

**IN SEARCH FOR CRITERIA OF RELEVANCE FOR
ARGUMENTATION THEORY**

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Abstract

Argumentation theory studies the process of arguing, which is seen as rational action where claims are made and justified. There is a tradition centred around classical logic, in which the logical theory is extended to be applicable to model inferences in argumentation. In this work the logical approach is viewed with the eye on it's ability to evaluate arguments against logical validity, and it is noted that validity is not sufficient, the problem being on relevance. During the last few decades argumentation studies as well as novell approaches to logic have proliferated. One of the most influential argumentation theories, which is presented in some detail, is the Pragma-Dialectical theory, which despite of it's many merits lacks satisfactory criteria for evaluating relevance. Important attempts to capture the concept of relevance are looked at in the field of logic, but not all are seen satisfactory. A theory by Gerhardt Schurz is seen as most promising and it's insights are applied to Pragma-Dialectical theory. Some formal properties of relevance are discussed and the use of Schurzian Relevant deduction is shown to be promising by applying it to Gettier's problem, which turns out to be resting on irrelevant argument. As a consequence, theory of justification and with it, the classical definition of knowledge is can be slightly revised.

Keywords: Argumentation, logic, relevance, relevant deduction

Tiivistelmä

Argumentaatioteoria tutkii väittelyprosessia, joka nähdään rationaalisena toimintana, ja jossa esitetään väitteitä sekä perustellaan niitä. Klassisen logiikan piirissä on traditio, jossa logiikan teoriaa käytetään argumentaatiossa esiintyvien päättelyjen mallintamiseen. Tässä työssä logiikan lähestymistapaa tarkastellaan sen argumenttien arviointikyvyn valossa, kun pätevyydellä tarkoitetaan loogista pätevyyttä. Havaitaan, että looginen pätevyys ei ole riittävä kriteeri, sillä relevanssi muodostuu ongelmaksi. Viime vuosikymmenien aikana argumentaation tutkimus samoin kuin ei-klassiset logiikan tutkimukset ovat saaneet elinvoimaa. Tässä työssä tarkastellaan erästä vaikuttavimmista argumentaatioteorioista, pragma-dialektista teoriaa, joka ansioistaan huolimatta uupuu tyydyttäviä relevanssin kriteereitä argumentaation arvioimiseksi. Logiikan piirissä on tehty tärkeitä yrityksiä relevanssin käsitteen hahmottamiseksi, mutta monet niistä eivät ole tyydyttäviä. Eräs lupaavimmista on Gerhardt Schurzin teoria, ja sitä sovelletaan pragma-dialektiikkaan. Joitakin relevanssin formaaleja kriteerejä tarkastellaan sekä osoitetaan että schurzilainen relevantin deduktion idea on lupaava soveltamalla sitä Gettierin ongelmaan. Osoittautuu, että Gettierin argumentti nojaa irrelevanttiin päättelyyn. Tämän seurauksena perustelun teoriaa sekä sen myötä klassinen tiedon määritelmää voidaan parantaa.

Asiasanat: Argumentaatio, logiikka, relevanssi, relevantti deduktio

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“Of all the notions of argumentative and dialectical appraisal, none is more intuitive than relevance, and none is in worse theoretical shape.” (Woods, 1994, 82)

1. INTRODUCTION

Argumentation is action involving arguments, which constitute of claims and grounds for accepting them. Argumentation theory is a theory which aims to describe and explain what is the nature of making claims and how these claims are backed up. Argumentation theory may be seen to fall under the general topic of epistemology, which is the philosophical investigation of knowledge. If knowledge is defined as true, justified belief, as the prominent (and classical) definition goes, then the domain of argumentation theory can be seen as explaining what justifying a belief involves. So argumentation theory has pertinence on a central philosophical question. The classical definition of knowledge requires justification, but someone might disagree with the definition, and claim that all that is needed for a belief to be knowledge is truth (or perhaps something else), but not justification. To see that such a conception would be problematic, it suffices to note that without justification a lucky guess would count as knowledge. For example, should I claim that it will rain tomorrow, someone might quite rightly say tomorrow (after noting that it did rain), that I nevertheless did not know that it would rain, but rather been lucky in guessing. So, justification does seem important. But what does justification mean exactly? This question, I hope, will be illuminated at least dimly.

But the business of argumentation theory is not confined to epistemology in a narrow sense, since we could make claims that are not strictly speaking knowledge claims. For example, I could claim that it we ought to buy beef rather than chicken for the barbeque party, and give reasons for it. What we ought to do has to do with something else, for example a decision, which is not knowledge in the strict sense. We still might need to justify beliefs, even if they are not epistemic in nature. Argumentation theory is interested in the action of justification of beliefs, whether epistemic in nature or not. Justification is important in scientific realm, given that science is about knowledge. But it is important also in politics, legal contexts, and indeed, in everyday lives of all people.

The starting point of understanding argumentation may be grounded on layman's conception, but to give a precise account of it is another thing. What is required for an argumentation theory to be adequate? Obviously, a definition of argument and argumentation sets the tone and direction of the investigation. I will postpone a more detailed definition until later, and start with a more loose description. A characterization of these central notions could be: *an argument* is a constellation of sentences, where some stand in justificatory relation to some statement, which serves as a claim. *Argumentation* is action, where arguments are put forward. Argumentation is considered to be human activity, done within language¹. Certain conventions² of use of central terms may be in place to complement this characterization of argument and argumentation. *Sentences* are linguistic entities, which serve various functions. Examples of types of sentences are assertion, question, request, imperative, and exclamation. Sentences consist of propositions and a part relating the proposition and the speaker (writer) and hearer (reader). *Propositions* are linguistic entities that correspond or denote to 'states of affairs', or plainly, to how things are. Propositions in sentences are accompanied by linguistic counterparts of relations towards propositions in question. An example perhaps gives an idea of what I mean; let *p* denote to a state of affairs 'it is raining'. One could have different kinds of relations towards this proposition. Speaker could be asserting to an audience that it is the case that *p*. Or someone could ask from someone else whether it is raining. Or someone could give an order 'make *p* happen!' (should the ordered have a rain machine, this would not be odd). A question could be: 'Are the states of affairs such that *p*?' (less archaic formulation: 'Is it raining?'), and an exclamation 'Oh, it is raining'. Sentences as such are not actions, but sentences are used to do things, that is, they have various functions. I might use a question sentence to inquire whether it is the case that *p*. Or I might claim that *p*, should someone not aware of it. Some of the functions are related to epistemic issues while others are not.³ Actions are intentional, by which I mean here that acts of uttering sentences are committed to (in order to) achieve a goal. In short, argumentation is activity to be

¹ I shall not consider a possibility of making claims or justifying them via non-linguistic means. The reason for this is that it is (or would be) rather peripheral activity compared to linguistic actions. Secondly, one could expand the "area of linguistic" into other areas; for example, if dancing would include symbolic functions and conventions of meaning shared by a community, it could possibly have enough characteristics to count as a language.

² I am aware that matters concerning these concepts are not simple or unproblematic, and I intend these characterizations to be precise enough for there to be basis for communication.

³ For example, I might recite a poem that is to induce aesthetic pleasure, not having any epistemic function in mind; on the other hand, I might express that I *doubt* that *p*, which begs for justification.

defined (linguistically) with speech acts. Terminology described above is unfortunately used in confusing manner in philosophy as well in other areas. One of the sad terms is ‘proposition’ which sometimes is used to refer to act of proposing that something is the case, sometimes to a sentence as a syntactical structure, sometimes to the content or a meaning of a sentence, sometimes types of sentences, and what have you. The confusion is not always impairing, it doesn’t always cause conceptual trouble, but when it does, it can be bad⁴.

The motivation for starting with a rather vague and narrow description is related to the fact that the theory of justification (as a subtheory of theory of argument) has been assimilated quite straightforwardly with theory of logic, rather than with argumentation theory. In argumentation theories more attention has been paid also to the pragmatic level⁵ of language use, compared to logical tradition. This is the case not throughout the history of the field, but especially in the first half of the 20th century. The situation becomes evident, when considering some widely read text books on logic, such as Irving Copi’s *Introduction to logic*, to name one but one example. The core of argumentation is argument, and the core of argument is the logical relation between premisses and conclusion. Even though there are allusions to extralogical phenomena, they are pushed to the marginal. The theory of argumentation has witnessed a remarkable proliferation during the last few decades on several fronts. One of the most important approaches is the Pragma-Dialectical research programme, on which I shall concentrate. This approach, albeit not as the sole one, has taken up issues previously neglected or marginalized, including aspects not belonging to classical theory of logic.

There exists an ambiguity that may cause misunderstandings unless different conceptions are kept carefully apart, namely the different senses in which the term ‘argument’ is used.

Joseph W. Wenzel differentiates three perspectives, each focusing on different aspect of argumentation. The *process* aspect has traditionally been studied by rhetoricians, who have been looking argumentation in terms of it’s persuasiveness or influence on the audience.

⁴ I am not sure if the matter is clear *enough* after the above characterization of the terms. In my opinion the term ‘proposition’ has been one of terms to cause a lot of trouble in the last hundred years or so.

⁵ By ‘pragmatic level’ I mean roughly the level where the *use* of sentences is the issue; other levels being syntactical and semantical level. I intend not to say that these levels are mutually exclusive, nor that pragmatic level is completely ignored by logicians.

The rhetoricians question could be: ‘How to adapt discourse to audiences in order to gain their agreement?’ The *procedure* aspect is studied by dialecticians, and their objective is to understand the rules governing critical discussions. The third aspect has to do with arguments understood as *products*, and they are the business of logicians. (Wenzel 1987, 101-102; Wenzel 1989, 85-86) In this work, procedure and product are the senses that should kept in mind. The approach chosen here corresponds most closely to the logical tradition and dialectical tradition. The dialectical rules as well as logical rules are to be taken into account when looking at arguments and argumentation with an evaluative eye.

The use of logic as the core theory of argument, or at least the theory for justification is not altogether dismissable⁶. For it may be seen that justification as such is not a very enlightning conception, when thinking about, say knowledge issues. More than just justification is needed, that is, *good* justification, not just any justification. This begs the question: what is good justification? The answer could be: a logical one. Whether this answer is acceptable depends on how well theory of logic fits the notion of good justification. Well, does logic deliver all the goods that are called for? The answer to this is negative, and especially the focus is on relevance. That classical logic leaves us wanting for criteria of relevant argument is shown in chapter 2.

Argumentation can go astray in numerous ways, only part being logical. To make matters clearer it is worth the trouble to investigate the question: what exactly is argumentation? This question is answered in chapter 3, where one of the most promising and appreciated theories of the present time, the Pragma-Dialectical theory of argumentation, is presented in some detail. Despite of all the merits of the Pragma-Dialectical theory, it lacks precise criteria for evaluating arguments, that is, criteria for judging whether arguments are good or not; it doesn’t lack them altogether, but rather it lacks precise criteria for deciding whether arguments are relevant. Clearly, relevance is intuitively a necessity for a good argument.

This brings us to the question: what is relevance? This is not an easy question, as can be inferred from chapter 4, where a number of attempts and approaches to capture the ‘logic of relevance’ is viewed. It seems that various ideas, some of which are quite straightforwardly extensions or modifications of classical propositional or predicate logic, are motivated with

ideas that do point in some sense or another to right direction, but do not quite capture the essence of relevance sought for in the argumentation theory, at least not in all respects. Furthermore, as Woods (1994, 82) says, relevance has proven to be problematic in other areas than arguments as well; explanations, asking of questions, and conversation in general involve relevance but the situation seems to be, according to Woods: “*No theory.*”

This might through one in despair, and make one give up. However, I believe that significant ideas have gone pretty much (albeit not completely) unnoticed by the field of argumentation theorists. I am referring to a theory by Gerhardt Schurz (1991), coined as relevant deduction theory. It was designed to explain some paradoxes (not in the strict sense of the word) in various fields, many similar at root to ones presented in chapter 2. I will pick the essence of the relevant deduction and apply its results to problematic inferences, which should ease ones despair.

Finally, in chapter 6 I will review shortly the ideas and strenghten the motivation to take the Schurzian conception seriously. I hope to do this by showing that a case against classical definition of knowledge due to Gettier is flawed, which I consider to be a very interesting result. My main thesis is that the Schurzian conception of relevance should be incorporated to Pragma-Dialectical theory of argumentation.

⁶ I wish not to imply that theory of logic is exclusively interested in issues of argument or justification.

2. PUZZLEMENTS

In this chapter I shall lay out different kind's of arguments or inferences (or forms of arguments)⁷ containing some irrelevant element. My motive to do this is to present the variety of phenomena that are seen as falling under the heading '(ir)relevance', and perhaps to high-light some features that may not be so explicitly stated by the authors, but that seem to prevail their conceptions. The way into the relevance question chosen here is through logic, and more precisely, classical propositional logic. By classical propositional logic I am referring to the 20th century logical tradition, for which a representative introductory text book is Copi's *Introduction to logic* (Copi 1978). Traditions besides the classical logical tradition could have been the starting point. One place to begin with could have been a non-classical logical tradition or an 'informal logic' approach⁸, or perhaps some recent argumentation theory. Another could have been a linguistically oriented tradition. The chosen starting point makes sense. The non-classical logical work is partly motivated exactly because the classical logic fails to accommodate the relevance problem, so high-lighting some classical problems also serves as a background for many of the non-classical logics. A number of writers in 'informal logic'-field, or more broadly under the heading 'argumentation theory' have tried to tackle the relevance problem, many of them taking note of the problems classical logic encounters. Linguistical point of departure could have made sense, especially if noting that some problems of relevance seem to be pragmatic in nature, and pragmatically oriented linguist might have a word also on these matters. As my goal is to deal with the relevance problem related to argumentation theory, and especially a normative one, the linguistical approach would be too much of a detour⁹. The contents of this chapter deal with arguments and inferences labelled irrelevant, and the purpose is to chart the territory.

⁷ A note on vagueness of terms here: arguments as products of argumentation include inferences. I am not mixing terms in the sense that an inference would be the same thing as an argument.

⁸ Informal logic – approach is one of the main traditions in late the 20th century; for a general introduction to the field of argumentation theory, see *Fundamentals of Argumentation Theory* (ed. by van Eemeren, Grootendorst and Henkemans et al 1996). Also other approaches are presented in this handbook.

⁹ Argumentation theory has been the business, or at least side business for many logicians in the 20th century. There are many theories linked to argumentation theory and many perspectives that could be considered when looking at the relevance problem. A fairly good idea of the state of the area can be gained from the above mentioned (van Eemeren, Grootendorst and Henkemans et al 1996).

2.1 Fallacies of Relevance

A widely read text book of logic, namely, Irving M. Copi's *Introduction to logic*, defines a fallacy as "a type of argument that may seem to be correct but which proves, upon closer examination, not to be so" (Copi 1978, 87). In the Copi's book, the fallacies are divided into two classes, formal and informal fallacies. The informal fallacies are further divided into fallacies of ambiguity and fallacies of relevance. In what follows, I shall briefly run through the fallacies of relevance¹⁰, and briefly point out some characteristics of Copi's analysis of the fallacies.

1. First on Copi's list is *argumentum ad baculum*. One commits the *ad baculum* if one appeals to force or threat of force to cause acceptance of a conclusion. Copi gives a few examples, of which I shall quote one: "The lobbyist uses the *ad baculum* when he reminds a representative that he (the lobbyist) represents so many thousands of voters in the representative's constituency [...]". An explanation is given to reader, that "[l]ogically these considerations have nothing to do with the merits of the legislation the lobbyist is attempting to influence" (Copi 1978, 88). From Copi's explanation it may be inferred that in his opinion in sound argumentation there must be a logical connection between the premisses and the conclusion, for the argument to be relevant.

2. In explaining *argumentum ad Hominem* (abusive version), Copi says that "[i]t is committed when, **instead of trying to disprove the truth of what is asserted**, one attacks the person who made that assertion" and concerning the circumstantial version of the *ad hominem* we are explained that that sort of arguments "**are not really to the point; they do not present good grounds for the truth of their conclusions** but are intended only to win assent to the conclusion from one's opponent because of the opponent's special circumstances" (Copi 1978, 89-90). So, according to Copi, the arguments must be directed towards proving or disproving a claim. Also, the arguments should be towards the point, which means that one should present good grounds for the truth of the conclusion.

3. **If one argues that a proposition is true on the basis that it has not been proved false**, or *vice versa*, one has committed the fallacy of *argumentum ad ignorantiam*.

¹⁰ Copi does not give an exhaustive treatment of different fallacies.

According to Copi, **”our ignorance of how to prove or disprove a proposition clearly does not establish either the truth or the falsehood of that proposition”**. However, according to Copi, there is an exception to the fallaciousness of *ad ignorantiam*, that is, in the context of a court of law, where a person is presumed innocent until proven guilty, and **because of this principle the defence may argue *ad ignorantiam* without committing a fallacy**. This exception to the rule is admitted by Copi, because of ”special legal principle”, and not including this special court-of-law-context, the *argument ad ignorantiam* is fallacious in every other context. Furthermore, there is no inconsistency between this exception and other contexts because of ”the special legal principle”. (Copi 1978, 91)

In order to be able to legitimately assert that a proposition is true (or false), one must have an argument in which one tries to prove (or disprove) that proposition. The exception in the context of court room is somewhat perplexing. Is the defence really allowed to argue *ad ignorantiam*? To me, it seems that the defence may argue that sufficient evidence to convict the accused has not been presented by the prosecutor. To convict the defendant, sufficient evidence must be presented, and this has to do with the burden of proof, which is a different matter. The defence may argue that the prosecutor has not presented a sufficient evidence, which - as I see the matter - is not a case of *ad ignorantiam*, presuming there are criteria available that specify what counts as sufficient evidence. Copi doesn't discuss the concept of *burden of proof*. Now, what comes to relevance, it seems that either Copi sees it legitimate for a defence lawyer to present irrelevant arguments, or *ad ignorantiam* does not make a defence lawyer guilty of irrelevance. The first case runs against all intuitions (and puts prosecutors objection 'irrelevant' into peculiar light). However, it is not clear (or likely, for that matter) why should we think that *only* in legal surrounding is there a presumption which makes *ad ignorantiam* a proper way to argue. Couldn't there be other situations? For example, suppose there is a decision to be made whether it is safe to cross a lake which is frozen, but there is uncertainty whether the ice will hold a man. To me it seems reasonable (in a way that is similar to Copi's court room example) to argue *ad ignorantiam* unless there is some evidence that the ice will not break in the middle of the lake. One could refer to a principle that for reasons of safety, one should presume that it is not safe to cross the frozen lake until it is proven safe. This would be a 'special practical principle'. I believe there is reason to state that Copi's exception is *ad hoc*, and to adequately analyse these matters there should be an explanation how extra-logical principles

of argumentation should be taken into account, to avoid the *ad hoc* - type of explanations. Here, it seems plausible to refer to the distinction made by Wenzel (see above, in introduction), between the process, procedure and product aspect of argumentation. In the court room, it could be said, there is a *procedural* rule that the defendant is presumed innocent until proven guilty. It is arguable that these sorts of rules underly argumentation also in other contexts than in court room alone, however I shall not pursue this line of thought any further here. I will only note that this would be a general point, and it would not be *ad hoc* in nature, unlike Copi's account.

Here it should be noted that Copi seems to have in mind different sorts or aspects of relevance in the case *ad baculum*, *ad hominem* and *ad ignorantiam*, but that he doesn't differentiate between them, thus conflating different senses of relevance that are connected to different senses of the term 'argument'. Logical failures as well as extra-logical failures are cast into the irrelevance – category.

4. "The *argumentum ad misericordiam* is the fallacy committed when pity is appealed to for the sake of getting a conclusion accepted, where the **conclusion is concerned with a question of fact rather than a matter of sentiment.**" The *argumentum ad populum* is not defined very differently from the previous one; in *ad populum*, it is attempted to "win popular assent to a conclusion by arousing the emotions and enthusiasms of the multitude, **rather than by appeal to the relevant facts**". (Copi 1978, 92-93)

5. One is guilty of *argumentum ad verecundiam* if one appeals to an authority **in matters that the authority is not expert in**. For example, if someone appealed to Einstein to settle a political argument (presupposing that Einstein is not an expert in the field of politics). (Copi 1978, 95)

Interestingly, also *ad verecundiam* is put to the class of fallacies of irrelevance. Here, if someone argued that "Einstein, who is a great scientist, said that the government should vote for proposition X, therefore, the government should vote for proposition X", he would not be giving good grounds for his thesis that the government should vote for proposition X, and subsequently the premiss of the argument (that contains the appeal) is not sufficient establishing the acceptability (or truth) of the conclusion. When arguing, it is perfectly

acceptable to appeal to an authority, but one must be careful not to appeal to a wrong authority, that is, to a person that is not really an authority in the required field. To avoid committing the fallacy of *ad verecundiam* one has to make sure to appeal to a *relevant* authority. So, it is not a logical question of relevance, but some other *kind* of relevance that needs to be addressed; what is a *relevant* authority? I shall not try to answer this question, since it seems to lead to epistemic questions far beyond the scope of this work.¹¹

6. The next fallacy in Copi's list is called the *accident*, and it is characterized as follows: "the fallacy of accident consists in applying a **general rule to a particular case whose "accidental" circumstances render the rule inapplicable**". The fallacy of *converse accident* is the counterpart of *accident* and it is committed when **a rule that is supposed to apply generally, is generalized from atypical or unusual cases**. (Copi 1978, 95-96)

7. The fallacy of *False cause* is the case when a **mistake** has been made in identifying a cause of a given effect. In the more specific form, *post hoc ergo propter hoc*, it is inferred that an event is the cause of another event merely because the former takes place before the latter. According to Copi, the problem of what is a good argument for establishing a causal connection between two events is a central problem of inductive logic and scientific method. The reader is given an example of what is not a good argument for there being a causal connection: "the savage's claim that beating drums is the cause of sun's reappearance after an eclipse...". (Copi 1978, 97)

8. Also, into the class of fallacies of relevance is cast the *petitio principii*, or *begging the question*. If, when arguing for a conclusion, one relies on that very same conclusion, it is said that the arguer is begging the question. Copi reports that "**the premiss is not logically irrelevant to the conclusion, for if the premiss is true the conclusion must be true also... . [T]he premiss is logically irrelevant to the purpose of *proving* or *establishing* the conclusion**". (Copi 1978, 97-98)

¹¹ It is fair to note that fallacies in general, as well as in particular *ad verecundiam*, have received quite a lot of attention in the Pragma-Dialectical theory, and it is not that there is nothing to say about this. In the end, what I do not think that the question of relevant authority in the end is not in the scope of logic or argumentation theory.

In the the just quoted explanation, it is interesting that Copi identifies the fallaciousness of an argument to be in it's failing to meet it's *purpose*. An arguments purpose appears to be a quite different matter from logical connections between premisses and conclusions, that were the issue for example in *ad baculum*.

9. The fallacy of *complex question* is committed by the 'investigator' in his/her inference after a 'witness' has answered a question made by the 'investigator' (Copi 1978, 100):

INVESTIGATOR: Did your sales increase as a result of your misleading advertising?

WITNESS: No.

INVESTIGATOR: Aha! So you admit that your advertising was misleading. Do you know that your unethical conduct can get you into trouble?

In this example, it didn't matter whether the answer was 'yes' or 'no'. Either way, the witness admits that he/she has advertised misleadingly. It is worth noticing that - according to Copi - this fallacy occurs in it's most explicit form in a dialogue. (Copi 1978, 99-100)

10. The last fallacy in Copi's list is the *ignoratio elenchi*, which "is committed when **an argument purporting to establish a particular conclusion is directed to proving a different conclusion**". For example, a prosecutor may argue that a murder is a horrible crime while the prosecutor is supposed to give arguments for the accused being guilty of that horrible crime. The prosecutor may succeed in influencing the jury psychologically, but the prosecutors conclusion that a murder is a horrible crime is logically irrelevant to the point, namely, whether the accused is guilty or not. (Copi 1978, 100-101)

According to Copi, what is common to all fallacies of relevance (except *petitio principii*), is that the premisses are logically irrelevant to their conclusions. And because they are logically irrelevant to the conclusion, they are incapable of establishing the truth of the conclusion. (Copi 1978, 87-88)

As noticed in the case of *petitio*, the logical connection between premisses and conclusion is not enough for an argument to be relevant. However, one could see that Copi is implying that a logical connection is a necessary condition for an argument to be relevant. But the

logical relevance is not a sufficient condition for a sound argument. But now, the question is, how do we know whether a premiss is irrelevant or relevant to the conclusion?

Under the heading "Analogy and Probable Inference" Copi discusses the explicitly the concept of relevance. He states that "...it is doubtful that there is any disagreement about the *meaning* of relevance". However, the *criterion* for relevance in a given case may not be as clear, even if the *meaning* of the concept of relevance is clear. Copi goes on and gives a criterion: "An analogy is relevant to establishing the presence of a given attribute [...] provided it is drawn with respect to *other circumstances affecting it*. One attribute is relevant to another, for purposes of analogical argument, if the first affects the second, that is, if it has *causal* or determining effect on that other." (Copi 1978, 389) This is utterly unhelpful if we try to grasp criteria for relevance. The list of fallacies is of little or no assistance. One confusing thing is that shortcomings of relevance are sometimes related to the contents of premisses and conclusions, and sometimes to discursive (or procedural) rules, thus indicating that different senses of the term *argument* are not kept distinct.

2.2 Walton's 'Astounding Inferences' and other peculiarities

In the classical propositional logic, there is a number of valid inference forms that some logicians (that is, those with an interest to apply formal logic to natural language argumentation) have not been very happy with. In this section, I shall present some of those inferences. Of the following inferences, the first four are called *Astounding Inferences* by Douglas Walton in *Topical Relevance in Argumentation* (1982, 26). The examples are all instances of (classically) valid forms of inferences, but despite their validity, something seems to be wrong about them, when evaluated with respect to relevance in argumentation. Naturally, what is essential here, is the definition of a *valid inference*: a (classically) valid inference is such that it is impossible at the same time for the premisses to be true and the conclusion false¹². I shall use symbols in an ordinary way, but since conventions vary to a degree, I will state the usage anyway. Premisses are written over the line, and conclusion

¹² Validity is defined and described in formulations that are taken to be identical, but in fact are not, thus covering up some possibly essential about the nature of validity. For example, it is said that validity has the feature of being *truth preserving*. Preserving though is not an accurate description and certainly it adds something to the definition given in the text above, namely that truth endures through inference. Students in

under the line. The symbol (\therefore) is read 'therefore', meaning that the sentence followed by it is inferred from the sentences above the line. For material implication I will follow Walton's usage (\supset), for conjunction I will use (\wedge), for negation (\sim), and for inclusive disjunction (\vee). Other symbols will be introduced when first mentioned.

$$(1) \quad \frac{B}{\therefore A \supset B}$$

For example, from "Socrates is dead", one may validly infer that "If Walton sits down, Socrates is dead". Here, what seems to be the problem, is that by the definition of the truth value of material implication, if the consequence is true, then the material implication is also true, no matter what truth value the antecedent takes, or for that matter, what proposition the antecedent denotes. Since it is true that Socrates is dead, the inferred conclusion is also true, without there being any connection between Socrates' being dead and Walton sitting (or not sitting, for that matter) down.

$$(2) \quad \frac{A}{\therefore \sim A \supset B}$$

An example of this one is: From "Snow is white" one may validly infer the conclusion "If snow is not white, then triangles are four-sided". Here also, there seems not to be any connection between the antecedent and the consequent of the implication.

$$(3) \quad \frac{\sim(A \supset B)}{\therefore A}$$

Walton's (astounding) example of this form of inference is: From "It's not the case that if I break my leg today I'll ski tomorrow" one may infer "I'll break my leg today". The premiss of (3) seems to be quite reasonable, but the conclusion is less so.

introductory logic course are understandably perplexed when told that contradiction in the premisses results

An example of the inference form (4): from premisses "If they withdraw if we advance, we'll win" and "We won't advance" one can infer "We'll win", which is a quite astounding inference indeed.

$$(4) \quad \begin{array}{l} (A \supset B) \supset C \\ \hline \sim A \\ \hline \therefore C \end{array}$$

Given these examples, one might be already ready to give up the classical logic, since it may not seem to correspond to the intuition one has of logic. Furthermore, the situation is even worse, since there are more astounding inferences that Walton doesn't discuss. Here is one:

$$(5) \quad \begin{array}{l} \hline B \\ \hline \therefore \sim B \supset B \end{array}$$

From the premiss "Socrates is dead" one may validly infer: "If Socrates is not dead, then Socrates is dead". The inference form (6) is also somewhat odd (Blair 1989, 74), for example, from the premiss "Socrates is dead" one can infer validly, that "Socrates is dead". It should be noted, that whereas (1) - (5) seem strange with respect to the definition of valid inference, (6) is not at odds with it. It's oddity (or *irrelevance*, I might put it) seems to follow from the obviousness of it's validity.

$$(6) \quad \begin{array}{l} \hline B \\ \hline \therefore B \end{array}$$

Also, the inference forms (7) and (8) (which are called 'Simplification' and 'Addition', respectively) seem to contain an irrelevant element in the sense of obviousness or triviality.

$$(7) \quad \begin{array}{l} \hline A \wedge B \\ \hline \therefore A \end{array}$$

yields to validity.

$$(8) \quad \frac{A}{\therefore A \vee B}$$

From the conjunction "Socrates is dead and Plato is dead" one can infer "Socrates is dead". An example of (8): From "Socrates is dead" one may infer "Socrates is dead or Plato is alive". The uneasiness could alternatively be due to the irrelevance of the second disjunct, rather than triviality. Also, triviality plays a trick in (9), where X and Y are any sentences such that one may validly infer Y from X. (What it says, is that if Y can be validly inferred from X, the validity of inference is not affected if the very same premise X occurs in the premises more than once.)

$$(9) \quad \frac{X \quad X}{\therefore Y}$$

Two more valid inferences are worth mentioning at this point. From the definition of classical validity it follows that the following inferences are valid:

$$(10) \quad \frac{A \wedge \sim A}{\therefore B}$$

$$(11) \quad \frac{A}{\therefore B \vee \sim B}$$

In (10), the problem of relevance seems to be in the conclusion, which could be any sentence what so ever. How is it, that any sentence could be derived at in a valid inference?

In (11), any sentence what so ever serves as a premise for a (tautological) conclusion.

These examples should be sufficient to show that the validity of an inference does not entail that the inference is relevant, at least not in any common sense of the term. More precisely, these examples show that validity is not a sufficient criterion for an inference to be relevant.

But perhaps it is a necessary condition? To show that it is not, it would suffice to present an inference that is relevant but that fails to be valid. However, I shall leave this question open for the moment and return to it later. There are other inferences where relevance is an issue as well. These examples are intended to motivate the search for relevance criteria and not settle with validity in the classical logic sense as a criterion by which inferences should be evaluated. On the other hand, should one approach the field of argumentation from the logical camp, the Copi's list of fallacies and the analysis provided should leave one wanting further explanation what comes to relevance.

3. THE PRAGMA-DIALECTICAL THEORY OF ARGUMENTATION

In this chapter I shall present the Pragma-Dialectical theory of argumentation, my intention being that I could in the subsequent work throw some light on the problem of relevance especially with respect of the Pragma-Dialectical theory itself. I'll be primarily concerned with aspects that, I think, have at least some bearing on the problem of relevance, and refrain myself from presenting all aspects of the theory as they are not relevant to the problem of relevance in argumentation. The connections to it may not be immediately apparent, nor will the connections be direct. The rationale is that relevance issue is not restricted to inferences, but is pertinent also in the pragmatic level, the symptoms being visible from the fallacy list in previous chapter. The relevance problem is not, as will be seen, alien to Pragma-Dialectics. The main figures of the P-D research programme, van Eemeren and Grootendorst, have published articles dealing directly with the concept of relevance¹³, and there drawn guide lines as to how to approach the problem within a Pragma-Dialectical framework. However, I believe that more study is needed on the subject. But first, a sketch of the Pragma-Dialectical argumentation theory and its general features is needed before proceeding to the more specific questions.

It is possible to resolve disputes in different ways, but here we are interested in a way that is the object of argumentation theory. A civilized way of resolving disputes is by exchanging views in a discussion between participants. Views may be criticized, attacked and of course defended, and argumentation theory is concerned with the possibility of studying this discourse phenomenon, which is called here, following the terminology of P-D, *an argumentative discussion*. In an argumentative discussion there is a subject (or subjects) that the discussants have a disagreement about. The subjects may vary greatly; the subject may be actions to be taken, facts, ideas, theories, attitudes, and so on. In the ideal model, the subject matter is explicitly stated by one of the participants. In P-D the term that is used to refer to this subject matter is *the expressed opinion*, which consists of the proposition of a speech act. An expressed opinion may be positive or negative. The language users' attitude towards an expressed opinion is referred to by the terms *standpoint* and *point of*

¹³ See: References in the end.

view¹⁴. Also the standpoint may be positive or negative. To an externalized standpoint is attached a commitment that is positive or negative depending on the standpoint: in a positive standpoint one expresses a *positive committedness* and in a negative standpoint one expresses a *negative committedness*. The commitments relate to the fact that in a discussion there are at least two people involved, and that one language user is addressing to another language user, who is to be seen as a *rational judge* of argumentation. This means that the addressee is to be seen as capable of assessing and evaluating arguments put forward by the arguer. The arguer is seen as advancing arguments as an attempt to justify an expressed opinion to the satisfaction of a *rational judge*. The judgement is to be made “on the contribution it makes to the resolution of the dispute”. (E & G 1984, 2, 5)

3.1 Four meta-theoretical presuppositions

In P-D the concept of *externalization* plays an important role. It means that argumentation is seen as “*verbal communication of the subject to investigated*”, in distinction to lapsing into ‘internalization’ of the subject. In *internalization*, according to van Eemeren and Grootendorst, there exists a danger of psychologization, where a theorist attributes to a language user ‘thoughts’, ‘ideas’ or ‘motives’ without sufficient grounds. The theorist is to primarily rely on what is actually said and performed, explicitly or implicitly, in the speech acts. (E & G 1984, 5-7)

Also an important aspect that needs to be noted when studying argumentation is that language has functions, i.e. language use, and especially argumentation, is purposive activity. The term *argumentation* encompasses two senses of the colloquial use of the word: the *process* and the *product* of argumentation. This ambiguity is appreciated in P-D, and neither sense of the term is overlooked. The process - sense of the word refers to the *purposive use of language*, and the product - sense refers to the *constellation of statements*. It is to be noticed that in some logically oriented approaches the object of the study of argumentation is seen exclusively in the product - sense, and these products are primarily

¹⁴ The terms *standpoint* and *point of view* are used synonymously in the P-D. I shall later use the term *claim* synonymously with these; other terms could also be used.

studied in respect of their logical properties¹⁵. In their theory, to refer to the purposiveness aspect of argumentation, van Eemeren and Grootendorst speak of *functionalization*. (E & G 1984, 7-9)

Yet another important feature of P-D is the *socialization*, by which is meant that argumentation is to be seen as *communicative* and *interactional* activity¹⁶. The former term refers to there being (paradigmatically) at least two persons involved in a language usage situation where one person is trying to get another person understand what (s)he means. The latter term is to convey that the addressee is to react to the arguments that the arguer puts forward. Argumentation is seen as, to put it in simple words, a form of dialogue. (E & G 1984, 9, 14)

In addition to externalization, functionalization and socialization, in P-D also *dialectification* is seen as an essential feature of argumentation study. ‘Dialectical’ stands for an insight that argumentation should be viewed as a critical exchange, where someone’s expressed opinion concerning a point of view is attacked by someone. That is, there are roles of protagonist and antagonist that have been distributed between the language users, and argumentation consists of protagonists statements put forward to justify a standpoint to the satisfaction of the antagonist and critical judgements and responses to it made by an antagonist. (E & G 1984, 15-18)

The (pro- and contra-) arguments of the protagonist and the doubts (and other critical responses) of the antagonist together constitute interaction for which the theory of argumentation should provide ‘rules of conduct’ according to which the fertility of the moves made by the participants could be measured; ‘fertile’ understood in the sense that it furthers the resolution of the dispute and it be acceptable to participants of discussion. The rules of conduct should be applicable to all speech acts that may be of use in the resolution of a dispute and they aim to ensure the efficiency and thoroughness¹⁷ of the discussion.

¹⁵ Or, as noted above when discussing Copi’s account, the product - sense is confused with process or procedure - senses.

¹⁶ The communicative and interactional aspects are especially realized when formulating the speech act theory. (See below)

¹⁷ Here, ‘efficiency’ and ‘thoroughness’ should not be understood too restrictedly. They are meant to cover specifically stated requirements for rules; van Eemeren and Grootendorst refer to Barth & Krabbe (1982), chapter 3, where the issue is more elaborated. van Eemeren and Grootendorst have condensed from Barth &

Besides a critical attitude the discussants need to adopt a co-operative attitude if they wish to resolve a dispute. (E & G 1984, 17-18) The idea of argumentation to be activity that aims at *resolving* a dispute is meant to make a distinction; it parts the approach from those that might otherwise seem to be similar or in accordance with the P-D approach. Resolving a dispute is not the same as consensus or compromise. If the aim is consensus or compromise, one might avoid voicing out doubt and just 'go along', or one might settle for an agreement just to end the dispute, or accept a premiss without really committing to it.¹⁸

These considerations are followed by a formulation of a *norm of rationality*:

A language user taking part in an argumentative discussion is a rational language user if in the course of the discussion he performs only speech acts which accord with a system of rules acceptable to all discussants which furthers the creation of a dialectic which can lead to a resolution of the dispute at the centre of the discussion. (E & G 1984, 18)

Argumentation is defined thus:

"Argumentation is a speech act consisting of a constellation of statements designed to justify or refute an expressed opinion and calculated in a regimented discussion to convince a rational judge of a particular standpoint in respect of the acceptability or unacceptability of that expressed opinion." (E & G 1984, 18)

3.2 Four Stages of Argumentation

In P-D, argumentation is divided into four stages, which may or may not all be explicit in an actual argumentation. Whether the stages are explicit or not in actual argumentation, isn't essential here, they are part of the ideal model of argumentation in the P-D fashion. When argumentation is seen as a dialectical process in which there are at least two persons¹⁹

Krabbe as follows: "The rules must promote the conclusion of the discussion with an unambiguous result, the rapid reaching of that result, the consideration of all possibilities, the lucidity of the discussion and step-by-step approach to the resolution of the dispute. This means that the rules must be *realistic, dynamic, radical, orderly* and *systematic*." (E & G 1984, 17-18)

¹⁸ This is not to say that one should always aim at resolving a dispute; a compromise might be wise in, say political circles or in relationships.

¹⁹ It is possible to analyze for example an argumentative text, where there isn't really but one participant, *as if* there was a silent opponent, to whom the arguer addresses the arguments. In practice, also used as a rhetorical device, an arguer may ask him/herself a critical question, thus anticipating criticism, and defending his/ her standpoint. What is essential is that argumentation is seen as a social phenomenon. Obviously, also *more* than two participants may be active in argumentation, in which case each participant is to adopt either the role of proponent, or the opponent. About the roles, see below.

involved, the four stages are functional. (van Eemeren, Grootendorst and Henkemans et al 1996, 281)²⁰

The first stage is called *The Confrontation stage*, where it is established that there is a difference of opinion, that is, someone has put forward a standpoint, which is not accepted²¹ by someone else. An explicit disagreement is not always a necessary requirement for argumentation to get started, for it is obvious that an arguer might know (or make a guess) in advance that the standpoint he/she is about to defend, needs argumentation to support it in order for it to become accepted by another party. However, in the ideal model - often as well in practice - the confrontation stage is necessary, because without confrontation there is no sense in arguing for (or against) a standpoint, unless there really is a difference of opinion, and usually, this difference of opinion should be brought about, in a way or another. If someone defends a standpoint and presents an argument to support that claim, and it happens that the addressee has shared that opinion, the argument has been quite futile (and the addressee has gotten frustrated, if the argument has been a lengthy one). (E & G 1984, 85; E & G 2004, 60) The crucial point related to the confrontation stage is that there is a proposition (a standpoint) which is not accepted by the antagonist. This point will have an effect on dealing with the relevance issue.

Once it is established that there really exists a difference of opinion, the discussants may enter into the second stage, that is, *The Opening Stage*. Here the parties are to determine whether there is hope for resolving the difference of opinion. In order to be able to solve the dispute within a critical discussion, at least some requirements should be met. For one thing, the roles of discussants should be distributed so that one participant takes the role of a *proponent* and another takes the role of an *opponent*. The one who assumes the role of proponent takes as a responsibility to defend a standpoint. The opponent is to critically respond to the defence the proponent advances for the standpoint. Also, there should be an agreement as to what rules are in effect during argumentation. Should there be no agreement about the rules, it is not likely that there is a possibility of resolving the dispute,

²⁰ For a short exposition but a good over view of the P-D theory, see van Eemeren, Grootendorst and Henkemans et al, chapter 10, p.274-311.

²¹ By "not accepted by someone" is meant that someone has cast doubt on the point of view.

not at least in an orderly way of critical discussion.²² Also there needs to be at least some common presuppositions, that is common ground from where to begin the discussion. (E & G 1984, 85; E & G 2004, 60-61)

The third stage is *The Argumentation stage*. Here the proponent puts forward arguments to defend a standpoint against doubts raised by the opponent. The objections may vary, from minor doubts that require but little supportive arguments to be overcome, to complex counter-arguments that may require a vast system of arguments. The different structures of argumentation are explained later. This phase is often seen by theorists of argumentation as constituting the whole critical discussion, but, according to the P-D theory of argumentation, also other stages are indispensable in a full scale theory, which is not, of course, to undermine the importance of this stage. (E & G 1984, 86; E & G 2004, 61)

The argumentation stage is followed by *The Concluding Stage*, where the outcome of the argumentation is viewed. The protagonist may have withdrawn the standpoint and the dispute has been resolved in favour of the opponent. If the protagonist has managed to overcome all the doubts of the opponent, then the dispute has been resolved in favour of the protagonist. It is also possible that the dispute doesn't get resolved, and this is the case when one or more parties disagree on the outcome of the discussion. In all cases, the outcome is not, according to P-D, resolved or unresolved for good. For it is always possible to start a new dispute, that is, to begin everything all over again (which could be reasonable if, say, previously unknown and relevant information was to emerge later). (E & G 1994, 147-149; E & G 1984, 85-87; E & G 2004, 61-62)

3.3 Speech acts in argumentative discussions

In this section I will present the Pragma-Dialectical view of speech acts, following van Eemeren's and Grootendorst's theory. As is well known, the two inspiring studies on speech acts are *How to Do Things with Words* by John Austin and *Speech Acts* by John Searle. Their insights are used in the Pragma-Dialectical theory of argumentation. The speech act theory is not adopted without amendments or corrections on Austin's and

²² To my knowledge, neither van Eemeren nor Grootendorst discuss a situation where some rules but not

Searle's work. I am not concerned how speech act theory has evolved since the Austin's first publication on the subject, nor will I have anything to say about van Eemeren's and Grootendorst's discussion on various positions taken by various authors on the matter. I simply wish to present the speech act theory as it has been designed for the Pragmatic-Dialectical theory of argumentation. (E & G 1984, 19)

Whenever people speak to each other, there is a number of acts they perform or may perform, simultaneously. First, there is the act of uttering noises²³ (or perhaps a better word would be *sounds*), words and sentences. Secondly, they inform, argue, bring about boredom, convince, persuade, and so on. In other words, they produce different sorts of effects. These are called *perlocutionary acts*²⁴. Thirdly, a speaker (usually) performs a *propositional act*, which consists of referring to something and predicating properties to it. The fourth act is called the *illocutionary act*, by which is meant a class of acts including for example making statements, promising, warning, requesting information, and so on. (Searle 1972, 39; Searle 1980, 25; E & G 1984, 19)

Above it was mentioned in connection of the meta-theoretical presumptions of the P-D, that language serves both communicative and interactional purposes (*socialization*). Now these functions are linked to the speech act theory. The former function is served in a language use situation by the illocutionary effects and the latter is served by the perlocutionary effects. In order for the illocutionary act to be 'happy' it should have succeeded in producing the effect it was intended to produce in the hearer, namely, understanding the speech act. The perlocutionary effects of speech acts are divided into two classes: *inherent perlocutionary effect* and *consecutive perlocutionary consequence*. Analogously with illocutionary acts, the perlocutionary acts have 'happiness conditions' that need to be fulfilled, without which the act is not successful. Aligned with the two classes of perlocutionary effects, there are different conditions to be met before an act is fully

others, would be agreed upon by the participants. I shall disregard the matter also.

²³ One could wonder whether uttering noises is *an act*, or rather behaviour. In the context of speaking uttering noises is intentional, comparable to using sign language or moving a pen across paper with the intention to communicate through the media chosen; the physical act of moving a hand when using sign language is not behaviour. Uttering noises could be mere behaviour, like when breathing heavily after climbing stairs, or sighing audibly in boredom.

²⁴ Searle thinks that the perlocutionary act is not always present when a speaker utters words: Searle thinks that uttering "Hello" doesn't include a perlocutionary act, since in greeting the only thing required for the perlocutionary act of greeting to be complete, is that the hearer *understands* being greeted. (Searle 1980, 46)

successful. In a speech situation, a hearer may or may not accept the speech act made by the speaker. The speech act may have, regardless of the acceptance or non-acceptance also have other effects. The inherent perlocutionary effects are limited to the speech situation, exclusively, whereas all other effects the speech act may have are put into the class of consecutive perlocutionary consequences. Depending on how these perlocutionary effects are as the speaker intended, they are called *minimal* and *optimal*, that is, for example, if a person warns another person, the minimal effect (inherent perlocutionary effect) is the accepting of the warning, and the optimal effect (consecutive perlocutionary consequence) could be keeping mouth shut. (E & G 1984, 23-25)

van Eemeren and Grootendorst restrict their attention only to specific perlocutions. It is possible that a speech act has perlocutionary effects that are completely unintended by the speaker. The criterion for distinguishing intended perlocutionary acts and other, unintended consequences, is "whether the speaker can reasonably be asked to *provide his reasons* for causing the effect or consequence in question" (E & G 1984, 27). Also, a speech act may have effects (or consequences) that are not based on the understanding of the utterance, which are called *non-illocutionary perlocutionary effects or consequences*, which include propositional, contextual, force, and utterance perlocutions. The last restriction is important with respect to the interactional aspect of language use. The perlocutionary acts are seen to be undergone a rational decision by the listener, on which account the listener is not viewed as a mere passive respondent. The effects are seen as weighed responses, and indeed, should someone advance an argument and the listener accept (or reject) the argument without a rational consideration, the acceptance (or rejection) would seem to run against intuitions about the meaning of 'accepting an argument'. (E & G 1984, 26-28)

Argumentation, being a form of language use, and having both communicative and interactive aspects, consists of illocutionary acts and perlocutionary act of convincing. The grammatical counterpart of a single argument (a single illocutionary act) is not a single sentence, for it may consist of several statements, and thus, grammatically consist of several sentences. As argumentation consists of several sentences, and by uttering a sentence one performs at the same time an illocutionary act, and as argumentation is seen as an illocutionary act, van Eemeren and Grootendorst raise the question of how to take it that argumentation has two *illocutionary forces*. Their answer is that argumentation is an

illocution consisting of a complex of statements, which is labelled as a *constellation*. Argumentation, then, is viewed as a phenomenon of higher textual level, it is ‘made of *elementary illocutions* and it is a larger communicative unit (*compound illocution* or *illocutionary act complex*). The elementary locutions correspond to grammatical sentences, and a specific sequence or constellation of elementary locutions can be seen (in higher textual level) as an illocutionary act complex of argumentation. Now then, speech acts function as argumentation but also as an assertion (or some other assertive). In addition, it should be noted that van Eemeren and Grootendorst regard argumentation distinct from the expressed opinion. The expressed opinion is intended to be justified or refuted by argumentation. Argumentation then stands in a specific relation to an expressed opinion (their position at this point contrasts to a view in which conclusion is a part of an argument). (E & G 1984, 29-35; E & G 1989, 368)

What is an illocutionary act complex of argumentation and when is it correctly performed? van Eemeren and Grootendorst address the question and give conditions for it (E & G 1984, 39-46), which I shall represent below in a slightly condensed form. They make a distinction between (constitutive) conditions of a *recognizable* and a *correct* performance of illocutions. In the following conditions, *S* stands for a speaker, *L* stands for a listener, *S_i* is a statement, and *O* stands for an expressed opinion. First, the illocutionary act complex of argumentation has to meet the *propositional content condition* (E & G 1984, 43):

The constellation of statements S₁, ..., S_n consists of assertives in which propositions are expressed.

Second, it has to meet the *essential condition* for pro-argumentation [and contra-argumentation] (ibid):

Advancing the constellation of statements S₁, ..., S_n counts as an attempt by S to justify [refute] O to L's satisfaction, i.e. to convince L of the acceptability [unacceptability] of O.

If the propositional content condition is not met, then no proposition is expressed, and if the essential condition is not fulfilled, then there isn't an illocutionary force of an assertive. In

the first case there isn't a proposition on which a listener could agree or disagree. In the latter case, there is no argumentation, but orders, questions, or what have you. (ibid)

These conditions together with the following *preparatory* and *sincerity conditions* form the *correctness conditions for argumentation*. Preparatory conditions for pro-argumentation [and contra-argumentation] are:

1. *S believes that L does not (in advance, completely, automatically) accept [accepts (for the time being, in whole or in part, more or less)] the expressed opinion O.*
2. *S believes that L will accept the propositions expressed in the statements S_1, \dots, S_n .*
3. *S believes that L will accept the constellation of statements S_1, \dots, S_n as a justification [refutation] of O.*

If one of the preparatory conditions fails, the speech act is said to be *inexpedient*²⁵, whereas in failing to meet any of the sincerity conditions, the speech act is said to be *untrue*.

Sincerity conditions for pro-argumentation [and contra-argumentation] are:

1. *S believes that O is acceptable [unacceptable].*
2. *S believes that the propositions expressed in the statements S_1, \dots, S_n are acceptable.*
3. *S believes that the constellation of statements S_1, \dots, S_n constitutes an acceptable justification [refutation] of O.*

In P-D, if all these conditions are fulfilled, then the illocutionary act complex of argumentation is said to be completely happily performed.²⁶ (E & G, 44-46) To emphasize how this discussion relates to question of relevance, it could be stated that acceptability in the 3rd sincerity condition quite naturally involves relevance; for it is unlikely that someone would say that your justification is acceptable albeit irrelevant. Also, it should be noted, that

²⁵ Argumentation in the P-D theory is aimed at resolving a difference of opinion. If the arguer does not believe the argument would justify expressed opinion for the listener, then it is hard to see *why bother*. Obviously, there could be other ends which could motivate to argue; for example in a class room situation a teacher might in advance think that it is doubtful whether students would accept the justification for a claim concerning refrainment from sex and alcohol, but still provide reasons to believe the claim.

²⁶ van Eemeren do not give the exact conditions for a speech act to be recognizable, but they do not equate the completely happy performance of a illocutionary act complex of argumentation with a recognizable illocutionary act complex of argumentation. A speech act may be recognizable (and meet the propositional and essential conditions) but still not be completely happy, in which case the listener is also (as in the case of completely happy performance of the speech act) entitled to hold the speaker responsible or liable for the speech act.

if arguments are modelled with logical deductions, the epistemic status of premisses needs to be addressed. Accepting a proposition would account as an epistemic status of a premiss²⁷.

3.4 The Structure of Argumentation

As hinted above, the structure may vary considerably. To have a clear picture about what kind of argument structures there may be is important not only to a theorist of argumentation but also to anyone engaged in argumentation, otherwise it would be hard if not impossible to even understand what's going on. Should one completely fail to recognise the structure, one would not know which speech acts are intended to deliver the standpoint and which are supposed to give reasons for accepting that standpoint. It might not be even recognized as argumentation at all.

The most basic form of argumentative discussions includes an expressed opinion of something and argumentation to defend that opinion, where the antagonist hasn't got a point of view of his/her own regarding the statements advanced by the protagonist. That is, the protagonist has stated an opinion on something, the antagonist has either accepted the argumentation or raised doubts concerning the protagonist's opinion, and the protagonist has responded to the antagonist by giving an argument in favour of the expressed opinion. This type of discussion is called *consistently simple* in P-D. If, as often is the case, the antagonist does have a point of view of his/her own on the subject matter, the situation is more complicated. In that case the roles of protagonist and antagonist change during the discussion depending on whose point of view is in the centre of the dispute at the moment. However, the antagonist may wish to advance argumentation in support of his own point of view (which is ultimately directed towards refuting the original point of view of the protagonist), in which case he/she has assumed the role of the protagonist (regarding that point of view). The type of discussion, in that case, is *not consistently simple*. There might

²⁷ I do not wish to claim that the premisses would always need to be accepted unconditionally, I take that sometimes premisses could be only provisionally accepted or, as the phrase goes, for arguments sake. The epistemic status of premisses depends in the end on very deep questions of epistemology. Should someone adopt a *foundationalist* view, which would amount to the idea of there being a 'rock-bottom' of knowledge, the premisses would in the end have to be accepted. However, in P-D, the epistemological standpoint is rather a *critical rationalist*, which means that there is no solid rock bottom, but rather, every statement could be called into question. This could be called an *assumptionalist* stance.

be two points of view from the very beginning of the dispute in which case the discussion is called *wholly compound*. (E & G 1984, 87-89)

van Eemeren and Grootendorst introduce still further terminological distinctions. *Initial disputes* are separated from *subdisputes*; ‘initial dispute’ refers to the original dispute whereas ‘subdispute’ refers to disputes arising “during a discussion occasioned by an initial dispute” (ibid, 89; italics removed). Analogously they differentiate between *principal discussions*, *initial points of view*, and *principal argumentations* on the one hand, and on the other hand, *subdiscussions*, *subordinate points of view* and *subargumentation*, respectively. The complexity of argumentation thus may vary: there may be one principal argumentation with no subargumentations, or there may be one or more principal argumentations each having one or more subargumentations. The subargumentations (relating to one or more principal argumentation) may be jointly sufficient but individually not necessary to justify or refute the initial point of view, or individually necessary but only jointly sufficient to justify or refute the initial point of view. These possibilities may be referred to with terms *single*, *multiple*, *co-ordinative compound*, and *subordinative compound argumentation*. Single argumentation consists of principal argumentation, such that the arguer considers it to be necessary and sufficient to justify or refute the initial point of view. By ‘multiple argumentation’ is meant argumentation that consists of two or more simple argumentations (with the same point of view) that are individually sufficient but are not individually necessary. By ‘co-ordinative compound argumentation’ is meant argumentations that are individually necessary but only jointly sufficient, and furthermore, that are not sub-ordinate argumentations. ‘Subordinative compound argumentation’ is constructed of a principal argumentation relating to initial point of view, and of subargumentation (relating to principal argumentation).²⁸ (ibid, 89-93.)

In several passages van Eemeren and Grootendorst indicate that they take logical validity to be a criterion of a good argument. However, they do not think that logical validity is the sole criterion of a good argument, and in various places they criticize logicians for being too much centred on formal characteristics of an argument. Despite of their critical attitude

²⁸ The case that could rise, but van Eemeren and Grootendorst do not discuss any further but mention, is the case where two or more argumentations would be individually neither necessary nor sufficient, but jointly necessary and sufficient. (See footnote 30, ibid., 197)

towards logic, they do not expunge formal logic altogether, but make use of it, for example, in explicating unexpressed premises and in evaluating arguments. (E & G 1992b, 62, 68, 95-96, 169, 209). Their position could very well be characterized in saying that considerations on formal logic should be complemented with practical considerations and pragmatic considerations (see: E & G 2004, 9-10).

Evaluating arguments is the central task of a normative argumentation theory and the theory should be able to give adequate criteria for evaluating arguments as good or bad. For Copi (1978), just to take an example of a tradition, truth of premises and formal validity present themselves as ready-made criteria for a good argument (though as is evident from Copi's explanations, some pragmatic filling in is needed). But, as was shown in chapter 2, these do not suffice. In Pragma-Dialectics, even though a logical apparatus is put to use, a more fine-grained distinction between argument forms is introduced. Three broad classes of argumentation schemes are differentiated. van Eemeren and Grootendorst explain that the schemes are "abstract frameworks that can have an infinite number of substitution instances" (E & G 1992b, 97). Also it should be obvious that relevance is an indispensable notion pertaining to evaluation.

The three argumentation schemes in P-D are called 1) *the relation of concomitance*, 2) *the relation of analogy*, and 3) *the relation of causality* or *instrumental relation*. I will site one example of each of the categories, in respective order, just to give an idea of the schemes.

1. "I think that Mary is pig-headed, because she is a teen-ager and pig-headedness is typical of teen-agers."
2. "The Dutch educational reform of the 70s had to flop, because the British educational reform also flopped and the Dutch educational reform is the same as the British educational reform."
3. "The victim must have had sexual contact, because she appeared to be pregnant and pregnancy results from sexual contact." (Ibid, 98-99)

For each type of scheme there are critical questions to be asked when evaluating arguments. These questions constitute "a dialectical testing method" (ibid, 101). In the above cited cases, the critical questions to be asked would be something like the following. With regard to the relation of concomitance the following questions would be appropriate for a critical examination of the argument: 'Is Mary really a teen-ager?', 'Is pig-headedness really typical

of teen-agers?', 'Could Mary's pig-headedness be due to some other reason?'. The analogy-based argument could be examined with the help of questions such as: 'Is the British educational reform really like the Dutch one?', 'Are there crucial differences between the two reforms?', 'Could there be other examples matching better the Dutch educational reform?'. And the argument based on a causal or instrumental relation could be critically evaluated by questions such as: 'Was the victim really pregnant?', 'Does sexual contact always result pregnancy?', 'Could there be other ways to get pregnant than sexual contact?'. (ibid, 101-103)

My opinion is that the above mentioned *topoi* or *loci* (to use a term customarily used in rhetorics), namely the relations of concomitance, analogy, and cause, and the critical questions relating to them, could be explained also differently, in more general terms. Essentially, the critical questions with which the arguments are to be evaluated are: 'Is it true (or acceptable), what the premiss asserts?' and 'Do the premisses justify the standpoint in question?'. The latter may be divided into two sub cases: 'Are the premisses sufficient to justify the standpoint in question?' and 'Are the premisses necessary for the justification?'. As far I can see, these questions capture the essence of the point made by van Eemeren and Grootendorst, with regard to the evaluation of an argument²⁹, be it any of the three types of argumentation schemes. Perhaps a more worrisome aspect in their discussion is that no motivation is given for choosing these *topoi*, and if it is thought that the mentioned list of *topoi* is complete, that no proof or explanation is given for its completeness. That is to say, they seem somewhat *ad hoc*. I shall not dwell into the matter any further as I haven't got a real reason for the worry, just that it would be nice to assure oneself that the *topoi* are exhaustive.

That the Pragma-Dialectical theory is incomplete with these respect to problems concerning the norms, is admitted by the authors, who state: "In order to comply with the norms, various kinds of criteria need to be satisfied. So far, the pragma-dialectical theory does not

²⁹ It should be noted, that the subject of 'evaluating an argument' is discussed in the same chapter than the subject 'analyzing an argument', in *Argumentation, Communication, and Fallacies*. The authors do explicitly state that they are talking about evaluation, but I think that the critical questions formulated by them serve better the analyst (or better still, the antagonist) than the evaluator. The questions are examples for an evaluation process, but are not completely satisfactory when formulating general criteria of relevance for a good argument, which is my aim.

provide all the criteria that are necessary for deciding whether or not a certain speech act satisfies the norms.”³⁰ (E & G 1992b, 106)

The pragma-dialectical rules for argumentation are designed to meet the goal of discussion: to resolve a difference of opinion. The rules specify the code of conduct for a rational dispute resolution, and the evaluation of argumentation is done in the light of the rules. (E & G 1984, 18) Much depends, then, on the rules (and their closer description). The rules should be so constructed as to really be acceptable for a rational judge (in an acceptable sense of the word ‘rational’), for the rules actually define what van Eemeren and Grootendorst mean by ‘a rational judge’ (ibid, 18). An argument is evaluated as good if the rules are obeyed, and fallacious if not.

There seems to lie a problem for Pragma-Dialectics, when considering if the approach really is a *normative* one, as argued by Harvey Siegel and John Biro³¹. The problem may be put as follows. A rational language user is one who performs speech acts that accord with a system of rules. The function of the rules is that obeying them results in resolving a difference of opinion as effectively as possible. Siegel and Biro argue, however, that “the participants might abide by the code of conduct and resolve their dispute but in ways that render the resolution unjustified or irrational” (Siegel and Biro 1992, 90). As almost any standpoint whatsoever may be put forward, and also successfully defended, if the

³⁰ The norms referred to in the passage just cited form a core of the theory. The norms are shaped into 10 rules. I will reproduce the rules in full here.

1. “Parties must not prevent each other from advancing or casting doubt on standpoints.
2. Whoever advances a standpoint is obliged to defend it if asked to do so.
3. An attack on a standpoint must relate to standpoint that has actually been advanced by the protagonist.
4. A standpoint may be defended only by advancing argumentation relating to that standpoint.
5. A person can be held to the premisses he leaves implicit.
6. A standpoint must be regarded as conclusively defended if the defence takes place by means of arguments belonging to the common starting point.
7. A standpoint must be regarded as conclusively defended if the defence takes place by means of arguments in which commonly accepted scheme of argumentation is correctly applied.
8. The arguments used in a discursive text must be valid or capable of being validated by the explicitation of one or more unexpressed premisses.
9. A failed defence must result in the protagonist withdrawing his standpoint and a successful defence in the antagonist withdrawing his doubt about the standpoint.
10. Formulations must be neither puzzlingly vague nor confusingly ambiguous, and must be interpreted as accurately as possible.” [A typo corrected] (E & G 1994b, 21-22).

Substantially the same rules have been formulated a little differently, in (E & G 1992b, 208-209), and in a somewhat more finegrained form in (E & G, 2004, 136-157).

³¹ Harvey Siegel and John Biro are exponents of a so called ‘epistemic approach’; see for Siegel and Biro (1997) and (1992).

participants *just agree* on some starting points and ‘appropriate’ argumentation schemes and the logic, argumentation actually may turn out to be irrational, even if being conducted according to pragma-dialectical rules. Only restriction that is placed on acceptable starting points, is that they may not include logical inconsistencies. And the rule 8 states that arguments must be valid³². (E & G, 1984, 165-166, 169)

Siegel and Biro give an example of problematic arguments. ”Two disputants are arguing about the upcoming election. Both agree that the most handsome [...] should be elected. They disagree at the outset, about which candidate is most handsome [...] but after some discussion, during which the rules of the code of conduct are honoured, the dispute is resolved and the participants agree that they should vote for candidate C.” The second type of problematic argument is one where the disputants agree on rules that are invalid or unreliable or even crazy. (Siegel and Biro 1992, 90-91) Handsomeness is, according to the authors, irrelevant to the worthiness of the candidates, and therefore the resolution is irrational, since the criterion of handsomeness is not called into question. Also, in a discussion it could be agreed that a problematic rule is to be used in dispute resolving, for example, a fallacious rule on probabilities (such as the gamblers fallacy). Unless the theory can block these sorts of counter-examples, it should be rated as unsatisfactory theory. And moreover, as Siegel and Biro argue, it will render the pragma-dialectical theory a descriptivist or rhetorical one, because there doesn’t seem to be, in the end, other norms than the ones the disputants agree upon, which may be almost anything, whatsoever. These conclusions — if correct — run counter van Eemeren’s and Grootendorst’s insistence on normativity, or at most, according to Siegel and Biro (1992, 91), the P-D account accords with *an instrumental or pragmatic* rationality.

Siegel’s and Biro’s epistemic account to rationality (and argumentation) faces the question: ‘what exactly are the criteria for a standpoint to be rationally justified by given premises?’

³² The range of logics is not restricted, to my knowledge. Throughout the pragma-dialectical literature, however, classical syllogistic logic, propositional and predicate logic appear. No ‘core logic’ or preferred logical system is mentioned. It is clear that van Eemeren and Grootendorst agree that no contradictorial sentences may be included into starting points, because by classical propositional logic any sentence may be deduced easily. So, they would not admit any system what so ever, but they leave a very wide range of options open, which would include also a logic that had undesired properties (see below, the gamblers fallacy).

They do not answer this question but note that *informal logicians*³³ are facing the same question when asserting, that "acceptability of premisses, relevance of premisses to conclusion, and strength of support by premisses to a conclusion" are relevant criteria for assessing an argument. The specific criteria in various types of arguments are left open by epistemic account, for the time being. (Ibid, 97-99) I agree on the point that in argumentation theory should give means to evaluate arguments, and furthermore that there should be criteria for evaluation of the relevance of premisses to conclusion. However acceptability of the premisses in my opinion is a bit more complicated matter. Logical inconsistencies aside, it could be asked whether evaluating premisses is the business of argumentation theory. Take the example Biro and Siegel provide as a critical example to P-D approach: obviously the looks of candidate *could* be an important factor on deciding who to vote for, since it could be argued (for example on psychological grounds) that handsome people get their agendas accepted more efficiently than ugly people. The question of the criteria of acceptability of premisses does not seem to fall under the domain of argumentation theory; take as an example the acceptance of, say, a contingent statement like 'the bus number 23 goes via centre'. As the content of statements could be of morality, aesthetics, every day facts, scientific theories or what have you, it would be impossible for an argumentation theorist to say what is acceptable, unless omniscient. Obviously, should the dispute be about facts, a criterion of acceptance would be truth, which is but a lipservice for anyone uncertain of what *is* the fact. For non-factual³⁴ statements (i.e. statements of morality or aesthetics), a criterion equivalent or comparable to truth is in place.

3.5 The Concept of Relevance in Pragma-Dialectical Theory of Argumentation

The concept of relevance has been taken to refer to quite different sorts of phenomena, which do have in common some general characteristics. Obviously, 'relevance' (or 'irrelevance') refers to a relation that holds (or doesn't hold) between parts of texts. There must also be some objective in light of which that relation functions. (E & G 1990, 57-59)

³³ Siegel and Biro (1992, 97) are referring to Blair and Johnson. On the 'informal logic' approach to argumentation see for example Johnson and Blair (Johnson 1996, esp. chapter 2).

³⁴ This addition is for a value realist, who would not take moral statements to belong to category of facts. I *intend not* to take sides on this question, and *need not* as far as I can see.

To me, the concept of relevance becomes non-sensical if these two aspects (that ‘relevance’ refers to 1) a relation between parts of text (or some other thing, say a statement and context), and that 2) this relation has to be functional in respect of some goal) are excluded from it. The first aspect nobody denies, to my knowledge³⁵. However, the second aspect is not always so clearly realized. van Eemeren and Grootendorst state that “[t]he general relevance problem [...] is to determine whether or not such a functional relation exists between text fragments when given *a particular* goal in a given case” (Ibid, 59; Italics added). When explaining the different fallacies of relevance, Copi sometimes refers to a lack of logical connection, and in the case of *petitio*, he refers to the argument not being a proof. The Copi’s problem is not that there is not a particular goal he thinks the argument doesn’t meet, for he always *does* refer to a particular goal. Rather, the problem is that he confuses the different aspects of relevance, and fails to distinguish between different sorts of goals that are part of argumentation.

van Eemeren and Grootendorst have Copi’s work as a target of criticism, when discussing defects of the so called ‘logically oriented’ approaches to argumentation. They point to the fact that Copi - among others within that line of inquiry - does not take the concept of relevance seriously enough, that is, he doesn’t make it clear, for example, whether all valid arguments are relevant (or vice versa, for that matter) or not. However, there are attempts made towards clarifying the concept under discussion, and van Eemeren and Grootendorst do pay some attention to them. We shall get back to it a little later. (E & G 1994, 57-58; also in: E & G 1992, 147)

According to van Eemeren and Grootendorst:

”Relevance (or lack of relevance) refers to the relation between explicit or implicit elements in an oral or written discourse. [... R]elevance [...] is always tied to a certain interactional objective: only in the light of this objective is the one element [of the text] relevant or irrelevant to the other. By this definition, relevance [...] does not refer primarily to a formal relation between discourse

³⁵ In everyday language use the word ‘relevance’ may not be thought so clearly as a relation. Someone may cry, say, ”That’s not relevant”, from which an impression may rise that the speaker is predicating relevance to ‘that’. A brief thought on the subject should convince anyone that relevance is not a predicate, but a relation of at least two places: a thing is relevant *to* something.

elements, but to their functionality in view of the interactional intentions that can be ascribed to the speakers or writers.” (E & G 1994, 51)³⁶

van Eemeren and Grootendorst consider two major approaches to the matter of relevance. The two approaches end up studying two different linguistic phenomena of which both reasonably can be said to fall under the concept ‘relevance’. Despite the common heading, they refer to two quite different things, which are labelled *interpretative* and *evaluative relevance*. In addition to these, in P-D, also *analytical relevance* is defined.

1 Interpretative Relevance

In the so called descriptive approach to (argumentative)³⁷ discourse a central question could be ‘When is a sequel relevant to the next sequel of a conversation?’ or alike. For example, it could be said that in the following imaginary exchange utterance (B1) is not relevant to utterance (A1)³⁸

(A1) What’s wrong in the modern days, is that people no longer regard themselves responsible for each other.

(B1) That’s interesting, I heard a song yesterday. It was called ”Modern days”, or something like that.

The (descriptively and empirically) oriented theorist studying ‘relevance’ would be interested in giving a description of what interlocutors would themselves regard as relevant or irrelevant. As P-D is intended to cover also the descriptive aspect of argumentation, van Eemeren and Grootendorst subsume the interpretative relevance to their concept of relevance. However, they link the relevance of speech acts to a specific subgoal of a specific stage of argumentative discussion, that is, to confrontation, opening, argumentation, or concluding stage. Consequently, a speech act may be relevant with regard to a goal of one

³⁶ van Eemeren and Grootendorst give elsewhere two essentially equivalent definitions of relevance: ”An element of discourse is relevant to another element of discourse if an interactional relation can be envisaged between these elements that is functional in the light of a certain objective” (E & G Relevance Reviewed, 141). Another one, almost identical, is found in (E & G 1990 The relevance problem in the analysis of argumentative texts - a pragma-dialectical reconstruction)

³⁷ Discourse studies are not, of course, interested exclusively in argumentative discourses, but our focus is primarily on argumentative discourses.

³⁸ In this example it is assumed that speaker A is trying to discuss on an intellectual level about modern times, and speaker A disregards that level altogether by shifting the topic into something else. Naturally, if speaker B would continue by, say, citing the song and putting forward an alternative standpoint, the utterance B1 should be counted as relevant.

Another thing should be noted: Someone might point that this piece of discussion does not include any arguments. That is true, but the utterance A1 can be interpreted as putting forward a standpoint, which is a part of argumentation in P-D.

stage but irrelevant with regard to another goal of another stage. (E & G 1994, 52) It could be added, that sometimes speech acts are irrelevant with respect to all goals of argumentation, but still serve some function of language use. For an analyst this is essential to take note, otherwise all speech acts would turn out relevant to a given goal.

2. Analytical relevance

van Eemeren and Grootendorst introduce another concept, *analytical relevance*, that stands, in a way, between *interpretative* and *evaluative relevance*. In communication general, and in argumentation particularly, interpretation precedes evaluation, since there would be no sense evaluating anything if one didn't know what one was evaluating. Also, as interlocutors put forward arguments, they (quite often at least) are anticipating an evaluation of them. An analyst of a text must make a reconstruction of a text (since generally discourse isn't formed 'naturally' to fit the evaluators model). The reconstruction needed here is a kind where all the speech acts, and only those, that are relevant for the critical discussion aimed at resolving a difference of opinion, are identified as such. This is the function van Eemeren and Grootendorst assign to *analytical relevance*. In the reconstruction process it is usually important to make implicit elements of argumentation explicit, and also make it clear which elements were operative in resolving the dispute. (E & G 1994, 53-55; also in: E & G 1992, 144-145) The analytical process must take the evaluative relevance into account, since the theorist aiming to come up with a judgement on the arguments advanced should not let anything important be disregarded or let something unimportant affect the judgement. In practice, the process would have to be circular, since originally seemingly irrelevant comment by an interlocutor could turn out to make all the difference in the end, and this could be noticed at the time a judgment is to be passed on the argumentation.

3. Evaluative Relevance

Another major approach to relevance is - as van Eemeren and Grootendorst call it - the normative approach, in which relevance is seen as evaluative relevance. In it, (ir)relevance is assigned to discourse on the grounds of certain standards of sound arguments. An example from Ralph H. Johnson's and J. Anthony Blair's *Logical Self-Defense* (Johnson & Blair 1994, 65-66) will illuminate the matter:

- (1) "As for the nutritional value of Corn Flakes, the milk you have with your [Kellog's] Corn Flakes has great nutritional value.
- (2) [Therefore], Kellogs Corn Flakes does have significant nutritional value."

According to Blair and Johnson, this piece of argumentation is irrelevant, in the sense that premise (1) does not lend any support to the conclusion (2) (Ibid, 66). Their explanation, even though it doesn't seem to be out right false, leaves as into dark because no criterion for support is given.

In this work the pivotal question that I wish to try to answer is: "what are the criteria for relevance in evaluating an argument?" That is, I wish to leave problems pertaining to interpretative and analytical relevance aside, and concentrate on the evaluative relevance. I recognize that it depends on other relevance criteria in the sense that evaluation is done after interpretation and analytical reconstruction, and given a possible reiteration of the process, it could be that original evaluation could be turned down after reconsideration of interpretation. This, however, does not affect the search of the criteria.

It should be clear, that the irrelevant arguments on Copi's list presented in chapter 2, and their analysis from a logical point of view are based on an account of evaluative relevance, where, more specifically speaking, evaluative relevance has logical validity as criterion. As was shown, it doesn't suffice as an adequate criterion for (evaluative) relevance.

van Eemeren and Grootendorst have set themselves to construct a theory of argumentation, such that it includes a descriptive as well as a normative side. Of the descriptive side I have very little to complain about, and in the focus is the normative side, which is incomplete without adequate criteria for judging relevance of arguments.

Next I shall sum up some important aspects of the Pragma-Dialectical theory in order to specify the focus of the relevance problem. The process of argumentation according to the P-D has been divided into four stages: confrontation, opening, argumentation, and conclusion. In the course of the process, a number of different kinds of speech acts are performed, such as asserting that something is the case, doubting that something is the case, or clarifying a meaning of a term upon request, just to mention a few. An analyst following the P-D-theory would interpret and analyse the discourse, and form a reconstruction of the

discussion. In the reconstruction, all speech acts would have been ordered into the four stages, and all speech acts would have undergone an analysis, where the indirect speech acts would have been rephrased into direct speech acts, speech acts not relevant to the resolution of dispute would have been deleted, and the components of the speech acts would have been made explicit. Also implicit information would have been explicit³⁹, and the argument structures would have been recognized, as well as the argument types. The outcome of this analysis then would include (among other things) a set individual speech acts breaking down to propositions, each of which would be linked to an illocution; propositions would form an argumentative structure and arguments would be labelled and sorted.

For example, imagine some one argued as follows: ‘The members of the parliament should be given a pay raise. That way the best minds of the nation would be more interested into getting involved in politics.’ The standpoint (S) would be: ‘The members of the parliament should be given a pay raise.’ This speech act belongs to the confrontation stage, and with it comes the obligation to defend the standpoint. This obligation is taken up in the next speech act, where a proposition (P: ‘Pay raise would result in the best minds getting involved in politics’) is put forward to make the claim acceptable. This speech act would belong to the argumentation stage. The question then for the evaluator is: Has the speaker justified her/his standpoint? The answer to this question depends on criteria used in evaluation. If this is all the information we had, we could label the argument as an instrumental one, where the pay raise is seen as an instrument to get the best minds getting into politics. But it doesn’t specify what is the value of the outcome, that is, *why* best minds should get into politics. Furthermore, it doesn’t link the involvement in politics and parliament in any way together. So the judgement on this argument could be that as such, it is not a good one (if, lets say, evaluated on logical grounds). Let’s assume that by on way or another, the analyst has found out that the speaker adheres to following proposition Q: ‘Getting best minds involved into politics (and through politics into parliament) is something that should be done, and a pay raise would get best minds interested into it’. The argument would then be: S, on the grounds that P and Q. Given the meaning that they (P, Q, and S) have, the argument would

³⁹ It is challenging problem for P-D (or indeed to any argumentation theory) to come up with a method which would succeed in bringing about the unmentioned premisses or presupposition of an argument. I shall not deal with this problem here. It should be noted that in the following I simply ignore the problem.

be valid in the logical sense of the word, and this could also be shown by choosing appropriate symbols for a logical test, say, like the truth table method.

One isolated example may give an idea of what is aimed at, but when evaluation is taken seriously it doesn't suffice to rely on logical validity, as has been seen in chapter 2.

Especially the problem of relevance stands, that is, what criteria can be given to relevance.

In chapter 4, major attempts to answer this question are looked at.

4. APPROACHES TO PROPOSITIONAL RELEVANCE

4.1 Whither relevance?

The relevance problem seems to be so hard partly because there are different applications or different objects to which relevance is assigned. The concept is used in various senses, and it is not clear that there is a sense of relevance that is applicable in all the uses, or domains. It doesn't make the definition easy, if the domain is not identified. Generally speaking, we may say that relevance is some sort of relation, but if we are not always clear about between what things is it a relation about, trouble is spelled. To illustrate the trouble I shall give an example, which I think is analogous to understanding the issue. For a student of logic, it may happen, if entering late into the first lecture on an introductory course, that when noticing a string of symbols, forming, say modus ponens, the meaning is completely out of reach of understanding. The reason is that unless it is understood that letters stand for assertive sentences, or propositions, the idea of logic is not understood. The same applies for relevance: what is the domain we are talking about? The puzzlements in chapter 2 have been mainly about inferences, or inferences in context of argumentation, but it is evident that relevance could be assigned to some other objects (or relation of objects) as well; a speech act could be relevant or irrelevant in a discourse where, say, information is queried. So it is worth trying to take a little distance, so that different approaches can be put into a larger frame work, and the domain of relevance in argumentation could perhaps be identified. Let us take an example. Assume that we are interested in a fragment of discourse that happened to take place in a court of law. A witness has stated that 'Mike and Mary got married, and they had children. Their grandparents became very happy'. How is does the process of analysis to go about, from a scientific point of view?

First of all, the situation is described in terms of the theoretical frame work used. The framework could be linguistic, psychological, sociological, logical, or what have you. Lets take it to be a logical one. Then the piece of discourse could be translated and organized according to the logical theory, which could or could not be a formal one. Let the outcome of this translation be a set of sentences written in a formal language consisting of sentence letters and connectives, and ordered into a set of premisses and a conclusion. Secondly, theoretical apparatus (theory of logic) is used to analyze the inference, and a verdict is cast,

whether it fulfills criteria of a given concept. In case the verdict needs to be explained in natural language, the process continues by translating the meaning of the outcome in understandable natural language. The need to go through translation steps stems from the possibility (albeit not necessity) of having a theoretical frame work, in which some thing is expressible precisely, but which is not expressible in ordinary language.

I would like to emphasize that there are crucial matters to be taken into account, when evaluating this procedure. The translation from natural language to theoretical language is done in view of the theory. If the translation is some how faulty, the method used in that theory is blame worthy. Actually, many relevance theoreticians (as well as critics of logic) have spotted problems just here⁴⁰. To justify my point, an example should suffice. Lets say that the analyst is using a framework of propositional logic and translates ‘Mike and Mary got married, and they had children’ into ‘ $A \wedge B$ ’. In the classical propositional logic, conjunction is not sensitive to temporal relation between the conjuncts, and if there was an intended temporal order in the original statement, then it is lost in translation. This could make a difference in the example (especially in view of a sequence where after getting married and having children grandparents happiness is mentioned). The motivation for making a translation step is that it has proven useful in some instances; probably the most remarkable example being due to Bertrand Russell and his analysis on the sentence ‘The present king of France is bald’, which turned out to hide an existential sentence, was not reflected on the surface of the English sentence. So the step can prove to be useful, but one must be careful when making the translation. I shall refer to this as the *translation problem*.

The second step in the process is the theoretical work done on the translated material, and this is another a place where things can go wrong. An example of this would be: From $A \wedge B$ it may be inferred, that C implies $A \wedge B$, where C means ‘Mary was unfaithful to Mike’. That this is wrong, is evident if the logical inference is translated back to natural language: From ‘Mike and Mary got married, and they had children’ it may be deduced (inferred) that ‘If Mary was unfaithful to Mike, then Mike and Mary got married and they had children’.

⁴⁰ From the logical perspective, see i.e. Walton 1984; Anderson and Belnap and their *Entailment*; Stephen Read 1988. The business of analysing language and its structures is the business of linguists, and a lot of work has been done there, but I will not go into the matter here.

The validity (in the every day sense of the word) of deduction is seen gone wrong, badly I my add. I shall refer to this as the *transformation problem*, to emphasize that on theoretical basis a certain transformation is imposed on the material.⁴¹ The idea behind the transformation process is see what the argument amounts to, and a theoretician could use logical devises to make a judgement, to evaluate the argument.

The upshot of this discussion on translation and transformation is that for relevance (as well as for many other concepts) there could be atleast two relevance problems, which should not be confused⁴². For present purposes the distinction between aspects makes it also possible to classify approaches and analyse (or describe) them.

The domain that concerns us here is generally speaking argumentation. It has been defined in the Pragma-Dialectical perspective as a constellation of speech acts, which can be divided into parts according to four stages running from confrontation through opening and argumentation to conclusion stage. The speech acts are seen as constituting of a proposition and illocutionary as well as of a perlocutionary part. (see chapter 3.3, above). According to Pragma-Dialectical theory, there are three different categories to which the relevance problem is pertinent. First of all, there are the four stages of argumentation. Each stage has its own objective, and this objective is what a speech act is relevant to. The confrontation stage has the objective of bringing the issue out, that is, the standpoint of each discussant. What this amounts to, is making it clear whether a discussant accepts or doesn't accept a standpoint. Should someone not accept a given standpoint, the one claiming acceptance is then to give reasons for the standpoint, once reached the argumentation stage. The second stage is where rules and starting points or premisses are agreed upon. After this, the argumentation stage then may be entered. During argumentation the participants are to provide reasons for accepting the standpoint (protagonist) or reasons not to accept the

⁴¹ To clarify, the inference can be made either in the situation under analysis and then evaluated by the theorist, or the theorist could make the translation and then see how the translation behaves in the theoretical framework (that is, make the inference in the above example).

⁴² An aside concerning the motivation that possibly is a reason that results problems could be the following. Confusing the translation problem and the transformation problem is unfortunate, but from a certain point of view quite understandable. They are closely linked in classical propositional logic in the following way: $X \vdash Y$ if and only if $\vdash X \rightarrow Y$ (where the arrow refers to material implication, and turnstile to classical deduction relation). If theoretician is logically oriented, this result is a nice property, and furthermore, it links material implication to the concept of deduction. We can thus see the motivation to translate 'if..., then...' as material implication.

standpoint (antagonist). Should everything proceed ideally, the outcome is that either the protagonist or the antagonist retreats from the original position. (see chapter 3.2 above)

The Pragma-Dialectical theory divides argumentation to four stages, in which speech acts are advanced. Speech acts consist of propositional content and illocutionary force (I shall ignore here the perlocutionary content). Argumentation analyst then *translates* actual argumentation into a theoretical model and then evaluates the result (which I call *transformation*). Question of relevance then is pertinent to translation, so that from argumentative point view the translation is adequate, relevance – wise, and it is pertinent to transformation, so that from argumentative point of view the transformation is adequate relevance – wise.

The fusion of these criteria shows itself at least in (some) logically oriented approaches, where there is dissatisfaction with the result such as previously mentioned example where Mary's unfaithfulness implies marriage and having children, based on premiss clearly not implying such a thing. Implication is mistranslated, but when trying to rectify the translation, also deduction is meddled with, thus making it hard see clearly what the relevance problem actually was. The fusion of criteria can yield to confusion. However, approaches to relevance may classified according to translation or transformation theories, or theories that employ both.

4.2 Walton and relatedness propositional logic

In chapter 2.3 I presented a list of astounding inferences studied by Walton (1982). Now I will view his solution to these problematic inferences. Walton identifies the problem to be partly caused by the connective '⊃', that doesn't match precisely the ordinary language junctor "if... then...", at least not in every case. The problem is that in a valid inference like "Socrates is dead, therefore if Walton sits down, Socrates is dead" the conclusion is outrageous, and we should not be able to validly deduce such sentences, since Walton sitting down has nothing to do with Socrates' being dead. In other words, they are not

related in any way. The way to proceed is to introduce a new connective that is sensitive to relatedness, and construct a new logic around it, *relatedness propositional logic*.

In a sentence "If A then B" the antecedent must be related to consequent, and 'relatedness' is a binary relation, that is at least reflexive (if A is related to B, then B is related A). The *relatedness conditional* $p \rightarrow q$ is true when $p \supset q$ is true and p is related to q. (Walton 1982, 28.) When we consider the four astounding inferences (1)-(4), the paradoxical ring is removed from the first two, since they fail to be generally valid in relatedness logic. (The first one – as a reminder – was : From "Socrates is dead", one may validly infer that "If Walton sits down, Socrates is dead"). Interesting though is that if in the conditional the antecedent and consequent are related, they are valid (ibid, 31).

So, initially it might seem that Walton's approach could be the answer to the astounding inferences. However, this conclusion would be too hasty. One problem is that the conditional of relatedness logic doesn't match but one type of conditional in ordinary language, just as the material conditional in classical propositional logic. Consider the astounding inference (3): From "It's not the case that if I break my leg today I'll ski tomorrow" one may infer "I'll break my leg today". Whatever we might mean by 'relatedness' it should result in saying that skiing and having a broken leg are related. And if the conditional in the premise is interpreted as the relatedness conditional, the paradoxical ring remains. This means that the relatedness conditional is not an overall answer to paradoxical inferences. (Walton 1982, 38) The most it could do is that some conditionals should be modelled by relatedness conditional, and accordingly, the logic by which the evaluation of an argument is done, should be chosen to catch the arguments logic.

But even if the idea of introducing a relatedness conditional does not result in solving the paradoxicality of inferences, the idea of relatedness is somehow connected to relevance. This is evident, intuitively speaking, since it does not make sense to say that e.g. A is relevant to B, but A is not related to B; on the other hand, it makes sense to say that even though A is not relevant B, A is related to B. Therefore, it may pay off to take a little closer look at 'relatedness', which seems to be a necessary property of relevance.

Walton discusses a few possible interpretations of relatedness. One suggestion is that it could mean *spatio-temporal proximity*. This would — allegedly — explain why in "If Walton sits down, Socrates is dead" the antecedent and consequent are not related to each other: There is more than 2000 years between these events. (Walton 1982, 35-36.) It is evident that the spatio-temporal proximity does not explain what is wrong with the astounding inference (3), where breaking the leg and not skiing are spatio-temporally close events. Another interpretation of relatedness is that it means that two propositions share *a common subject-matter*⁴³. This interpretation of relatedness would explain why "If Socrates is dead, then bananas are yellow" is untrue; there is no common subject matter that the antecedent and consequent share. But again, if one would hasten to say that irrelevance would be solved by this notion, one would soon be disappointed; we would only have to look at astounding inference (5): From the premise "Socrates is dead" one may validly infer: "If Socrates is not dead, then Socrates is dead", where a common subject-matter is shared by the antecedent and consequent of the conclusion on the one hand, and by the premise and conclusion on the other hand. Also a further problem could be raised: what would be a correct way to assign a subject-matter to a proposition? Consider the following sentence: "If Miss Piggy calls in sic today, then our pay-cheques will arrive late". What is the common subject matter in the antecedent and consequent? There is none, in the face of it. But there *could* be one, say if Miss Piggy was the one who mails the pay-cheques. But now it could be said that the antecedent and consequent share a subject matter, *because they are related* in a certain way. The common subject matter is in the end an empirical matter, that is, whether two events are assigned any common subject matters. This would apply also to "If Walton sits down, Socrates is dead". Let's imagine a situation where Walton and some one observing Walton did not know that Socrates was dead. The observer knows that Walton is about to receive important information about Socrates and says: "If Walton sits down, Socrates is dead", treating Walton's possible reaction as a sign of devastating news.

To interpret relatedness as spatio-temporal proximity is generally speaking, in my opinion, a somewhat odd idea. In Walton's example about Walton's sitting down and Socrates' being dead, (disregarding counter examples of the sort mentioned above) it does seem somewhat

⁴³ Walton says that idea of interpreting relatedness as 'sharing a common subject matter' comes from David Lewis (Walton 1982, 39), but he nowhere gives a reference, David Lewis is not even mentioned in the bibliography.

plausible to say that the connection between those events should be spatio-temporally close to each other in order them to be related. If someone argued for the conclusion "If Walton sits down, Socrates is dead", we would probably object and point out that there could not be a relevant connection because they are not *even* close to each other, never mind the premise "Socrates is dead". If it turned out that the arguer was using the conditional in the material implication-sense, then we would not object. But if one is arguing that Walton's sitting down is *the reason* for Socrates being dead, we would be astonished. I think, however, that if someone would really argue that way, then pointing out the difference of more than two millenia would not be a good objection, for there could very well be other subjects and other arguments where the time is not an issue at all; e.g. arguments that are about abstract subjects. Thus, the spatio-temporal proximity is not a general criterion that a conditional has to meet. Also, as already noted, proximity of two events is not a sufficient reason to make them relevant or even related (in other than proximity-wise) to each other. The nature of the connection between the two events in question that the arguer may have in mind *could* nevertheless be such that the proximity *would* be an issue, for example, it could be a causal connection. On the other hand, the connection could be something totally different⁴⁴. There could always be some 'funny' presuppositions that would render the example unproblematic in a specific case, as is obvious in the example above. The oddity about relatedness as spatio-temporal proximity is rather it being so specific. And of all possible criteria to choose from, why are time and space chosen to be the ones? This selection sounds a little *ad hoc*, even though I can understand that if we are pondering on the cause of Socrates' death, then we would rule out events that took place after⁴⁵ his death and probably events that took place long before his death, because we presume that whatever the cause may have been, it had to have taken place before and close to that event.

Walton does not think that relatedness implication is a general solution to relevance problems. He is ready to admit some 'pragmatic filling-in' to enlarge logic's application range, and he explains that this is needed because neither the classical material implication nor the relatedness implication is suitable for all arguments. This is due to the fact that there are not one but two objectives in the mind of the constructor of a logical system: one wants

⁴⁴ To invent one is not difficult: If, in the situation, there was a convention that whenever Walton hears a true sentence, then Walton sits down, otherwise Walton remains standing, then it would be a sensible conclusion to make.

a connective that matches the ordinary language "if... then..." as well as possible, and at the same time the system should have certain features, such as truth-functional connectives. Also, according to Walton, in argumentation many types of irrelevances may occur in argumentation and several types of implications are needed in order to account for different phenomena. (Walton 1982, 43, 51)

The question then is whether relatedness implication has the potential to remove enough paradoxicality from astounding differences. Walton ends up saying that it does. He considers an argument "Bananas are an edible fruit, therefore if bananas are yellow then bananas are an edible fruit", where the antecedent of the conclusion is not *needed* in the course of inference, but he does not find it problematic. (Walton 1982, 46-48)

In relatedness logic an argument is valid if the conclusion is a (relatedness) tautology, never mind what premises there may be. In these cases premisses are redundant, but Walton argues that redundancy is not due to failure of subject-matter overlap. His argument is based on an example where one of the premisses is redundant but where there is a subject-matter overlap⁴⁶, thus showing that there may be irrelevancies that have a different source. As Walton notices, redundancy of premisses is not an issue in relatedness logic, it suffices to show that the premisses are not true when conclusion is false. He challenges "those who still find such arguments paradoxical to try to formulate their reasons why they think so". (Walton 1982, 48-51) One reason that seems *prima facie* plausible is that in an argument, we give reasons (premisses) to accept a conclusion. There are two different matters however, in Walton's discussion, which should be kept apart. One is that there may be premisses that are not needed nor used in the argument, and another is that there may be conclusions where the antecedent of a conditional is irrelevant or not used. Examples of each are, respectively:

- (i) $A \vdash B \rightarrow B$
- (ii) $B \vdash A \rightarrow B.$

The first inference is valid even if A and B are not related, the second is valid if A and B are related, in the sense of subject-matter overlap. I disagree with Walton in that these

⁴⁵ Walton doesn't give a constraint of temporal order, which would be natural in cases he discusses.

⁴⁶ From $A \rightarrow B$, $\sim A \vee B$, and A, it is deduced that B. Either one of the first two premisses is redundant. (Walton 1982, 50)

inferences are acceptable from the point of view of relevance. The first one is unacceptable because the conclusion is not acceptable *on the basis* of the premiss (and thus the conclusion is not relevant to the premiss), and the second one is unacceptable because the conclusion is not relevantly deduced from the premiss.

4.3 Iseminger on Anderson and Belnap approach

The problematic inferences mentioned by Walton have troubled logicians quite a lot. But rarely if ever has a project of such magnitude been undertaken that would match the one by Anderson and Belnap in their *Entailment*. What motivates them, is the fact that on the one hand in classical logic the *ex falso quodlibet* (from a contradiction anything may be deduced), but on the other hand deductions should be relevant (and the *ex falso quodlibet* is not relevant). They hold on to relevance and decide to make it so that the ‘paradoxical’ deductions do not get validated. One of culprit is the material implication, just as for Walton who no doubt would not accept the Anderson and Belnap approach. Without jumping into the Anderson-Belnap wagon, I shall take sides with Gary Iseminger, who provides a critique of the projects philosophical rationale.

Gary Iseminger (1980) takes a negative stand towards theory of entailment by Anderson and Belnap. His claim is that their project “lacks a strong philosophical motivation”. He considers one of the arguments that prompted Anderson and Belnap do vast research on entailment: on the one hand it is argued, that premisses should be necessarily relevant to a conclusion, but since (*ex falso quodlibet*) $A \wedge \sim A$ entails B and it is (usually seen as) a consequence of widely accepted (since $A \wedge (\sim A \vee B)$, therefore B), there is a major problem, as the *ex falso quodlibet* is seen as irrelevant. Anderson and Belnap distinguish between two concepts playing a part in considerations on validity of derivations. One is *the meaning-connection* and the other *derivational utility*. Meaning-connection may be understood in various ways, but whatever is meant by it, the meaning-connection is seen as a necessary criterion for relevance. Iseminger identifies three arguments from Anderson and Belnap that are meant to justify the claim that meaning-connection (and therefore relevance) is necessary for validity of an argument. The derivational utility does not play a major part in Isemingers argument. (Iseminger 1980, 197-200, 213)

First is called *systematic argument* by Iseminger, and the idea of it is to take another look at validity and require that the meaning of conclusion is included in the premisses, which (so claimed) for example in *ex falso quodlibet* fails to be the case. As the relation of meaning connection is a proper subclass of meaning inclusion, it suffices for Iseminger to show that the requirement of meaning inclusion to restrict the class of valid inferences is not sustainable in Anderson and Belnap – project. Besides the possibility that it could be argued that in *some* sense the meaning of B is included in $A \wedge \sim A$, it seems that in – possibly but not necessarily – in *another* sense the meaning of $(A \wedge B) \vee (A \wedge \sim B)$ is included in A. Iseminger’s claim in the end is that there, as to yet, is no meaning inclusion sense that would motivate the demand that validity should be restricted by it, at least not preferable to classical validity. The concept of validity is defined by the idea of guaranteeing the truth, but why should this be further restricted by meaning inclusion? None of the possibilities Iseminger considers are viable, and he states: “...[S]ome pre-analytic idea is needed to motivate a restricted meaning-inclusion account, or perhaps some different conception of truth”. (Iseminger 1980, 201-206) Iseminger does not deny the importance of relevance, but argues that *validity* does not require relevance in the meaning-inclusion-sense, or at the very least, Anderson and Belnap have not given a sustainable argument for it.

Second argument is called the *historical argument*⁴⁷, and the idea is that for over two millenia logicians have made claims about relevance of arguments, in particular with relation to valid arguments. These arguments would roughly identified as the fallacious arguments cited in the Copi’s list in chapter two. Of the fallacies, some seem to have meaning-connection, which undercuts the idea of having them as examples of valid arguments without relevance in the meaning-connection sense. Others on the other hand do have a meaning connection, but fail in the *derivational utility* – sense. An argument may fail for informal reasons, or extra-logical reasons (or pragmatic reasons, if you may), but this would not be a concern for Anderson and Belnap. So the question turns to formal fallacies, such as *affirming the consequent*⁴⁸, or Disjunctive Syllogism⁴⁹ (a fallacy in Anderson and Belnap

⁴⁷ I feel that Iseminger is not altogether clear on the historical argument, which very likely could be actually a failure on my account, but I will try to make the best of it.

⁴⁸ From ‘A implies B’ and B it is deduced that A, which is a classical formal fallacy.

⁴⁹ Iseminger talks about MTP, or Modus Tollendo Ponens, but the difference is unimportant here; see foot note 2 on page 197 of (Iseminger ****)

theory of entailment). (Iseminger 1980, 206-210) But how then is the idea that validity requires meaning-connection motivated?

The third argument relies on an example, where it is claimed by Anderson and Belnap (1990, 17-18) that a failure of connection is the problem, and that it is an invalid argument due to lack of relevance. The argument could be put in symbols as: From A it may be deduced that B implies (materially) A. In this (classically) valid sense of implication the argument is such that if the premiss is true, then the conclusion is also. But according to Anderson and Belnap this can not be, since there is no connection between A and B (or more precisely, there is no necessary connection between them). Iseminger (1980, 210-213) shows that the fallaciousness feel of the argument form could also be due to a number of other reasons other than lack of meaning-connection, for example in “A, therefore B implies A” B is not asserted.

To summarize, Iseminger argues that the Anderson and Belnap – approach to explain validity is unmotivated in the strong philosophical sense, inasmuch meaning-connection is concerned. From this it does not follow, I’d like emphasize, that relevance does not play an important role in argument evaluation, or inference evaluation, for that matter. Or put in simple terms, even though relevance and validity do not co-exist, relevance is still important. An aside note could be that relevance understood in meaning-connection sense is not sufficient validity either. The derivational utility could be suggested to be a useful concept when looking at relevance question, but it does not lend support to the solution problem of relevance in classical logic, not at least in any obvious way. Even though it would show that, for example, in an argument of the form $X, A \wedge B \vdash A$ the conclusion *could* be derived without using X, and it could be classed as an irrelevant premiss, X also *could* have been used in the derivation. The problem is actually even worse, since someone might claim that besides X also B is not needed in the derivation of A, leading to an astounding inference already mentioned in chapter 2. But still, *utility* intuitively seems related to relevance.

4.4 Stephen Read and Relevant logic

Stephen Read picks up the battle with relevance in his *Relevant Logic* (1988). His strategy is to build a philosophically sound concept of inference that is free from the relevance problems that bother the classical logic. He calls it *The Relevant Account of Validity*. (Read 1988, 2-5) The implementation of the strategy on finding *a correct* (that is: relevant) account of validity starts with a view on classical notion of validity and its properties. One of the central problems for Read is the *ex falso quodlibet*⁵⁰, that is, the deduction of any sentence whatsoever from a contradiction, and this is unacceptable for Read, who now faces the burden of explaining it away. Also, what Read finds unacceptable, is the material implication as a translation of ‘if [...], then [...]’, which he claims is not really truth functional, but intensional. From this it follows that neither of

“not- $P \vdash$ if P then Q

$Q \vdash$ if then Q ”

hold. (Read 1988, 28). Read furthermore denies that Q could be inferred from ‘ $\sim P \vee Q$ ’ and P ⁵¹, that is Disjunctive syllogism is not a valid form of inference. The essence of Read’s argument is that he claims that disjunction and conjunction have a truth functional as well as intensional meaning, and that these are confused in many cases. If an intensional disjunction (what Read calls *fission*, and denotes with a symbol $\dot{+}$) is adopted, then for example, the inference $A \vdash A \dot{+} B$ fails to be valid, that is rule of Addition is invalid for fission.

Intensional conjunction (or *fusion*, which I will denote to by $\dot{\wedge}$) does not have the same properties than extensional conjunction; to give examples Simplification ($A \dot{\wedge} B \vdash A$) and Adjunction ($A, B \vdash A \dot{\wedge} B$) hold for extensional conjunction but fail for fusion. (Read 1988, 32-39)

Read engages to an analysis of the deduction relation by listing properties that the classical deduction relation has, and then by comparison takes a look at his relevant deduction relation. I shall cite them all (see Read 1988, 42-43):

⁵⁰ Read’s approach does resemble Anderson and Belnap project, but there are any distinctive elements as well. I will not attempt a comparison of the approaches.

⁵¹ In the original text there is a mistake, where P was missing, see page 31 of (Read 1988).

- (1) $A \vdash A$ (Reflexivity)
- (2) If $X \vdash A$, then $B, X \vdash B$ (Monotonicity)
- (3) If $X \vdash A$ and $A, Y \vdash B$, then $X, Y \vdash B$ (Cut, also known as transitivity)
- (4) $(X, A), Y \vdash C$ iff $X, (A, Y) \vdash C$ (Associativity)
- (5) If $X, A, B, Y \vdash C$, then $X, B, A, Y \vdash C$ (Permutation)
- (6) If $X, A, A, Y \vdash C$, then $X, A, Y \vdash C$ (Contraction)
- (7) If $X, A, Y \vdash C$, then $X, A, A, Y \vdash C$ (Repetition)
- (8) If $X \vdash A$ and X', A' result from X, A respectively by a uniform substitution of B for C , then $X' \vdash A'$ (Substitution)
- (9) If $X, A \vdash B$ and $\vdash A$, then $X \vdash B$ (Suppression)

(By X and Y Read means a *bunch* of sentences (names of sentences), as opposed to a set of sentences. A set is extensional, whereas the bunch is the intensional equivalent of it.) The fusion makes a difference in the following sense: An entailment in classical logic is valid if and only if it can not be the case that premisses are true *and* conclusion false, whereas entailment is valid in Read's system if and only if it is not the case that premisses are true *and* conclusion false. Relevance properties that Read is after, are reflexivity, symmetry and non-transitivity. Relevance in his system comes down to an idea that relevance is a necessary condition for an entailment. Relevance on the other hand is actually *meaning-connection* (Read 1988, 133). The difference between classical logic and relevant logic with respect to the above mentioned properties (except ones with no premisses) is that the premisses (separated by a comma) may be seen as independent to each other, whereas in relevant logic this is matter to be carefully considered. I will not go through all of Read's results, but it fair to mention that the classical *ex falso quodlibet* as well as the classical $A \vdash B$ implies A do hold in relevant logic, so there is initially some promise that the system may have an advantage over classical logic, with respect to relevance at least. One might dislike the non-truthfunctional connectives, but a mere *dislike* would not suffice as an argument

against it. But, it might be wondered, what sort of connectives are the fusion and fission? A syntactical view would be to take a look at it's behaviour; a semantical view would ne to take a look at semantical properties. For example: syntactically fusion and fission are analogous to 'and' and 'or' in the sense that in the relevant logic DeMorgan laws are valid (see Read 1988, 66-67). Semantically classical logic explains *truth conditions* by some way or another, the truth tables being a natural way to present them. For fusion and fission this way is not open, since they are not truth functional. Some might settle for a formal semantics of a kind, and Read provides world semantics (see Read, 79 -). But it could (and has been, by Tindale 1994, 73-74) be complained that Read faces a circularity problem: relevance is defined with entailment, as propositions are relevant if they entail each other. And entailment is (truly) an entailment only if it is relevant. Unless this circularity is explained away, the relevant logic could serve only as a technical devise when evaluating arguments in terms of relevance.

4. 5 Prospects and distinctions for relevance

Given the complexity of the notion of relevance, and the various approaches to relevance, it seems that we are lost in the jungle of distinctions. An adequate question here is, to rise above the jungle, what should we expect from a theory of relevance? John Woods uses the term *apocalyptic relevance* as everything is relevant to everything or alternatively nothing is relevant to anything. He then formulates a sensible adequacy condition for any relevance theory, based on this concept: "A theory should not imply that relevance is (or is approximately) apocalyptic" (Woods 1992, 189). Clearly, if we are to hold on to a normative concept such as relevance, we need it to make a distinction between relevance and irrelevance, and this states a minimum adequacy condition for the concepts.

Woods (1994, 82-85) finds the theoretical state of the concept of relevance terrible, and refers to Aristotle who already identified the problem as well as its importance. He also makes a conjecture that philosophers focus has been misdirected to searching relevance from logic, where it is defined in terms of relations of propositions. He considers two quite similar accounts on relevance criteria, by Johnson and Blair on the one hand and by Trudy

Govier on the other, of which the Goviers is explicitly treated.⁵² Relevance is divided into positive and negative relevance as follows.

“P is positively relevant to Q if P’s truth counts in favour of Q’s truth.”
“P is negatively relevant to Q if P’s falsity counts in favour of Q’s falsity.”
“P is irrelevant to Q if neither the truth nor falsity of P counts towards the truth or falsity of Q” (Italics removed. Woods refers to Govier’s 1988 *A practical study of argument*, p. 122-123).

Woods dismisses Goviers account, on the grounds that if the ‘counting towards’ is interpreted as at least as strong a relation than material implication, then it would lead to everything being relevant to everything. Woods’ treatment though requires that the irrelevance criterion is strengthened into a form where it gives in addition of sufficient condition also necessary conditions, from which follows that relevance may be defined by referring to irrelevance. Woods’ argument against Goviers position relies on the meaning of material implication. If P implies Q or $\sim P$ implies Q, P would count as relevant to Q. From this it may be deduced (by definition of material implication) that

$$(\sim P \vee Q) \vee (P \vee Q),$$

which is a tautology. So assuming that P is relevant to Q, it would lead to an unbearable conclusion that any P is relevant to any Q, which would be same as saying that everything is relevant to everything. This result violates the principle, that the definition relevance should not entail apocalyptic relevance. As Woods notices, an escape from this argument would require that the ‘counting towards’ is a weaker relation than material implication, for example likelihood or probability, where truth functionality is not available (as for material implication).

Woods considers the possibility of using probability calculus to capture the essence of relevance in ‘counting towards’ but dismisses the approach in the end as well. Let us take a look the probabilistic view. He argues against it as follows. Conditional relevance is not defined for contradictions or tautologies, and he states that from $P \wedge \sim P$ it may be deduced that P, and that $P \wedge \sim P$ is relevant to P.⁵³ Relevance would then not be defined to the

⁵² Woods refers to Johnson and Blair, *Logical Self-Defence* 1977-edition and to Trudy Goviers *A practical study of argument*, 2nd ed. Belmont, CA: Wadsworth.

⁵³ An aside note: Woods seems to be quite comfortable with the characteristic of classical logic that from contradiction any proposition validly may be deduced. His example is a special case of a more general X and not-X entails that Y, where for both X and Y is substituted P. Incidentally, this substitution is also an instance of conjunction elimination, where from X and Y may be deduced X.

whole range of arguments, which is indeed an undesired feature. A way out of this is to settle for a less general account of relevance. The intuitively appealing of the account can be seen in the definition for conditional probability: P is relevant to Q if and only if the probability of Q, given P, does not equal 0.5. However, Woods argues that this approach leads to (seemingly) unanswerable troubles. His arguments rely on theorems of probabilistic calculus, and I will rehearse one argument. Let it be, that a book's colour is irrelevant to its weight. A theorem of probabilistic calculus is that for any mutually exclusive Q and R and S the probability of (Q or R or S) given P equals the sum of the probability of the three following: Q given P, R given P, and S given P. So, if Q, R, and S each refer to a sentence saying that a book has a certain colour, and P refers to weight of the book, then the sum of probabilities of Q given P, R given P, and S given P is 1.5. Woods concludes that this is absurd, and something needs to be done for the approach to be viable, so he considers next an idea due to George Bowles⁵⁴. The basic idea is to impose an additional restriction on the probability value of some Q, on condition P. The restriction is that the probability value is assigned solely on the basis P and Q, not on the basis of some other sentences as well. In effect, in the example cited above, the probability should not be calculated via addition, but rather taken as such. This would do the trick, in this example, anyway. However, Woods complains that the probabilistic approach fails to give a satisfactory explanation of the meaning of conditional probability, which was intended to serve in stead of material implication in the 'counting towards' in the definition of relevance by Govier. (Woods 1994, 85-88)

David Hitchcock has contributed to the discussion on relevance some very interesting ideas. Relevance is a relation rather than a property, and more specifically, it is a triadic property $\langle x, y, z \rangle$: "x is relevant to y in a situation z" (Hitchcock 1992, 251-252). Although Hitchcock speaks of 'items of information', which could be characterized as "a proposition or as the value of a propositional function or a speech act communicating or requesting information" (ibid, 256-7), I see no harm of calling them all propositions (in this connection), thus a proposition x is relevant to a proposition y in a situation, which we designate by a symbol z.

⁵⁴ See George Bowles' (1990): 'Propositional Relevance'.

Hitchcock makes an important conceptual distinction between *causal* and *epistemic* relevance. The former type refers to the fact, that some things are able to cause something in a given situation, e.g. N.N. smoking for 40 years caused him to get lung cancer⁵⁵, thus smoking is relevant to N.N. getting cancer. Causal relevance should be differentiated from *epistemic* or *justificatory* relevance. For example, in an argument between lovers about how to use tooth paste correctly, A could accuse B of bringing into argumentation an irrelevant fact, that he came home very late last night. Although, to remind about the fact that A came home late last night could cause the argument to turn out differently, it has no relevance in justifying the claim that the most efficient way to squeeze a tooth paste container is to start from the closed end. Another distinction brought up by Hitchcock, is a distinction between *subjective* and *objective* relevance. By the former he means relevance that is assigned to something by someone⁵⁶, and by the latter he means epistemic relevance whether or not it is recognized as such by a person. That is, a person may judge a proposition irrelevant even though it is relevant in justifying a claim. (Hitchcock 1992, 253-255)

If x is relevant to y (in a situation z), it means the same as 'x is not irrelevant to y (in a situation z). That is, relevance and irrelevance are contradictory relations. Hitchcock doesn't take a definite stand on whether relevance is a matter of degree, but irrelevance definitely is not. If x is irrelevant to y, and w is irrelevant to y, there can't be made a distinction whether x is more irrelevant than w to y. But, in the face of it, if both x and w were relevant to y, it could be said that x is more relevant than w to y. (ibid, 252-3)

In the triadic relation $\langle x, y, z \rangle$, each term belongs to a different category, since x is a piece of information that is (epistemically) relevant to an epistemic goal y in a situation z, and it makes no sense to say that a piece of information is relevant to a situation, or to say that an epistemic goal is relevant to a situation, or to say that a piece of information is relevant to a piece of information, or an epistemic goal is relevant to an epistemic goal, or a situation is relevant to a situation. That is, as Hitchcock notes, strictly speaking. Loosely speaking we may have elliptical characterizations, where these restrictions are not verbally respected. However, when using language precisely, this means that the relations between x and y, y

⁵⁵ This example — as well as the next one — is my own.

⁵⁶ I would take it that this close to an idea of meaning-connection as an empirical matter.

and z and, x and z are irreflexive, asymmetric and vacuously transitive. (Hitchcock 1992, 257)

An epistemic goal is "an issue to be settled, a question to be answered, a problem to be solved, a decision to be made" (ibid., 256). And as characterized above, an item of information (the subject term of the relation) can be characterized as "a proposition or a value of a propositional function or a speech act communicating or requesting information" (ibid., 255-6). Strictly speaking, however, I can't see how a speech act requesting information could serve as a justification of an epistemic goal of settling an issue or making a decision. What Hitchcock is saying seems though understandable, and the ambiguities are acceptable for the sake of generality of his position. I will though restrict myself in using the term 'proposition' to denote to items of information, which may appear for example in question-form, but which nevertheless are the propositional contents of such speech acts. I will include 'propositional functions' in the term 'proposition'. The drawback of my choice of terminology is that despite both items of information and epistemic goals are propositions in my presentation, their roles in an argument may be confused if we are not careful. But the advantage of it is that we can see that a proposition in one argument can serve as an epistemic goal and in another argument as a piece of information that is relevant to the goal of that argument.

Hitchcock defines relevance thus:

"An item of information x is relevant to an epistemic goal y in a given situation if and only if in that situation x can be put together with other pieces of atleast potentially accurate information to arrive at the epistemic goal, provided that the other pieces of information are not sufficient by themselves to achieve the epistemic goal if the original information is inaccurate" (ibid., 257-8)

In this definition, if x is relevant to y, then x is needed in order to arrive to y, which blocks the possibility of x being redundant, and the possibility of any proposition to be relevant to y (in cases where the other propositions are sufficient). It is not demanded that x is sufficient to arrive at the desired goal, it could be that only together with other information is the epistemic goal justified. Hitchcock notes that it is neither necessary nor sufficient that a

conclusion follows from the premisses for premisses to be relevant to conclusion⁵⁷. (ibid., 258, 264)

⁵⁷ By 'follows', Hitchcock means — besides a deductive or logical consequence in the sense of the normal propositional logic — a relation of premisses and conclusion where truth is transmitted definitely, or probably, or provisionally. The point, as far as propositional logic is of concern, has already been noticed above, and there is no need to rehearse it. What comes to 'propable' or 'provisional' truth transmittance, I leave it an open question.

5. SCHURZ AND RELEVANT DEDUCTION

In ‘Relevant Deduction’ Gerhard Schurz proposes that the problem of relevance should not be handled by changing the logic, but by making a distinction between validity and relevance. Although Schurz doesn’t even mention a theory of argumentation, I believe his insights are very useful in dealing with the problems that presently occupy us. Support from Schurz for this belief could be inferred from his very brief comment on his views on the applicability of the relevant deduction: “the method of relevant consequence elements can be used as a general method of knowledge representation” (Schurz 1991, 426)

Schurz differentiates between *conclusion-relevance* and *premise-relevance* and argues that irrelevancies of the latter type are less harmful in applications than the former type. I shall first consider the former type. The basic idea that Schurz uses to detect *conclusion-irrelevance* is this: “[T]he conclusion of a given deduction is *irrelevant* iff the conclusion contains a component which may be replaced by any other formula, *salva validitate* of the deduction.” (Schurz 1991, 400-401) This idea seems intuitively very plausible, since if in an inference it doesn’t make any difference if a component is replaced by another component, regardless of it’s meaning, it could not possibly be relevant. I shall quote the informal definition of relevance (in predicate logic):

”Assume $\Gamma \vdash_L A$. Then A is a *relevant conclusion* of Γ iff no predicate in A is replaceable on some of it’s occurrences by any other predicate of the same arity, *salva validitate* of $\Gamma \vdash_L A$. Otherwise, A is an *irrelevant conclusion* of Γ .”⁵⁸ (Schurz 1991, 409)

The definition for propositional logic could be then: Assume $\Gamma \vdash_L A$. Then A is a *relevant conclusion* of Γ , iff no subformula of A may be replaced by another formula *salva validitate*, otherwise the conclusion is irrelevant. That this fairly simple idea is worth considering, let us view how it works on some of the Walton’s astounding inferences mentioned in chapter

⁵⁸I have two notes on this definition: (1) In this definition: Γ is a set of premises, \vdash_L is a deduction relation in a logic L , and A is a conclusion derived from the premise set. (2) The corresponding definition for propositional logic is easily formulated by replacing the term *predicate* by *subformula*. (Schurz doesn’t give the definition for a propositional logic, but I take from the discussion, that he would formulate it this way.)

2.3. For A to be relevant conclusion of Γ let us adopt the following terminology: $\Gamma \vdash^{rc} A$, and for A to be irrelevant conclusion of Γ , let us mark it by $\Gamma \vdash^{ic} A$.

Walton's astounding inferences (and other peculiarities) were all classically valid, but the problem with them was about relevance. Of those inferences in terms of conclusion (ir)relevant deduction the following holds (explanation for irrelevance in parentheses):

- (1) $B \vdash^{ic} A \supset B$ (A may be substituted with any sentence salva validitate.)
- (2) $A \vdash^{ic} \sim A \supset B$ (B may be substituted with any sentence salva validitate.)
- (3) $\sim(A \supset B) \vdash^{rc} A$
- (4) $(A \supset B) \supset C, \sim A \vdash^{rc} C$
- (5) $B \vdash^{ic} \sim B \supset B$ (The antecedent in the conclusion may be substituted with any sentence salva validitate.)
- (6) $B \vdash^{rc} B$
- (7) $A \wedge B \vdash^{rc} A$
- (8) $A \vdash^{ic} A \vee B$ (B may be substituted with any sentence salva validitate)
- (9) $X, X \vdash^{rc} Y$, where X and Y are any sentences such that one may validly infer Y from X.
- (10) $A \wedge \sim A \vdash^{ic} B$ (B is replaceable salva validitate)
- (11) $A \vdash^{ic} B \vee \sim B$ (The occurrences of B:s may be substituted with any sentences salva validitate.)

So the concept of conclusion (ir)relevance seems to deliver at least part of the answer to the problem of relevance in inferences. However, of the above inferences (3), (4), (6), (7), and (9) belong to the class of conclusion relevant deductions, and the question is whether

Schurzian theory can ease the pain of irrelevance by the concept of relevant premises. Definition for relevant premises could be formulated informally as follows: premise set is irrelevant iff a single occurrence (of a sentence or predicate) in a premise set may be changed salva validitate, or multiple occurrences in a premise set may be changed without changing the logical content salva validitate. (Schurz 1991, 420-421)

With this definition it turns out (for premises to be relevant, let us mark \vdash^p ; for premisses to be irrelevant, let us mark \vdash^{ip}), that:

(3) $\sim(A \supset B) \vdash^p A$ (B in the premise may be substituted with any sentence salva validitate)

(4) $(A \supset B) \supset C, \sim A \vdash^p C$ (B in the premise may be substituted with any sentence salva validitate)

(7) $A \wedge B \vdash^p A$ (B in the premise may be substituted with any sentence salva validitate)

(9) $X, X \vdash^{pi} Y$, where X and Y are any sentences such that one may validly infer Y from X

In this case, either of the occurrences of X could be deleted without change in the logical content of the premisses. Schurz does not mention this particular inference, but it does fit the criteria of the irrelevant premisses, where a single occurrence of a sentence in a premiss set could be substituted by any other sentence salva validitate.

(10) $A \wedge \sim A \vdash^{ip} B$ (Occurrences of A's could be substituted with any sentences without changing the logical content of the premisses; it should be noted, that this deduction would be premiss irrelevant even if B=A.)

Of the astounding inferences, where a problem of relevance seemed to be at issue, the following needs to be addressed:

(6) $B \vdash B$

According to the relevant deduction theory (6) has both a relevant conclusion and a relevant premise. In the context of argumentation this would amount to a situation where a claim, for example “The politics of the present day is shallow” would be justified by “The politics of the present day is shallow”, which is blatantly circular. However, in the argumentation the process starts with doubt towards the claim, or at least, the claim is not accepted by the antagonist. In circular arguments doubt is not removed, so this argument form is not satisfactory in a good argument.

Perhaps one way to look at the problem would be to embed inference into pragmatic surroundings. The Pragma-Dialectical theory of argumentation divides argumentation into stages, where one task of the opening stage is to agree on the common ground, namely the accepted premisses. And the claim made by protagonist is presented in the confrontation stage. It would be inconsistent for an antagonist to doubt a claim B and accept a premiss B, so the trouble seems to reside at the commitment level; or to put it in speech act lingua, illocutionary part of the speech act. Would this be an ad hoc explanation? I think not. For even if it may be forgotten in the midst of different deductions, a question of the status of the premisses is an issue, if interested in logic as a tool for argumentation theory. In logic text books, premisses are often given without explanation, just to be assumed by the student, for the sake of the deduction. But what if the student replies: let’s not assume! This would undercut the whole point of the deductions of the type $B \vdash B$. To show that this point is not only about this specific form of deduction, consider the following:

$$A \wedge B \vdash B \wedge A$$

This is no less circular, assuming that the conjunction of the sentences is not fussy about order (in that case, it would be outside the scope of classical logic). If this was a formalisation of an inference in *an argument*, one would judge it circular as well. From the argumentation theory perspective, commitments would be inconsistent. Still, someone might be doubtful whether the explanation is ad hoc. Well, consider the following:

$$A \supset B, A \vdash B,$$

which is a classical Modus Ponens. In the pragmatic setting, it could be said, that an antagonist would not be obliged to accept the claim B, unless he/she accepted the premisses, in which case the claim would have to be accepted, save from inconsistency. So, it turns out (if what is said above is correct), that $B \vdash B$ is not a problem of relevance on

the propositional level, but rather a breach of consistency on the pragmatic level (of argumentation). The confusion lies in that there is a mixup on what is asserted and what is not. In other pragmatic setting, say, in applications of information retrieval and/or processing from a data base, the deduction might not be a problem in the first place, but that is outside our scope.

6. DISCUSSION AND CONCLUSION

From Schurzian definition of relevance it is obvious that the relevance concept is distinct from the concept of validity, and that relevant conclusions are a proper subclass of valid conclusions. Also deductions with relevant premises are a proper subclass of classically valid deductions. As Schurz explains (Schurz 1991, 399), in his approach to relevance, logical validity is left intact, but for reasonableness a further constraint of relevance is required. This strategy marks a difference between the Schurzian approach and other approaches, such as the non-classical logics exemplified by Anderson and Belnap and their relevance logic as well the relevant logic approach by Read. In their approaches the attempt is to define a new logic to capture relevance in the logical system in other ways. One further interesting result emerges from the Schurzian approach. In classical logic the validity is a matter of form, that is, a valid rule stays valid no matter what sentences are substituted for the sentence letters (of course, pending uniformity). In Relevant deduction, irrelevance is a matter of form. A consequence, all deductions of the form $\text{ex falso quodlibet}$ are irrelevant, including $A \wedge \sim A \vdash A$. So any strategy that merely blocks $\text{ex falso quodlibet}$, would have to place restrictions on simplification, or give some explanation.

The approach by Schurz marks a difference also in that it has many extensions beyond propositional logic. Schurz extends the idea of relevant deduction predicate logic as well as to alethic and deontic logic, which results in solving some ‘paradoxes’ (not paradoxes in the strict sense) due to relevance in various fields. One could wonder whether the propositional connectives other than the classical truth functional ones could be incorporated into the Schurzian approach. What I have in mind, are the connectives mentioned by Stephen Read, fusion and fission and their derivatives. It was concluded, that Read seems to end up to circularity when trying to define relevance in terms of (non classical) validity. But, could the concept of relevant deduction be applied to Read’s system⁵⁹, without further ado? The (possibly) trivial answer is negative. The reason is that the definition of relevant deduction relies on classical definition of validity, and Read’s idea of validity is not identical, so as such, a synthesis of the ideas does not work. However, question could be pushed one step further, and it could be asked whether the idea of (ir)relevant conclusion / premiss *salva*

⁵⁹ This is an interesting question also according to Schurz (1991,414).

validate makes a difference if for classical validity the Read-validity is substituted. The answer is that it would make a difference. Of the Relevant deduction theory it is interesting to note that the cut rule or transitivity and monotonicity rules fail, that is the relevant deduction relation is not transitive nor monotonic (Schurz 1991, 414). However, in Read's logic these concepts apply (on surface, at least), so it seems plausible that the relevant deduction would restrict the valid deductions of relevant logic⁶⁰. I will not pursue this question any further.

Instead I'd like to make some remarks on properties of relevance, drawing from systems and distinctions discussed earlier. Read takes that logical relevance is symmetric, reflexive and non-transitive (Read 1988, 133). Interestingly Hitchcock sees relevance as irreflexive, asymmetric, and vacuously transitive (See above, chapter 4.5). Clearly they must have very different things in mind. Read's idea of relevance is intimately related to meaning-connection, which explains his position on the properties of relevance. There must be a meaning-connection between a proposition and itself (reflexivity), if x and y are two propositions with a meaning-connection, then there must be a meaning-connection between y and x (symmetry), but if x and y , as well as y and z have a meaning-connection, it does not necessarily follow that x has a meaning-connection with z (thus failing transitivity, albeit not rendering it intransitive, therefore it is non-transitive). Hitchcock's idea of relevance is that it is a triadic relation, so how are these concepts to be compared at all? Well, one way could be to take that Read's relevance is between propositions, and Hitchcock's relevance is between entities belonging to different categories and these categories are not comparable in the same sense. So, if propositions are taken to be pieces of information, and that pieces of information can be compared with respect to relations, then Read's relevance relations may well have the properties he assigns to them without necessarily contradicting Hitchcock's view on relevance. Likewise, if looking at epistemic goals, then it makes sense to have an epistemic goal that is (or is not) relevant in Read's (or perhaps in some other) sense to another epistemic goal.

⁶⁰ Of this point I am unsure (to put it mildly), since the languages are different; Read's logic works with 'relevant language', and also the meta-language is 'relevant-language'; so it might be that in the end we cannot make comparisons. For example: would we define relevant deduction in extensional or intensional terms? These things escape my reach.

Now, to make things more manageable I will take that the epistemic goal is ‘solving a difference of opinion’. To solve a difference of opinion in Pragma-Dialectical framework, a set of speech acts is advanced. For simplicity, let the discussion be consistently simple, so that the protagonist will perform a set of speech acts aimed at giving sufficient reasons for an antagonist to accept the claim made. Let then the claim be that B (say, naively it to be that ‘You ought to take a rain coat with you’). The antagonist would have not accepted this, and therefore given a motivation for the protagonist to perform speech acts by uttering the sentences ‘If there is a possibility of rain, then you ought to take a raincoat with you’ (In symbols $A \Rightarrow B$)⁶¹ and ‘There is a possibility of rain’ (In symbols A). Let us assume that these speech acts fulfill all the happiness conditions. The question is how the considerations on evaluation, especially relevance – wise are to be taken. From the general perspective of Read’s relevance, he would be interested in how the connectives are *translated* into the formal language, since for him the meaning of the connectives is a crucial matter (for example, disjunction in extensional sense causes problems, that are rectified according to him⁶² by intensional interpretation, and the same trouble is present with other connectives, at least some times). As meaning-connection is pretty much equivalent with relevance, and we could assume there to be a meaning-connection satisfied in a way that satisfies Read’s idea, and furthermore, that the inference is valid in Relevant logic this would be evaluated as a good argument. No surprise here. In the Hitchcockian sense, this argument is relevant to an epistemic goal (in a *normal* situation⁶³). Obviously it would be somehow odd to say that the epistemic goal in question is relevant to the speech acts, leading to asymmetry⁶⁴.

The matter could be put in more simple terms: justification is not a symmetrical relation (assuming that justification’s logical form is: X justifies Y). On the other hand, it is irreflexive, since it is not the case that X justifies X. The relation is vacuously transitive since the conditions are not met: Should we have (1) premisses X that would justify a conclusion Y, and (2) Y as a premiss to justify Z, it would not follow straightforwardly that

⁶¹ I have chosen a symbol not used before to make room for the possibility that ‘if..., then...’ could be none of the connectives mentioned earlier.

⁶² He takes it that the meaning of connectives is defined by their use in deductions, see Read (1988,55)

⁶³ I will push aside any complications regarding the situation part of Hitchcocks definition and simply assume there is no problem.

⁶⁴ However, it could be the case that if there was an epistemic goal ‘understanding why speech acts were advanced’ the *description* of the epistemic goal in that situation would be relevant; a number of complications could be easily produced, but I will disregard them. The only thing to I have to say about any of the kind is that it is another matter.

(3) X justifies Y. The reason is that Y is in a different position in (1) and in (2). In (1) it acts as a conclusion and in (2) as a premiss. It should be emphasized that the relation is not intransitive⁶⁵, that is: it is not the case that from (1) and (2) it would follow necessarily not-(3). Needless to say, there could be cases where (1), (2), and (3) could hold.

Let us go back to relevance in Pragma-Dialectical theory. A speech act can be relevant (or irrelevant) in interpretative, analytical or evaluative sense. At each stage a speech act may succeed or fail with respect to the goal of that stage, the success or failure relating illocution or to propositional content. My main target is evaluative relevance, but mentioning other aspects should not do any harm. In confrontation stage, the aim is to bring about a difference of opinion, so advancing speech acts that are relevant to this goal is appropriate. Assertives, commissives and usage declaratives are in place. For example, expressing a standpoint is in place, as well as committing oneself to acceptance, or non-acceptance. Being unclear on whether one has or has not asserted an opinion would make the speech act illocutionarily irrelevant in interpretative sense with respect to the goal of the confrontation stage. Should it be unclear what is the content of a claim, it would make any evaluation difficult, affecting the propositional relevance. If it turned out that an opinion is not accepted by an interlocutor and a protagonist would have accepted the responsibility to present justification for it, then assertives are brought forward at the argumentation stage. At argumentation stage the epistemic goal is to justify the opinion. The assertives are such that the propositional contents are believed to justify the claim. Proposition could turn out to be irrelevant in the sense that it would not have an effect on the acceptance of the opinion in the centre of the discussion. (van Eemeren, Grootendorst and Henkemans et al 1996, 288-289)

To recapitulate the ideas presented in previous chapters: A set of inferences and arguments which are labelled (correctly or incorrectly) as including irrelevancies were presented (Chapter 2). Next it was proceeded to an argumentation theory, one that can claim to be among the most important ones to present time, and pointed that it is short of explaining the normative concept of relevance (Chapter 3). In chapter 4 some approaches to the question of relevance were viewed, but they all left something to hope for. In chapter 5, a promising theory of relevant deduction by Schurz was viewed, and even though Schurz (to my

⁶⁵ Some would prefer the term anti-transitive.

knowledge) does not mention directly argumentation theory as an application for his relevant deduction theory, it seems fit for a candidate to complement the Pragma-Dialectical theory. It seems to avoid the pitfalls of other approaches. Perhaps one still has doubts as to what use could this conception of relevance have, so a further argument on behalf of the proposed relevance theory might be in order. For example, someone might ask for a reason to make those inferences in the first place. Walton's examples (on Socrates and Walton) are artificial and would not impress virtually anyone. The answer is that if we are constructing an argumentation theory with the aim of including evaluative component to it, we would like it to state criteria for the evaluation. If nobody ever made an irrelevant inference, then the question would not rise, or at least it would not be pressing. The artificial examples are so astounding that the whole rehearsal might seem as activity, where problems are made up. But people *actually do* commit fallacies of relevance *in real life*. To this it could be replied that still we do not need a specific theory, since the intuitions would take care of the job. This however is not true. It is the case, that even in the scientific circles intuitions fail, and even careful considerations are not always enough to spot irrelevancies. But then the argumentation theorist should be able to provide criteria for the evaluation to be possible.

As an example of what use the relevance conception proposed in this work may have, I will take a genuine argument. The example is only a fragment of a wider discussion, so the analysis ignores a majority of the argumentation (for example, I will not go through responses to the original argument). The example is a fairly well known argument put forward by Gettier (1963) in a short article. Gettier's claim is that the so called classical tripart definition of knowledge is not sufficient. He argues by using two examples, of which I shall take the second one. The definition requires of knowledge that it should be true justified belief. His argument may be put as follows (in a slightly condensed form, without changing the essence of the reasoning).

Assume that Smith believes on the basis of strong evidence, that Jones owns Ford (let us mark this sentence with P in propositional logic). Smith has a friend, whose current location is unknown to Smith. Anyway, Smith infers from his original belief another belief (by rule

of addition⁶⁶) (let us mark this by 'P ∨ Q'): "Either Jones owns a Ford, or Brown is in Barcelona". Let's assume further, that it happens to be that despite the evidence, Jones doesn't own a Ford and Brown happens to reside in Barcelona. This would make the sentence 'P ∨ Q' true, since one of adjuncts is true and hence, the proposition is true on the basis of the meaning of disjunction. According to Gettier, this is not knowledge, even though it is a true belief, which is "correctly inferred" from the premiss. And it might be added, that Gettier says, that Smith is "*completely justified* in believing these propositions" (italics added). (Gettier 1963)

It seems evident that Gettier holds that logical validity is enough for complete justification. However, it is reasonable to include relevance to the criteria of good justification, if justification relies on – say, classical – logic. The idea of accepting logic for the criterion of justification in the knowledge definition relies on the notion that any justification whatsoever would not deliver the intended restriction. But logical validity, if short of relevance, does not do the trick either. So, what happens if relevance restriction is added, does the Gettier argument lose its edge? I say it does. If the Schurzian notion of relevant deduction is accepted, then Smith is not "completely justified" in believing that 'P ∨ Q' based on P. This is because Q is replaceable *salva validitate*, so Q would be irrelevant in the conclusion. In effect, the Gettier argument against the classical definition fails, given that relevance is an issue, and I see no reason why it shouldn't. Put shortly, Gettier's argument fails because Smith is not justified in believing what Gettier claims him to be. Gettier's argument is that the classical definition (or some of its modern variants) is not sufficient for knowledge. He does not question the necessity of the criteria. This is in accordance with the Schurzian relevant deduction notion, since Schurz defines relevance in such a way that relevant deductions are a proper subset of logically valid deductions.

My argument against Gettier only proves that Gettier's argument (or one of the two cases, to be exact) against sufficiency of the classical definition fails. The relevance – criterion is pointed against Gettier's view on what counts as good justification. It seems reasonable that

⁶⁶ Addition rule states, that from a proposition X it may be inferred that X or Y. It is valid in the sense that it is never the case that the premiss is true but the conclusion at the same time false. The rule is not mentioned by Gettier, but it is evident that he refers to this rule.

relevance is a criterion in the classical definition, so if it is asked ‘what does justification amount to?’, relevance in the Schurzian sense could be at least part of the answer. So, as it happens, this notion of relevance is also a contribution to the classical definition of knowledge, in the sense that when asked for further definition or more precise definition, the relevance criterion is noted and answered by relevant deduction theory. This does not mean that this settles the classical definition once and for all, because it could very well be that still more is needed; for example, one might not be satisfied with the idea that knowledge must be a belief, or some other complaint could arise. This however does not concern us here.

I conclude with the following suggestions: (1) The Pragma-Dialectical argumentation theory should be complemented with Schurzian relevant deduction theory, and by doing this (2) the classical definition of knowledge may be given a precisization with regards to the justification criterion.

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