relation, namely that the second conjunct is a result of the first and therefore holds in all situations where the first conjunct holds. Similarly, both sentences in (43) give a future prediction, a statement about a positive outcome (43a) and a negative outcome (43b) of a conceivable single future event. Again, neither first nor second conjunct is asserted, but a result reading is obtained.

The basic characteristics of $_{LS}$*and* in a sentence '*P* and *Q*', where *P* and *Q* are indicative sentences, then seem to be these:

Characteristics of $_{\mathbf{LS}}$*and*: (i) Neither conjunct is asserted, but (ii) the second conjunct is interpreted as a result of the first, so that (iii) the overall impact is a conditional assertion.

I argue that, if we identify the occurrences in IaDs with $_{LS}$*and*, then we can account for the intuitive readings in a straight-forward manner.

So assume that 'and' in IaDs is $_{LS}$*and*. Then what are we to make of the first characteristic which stated that neither conjunct is asserted? – Imperatives never make for assertions, so we might argue that this condition is vacuously fulfilled even if we assume that a directive $\nabla_G\alpha$ is given. But then we would not be able to comply with the third characteristic anymore according to which we get a conditional assertion only. So, I propose to conceive the first characteristic of $_{LS}$*and* in full generality to state that we do not have a speech act conjunction and that therefore, in particular, the speech act associated with the first conjunct is not performed. Consequently, according to the second and third characteristic of $_{LS}$*and*

the second conjunct is interpreted as a result of the first to yield a conditional assertion. The assumption that 'and' in an IaD of the form '*A* and *P*' is $_{LS}$*and* then yields *Ass*([α]φ) as desired.

The subsequent question is why is 'and' in IaDs preferably interpreted as $_{LS}$*and* and not as speech act conjunction? – A relatively simple pragmatic explanation can be given based on the Pairing Hypothesis. Recall example (38).

(38) a. You only have to be blond and nobody likes you.
b. You have to be blond or nobody likes you.
c. ? You have to be blond and nobody likes you.
d. ? You only have to be blond or nobody likes you.

We noted there that conjunctions do not pair naturally with necessity statements (38c). If the first conjunct expresses a necessity statement with an underspecified goal *G*, then, normally, the second conjunct does not provide a goal proposition with which to instantiate *G*. Intuitively, conjunctions between necessity statements and propositions appear less coherent, as if two independent ideas were expressed. With this in mind, compare the schematic candidate readings of an IaD under speech act disjunction (44a) and under $_{LS}$*and* (44b).

(44) a. $\nabla_{G|\Gamma}\alpha$ & *Ass*(φ)
b. *Ass*([α]φ)

According to the Pairing Hypothesis, we do not expect that in (44a) the goal proposition *G* is naturally instantiated with the proposition φ, even in case φ is positively connoted. Moreover, as was noted in connection with the Conditional Assertion Hypothesis, we expect that in (44a) optional restriction of the context-of-interpretation of the second conjunct is subject to additional pragmatic inference. Taken together, these observations support the intuition that under a speech act conjunction reading of IaDs (44a) the conjoined speech acts may appear only remotely related. In contrast to that, under an $_{LS}$*and* reading (44b) the relation between the conjuncts is entirely clear and no extra inference is needed to restrict the context-of-interpretation of the second conjunct. Consequently, I hypothesize that the preference for $_{LS}$*and*-readings over speech act conjunction-readings in IaDs is a matter of coherence.

3.2.2. *Disjunction.* Again I aim to identify a particular, but general use of disjunction to account for the observations in the context of IoDs. The use I have in mind I will call *right-coordinating, explanatory or*, or $_{RCE}$*or* for short, examples of which are the following:

(45) a. It is probably a good idea to invite Jason as well or Jane will be sad all night.
b. You have to show your member's card at the entrance or the doorman will refuse you.
c. I promise not to be late or we'll miss the bus.
d. I will call Jane or she will be sad.

It is not a threat to truth-conditional reconstruction that all the examples in (45) are non-commutative, because a standard pragmatic explanation based on Grice's Maxim of Manner is ready to hand. But what makes these occurrences of 'or' not square with truth-conditional disjunction is first of all that none of the examples in (45) allows for the paraphrase 'If not *A*, then *B*', given that we consider these to be of the form '*A* or *B*'. Moreover, in all the examples the speech act associated with the first disjunct is actually performed.

How is the natural reading of the examples in (45) best described? – Let the template for these examples be '$\sigma(\alpha)$ or *P*' where $\sigma(\alpha)$ is an indicative sentence which refers to action α and the proposition denoted by *P* is φ. Then the intuitive reading of examples (45) is (46).

(46) $SpeechAct(\sigma(\alpha)) \,\&\, Ass([\neg\alpha]\varphi)$

However, (46) might obscure the fact that we are not just confronted with a simple conjunction of speech acts as we were in (40a), for instance.

(40) a. I hereby promise not to be late and I hereby allow you to hit me, in case I am.

The assertion in (46) states an anti-result of the action named in the first disjunct, but there is also a clear *negative bias*.

(47) a. ? It is probably a good idea to invite Jason as well or Jane will shine with glee all night.
b. ? You have to show you member's card at the entrance or the doorman will offer you a free cocktail.
c. ? I promise not to be late or we will win the jackpot.
d. ? I will call Jane or she will be happy.

The infelicity of the examples in (47) gives credit to the claim that what the conjoined assertion in the reconstructed form (46) offers is a *corroboration* of the first speech act. For instance, to say and to mean in (47a) that it is a good idea to invite Jason could be corroborated with a positive outcome of inviting Jason or a negative outcome of not inviting Jason. Hence, the strangeness of (47a), unless we interpret Jane's shining with glee to be something worth counteracting.

I take the following to be the characteristics of $_{RCE}or$:

Characteristics of $_{\mathbf{RCE}}$*or*: (i) We get a speech act conjunction reading of the form $SpeechAct(\sigma(\alpha))$ & $Ass([\neg\alpha]\varphi)$ such that (ii) the conjoined assertion corroborates the first speech act.

If we assume that the occurrences of 'or' in IoDs are $_{RCE}or$, then we can account for the intuitive readings. Consider sentence (48).

(1) c. Close the window or I will kill you.

(48) ∇_Γ [[close the window]] & *Ass*([¬ [[close the window]]] [[I kill you]])

Then the intuitive reading of (1c) is captured by (48). We have then identified the underspecified goal *G* which is part of our rendering of directives with the special goal proposition Γ, but this need not necessarily be the case, as we shall see shortly.

Given that 'or' is analyzed as $_{RCE}or$, we can explain the oddity of example (1d) where it was assumed that it is common knowledge between the conversationalists that being kissed by the speaker is unconditionally desirable to the hearer.

(1) d. Close the window or I will kiss you.

(49) a. $\nabla_\Gamma\neg$ [[close the window]] & *Ass*([¬ [[close the window]]] [[I kiss you]])

b. $\nabla_{[\![\text{I kiss you}]\!]}\neg$ [[close the window]]
& *Ass*([¬ [[close the window]]] [[I kiss you]])

c. ∇_Γ [[close the window]] & *Ass*([¬ [[close the window]]] [[I kiss you]])

d. $\nabla_{[\![\text{I kiss you}]\!]}$ [[close the window]]
& *Ass*([¬ [[close the window]]] [[I kiss you]])

To facilitate reading I will refer not to the particular example in (1c), but to the variable case. Let example (1d) be of the form '*A* or *P*.' where the denotation of *A* is α and the denotation of *P* is φ. The crucial assumption is that φ is positively connoted. There are then four conceivable speech act forms with this sentence, namely (49a-d) which are reproduced schematically below. We might either identify the underspecified goal *G* with Γ or we might identify it with φ, since φ is positively connoted. Moreover, we might interpreted the imperative as a directive to perform α or not. This then yields four conceivable readings and it needs to be argued why none of these is pragmatically feasible under the assumption that we have $_{RCE}or$.

(i) $\nabla_\Gamma(\neg\alpha)$ & *Ass*($[\neg\alpha]\varphi$)
(ii) $\nabla_\varphi(\neg\alpha)$ & *Ass*($[\neg\alpha]\varphi$)
(iii) $\nabla_\Gamma\alpha$ & *Ass*($[\neg\alpha]\varphi$)
(iv) $\nabla_\varphi\alpha$ & *Ass*($[\neg\alpha]\varphi$)

Ad (i) & (ii). The reason why neither $\nabla_\Gamma(\neg\alpha)$ nor $\nabla_\varphi(\neg\alpha)$ can be a feasible reading for an IoD under $_{RCE}or$ is that it is impossible for an imperative form *A* with which we associate the directive $\nabla_G\alpha$ to mean $\nabla_G(\neg\alpha)$ for any arbitrary goal *G*. This was termed No Negative Interpretation Hypothesis and argued for in

section 2.3.2. Now, since $_{RCE}$*or* demands the speech act associated with the first disjunct, it makes no more sense to assume that here, and only here, imperatives *A* could mean $\nabla_G(\neg\alpha)$.

Ad (iii). $\nabla_\Gamma\alpha$ & *Ass*$([\neg\alpha]\varphi)$ is pragmatically odd, because the speaker gives an incongruous incentive with the assertion *Ass*$([\neg\alpha]\varphi)$ to abstain from α, while the directive $\nabla_\Gamma\alpha$ demands performance of α. This violates the second characteristic of $_{RCE}$*or*, namely that the assertion *Ass*$([\neg\alpha]\varphi)$ is to corroborate the speech act associated with the first disjunct.

Ad (iv). Against a rendering of the form $\nabla_\varphi(\alpha)$ & *Ass*$([\neg\alpha]\varphi)$ I argue that this interpretation does not constitute a reasonable contribution to any talk exchange, because it boils down to saying: $[\neg\alpha]\varphi \wedge [\neg\alpha]\neg\varphi$. But this means that the speaker thereby expresses that he thinks it is a matter of certainty that the addressee performs action α. This runs counter to what we could call the presuppositions of a directive. To tell someone to perform an action α makes little sense if at the same time the belief is conveyed that α will be performed come what may. Even disregarding the point that this last conviction is conveyed in a more than crooked manner, the resulting impact will surely not make for a reasonable directive either to perform or not to perform the mentioned action. Neither will it makes for a reasonable conditional assertion.

Consequently, the assumption that 'or' in IoDs is $_{RCE}$*or* accounts for the intuitive meaning of POS-ORs and for the pragmatic infelicity of NEG-ORs. The impossibility of NEG-ORs is covered by the Speech Act Conjunction Hypothesis and the No Negative Interpretation Hypothesis as before.

The presented account can also account for neutral IoDs like (34) which were introduced in the context of a review of Schwager's account of pseudo-imperatives.

(34) Speak at least six different languages or you are not a cosmopolitan.

It was already noted and conserved under the label NEU-OR Problem that neutral IoDs are a threat to the diversification strategy, because it is not straight-forwardly clear why in these cases a directive is given. Sentence (34) intuitively states applicability conditions for the term 'cosmopolitan' which might be felt to be simply a conditional statement. But it just turns out that my rendering of directives as necessity statements is broad enough to account for these cases. If we assume that all IoDs feature $_{RCE}$*or*, we can deal with neutral IoDs in a straight-forward manner. We predict that the speech act analysis of (34) is (50).

(50) $\nabla_{[\![\text{be cosmopolitan}]\!]}\,[\![\text{speak} \geq 6 \text{ languages}]\!]$
& *Ass*$([[\![\text{speak} < 6 \text{ languages}]\!]\,]\,\neg\,[\![\text{be cosmopolitan}]\!]\,)$

We have then identified the goal proposition in the directive with the goal 'be a cosmopolitan'. Interestingly, both speech acts in (50) actually state the very same

thing. They are totally interchangeable. I conjecture that the redundancy in the analysis should not be a cause to worry. The intuition that we get a conditional statement is certainly met. In fact, it is crucial to maintain that a directive speech act is performed, i.e. to assume that a necessity statement is made, in order to account for the oddity of (51).

(51) ? Speak less than six different languages or you are a cosmopolitan.

To me, this example is odd out of context and only becomes feasible in contexts where not being a cosmopolitan is somehow salient as a reasonable goal proposition, e.g. where it is a reply to somebody's claim that he is *not* a cosmopolitan. I have nothing to say about why being a cosmopolitan constitutes a reasonable goal proposition out of context while not being a cosmopolitan requires additional context to constitute a reasonable goal proposition, but, accepting that this is so, it transpires that my analysis in terms of necessity statements is suited to give an intuitive account of these cases.

Although the discussion of pseudo-imperatives could be brought to an end here, we should not miss the chance to make some more interesting observations about the use of natural language disjunction.

3.2.3. *Negative Bias in Disjunction.* When contemplating the meaning of natural language disjunction 'or' the examples that come most readily to mind are presumably like (52).

(52) Jason is at home or he is still at work.

For disjunctions like (52) it is a piece of common wisdom that the disjuncts are related to each other in a most straight-forward manner. They are equal, alternative contributions to a unique discourse topic. Recall Grice in *Indicative Conditionals* to which I have added emphasis:

> A standard (if not *the* standard) employment of "or" is in the specification of possibilities (one of which is supposed by the speaker to be realized, though he does not know which one), *each of which is relevant in the same way to a given topic*. (Grice 1989, p.68)

Example (52) is easily construed as addressing the issue of Jason's whereabouts and thus clearly constitutes an instance of the *standard use* which Grice depicted.

In general, Grice expected interlocutors to speak to a point. From this point of view we require disjuncts to be related to each other in a particular and easily construable way. Let this requirement be called *relatedness condition*. Relatedness is a general demand for disjuncts in disjunctive statements, standardly used or else.

Elaborating on Grice, Simons (2001) investigates the relatedness condition of disjunctions in more detail. She argues that in order to be informative an utterance must have at least one identifiable discourse topic. This is her *topic condition*. Subsequently she reasons that a question Q is such an identifiable discourse topic for an assertive utterance U in case U provides an informative answer to Q. Subject to the formal theory of questions and answer that Simons uses (Groenendijk & Stokhof 1984), assertions of disjunctive sentences 'P_1 or P_2' are informative answers to a question Q only if both conjuncts are. Let's call this necessary condition q-relatedness. Propositions P_1 and P_2 are *q-related* if there is a question Q to which both P_1 and P_2 are informative answers. Note that it is not a necessary condition for disjuncts to be q-related in order for the disjunction to be informative. This is because there might be other identifiable discourse topics than questions to which the assertion is an answer. But Simons does predict that if we can identify a question Q as a discourse topic of an assertion of the disjunction 'P_1 or P_2', then P_1 and P_2 are both informative answers to the question Q.

I take it to be obvious that to say that q-relatedness of disjuncts is a necessary condition for informative answerhood is informed solely by the above mentioned standard use of disjunction 'or'. I would like to consider next instances of natural language disjunction which seem to defy subsumption under the standard use. Standard or not, these should still satisfy the relatedness condition. Here are two example situations:

Suppose you are in a game show and you have to answer a question correctly in order to get a prize. Imagine now that the quiz master refers to the rules of the game by uttering either (53a) or (53b).

(53) a. You now give the right answer or you won't get the big prize.
b. ? You now give the wrong answer or you will get the big prize.
c. If you now do not give the wrong answer, you will get the big prize.

Although both statements are uncontroversially true and are even semantically equivalent in case we read the disjunction exclusively, (53a) is a much more viable candidate for a reasonable utterance than (53b). While (53a) seems to tell you, not only what the rules of the game are, but also what you should preferably do, given natural assumptions about your preferences, the disjunction in (53b) lacks, as I would like to say, a motivation. This is supported by the observation that a conditional paraphrase (53c) of (53b) is a reasonable thing to say.

As a second example situation, suppose Jason is at a party where Jane is too. Janet is at home and the facts are clear. Either girl is happy if Jason is with her, otherwise sad. Suppose for clarity that Jason, you and me intended to go home together and that the two of us are more than willing to leave by the time being. Now I comment on the scene as we watch Jason talking to Jane:

(54) a. Jason goes home now or Janet is sad.
b. Jason stays a little longer or Jane is sad.
c. ? Jason stays a little longer or Janet is happy.
d. ? Jason goes home now or Jane is happy.

Surely, (54a) and (54b) are unobjectionable statements. But for examples (54c) and (54d), again I would like to say that it is not entirely clear what my motivation for using a disjunction is. This feeling is again supported by the observation that equivalent conditional statements are unproblematic.

It is a legitimate generalization that the felicitous examples (53a), (54a) or (54b) all have a negatively connoted second disjunct, while the odd examples (53b), (54c) or (54d) all have a positively connoted second disjunct. One thus observes a *negative bias* in these examples once more. In what follows, I will make some suggestions how to account for this.

In the light of Simons' account of the relatedness requirement, it is now striking to see that although none of the examples (53a), (54a) or (54b) is a disjunction of q-related propositions, all of the sentences can be thought of as answers to a reasonable question. In particular, (53a) is an informative answer to the question 'What should I do?' and (54a) and (54b) answer the question 'What is Jason likely going to do?'. Alternatively, we could say in relation to Grice's remark that the respective disjuncts in examples (53a), (54a) and (54b) are certainly not relevant to a given topic 'in the same way'. In fact, the felicitous examples (53a), (54a) and (54b) all seem to shift focal emphasis to the first disjunct. Intuitively, the first disjunct directly addresses, or even constitutes, the topic and the second disjunct somehow adds information to the first. The examples under consideration are thus clearly not of the standard kind.

So we are left with a two-fold problem. How can we account for the acceptability of examples (53a), (54a) or (54b) in the light of the relatedness requirement? And why is it that examples (53b), (54c) or (54d) are slightly odd out of context? – A uniform way of dealing with this problem is to lay bare in what way the disjuncts are related in the acceptable examples that they are not in the unacceptable ones. To this end I suggest two strands of argumentation for consideration. For one, (i) one could hypothesize that although necessity statements may be put disjunctively, sufficiency statements may not. For another, (ii) one could assume that the examples under consideration are instances of $_{RCE}$*or* as well.

Ad (i). It may be speculated that there are various ways of satisfying the relatedness requirement. One is, as Grice pointed out and Simons elaborated on, for both disjuncts to uniformly pertain to a construable discourse topic in the same way. Another might be to express a necessity statement. In the non-standard examples (53a), (54a) and (54b), it is because the second disjunct is construable as an imaginable anti-goal, that they are easily interpreted as related. Examples (53b), (54c)

and (54d) are not easily construed as necessity statements, because their second disjuncts are not readily interpreted as anti-goals. Interestingly, this view gives a partial answer to a problem of general interest which was raised by Grice in *Indicative Conditionals*, viz. under which circumstances a conditional statement is statable as a disjunction. Result statements are conditional statements. Yet it is not possible to state every result statement as a disjunction. This is only possible for necessity statements. In other words, to express necessity statements is a non-standard, yet conventional use of natural language disjunction. Such a view is made plausible by the Pairing Hypothesis.

Plausible as such a position may be, it might be felt that it is also close to vacuity. To say that natural language 'or' can only be used to express necessity statements, but not to express sufficiency statements might or might not be a correct description, but to say so is also not much different from saying that 'or' has a negative bias, i.e. that the second disjunct may not be positively connoted, which was the initial observation here and was taken up as the formulation of a problem that needs to be explained. It is questionable whether the change in perspective that led from one description to the other already counts as a sufficient explanation of the initial observation. Maybe recourse to $_{RCE}or$ can add to this?

Ad (ii). What if we considered examples (53) and (54) as candidates for $_{RCE}or$ which some of the sentences instantiate felicitously while others fail to comply with some characteristic or another? – To say that 'or' in examples (53) and (54) is $_{RCE}or$ is already problematic for the first characteristic of $_{RCE}or$ which stated that the speech act associated with the first disjunct is actually performed. This is a problem, because in the specified contexts none of the first conjuncts of examples (53) and (54) can be felicitously uttered. It is unclear what could or should be meant by an utterance of, e.g. , (55) under the circumstances which we introduced with example (54).

(55) * Jason goes home now.

Arguably, (55) is simply ungrammatical, because in the given context it is not possible to use the simple present tense felicitously. Huddleston (2002, p. 127-134) lists a variety of possible uses of the simple present tense for non-statives, but none of these is applicable here. To express that Jason is actually going home at the time of utterance, the present progressive is needed. Only in running commentaries, e.g. in radio broadcasts of sport events (56a) or in explanations of ongoing demonstrations (56b), can the simple present tense be used to state that something is presently happening.

(56) a. Adams steps forward, tries to drive, he's bowled.
b. I add two cups of flour and fold in gently.

But, of course, given the context which we set for example (54) we would not expect a comment on the immediate present anyway. Forgetting about uses of the simple present tense to refer to things past, we should check the uses which Huddleston calls 'timeless' uses of the simple present tense. The simple present tense can occur timelessly in synopses (57a), stage directions (57b), captions (57c) or chronicles of history (57d), but clearly none of these fits the situation at hand either.

(57) a. Hugo walks out on Darcy, Harry defies government order and operates on Jenny Pope (...).
b. He touches his hat to Mrs Pearce, who disdains the salutation and goes out. He winks at Higgins (...).
c. David Boon (above) is startled into belated action after Indian wicket-keeper Chandra Pandit threw down his stumps at the non-striker's end.
d. Abert I becomes Emperor – the first Habsburg Emperor.

Finally, the present futurate, i.e. uses of the simple present tense for reference to the future, is also not applicable here. Huddleston lists three different occurrences of the present futurate. The simple present tense can refer to cyclic events in nature (58a), to a scheduled event (58b) or conditional statements (59a) under which Huddleston also subsumes certain disjunctive sentences (59b) as, what he calls, indirect conditionals.

(58) a. The next high tide is around 4 this afternoon.
b. The new movie opens at the Eldorado on Saturday.

(59) a. If he doesn't help me, I am finished.
b. Either he plays according to the rules or he doesn't play at all.

But Jason's going home is neither a cyclic event in nature, nor a scheduled event, nor is (55) a conditional statement. Of course, the conditional use of the simple present tense as present futurate in (59) explains why we have the simple present tense in all first disjuncts in examples (53) and (54). But this does not provide a context of use for (55) in isolation. What's worse, the treatment of sentences (53) and (54) as indirect conditionals would only throw us back to the previous considerations made under (i). At least, we find our intuition supported that (55) has no associated use on its own in the specified context and that therefore a straightforward application of $_{RCE}or$ to examples (53) and (54) does not seem possible.

But let's not give up so quickly. Although the first characteristic of $_{RCE}or$ seems inapplicable to the cases at hand, maybe we can gain some insight from the second characteristic nevertheless, to the extent that it *is* applicable, i.e. from the notion of corroboration. We have not only noted a negative bias in (53) and (54), but also a focal shift to the first disjunct. It is reasonable to assume that by an utterance of any

disjunction in (53) or (54) in the given contexts the speaker introduces the content of the first disjunct as a new discourse topic. It is moreover natural to require that new topics come with a presumption of common interest. Moreover, we would not want to say that the content of the first disjuncts in (53) or (54) is ever presented factually due to the simple present tense in all of these. So assume that, as an informal approximation, the impact of the first disjunct is that its content is presented as a *salient and noteworthy possibility*. The oddity of examples (53b), (54c) and (54d) could then be traced back to a failure to corroborate the introduction of a new discourse topic, viz. a salient and noteworthy possibility.

(60) a. It is a salient and noteworthy possibility that Jason goes home now, because, if he does not, Janet is sad.
b. ? It is a salient and noteworthy possibility that Jason goes home now, because, if he does not, Jane is happy.

Intuitively, it is a corroboration of the presentation of a state of affairs as salient and noteworthy to name a negative outcome of their non-instantiation (60a). But it is not a corroboration of the presentation of a state of affairs as salient and noteworthy to name a positive outcome of their non-instantiation (60b). One probably would like to say that (60a) expresses a coherent unit of thought, while (60b) does not, as might be supported by the observation that 'but' is strange in (61a), but perfectly acceptable in (61b).

(61) a. ? It is a salient and noteworthy possibility that Jason goes home now, but if he does not, Janet is sad.
b. It is a salient and noteworthy possibility that Jason goes home now, but if he does not, Jane is happy.

The case distills a further riddle. It the performance of some action α is at stake as a discourse topic, then to say that α has positive or negative results, clearly pertains to the given topic. It is perhaps not quite as obvious why statements about consequences of abstinence from performance of α, i.e. anti-result statements, should somehow pertain to the issue of α's performance. And indeed, anti-result statements do not in general. Only if the stated consequences of abstinence from performance of α are not positive, does an anti-result statement relate to the the issue of α's performance. Again, this is just observation. We could wrap up these intuitions more concisely and speak of a *Relation Puzzle*.

Relation Puzzle: If the action α it the topic of discourse, then statements of the form $[\alpha]\varphi$ relate to this topic, independent of the connotations of φ. But statements of the form $[\neg\alpha]\varphi$ relate to this topic only in case φ is negatively connoted.

Of course, we might speculate and say that, coming full circle, the reason why a statement of negative anti-results of α pertains to the issue of performance of α is that this is a statement of necessity. If we want to subscribe to this view, then the earlier noted Bias Puzzle and the just introduced Relation Puzzle collapse into one. But we certainly do not have to. Similarly, it might be hypothesized that the reason behind the logical weakness of NEG-ORs which was observed in section 2.1.1 is that NEG-ORs do not relate to the issue of performance of an action. But again, this connection between Relation Puzzle and the logical weakness of NEG-ORs need not be made. The Relation Puzzle is then just a very intriguing observation about the relevance of certain statements. Again, I dare say nothing about whys and wherefores here. All I am saying is that on the basis of these observations, mysterious as they may seem, we can explain the negative bias in disjunctions like (53) and (54) by reference to the relatedness requirement. In other words, I may not be able to explain why positive anti-results of an action α do not relate to the issue of performance of α, but seeing that this is so, I may at least suggest what the reason might be why examples (53b), (54c) and (54d) are odd. The disjuncts in (53b), (54c) and (54d) fail to relate.

4. Conclusion

This thesis aimed to shed light on the peculiar meaning asymmetries of the paradigm (1).

(1) a. Close the window and I will kill you.
b. Close the window and I will kiss you.
c. Close the window or I will kill you.
d. ? Close the window or I will kiss you.

I argued that IaDs, like (1a,b) are conditional statements. The imperative forms in these sentences are not associated with a directive. I blamed natural language conjunction ‘and’ to be responsible for these intuitions and I claimed furthermore that the meaning contribution of ‘and’ in pseudo-imperatives is nowhere close to being exceptional, but can be found in other linguistic contexts as well.

The exact same strategy was used to assess the meaning of IoDs, like (1c,d). The meaning contribution of natural language disjunction ‘or’ in pseudo-imperatives was said to be parallel to the meaning of ‘or’ in a variety of other linguistic contexts. I opted for a speech act conjunction analysis of IoDs such that the second speech act corroborates the first. These commitments helped explain the central problem of this thesis, viz. the NEG-OR Problem, in both its aspects.

Although the meanings of pseudo-imperatives have thus been sufficiently clarified, it is not the case that all related questions have been satisfactorily answered. Of course, the task to relate $_{LS}$*and* and $_{RCE}$*or* to existing theories of natural language conjunction and disjunction was entirely omitted.

However, the most pertaining outstanding issue is certainly what has been captured as the Bias Puzzle and the Relation Puzzle. To the extent that these puzzles are left unaccounted, it also remains an open end why natural language disjunction has a negative bias in some of its uses, namely when used to express conditional relations. The most straight-forward intuitive account of negative bias in disjunction is to say that anti-result statements $[\alpha]\varphi$ as such do not express what could be called in lack of a better term a *canonical relation*, unless they are special result statements, namely necessity statements. Canonical relations are, for instance, to be the cause of something, to be the result of something, or to be a reason for something. To be necessary for something is also a standard idea, yet to be the anti-result of something is likely not a canonical relation. Thus conceived, the reason why we have a negative bias in disjunctive statements '*A* or *P*' which aim to express a conditional statement 'If not *A*, then *P*' is that, for one, the disjunction '*A* or *P*' wants to be, at least partly about *A*, yet, for another, in order to relate to *A* the conditional statement has to be a necessity statement which is to say that *P* has to be negative. The intuitive account has traded one problem for another. The linguistic problem of how to explain the negative bias in conditional uses of disjunctive statements has been traded for the psychological problem of how to explain why we find that, schematically, $X \rightarrow good$, $X \rightarrow bad$, $\neg X \rightarrow bad$ all relate to X, while $\neg X \rightarrow good$ does not.

Note that with respect to IoDs, this open end was more or less smoothly circumvented by recourse to the properties of $_{RCE}$*or*. A directive $\nabla_G\alpha$ is corroborated by an assertion $Ass([\neg\alpha]\varphi)$ only if φ is undesirable for the addressee. For this to be explanatory we do not have to refine the notion of corroboration any further, and neither is the admittedly vague notion of a directive too vague to be revealing here. But in order to see that a similar trick does not work in general, consider the following example (62).

(62) ? It's probably a bad idea to invite Jason as well or we can have more beer for ourselves.

(45) a. It is probably a good idea to invite Jason as well or Jane will be sad all night.

The example (62) is sufficiently parallel to example (45a) not to look for reasons why we should not be able to assume that we have $_{RCE}$*or* in both cases. However, unlike with pseudo-imperatives, application of $_{RCE}$*or* cannot explain the infelicity of (62). For the assertion that it is a bad idea to invite Jason is certainly

corroborated, again just following the intuitive understanding of the term, by the conditional statement that we can have more beer for ourselves in case we do not invite Jason. It therefore seems as if the main achievement of this thesis has been to unveil sufficiently the surrounding linguistic phenomena to be able to draw a picture in which pseudo-imperatives have ceased to bewilder, yet at the same time not having revealed too much of the adjacent linguistic landscape in order not to have spoiled the beauty of a perspicuous arrangement.

REFERENCES

[1] Aloni, Maria (2003) 'On Choice-Offering Imperatives', In: Paul Dekker & Robert van Rooij (eds) *Proceedings of the 14th Amsterdam Colloguium*, University of Amsterdam, 57-62.

[2] van der Auwera, Johan (1986) 'Conditionals and Speech Acts', In: E. C. Traugott et al. (eds) *On Conditionals*, Cambridge University Press, Cambridge, 197-214.

[3] Bolinger, Dwight (1979) 'Is the imperative an infinitive', In: Bolinger, D. *Meaning and Form*, Longman, New York, 152–182.

[4] Broadie, Alexander (1972) 'Imperatives', In: *Mind*, **81**, p. 179-190.

[5] Clark, Billy (1993) 'Relevance and "Pseudo-Imperatives"', In: *Linguistics and Philosophy*, **16**, 79-121.

[6] Culicover, Peter W. & Ray Jackendoff (1997) 'Semantic Subordination despite Syntactic Coordination', In: *Linguistic Inquiry*, **28.2**, 195-217.

[7] Fillenbaum, Samuel (1986) 'The use of conditionals in inducements and deterrents', In: E. C. Traugott et al. (eds) *On Conditionals*, Cambridge University Press, Cambridge, 179-195.

[8] Geis, Michael & Arnold Zwicky (1971) 'On Invited Inferece', In: *Linguistic Inquiry*, **2**, 561-566.

[9] Geurts, Bart (manuscript) *Entertaining Alternatives: Disjunctions as Modals*, http://www.ru.nl./filosofie/tfl/bart/papers/disjunction.pdf.

[10] Grice, Paul (1989) *Studies in the Way of Words*, Havard University Press, Cambridge Massachusetts.

[11] Groenendijk, Jeroen & Martin Stokhof (1976) 'Some Aspects of the Semantics and Pragmatics of Performative Sentences', In: R. Bartsch (ed.) *Papers Presented at the Symposium 'Montague Grammar and Related Topics' Held in Amsterdam on January 12th-16th 1976*, 61-94.

[12] Groenendijk, Jeroen & Martin Stokhof (1984) *Studies in the Semantics of Questions and the Pragmatics of Answers*, Ph.D. thesis, University of Amsterdam.

[13] Han, Chung-hye (1998) *The Structure and Interpretation of Imperatives*, Ph.D. thesis, University of Pennsylvania.

[14] Horn, Laurence R. (1984) 'Towards a new taxonomy for pragmatic inference: Q-based and R-based implicatures', In: D. Schiffrin (ed) *Meaning, From and Use in Context*, Georgetown Universtiy Press, Washington, 11-42.

[15] Huddleston, Rodney (2002) 'The Verb', In: Rodney Huddleston & Geoffrey K. Pullum (eds) *The Cambridge Grammar of the English Language*, Cambridge Universtity Press, 71-212.

[16] Israel, Michael (2001) 'Minimizers, Maximizers and the Rhetoric of Scalar Reasoning', In: *Journal of Semantics*, **18**, 297-331.

[17] Klein, Daniel B. & Brendan O'Flaherty (1993) 'A Game-Theoretic Rendering of Promises and Threats', In: *Journal of Economic Behavior and Organization*, **21**, 295-314.

[18] Krifka, Manfred (2001) 'Quantifying into Question Acts', In: *Natural Language Semantics*, **9**, 1-40.

[19] Krifka, Manfred (2004) *Semantics Below and Above Speech Acts*, Talk held at Stanford University, April 9th, 2004.

[20] Lakoff, Robin (1970) 'Some Reasons Why There Can't Be Any Some-Any Rule ', In: *Language*, **45**, 608-615.

[21] Lawler, John M. (1975) 'Elliptical Conditionals and / or Hyperbolic Imperatives: Some Remarks on the Inherent Inadequancy of Derivations', In: Grossman, E. et al. (eds) *Paper from the 11th Regional Meeting. Chicago Linguistic Society*, Chicago Linguistic Society, Chicago, 371-382.

[22] Mastop, Rosja (2005) *What can you do? - Imperative Mood in Semantic Theory*, Ph.D. thesis, Universtity of Amsterdam.

[23] Merin, Arthur (1994) 'Algebra of Elementary Social Acts', In: Tsohatzidis, S. (ed) *Foundations of Speech Act Theory*, Routledge, London.

[24] Merin, Arthur (1999) 'Information, Relevance and Social Decisionmaking', In: L. Moss, J. Ginzburg, M. de Rijke (eds), *Logic, Lanuage and Computation, Vol.2*, CSLI, Stanford.

[25] Portner, Paul (2004) *The Semantics of Imperatives Within a Theory of Clause Types*, Talk held at Semantics and Linguistic Theory 14, Northwestern University.

[26] Schwager, Magdalena (2004) *Don't be late or you'll miss the first slot*, Talk held at the NASSLLI 2004 Student Session, UCLA, June 21st, 2004.

[27] Simons, Mandy (2001) 'Disjunction and Alternativeness', In: *Linguistics and Philosophy*, **24**, 597-619.

[28] Sperber Dan & Deirdre Wilson (1986) *Relevance: Communication and Cognition*, Basil Blackwell, Oxford.

[29] Stenius, Erik (1967) 'Mood and the Language Game', In: *Synthese*, **17**, 254-274.

[30] Wilson Dan & Deirdre Sperber (1988) 'Mood and the Analysis of Non-Declarative Sentences', In: Dancy, J., J. Moravvcik & C. Taylor (eds) *Human Agency: Language, Duty and Value*, Stanford University Press, Stanford.

[31] Zimmermann, Thomas Ede (2000) 'Free Choice Disjunction and Epistemic Possibility', In: *Natural Language Semantics*, **8**, 255-290.

Thank you:

Supervision, Guidance & Critical Support

Robert van Rooij

Discussion

Darrin Hindsill
Frank Veltman
Rosja Mastop
Magdalena Schwager

Jobs & Answers

Benedikt Löwe

Literature

Katrin Schulz
Olivier Roy
Sieuwert van Otterloo

Courteous Stand-by

Marieke Rohde

Intuitions & Open Ears

Maricarmen Martinez
Oliver Franke
Nikos Green

Foreign Language Intuitions

Chiaki Okura
Fuyuka Nakano
Aiko Takai

Well-Nigh Recommenders

Paul Dekker
Martin Stokhof
Peter Bosch

Further Highly Esteemed Opponents

Peter van Emde-Boas
Maria Aloni

Being There

Monika & Peter